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Academic Stress Predictors and Engagement of Teacher Education Students during Pandemic: A Mixed-methods Study

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Abstract
Background and Aim: This sequential explanatory mixed-methods study determined the stress levels of the academic stress predictors and levels of student engagement among the 442 Teacher Education students in Northwestern Mindanao State College of Science and Technology, Tangub City.
Materials and Methods: The quantitative data gathered using modified and validated survey questionnaires revealed the stress level of the following academic stress predictors: the students' Life Satisfaction is often received, the students have low internal Locus of Control, the students' Gender Identity is sometimes thought, and the students' Social Support is sometimes received; the levels of affective engagement, cognitive engagement, behavioral engagement and social engagement are high. Through multiple regression analysis, among the stress predictors, life satisfaction, locus of control, and social support are statistically significant with a significance level of 0.05. Using in-depth interviews of 12 participants from the randomly selected students per program in every year level, the qualitative data were analyzed using thematic analysis.
Results: There is a significant relationship between the significant stress predictors and student engagement, with an r-value of 0.448 interpreted as a weak correlation. There are eight themes that emerged, highlighting how the perceived academic stress predictors affect student engagement.
Conclusion: Student engagement comes from oneself, as a positive attitude, a higher level of life satisfaction, and a strong locus of control lead to higher academic engagement. Moreover, the external factors that surround a learner might affect those self-driven factors, such as received support that encourages students and the learning environment that possibly affects students' study habits and choice of learning modality.

Keywords: Student Engagement, Academic Stress Predictors, Social Support, Locus of Control, Gender Identity, Life Satisfaction, Multiple Regression, Mixed-methods Study

Introduction

The global outbreak of COVID-19 brought tremendous disruptions to education as new protocols were observed to mitigate the risk of the pandemic. Higher education institutions suspended on-campus academic activities and switched from traditional face-to-face instruction to distance learning settings, wherein these abrupt changes may reinforce students' stress (Rao & Rao, 2021). Students seem to be in a disproportionate state as they do not have the financial ability to acquire enough digital learning devices and reliable internet access (Rotas et al., 2020; Baticulon et al., 2021). Due to students' difficult living situations and at-home distractions, they face more complex challenges (Clabaugh et al., 2021; Barrot et al.,

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2021). These structural and environmental disruptions intensified pre-existing stressors, particularly in developing countries where digital inequities are more pronounced.

Academic stress is the unpleasant psychological condition that stems from pressures and self-disappointments when expectations are placed on students' academic achievement by their parents, teachers, peers, and family members (Subramani & Kadhirawan, 2017). It may arise from excessive school demands, poor academic achievement, financial difficulties, strained relationships, poor study habits, familial expectations, and low self-esteem (Assaf, Al-Abbassi, & Al-Binni, 2017; Nakalema & Ssenyonga, 2013). The pandemic transition to online learning further intensified these stressors (Ruiz & Robledillo, 2022; Yasmin et al., 2020). Gendered differences in stress experiences were also observed, with women reporting stress related to lack of support and men experiencing stress due to parental expectations and reciprocal obligations tied to financial and emotional support (Verma, 2020; Punia et al., 2021).

In higher education, academic stress has consistently been linked to diminished learning capacity, academic performance, employment attainment, and sleep quality (Pascoe et al., 2020). Excessive stress increases the prevalence of psychological and physical conditions such as depression, anxiety, nervousness, substance abuse, and suicide (Gazzaz et al., 2018; Dafaalla et al., 2016; Reddy et al., 2018). Stressed students perform significantly lower than their less stressed counterparts (Gazzaz et al., 2018), and unmanaged stress negatively affects student engagement and long-term career achievement (Kumalasari et al., 2021).

Student engagement is widely recognized as a crucial determinant of academic success and persistence (Kahu, 2013; Delfino, 2019). It encompasses four interconnected dimensions—cognitive, behavioral, affective, and social (Bowden et al., 2017)—which collectively foster effort, retention, and motivation. Engaged students demonstrate higher academic motivation, performance, and positive energy toward learning (Fraysier et al., 2020; Tuominen-Soini & Salmela-Aro, 2014; Bakker et al., 2015). However, engagement does not operate independently of psychological and contextual stressors, particularly during crisis conditions.

Despite the extensive literature on academic stress and engagement, there remains a theoretical and empirical gap in identifying which psychological and contextual predictors are most critical in explaining engagement during crisis transitions, especially among Teacher Education students. Teacher Education students occupy a unique position: they are not only learners but also future educators who must develop emotional resilience, adaptive coping strategies, and professional identity formation. The crisis context magnifies the importance of certain psychosocial variables that may determine whether students disengage or persist academically.

Life Satisfaction is theoretically grounded in subjective well-being frameworks and positive psychology, suggesting that global life evaluation influences academic motivation and resilience (Ackerman, 2021). During crises, diminished well-being can reduce persistence and engagement. However, few studies have examined life satisfaction as a predictor of multidimensional engagement among pre-service teachers in post-pandemic contexts.

Locus of Control, rooted in social learning theory, explains how individuals interpret control over life events. Students with an internal locus of control are more likely to perceive academic challenges as manageable, whereas those with an external locus may feel helpless in unstable learning environments. Although locus of control has been linked to stress and coping, limited research integrates it with engagement dimensions among Teacher Education students navigating crisis-induced academic disruptions.

Social Support, grounded in buffering and ecological systems theories, is particularly critical during periods of isolation and remote learning. Support from peers, family, and

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institutions reduces stress and promotes belongingness (Feldman et al., 2008). Yet, while social support has been widely studied in relation to stress, its combined predictive influence with psychological traits on engagement remains underexplored in Philippine higher education.
Gender Identity warrants stronger theoretical emphasis, particularly during crisis contexts. Gendered social expectations, coping norms, and support systems influence stress appraisal and help-seeking behavior (Verma, 2020; Punia et al., 2021). Moreover, Teacher Education programs often have gender-skewed populations, which may amplify gendered experiences of academic pressure, emotional labor, and professional identity development. However, existing studies frequently treat gender as a demographic variable rather than a psychosocial construct that shapes stress perception and engagement patterns. This conceptual limitation creates a knowledge gap that the present study seeks to address by examining gender identity as a meaningful predictor rather than merely a control variable.

Taken together, while prior research confirms that academic stress influences engagement, there remains insufficient integration of Life Satisfaction, Locus of Control, Gender Identity, and Social Support within a single explanatory framework—particularly among Teacher Education students in post-pandemic higher education settings. Thus, determining the academic stress predictors that affect student engagement will provide deeper insight into how instructional practices, institutional support systems, and psychosocial resources interact during crisis conditions. As such, the findings may guide institutions and educators in designing responsive pedagogical strategies and mental health conservation platforms to maximize student engagement despite challenging circumstances. Therefore, this study aims to determine the significant academic stress predictors, assess the level of student engagement, and examine the relationship between these variables, as understanding the factors influencing engagement can reveal insights into student performance, advancement, and retention (Delfino, 2019).

Objectives

This study aimed to determine the significant academic stress predictors and the level of student engagement of the Teacher Education students (A.Y. 2021-2022) during the pandemic in order to assess their relationship.

Specifically, it answers the following questions:

1. What is the stress level of the following academic stress predictors?; Life Satisfaction, Locus of Control, Gender Identity, Social Support
2. What is the level of student engagement?; Affective, Cognitive, Behavioral, Social
3. What are the significant academic stress predictors of the students?
4. Is there a significant relationship between the significant stress predictor and student engagement?
5. How do academic stress predictors affect student engagement?

Literature review

Academic Stress in Higher Education: A Persistent and Evolving Concern

In academic circles, stress has become a major topic. Various behavioral researchers have performed substantial research on stress and its consequences, concluding that the subject requires more attention (Agolla, 2009). Stress is considered unavoidable and associated with physical and psychological consequences such as headaches, depression, anxiety, heart disease, and stroke. It is also embedded in students' educational and social lives, influencing both cognitive and emotional functioning.

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Rather than viewing stress as a singular phenomenon, literature consistently presents it as multifactorial, arising from internal, interpersonal, academic, and environmental stressors (Lucier, 2012). College students face developmental transitions, including autonomy from parents, peer acceptance, and academic performance pressures. These transitions affect their academic functioning and psychological well-being.

More recent scholarship (2021–2023) expands this understanding by situating academic stress within digital and remote learning contexts. Studies after the COVID-19 pandemic report increased digital fatigue, reduced subjective well-being, and "digital burnout" due to prolonged screen exposure, online assessments, and diminished face-to-face interaction. Von Soest et al. (2020) already documented declines in subjective well-being during pandemic restrictions, particularly among resourceful adolescents. Emerging research further shows that remote learning intensifies academic stress through isolation, technological barriers, and blurred academic–personal boundaries, reinforcing the need to examine stress predictors in contemporary educational settings.

Despite extensive work on academic stress, few studies integrate personal psychological resources (life satisfaction, locus of control), identity factors (gender identity), and contextual supports (social support) into a single explanatory framework examining their influence on student engagement—particularly in Philippine higher education institutions. This gap justifies the present study.

Life Satisfaction as a Protective Psychological Resource

Life satisfaction is often used synonymously with happiness; however, it refers to a global cognitive evaluation of one's life rather than momentary emotional states (Ackerman, 2021). Synthesizing existing findings reveals that life satisfaction functions as a buffer against academic stress and a predictor of academic engagement.

Antaramian (2017) found that students with extremely high life satisfaction demonstrated stronger academic performance, greater self-efficacy, higher engagement, and lower stress levels compared to those with moderate or low satisfaction. Similarly, Civitci (2015) emphasized that college belonging significantly moderates the perceived stress–life satisfaction relationship, indicating that institutional affiliation strengthens students' resilience.

During the COVID-19 pandemic, subjective well-being declined significantly due to restrictions and uncertainty (Von Soest et al., 2020). This decline highlights how life satisfaction is vulnerable to contextual disruptions such as remote learning and social isolation. However, literature remains limited in examining whether life satisfaction continues to predict engagement under post-pandemic or hybrid educational conditions. The present study addresses this gap by empirically testing life satisfaction as a stress predictor linked to engagement.

Locus of Control and Perceived Academic Stress

Locus of control refers to an individual's perception of the primary causes of life events (Neill, 2021). The literature consistently distinguishes between internal and external orientations. A thematic synthesis of findings suggests that an internal locus of control reduces perceived stress and enhances task performance, whereas an external locus of control increases vulnerability to stress and psychological distress.

Goyzman (2010) reported that individuals with an internal locus of control experience less perceived stress and demonstrate greater task competence. Kurtović et al. (2018) further revealed that the external locus of control predicts depression, anxiety, and stress, with self-esteem and coping strategies mediating this relationship. Similarly, Abouserie (1994) found a positive relationship between external locus of control and academic stress, and a negative

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association between self-esteem and stress. Promsri (2018) determined that the external locus of control accounted for 15.8% of the variance in graduate students' life stress.

In remote and digitally mediated learning environments, perceived control over learning processes becomes even more critical. Recent studies suggest that online learning environments may reduce students' perceived control due to unstable connectivity, asynchronous structures, and limited instructor immediacy, potentially intensifying stress. However, limited research integrates locus of control with engagement dimensions in post-pandemic contexts. This study contributes by examining locus of control within a mixed-method framework linked to engagement outcomes.

Gender Identity and Academic Stress Experiences

Gender identity refers to a person's internal understanding and experience of their gender (Solomon, 2021). A synthesis of gender-based educational research reveals two persistent issues: girls' overall academic outperformance and gendered specialization patterns in higher education (Delaney & Devereux, 2021).

Kangethe et al. (2014) demonstrated that socially constructed perceptions of masculinity and femininity influence school behavior and academic attainment. Additionally, Burke and Weir (2010) found that female adolescents reported higher life stress despite receiving greater peer social support.

Recent scholarship expands this discussion by examining how gender identity intersects with digital stress and remote learning demands. Emerging evidence suggests that gendered caregiving expectations, digital accessibility disparities, and emotional labor may differentially affect stress experiences. However, empirical integration of gender identity with engagement dimensions remains limited in Philippine higher education research, reinforcing the importance of including gender identity as a predictor variable in this study.

Social Support as a Protective Buffer

Social support is conceptualized as both perceived and actual assistance from family, peers, and community networks (Hombrados et al., 2012). It includes instrumental and emotional dimensions (Hombrados et al., 2012). Literature consistently identifies social support as a protective buffer against academic stress (Feldman et al., 2008).

De la Fuente et al. (2014) and Martin (2007) emphasized that academic stress arises from exams, workload, financial concerns, and family issues. The Importance of Social Support (2017) highlights that social networks maintain self-image and buffer against adversity. In academic contexts, support fosters safe emotional environments and belongingness (Feldman et al., 2008).

In remote learning contexts, however, social support mechanisms shift toward digital communication platforms. Research from 2021–2023 notes that reduced physical interaction weakens perceived support, contributing to digital burnout and emotional exhaustion. Despite this, empirical evidence linking social support to multidimensional engagement remains underdeveloped in local higher education settings. The present study bridges this gap.

Student Engagement as a Multidimensional Outcome

Engagement is conceptualized as commitment, agency, attention, effort, and emotional investment (Conner, 2011; Taylor & Parsons, 2011; Trowler, 2010). It includes behavioral, cognitive, and emotional dimensions (Fredricks et al., 2004), and later expanded to include social engagement (Middleton et al., 2017).

Student engagement has been identified as a major educational challenge (Jang, Reeve, & Deci, 2010; Kraft & Dougherty, 2013). It reflects attention, curiosity, interest, optimism, and motivation (Great Schools Partnership, 2016). Enerio (2021) further emphasized that engagement is linked to goals, institutional support, mentoring, and peer relationships.

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Recent research on digital burnout and remote education indicates that prolonged online engagement can lead to "surface participation" rather than deep cognitive involvement. Digital fatigue reduces sustained attention and emotional investment. However, most studies examine engagement independently rather than as an outcome of interacting stress predictors.

Across the reviewed literature, academic stress is consistently described as a multidimensional and persistent phenomenon influenced by internal, interpersonal, academic, and environmental factors (Agolla, 2009; Lucier, 2012). Psychological resources such as life satisfaction (Ackerman, 2021; Antaramian, 2017) and locus of control (Neill, 2021; Goyzman, 2010; Kurtović et al., 2018) have been shown to buffer stress, while contextual variables, including gender identity (Solomon, 2021; Delaney & Devereux, 2021) and social support (Feldman et al., 2008; Hombrados et al., 2012) shape students' stress experiences and well-being. At the same time, student engagement has been widely recognized as a multidimensional construct encompassing affective, cognitive, behavioral, and social dimensions (Fredricks et al., 2004; Middleton et al., 2017). More recent studies have highlighted the additional strain brought by remote learning and digital burnout, particularly following the COVID-19 pandemic (Von Soest et al., 2020), suggesting that contemporary academic stressors have evolved in nature and intensity. However, despite the breadth of existing scholarship, there remains a limited integration of these stress predictors within a single explanatory framework that directly examines their combined influence on multidimensional student engagement, particularly within the Philippine higher education context. Furthermore, few studies employ a mixed-methods approach to capture both the statistical relationships and the lived experiences of students navigating these stressors. Addressing these gaps, the present study utilizes a sequential explanatory mixed-methods design to determine how academic stress predictors influence student engagement among Teacher Education students at Northwestern Mindanao State College of Science and Technology, thereby contributing contextually grounded and empirically integrated evidence to the current academic discourse.

Theoretical and Conceptual Framework

Researchers have shown that stress predictors could potentially alter the academic engagement of the students. This study purposely identified the 4 academic predictors that are based on the theories.

Social support is recognized as a critical component of the early phases of student life (Cage et al, 2021; Denny, 2015; Leary &DeRosier, 2012; Scarapicchia et al., 2017; Scanlon et al., 2020). It has been highlighted as a buffer against stress (Lee & Goldstein, 2016; Vungkhanching et al., 2017), particularly for younger students. Social interactions and support have been found to be a significant predictor of enhanced success for students navigating the university transition (Cage et al., 2021; Denny, 2015; Leary &DeRosier, 2012; Meehan & Howells, 2017; Van der Zandan et al., 2018).

Research has shown the negative effects of academic stress on academic engagement (Nakalema&Ssenyonga, 2013; Arsenio & Loria, 2014; Bataineh& M. Z., 2013). Engagement in academically effective practices, both inside and outside the classroom, that lead to a range of measurable outcomes has been defined as student engagement. Additionally, the extent to which students are engaging in activities that research in higher education has shown to be linked with high-quality learning outcomes has also been included in the definition of student engagement (Kuh et al., 2007).

In the context, students' locus of control refers to the way they explain their personal experiences and events. Rotter (1966) divides the notion into internal and external locus of control. It claimed that internal locus is concerned with how things end up as a result of an

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individual's thinking about a particular action, but external locus is determined by forces beyond their control, such as fate or chance, or it can be unexpected due to the social environment's complexity.

Gender identification is a term that refers to when an individual identifies as male or female, or, more rarely, both or neither. It was found as a personal component that could influence the extent to which undergraduate students feel academic stress and the effects of this perception on their well-being (Bernstein &Chemaly, 2017). According to statistical analyses of Calaguas (2011), every gender has significantly different views of subject, instructor, scheduling, classroom, and expectation-related stressors. Moreover, multiple studies strongly show that LGBT people are more likely to experience mental discomfort as a result of discrimination and stigma (Cochran & Mays, 2000; Dean et al., 2000; Cochran et al., 2003; Meyer, 2003; Shilo, 2014).

Life satisfaction is important to college students' academic and mental health outcomes because it is linked to happiness, psychological well-being, and meaning in life (Segrin& Taylor, 2007; Vela et al., 2016). One of the most important factors in life satisfaction is how people feel about their lives and how positive and negative things make them feel (Diener et al., 2001). Life satisfaction has been linked to academic success and has been shown to contribute to the reduction of mental health symptoms and stress levels (Jenkins et al., 2013). Increased college stress, on the other hand, has been linked to a reduction in life satisfaction (Brougham et al., 2009).

The study's overview is depicted in Figure 1. Social support, locus of control, gender identity, and life satisfaction are the independent variables of academic stress predictors. Student engagement will be the dependent variable. These variables will be subjected to multiple regression analysis to find significant stress predictors among the 4 identified stress predictors. There will be a correlation analysis between the significant stress predictors and student engagement to evaluate if there is a significant relationship. In addition, interviews will be conducted throughout the qualitative phase, wherein thematic coding analysis will be utilized in order to find themes in the words and sentence responses of the students.

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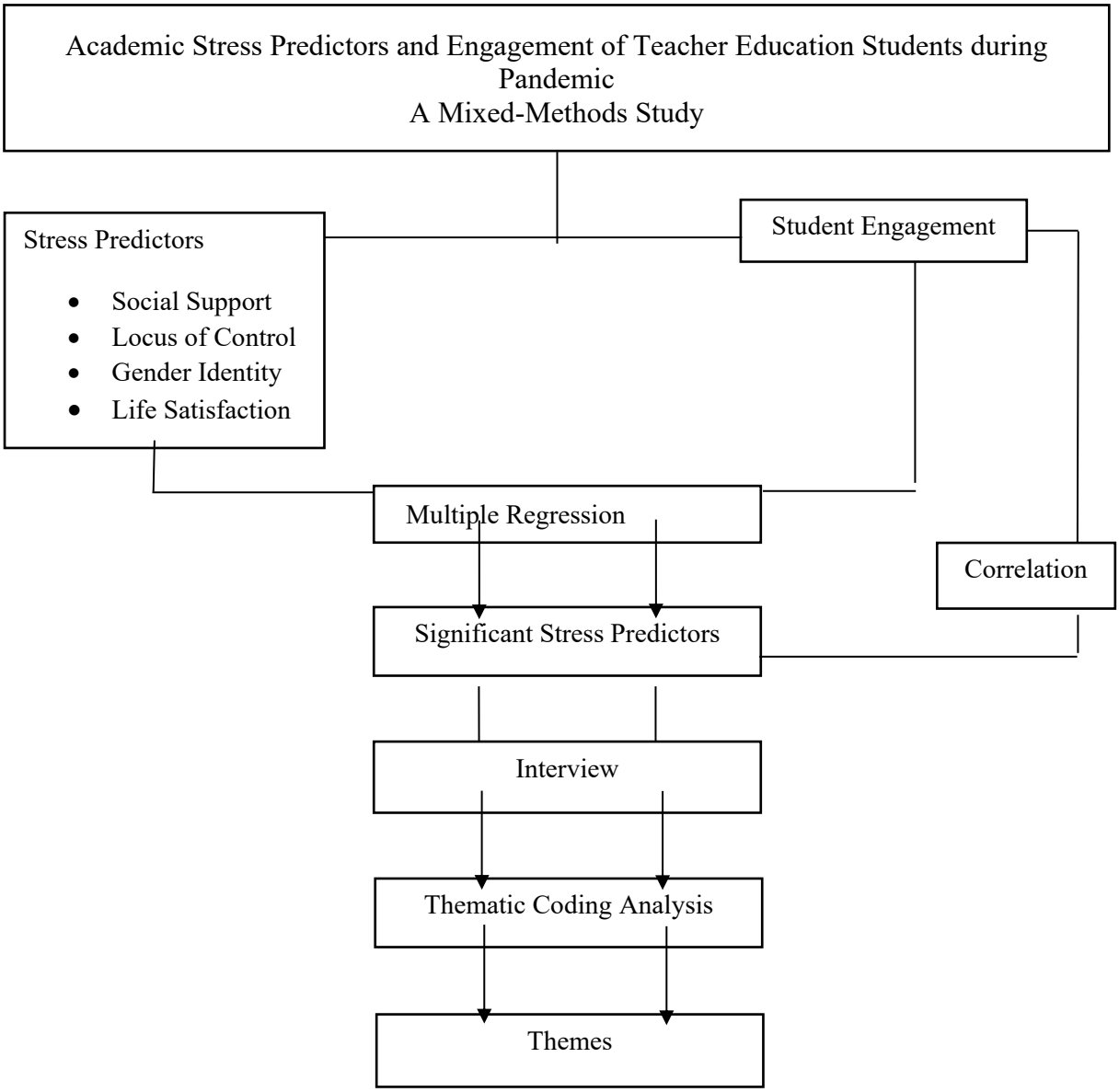

Figure 1. Schematic Diagram

Methodology

Research Design

This study used sequential explanatory mixed-methods, wherein both quantitative and qualitative designs were integrated in two consecutive phases within a single study (Creswell et al., 2018). Mixed methods research involves not only quantitative and qualitative components in the same study but also interconnecting them to have an integrated result (Ivankova et al., 2006). This research used a QUAN-qual approach in the collection of data set. The quantitative data collection instrument, which consists of Likert-type scales with equivalent statements were collected and analyzed first, prior to commencing the collection of the subsequent data through an interview, wherein student's answers were interpreted in a qualitative form through thematic coding.

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The quantitative phase used complex correlational design as it involves measuring several variables to identify the significant stress predictors and level of student engagement then assessing the statistical relationships between them, wherein multiple regression and correlational analysis were performed on the numerical data. The qualitative phase adopted the narrative approach to qualitative inquiry. The respondents' narratives facilitatedresearchers to study issues in depth through open-ended questions administered during interview that permits one to understand and capture the points of view of other people (Butina, 2015).

Research Respondents

The respondents of this study were the Undergraduate Teacher Education studentsof Northwestern Mindanao State College of Science and Technology (NMSCST) enrolled in the Academic Year 2021-2022. The School of Teacher Education has a total enrollee of 442 students, of whom 144 are in their first year, 43 in their second, 125 in their third, and 130 in their fourth year.

In the quantitative phase of the research, the researchers initially intended to employ total population sampling, wherein all members of the reference population are invited to participate (Mesa et al., 2016). All currently enrolled Teacher Education students were invited through their institutional e-mail to complete the online survey. However, out of the 442 enrolled students, only 222 students responded, yielding a response rate of approximately 50.23%. Therefore, while the entire population was invited, the final dataset represents voluntary responses rather than a full census of the population. This response rate is acknowledged as a limitation of the study, as non-response bias may affect the generalizability of the findings. Informed consent disclosures and Data Privacy Act agreements were included in the survey invitations. No incentives were provided for survey completion.

In the qualitative phase, random sampling was utilized to give every member an equal chance of being selected (Fraenkel et al., 2012), wherein the researchers interviewed 12 respondents from the randomly selected student per course in every year level.

Research Instrument

The instruments used in collecting data for quantitative phase is first-hand information, wherein the researchers used adopted and modified questionnaires validated by the experts: Dean of School of Teacher Education , Director of Student Affairs and Registered Guidance Counselor, Instructor of School of Business and Management and Faculty Scholarship Coordinator, Instructor and Program Head of Bachelor of Secondary Education major in Mathematics, and Associate Professor V and Acting Chair of Department of Physical Education.

Life satisfaction was measured using an 8-item modified questionnaire adapted from The Satisfaction Life Scale, developed by Diener et al., (1985). Each item was responded using a four-point Likert scale ranging from 'strongly disagree' to 'strongly agree'.

Locus of control was assessed using an 8-item modified questionnaire adapted from Yemen & Clawson, (2003). Each item was responded to using a four-point Likert scale ranging from 'high external locus of control' to 'high internal locus of control'. Individuals who develop an internal locus of control believe they are solely responsible for their own success. Those who have an external locus of control believe that outside forces, such as chance, determine their outcomes (Mindtools, 2021).

Gender Identity was measured using an 8-item modified questionnaire adapted from Gender Identity Reflection and Rumination Scale (GRRS) developed byTreynor et al. (2003). Each item was responded using a four-point Likert scale ranging from 'never thought' to 'always thought'.

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Social Support was measured using an 8-item modified questionnaire adapted from The Multidimensional Scale of Perceived Social Supportdeveloped by Zimet et al. (1988).Each item was responded using a four-point Likert scale ranging from 'never received' to 'always received'.

Student engagement was measured using a 20-item questionnaire adopted from Levels of Students Engagement developed by Enerio (2021). It is divided into 4 subscales which measure the behavioral, cognitive, affective and social domain, each consisting of 5 items that wer e answered using using a four-point Likert scale ranging from 'never' to 'always'.

For collection of qualitative data, researchers used an expert validated researcher-made questionnaire which primarily aims to determine how the significant stress predictors affect students' academic engagement.

Data Gathering Procedure

The researchers administered the survey questionnaires through google forms, wherein respondents can easily access online and researchers can request permission respectively. The survey link was sent to the respondents' institutional email addresses. The data gathered from the completed Google forms were calculated using a weighted mean and examined the results through multiple-regression and correlation analysis. The outcome of the multiple-regression analysis served as the foundation for collecting qualitative data. The researchers collected qualitative data by random sampling, in which researchers randomly selected one student per course in every year level. They were interviewed to assess how academic stress predictors affect students' academic engagement.

Ethical Considerations

Responsible conduct of research involving human subjects requiresa set of ethical considerations. There are several ethical issues to take into account when doing social science research on human subjects. Privacy rights, informed consent, and harm protection are the three main areas of ethical concerns in human subject research (Beskow, 2020).

Physical or psychological harm may be possible. In the quantitative portion of the study, participants were not personally interacted with; hence, the risk of bodily damage was limited to what an individual may encounter while completing an online questionnaire. As emotional stress is manifested by psychological harm (Beskow, 2020), the researchers took measures to minimize activities that could subject participants to emotional or psychological stress. For the purpose of preventing psychological harm to participants, informed consent is necessary, allowing potential participants to decide whether the research activities may trigger excessive emotional stress. During the qualitative phase, the interview was conducted via phone call, arranged at the most convenient time for the participant.

The protection of participants' personal information and the guarantee of confidentiality are included in privacy rights. Participants were asked for their phone number; however, this information was used just to get in touch with them about participating in the study's qualitative phase. In this study, participant replies were kept confidential. Results are shown as compiled information and research findings. No personally identifiable information was revealed in the responses. Data from this research, such as survey responses and audio recordings, are kept secure throughout the whole study duration. After the completion of the study, the researchers will delete all confidential data collected.

Data Analysis

In keeping with the mixed methods research design, data analysis was done in two phases linked sequentially from quantitative to qualitative phases of data collection. During the quantitative phase, statistical analyses were performed using the data analytic softwaresJamovi and SPSS. The weighted mean was computed first and analyzed through multiple regression

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to determine the significant stress predictors in which the weighted mean of student engagement served as the dependent variable. Correlation was performed between the significant stress predictors and student engagement in order to evaluate if they have a significant relationship. The significance limit was set at $p < 0.05$.

In the follow-up qualitative phase, thematic analysis was used as it seeks to understand experiences, thoughts, or behaviours across a data set (Kigera, 2020) through data reduction and analysis strategy by which collected qualitative data are segmented, categorized, summarized, and reconstructed using a six-phase thematic analysis (Braun & Clarke, 2013). The phases that the researchers carried out were as follows:

Phase 1. Familiarization with the collected data through transcribing interviews, organizing responses and updating field notes. In this phase, the researcher gained preliminary understandings and made a note of any emerging themes.

Phase 2. Generating initial codes through examining the raw data to get the basic codes needed to respond to the study questions.

Phase 3. Searching for themes and identified its categories by sorting the previously obtained codes. All potential quotations associated with the determined themes had to be grouped in this phase.

Phase 4. Reviewing of themes by comparing them to the narratives to confirm the themes and categories' accuracy.

Phase 5. Refining the themes through generating a thematic book with themes.

Phase 6. Presentation of results by discussing it with vivid quotations addressing the study questions.

Result and Discussion

Quantitative Phase

Students' Level of Academic Engagement during Pandemic

Students' engagement refers to the amount of time and effort students devote to their academics and other educationally-relevant activities (Kuh, 2001). It is the willingness of students to participate in educational activities such as going to class, turning in assignments, and paying attention to what the teacher says in instruction is another factor that influences engagement (Chapman, 2003).

Chukwuorji et al., (2018) emphasized that students' locus of control as well as the received social support impacts their learning attitude. Moreover, (Kessels et al., (2014) highlighted that gender identity is essential in such decisions to success in life, while life satisfaction is frequently examined as the best predictor of a person's subjective life quality (Huebner et al., 2006). Among these factors, locus of control and life satisfaction are considered as personal whereas gender identity and social support are social factors.

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Table 1 Satisfaction Level of School of Teacher Education Students

Statements	Weighted Mean	Interpretation
1. In most ways, my life is close to my ideal.	2.72	Often Satisfied
2. The conditions of my life are excellent.	2.63	Often Satisfied
3. If problems occur, I find ways to have what I want in life.	3.06	Often Satisfied
4. So far, I have gotten the important things I want in life.	2.72	Often Satisfied
5. If I could live my life over again, I would change almost nothing.	2.55	Often Satisfied
6. I am confident that I will always get what I want in life.	2.47	Rarely Satisfied
7. I have the resources to have the life I want.	2.48	Rarely Satisfied
8. I never felt that I was left behind in terms of my needs and wants.	2.93	Often Satisfied
Overall Weighted Mean	**2.70**	**Often Satisfied**

Life Notes: 1. 00 - 1.75- Never Satisfied; 1.76 - 2.50 -Rarely Satisfied
2.51 - 3.25- Often Satisfied;. 3.26 - 4.0 -Always Satisfied

Table 1 presents the life satisfaction level of school of teacher education students, demonstrating that students are often satisfied and able to find ways to meet their desires in life and never left behind in terms of needs, giving them the impression that their situation is close to ideal. Furthermore, people frequently desire a sense of control, anticipating things to proceed as planned (Park & Baumeister, 2017), which acts as mental energy useful in conquering life's difficulties and barriers (Capa, Audiffren, &Ragot, 2008).

Moreover, students are rarely satisfied with the resources available to them in order to live the life they desire. It indicates that it is the outcome of comparing one's current position to one's expectations, or what one wants and what one has (Ozgen, 2012).

The students' level of life satisfaction is completely understood as often satisfied (Overall Weighted Mean=2.70) which suggests that in the majority of cases, students are living close to their ideal lives, since they have adequate resources to meet their basic necessities. They devise strategies to obtain what they desire in order to accomplish the important things in life, as (Park et al., 2010) noted, persons who believe their lives are more meaningful also report higher levels of satisfaction.Higher meaning in life and hope, as well as a high level of life satisfaction, can help people cope with dangerous irregularities (Abrams et al., 2005; Batthyany& Russo-Netzer, 2014), suggesting that those who have a strong sense of life meaning can play a significant role in supporting and maintaining the psychological health of those who experience problems and it is characterized by a balanced vision of the happy life, including the interaction of positives and negatives, meaning-centered, and cultural aspects.

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Table 2 Locus of Control Level of School of Teacher Education Students

Statements	Weighted Mean	Interpretation
1. I need to be kept informed about news current events.	3.19	Low Internal Locus of control
2. I did not know where I stand with other people.	2.58	Low Internal Locus of Control
3. If I do not succeed on a task, I tend to give up.	3.02	Low Internal Locus of Control
4. I usually convince others to do things my way.	2.38	Low External Locus of Control
5. I make difference in controlling mistake.	2.75	Low Internal Locus of Control
6. The success I have is largely a matter of chance.	2.21	Low External Locus of Control
7. I am the master of my own fate.	3.19	Low Internal Locus of Control
8. My life is managed even if it seems like a series of random events.	2.96	Low Internal Locus of Control
Overall Weighted Mean	**2.78**	**Low Internal Locus of Control**

Notes: 1.00 -1.75-High External Locus of Control; 1.76 - 2.50-Low External Locus of Control 2.51 -3.25-Low Internal Locus of Control; 3.26 - 4.00-High Internal Locus of Control

Table 2 presents the locus of control level of school of teacher education studentswhich demonstrates that students have a low internal locus of control, that makes them to perceive their lives as a series of random events; and are not likely to give up as they view themselves as the masters of their own fate.In fact, having an internal locus of control has been linked to seeking assistance, having optimistic thoughts, and experiencing reduced levels of stress in general (Gianakos, 2002; Gray-Stanley and Muramatsu, 2011; Gore et al., 2016).

Moreover, students shows that they have a low external locus of control since they typically succeed in convincing others to behave in the same manner as they do in order to create change.It was also highlighted by Yunusa, 2015that this can be accomplished by training, in a way that fosters self-efficiency and self-dependence.

The student's locus of control is identified as low internal locus of control (Overall Weighted Mean=2.78) which indicates that the majority of cases, students are capable of controlling and managing their own destiny and never give up on their goals. Additionally, Goyzman (2010) asserts that individuals with an internal locus of control experience less perceived stress, and as a result, are more capable of successfully completing tasks than individuals with an external locus of control. Students with an internal locus of control had higher-than-average college course grades (Kirkpatrick et al., 2008), indicating that they had a competitive advantage in the classroom. Having an internal locus of control is generally beneficial. Individuals with an internal locus of control are less likely to experience psychological stress and are more secure in their ability to influence outcomes in their lives.

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Table 3 *Gender Identity Level of School of Teacher Education Students*

Statements	Weighted Mean	Interpretation
1. I am comfortable with my gender expression.	3.31	Sometimes Thought
2. I think about how I experience gender in a unique way.	2.94	Sometimes Thought
3. I play back in my mind how my gender may have been interpreted in a past situation.	2.30	Rarely Thought
4. I evaluate how things about my personality reflect my gender identity.	2.05	Rarely Thought
5. I think about things I can't do because of my gender identity.	2.56	Sometimes Thought
6. I think I am able to present my gender the way I want.	3.06	Sometimes Thought
7. I analyze what people may be thinking about my gender identity.	2.33	Rarely Thought
8. I try to figure out what others think about my gender identity.	2.44	Rarely Thought
Overall Weighted Mean	**2.62**	**Sometimes Thought**

Notes: 1. 00 - 1.75- Never Thought; 1.76 - 2.50 -Rarely Thought
2.51 - 3.25- Sometimes Thought;. 3.26 - 4.0 -Always Thought

Table 3 displays the gender identity level of school of teacher education students and presents that they sometimes thought about their gender as a view of its distinctive aspect of themselves. According to Ansara& Hegarty, (2014) gender identity is linked to appearance and biological traits, which enable the students to exhibit themselves in the manner that best suits them.

In addition, students rarely thought on considering what others may be thinking about their gender identity. It was emphasized by Egan & Perry, (2001) that students may also feel peer and parental pressure to conform to gender role expectations that prompts them to evaluate past experiences that represent their gender identity.

The overall weighted mean of 2.62 which is interpreted as sometimes thought, was emphasized in the context that students are able to express their gender identity freely, feel secure in their gender expression, and comprehend their gender identity as a social structure (Risman, 2017) that provides a virtue for being a member of a society. It was highlighted by Couloute, (2018) that those who do not comply to gender norms may have issues in both systems as a result of being out as their complete true selves; in particular, their identification may lead to them being targeted for various sorts of violence and sexual assault.

Table 4 *Level of Received Social Support of School of Teacher Education Students*

Statements	Weighted Mean	Interpretation
1. There is someone who is around when I am in need.	3.21	Sometimes Received
2. There is a person with whom I can share my joys and sorrow.	3.21	Sometimes Received
3. I get the emotional help and support I need from my family.	3.09	Sometimes Received

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Statements	Weighted Mean	Interpretation
4. My friends really try to help me.	3.06	Sometimes Received
5. I can count on my friends when things go wrong.	2.94	Sometimes Received
6. I can talk about my problems with my family or a friend.	2.95	Sometimes Received
7. My family is willing to help me make decisions.	3.13	Sometimes Received
8. There is a person in my life who cares about my feelings.	3.20	Sometimes Received
Overall Weighted Mean	**3.10**	**Sometimes Received**

Notes: 1. 00 - 1.75- Never Received; 1.76 - 2.50 -Rarely Received
2.51 - 3.25- Sometimes Received; 3.26 - 4.0 -Always Received

Table 4 shows the level of received social support of school of teacher education students and presents that they sometimes received emotional support from friends and family who care about how they feel and are willing to let them share the joy and sorrow in life as a key of making decisions. In addition, the received social support of students has an average weighted mean of 3.10 and emphasized that students can obtain the necessary social support, reinforcing the notion that social support enhances overall quality of life and acts as a protective buffer against unfavorable life events (The Importance of Social Support, 2017). Perceived social support has been repeatedly linked to well-being, as perceived amounts of support, affection, and caring can generate favorable experiences (e.g., Siedlecki et al., 2014). According to Uchino et al. (2013), increased perceived social support is connected with improved physical and mental health outcomes, implying that students are more engaged when they get support from their peers.

Level of Students' Academic Engagement

Table 5 *Level of Students' Affective Engagement*

Statements	Weighted Mean	Interpretation
1. I felt encouraged to explore ideas creatively.	3.28	Very High
2. I felt that the campus is a supportive place to learn.	3.33	Very High
3. I felt part of an academic community in the College.	3.19	High
4. I developed valuable relationships with members of the College staff.	2.88	High
5. I received comments on my work from teachers who helped me learn.	2.94	High
Overall Weighted Mean	**3.12**	**High**

Notes: *1. 00 - 1.75- Very Low; 1.76 - 2.50 -Low*
2.51 - 3.25- High; 3.26 - 4.0 –Very High

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Table 5 displays the level of students' affective engagement which presents that students have very high level of support from learning environment. In addition, Juchniewicz, (2010) emphasized that effective communication and social skills encourage students to explore and develop creative ideas.

Furthermore, students have high valuable relationships with members of the College staff. Faculty support including expressions of care and respect has also been associated with positive feelings toward and emotional commitment to an institution (LaMastro, 2001) which make students feel the essence of learning and integral part of the college community.

The overall mean of the level of students' affective engagement indicates that they have high educational atmosphere organized by faculty which gives a significant impact on student learning. Institutions where teachers foster a learning environment that make students become an active participant in their learning are examples of good educational approaches. Similarly, DeVito (2016) stated that students become involved in learning when they understand the teacher's expectations and have the opportunity to participate in decision-making. It is strengthened by Groves et. al (2015) which emphasized that the quality of student relationships with their teachers was found to be the most important factor that affects student engagement, as well as the institutional supports that students'received in order to be actively engaged.

Table 6 *Level of Students' Cognitive Engagement*

Statements	Weighted Mean	Interpretation
1. I worked hard to understand difficult content.	3.41	Very High
2. I was given enough materials to keep up my interest.	2.93	High
3. I pushed myself to understand things I find confusing.	3.33	Very High
4. I received feedback quickly enough to improve my work.	2.84	High
5. I developed academic interests because of the resources available in the College.	3.01	High
Overall Weighted Mean	**3.10**	**High**

Notes: *1. 00 - 1.75- Very Low; 1.76 - 2.50 -Low*
2.51 - 3.25- High; 3.26 - 4.0 –Very High

Table 6 shows the level of students' cognitive engagement which presents that students possess a very high capacity for comprehending challenging material and motivation to understand things that are difficult. Moreover, when students are satisfied with their learning outcomes, they move on to a new problem, and the cycle begins again (Hmelo-Silver 2004; Schmidt 1993), that develops critical thinking skills.

In addition, students were provided with high enough materials to maintain their interest and received timely feedback to developed their academic interests.In fact, interest is a potent motivator that energizes learning (Renninger&Hidi, 2016), because when students are interested in an academic topic, they are more likely to go to class, pay attention, become engaged and effectively perform well (Hidi&Harackiewicz, 2000).

The average weighted mean (3.10) of students' cognitive engagement is high. Fredericks et al. (2004), emphasized, that the students' attentiveness and willingness to acquire difficult

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abilities and utilize deep processing strategies such as elaboration, organization, and critical thinking are likely to outperform pupils who use superficial or sallow methods such as rehearsing. Furthermore, Greene, Miller, Crowson, Duke, and Akey (2004) discovered that cognitive and metacognitive strategies were significantly linked to academic engagement, and it has been identified as a good indicator of students' learning and achievement, implying that cognitively engaged students appeared to use a variety of strategies in their learning.

Table 7 Level of Students' Behavioral Engagement

Statements	Weighted Mean	Interpretation
1. I asked teachers about the lessons.	2.85	High
2. I actively asked for help whenever needed.	3.04	High
3. I studied at my own pace.	3.42	Very High
4. I set high-performance standards for myself.	3.00	High
5. I looked for other learning resources/references.	3.30	Very High
Overall Weighted Mean	**3.12**	**High**

Notes: *1. 00 - 1.75- Very Low; 1.76 - 2.50 –Low 2.51 - 3.25- High; 3.26 - 4.0 –Very High*

Table 7 presents the level of students' behavioral engagement which presents that they have very high capacity to learn on their own. It highlighted the student's participation in academic activities and efforts to perform academic tasks (Fredricks et al. 2004; Suarez-Orozco et al. 2009) through searching for various learning materials and references.

In addition, students hold high standards of performance and actively asked question to professors on the content of the lectures if necessary. Additionally, Sekhri, (2012) states that free communication between student and teacher is necessary as more conceptualization happens.

The overall weighted mean displays the students have highbehavioral engagement.This shows that students' behavioral engagement is reflected on student's participation in academic and extracurricular activities. According to Middleton et al., (2017), engagement manifests itself through activity, which includes both observable behavior and mental activity that requires attention, effort, cognition, and emotion. It was also supported by Wang et al. (2016) which emphasized that higher levels of behavioral engagement were associated with increased academic achievement.

Table 8 *Level of Students' Social Engagement*

Statements	Weighted Mean	Interpretation
1. I interacted with other students.	3.24	High
2. I worked with other students on projects/assignments during class or outside the class.	3.12	High
3. I attended social events organized by the College.	2.87	High
4. I attended cultural events organized by the College.	2.79	High
5. I attended sporting events organized by the College.	2.71	High
Overall Weighted Mean	**2.95**	**High**

Notes: *1. 00 - 1.75- Very Low; 1.76 - 2.50 -Low*
2.51 - 3.25- High; 3.26 - 4.0 –Very High

Table 8 presents the level of students' social engagement which shows that students have high levels of interaction with other students through the completion of projects and

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assignments that take place both inside and outside of the traditional classroom environment, and participated in the cultural, social, and athletic college events. Moreover, the average weighted mean (2.95)shows that social interaction is vital to the learning process. Coates (2005), stressed that institutions need to provide students with the appropriate resources and opportunities to make possible and promote specific kinds of interactions. Moreover, De Vito (2016), added that students actively engaged in the school if they feel the sense of belonging, fair treatment, free exercise of thoughts, and fair attitude. Socially interactive learners are engaged learners (Vacca et al., 2011) and Routman (2005) emphasized that students learn more when they are able to talk to one another and be actively involved.

Table 9 *Multiple Regression Analysis among Academic Stress Predictors (Independent Variable) and Student Engagement (Dependent Variable)*

Model Coefficients - Student Engagement				
Predictor	**Estimate**	**SE**	**t**	**p**
Intercept	0.8715	0.3421	2.547	0.012
Life Satisfaction	0.2055	0.0842	2.441	0.015
Locus of Control	0.3283	0.1089	3.014	0.003
Gender Identity	0.0464	0.0871	0.533	0.595
Social Support	0.2014	0.0521	3.868	< .005

*Significant at **α=0.05**

Table 9 shows that life satisfaction has a p-value of 0.015, locus of control has a p-value of 0.003, gender identity has a p-value of 0.595, and social support has a p-value of <.005. It emphasizes that among the stress predictors life satisfaction, locus of control and social support are statistically significant because the p-values for these terms are less than the significance level of 0.05. It was discovered by (Coccia& Darling, 2014; Kaya et al., 2015) that life satisfaction is related to a variety of other significant life components, including stress, social supports, and locus of control.

Table 10 *Level of Student Engagement and Significant Stress Predictor*

Correlations

*Pearson Correlation Sig. (2-tailed)

Variable	No. of Research Participants	Mean	St. Dev.	r - value	p-value	Interpretation
Significant Stress Predictor	222	2.843	0.471	.448 *	0.000	Significant
Students Engagement	222	3.075	0.428			

*Significant at α = 0.01 (2-tailed)

Correlation Size: r < .30–None or very weak; .31<r<.50–Weak; .51<r< .70–Moderate; .71<r<.90–Strong; and .91<r< 1.0–Very Strong

Note: r-value interpretation- *weak correlation*

p-value interpretation –*significant*

Table 10 presents the test of significant relationship between the level of student engagement and significant stress predictor. As shown in the r-valuewhich is interpreted .448,

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it entails that there is a weak and it is positive correlation between the two variables. Furthermore, the p-value suggests that there is significant relationship between the variables. Hence, student engagement and the significant stress predictors are interrelated. Academic stress may have a substantial impact on student's academic engagement (Manikandan&Neethu, 2018). Academic stress and student engagement are negatively associated, with a higher degree of student stress resulting in a lower level of student engagement, particularly for students entering a new environment (Kadiyono&Liyani, 2019).

Qualitative phase

This phase focuses into the relationship between stress predictors and academic student engagement in greater depth. The presentation of the findings included a discussion of how stress predictors affect students' academic engagement in school.

There were nine themes that emerged from the answers of the participants regarding the effect of the stress predictors on academic engagement. The results were presented in a themed book, which had 23 initial codes, 11 categories, and nine themes. The themes are given in the following table.

Table 11 *Effects of Stress Predictors to Students' Academic Engagement*

THEMES
1. Higher level of life satisfaction, increases student's engagement.
2. Part-time work reduces academic engagement.
3. Positive attitude leads to higher academic engagement.
4. Students engage more when they have control over their own lives.
5. Sufficient social support encourage students to be more engaged.
6. The choice of learning modality affects student engagement.
7. Study habits have an impact on academic engagement.
8. The learning environment influences student engagement.
9. School support drives student engagement.

Higher level of life satisfaction, increases student's engagement. This is the first theme came out from the effects of stress predictors on students' academic engagement. A better life situation has a positive effect on academic engagement, while financial insecurity has a negative effect. Students' own level of life satisfaction is affected by how they engage in academic matters. They shared:

> *It does not have a negative effect on me because I have the resources. I have gadgets, a laptop, and I also have an internet connection. Though it makes me dependent and lazy at times, I am generally happy with my life. It helped me a lot. (S1)*

> *As of now, it is an advantage for me. I have the complete resources to attend online classes. (S7)*

> *I was not born into a professional and wealthy family, so I don't really have complete resources for online learning and we are financially unstable as well. This really has a negative impact on my academic engagement, but not to the extent that I tend to lose interest. (S2)*

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> *I don't really have all the resources. I opted modular, but when we had a virtual gathering, I went to PisoNet to attend. I can only know the announcements in our GCs, but it really takes time. (S11)*

In class, students engaged if they are happier and are embodied with the thing they wanted. Higher levels of student engagement translate into higher levels of student life satisfaction, and the school environment has an impact on this development by providing opportunities for students to become more involved in their learning (Safira, 2020). Engagement in school is significantly associated with life satisfaction (Yuen, 2016).

Part-time work reduces student involvement. This is the second theme emerged from the effects of stress predictors on students' academic engagement. Part-time work nowadays is common due to the new normal mode of learning. Acquiring part-time works compromised the academic engagement of students. It gives more weigh on the academic engagement of the students. A student highlighted:

> *My part-time job affects my academic engagement. This feeling that you don't have any budget, especially when you don't have mobile data to download the file, means I will be less active in studies. That is why I need to find a part-time job, but then sometimes I don't have time to open my modules. (S6)*

Busy days lead to forget that they have modules to be answered and other activities to be submitted. High school students who work may overextend themselves, resulting in worse marks. According to the Association for Supervision and Curriculum Development (ASCD), Herbert Marsh and Sabina Kleitman discovered that as students labor longer hours, their grades suffer. Additionally, they are more likely than their non-working peers to have weaker academic and professional ambitions, including a lower likelihood of attending college. This is true for all pupils, independent of color, gender, financial status, or academic aptitude, as the research discovered.

A positive attitude leads to higher academic engagement. This is the third theme that came out from the effects of stress predictors on students' academic engagement. Positive traits of students drive them to be engaged in their studies. In tough times, a positive trait saves a student from uncertainties. They shared:

> *Typically, we will encounter numerous problems along the way; after all, stress is constant and accumulates on you as an individual. Just like holding a bottle of water, no matter what the weight of the water is, if you always carry it, you feel numb and paralyzed that there seems to be no bottle of water. There you need to release your stress. I mean, it's good to think a little, but in the long run, you don't need to come back from the stress that you've always been facing. It won't give you a good product in the end, especially since we're students and we're too young to be stressed. (S2)*
>
> *There are times that I am left behind in my studies but I find ways to comply it. It does not affect my academic engagement. (S11)*

Academic optimism is a concept that has been demonstrated to be associated with resilience, positive psychology, and engagement, and it has also been proven to be a role in higher student accomplishment (Hoy, Tarter, & Woolfolk Hoy, 2006). In the academic setting, similar relationships exist, with engagement positively influencing optimism, which in turn

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positively influences student perceptions of performance. Individual performance is linked to high levels of student engagement (Medlin & Faulk, 2016).

Students engage more when they have control over their own lives. This is the fourth theme that came out from the effects of stress predictors on students' academic engagement. Students' academic engagement increased because they control the changes in their lives. Controlled changes in life leads to increased academic engagement. They shared:

> *I am an extrovert around people I know and an introvert around people I don't. So far, I have matured and can control the changes in my life. (S1)*
>
> *I managed the changes in my life. I can control whatever changes in my studies so they don't affect my academic engagement. (S2)*

An administrator on lisbdnet.com (2021) stated that a person who possesses self-control does not become easily distracted. They will be able to better manage their time and resources as a result of this. They have a proclivity to put in consistent and focused efforts toward their objectives, which increases the likelihood of success. The administration also stated that allowing students to participate in and take charge of their education provides them with the skills they need to be significantly more effective. Students become more open to instruction when they are given more control over some aspects of the classroom. They also remain more interested in what they are learning and are more eager to take on difficulties when they are given more control over certain aspects of the classroom.

Sufficient social support encourages students to be more engaged. This is the fifth theme that came out from the effects of stress predictors on students' academic engagement. Student engaged because of the social support they received from their family, friends and special someone. Receiving a lot of social support has a good impact on academic engagement. They said:

> *Right now, the people around me are my friends and my churchmates. They have a huge impact on my academic engagement. (S1)*
>
> *My social connection before was quite low because of the pandemic where lockdowns were implemented. But, I received social support at this time, and it had a positive effect on my academic engagement. (S12)*
>
> *My social support does not have any bad effects on my academic engagement. My relationship with my parents is okay, but there are times that I am in the room alone. Maybe because my parents will not disturb me so that I will not get a distraction from my class. It is me who lacks interaction with them, but it does not affect my studies because they always support me. (S7)*

Social engagement reveals a positive relationship between students. When they needed assistance, they turned to their classmates. They were more than classmates; they were friends who treated each other as if they were brothers and sisters. These encourage students to participate in academic activities (Enerio, 2021). Parental support has been linked to increased student involvement (Estell & Perdue, 2013; Garcia-Reid et al., 2015); to increased academic engagement; and to increased school satisfaction (Gutiérrez et al., 2017). Additionally, teacher support has been shown to be positively associated with student engagement

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(Brioux&Oubrayrie-Roussel, 2017; Kalil&Ziol-Guest, 2008); is a significant predictor of classroom engagement (Kilday& Ryan, 2019); and plays a critical role in promoting student motivation and belongingness (Kiefer et al., 2015).

The choice of learning modality affects student engagement. This is the sixth theme that came out from the effects of stress predictors on students' academic engagement. Students' academic engagement sometimes varies depending on what specifically learning modality they opted for. Inappropriate learning modalities are detrimental to academic engagement. Six out of twelve participants stated that they eventually get bored when complying well with requirements because of the longer deadlines. They emphasized:

> *My major subject really stresses me out. Maybe not only me, but definitely my classmates as well. We never had a formal online class; they just gave us activities to upload online. We are no different from those who have a modular learning modality, and that really stressed me out. (S1)*

> *It's okay, but in terms of the activities that have no deadline, I tend not to finish the activities that need to be done sooner rather than later. (S7)*

Opted learning modality gives a negative effect on students' academic engagement when not taken seriously. In situations when the deadline is distant in the future, people are more prone to believe that the task will be difficult to complete. Procrastination, increased spending on the work, and even risking abandonment of the job are all consequences of this situation for them (Zhu, 2018). There was a significant, negative relationship found between student achievement growth and the proportion of days spent in virtual mode (Aduana et al., 2022).

Study habits have an impact on academic engagement. This is the seventh theme that came out from the effects of stress predictors on students' academic engagement. Distracted easily and losing focus, these negative study habits lowered academic engagement. Students engaged because of the way they deal with their studies. They shared:

> *First, I need to adjust harder because of the pandemic. Before, I could focus, unlike now when there are so many distractions, but I can handle it. It can affect it, but not so much. (S8)*

> *Sometimes I lose focus considering that we are in pandemic, this time I got bored maybe because of my ways in studying. (S12)*

Negative study habits lowered academic engagement. In the contrary, positive study habits fueled up the student's desire in engaging into their academic matters. In academics, academic success is a complicated process that is affected by a variety of factors, including study habits. Study habits are distinct patterns of individual behavior in connection to studying, and they are a combination of study approach and competence. Instead, study habits are actions and abilities that can boost motivation and convert the study into an effective process with high returns, which in turn increases the amount of information learned. Additionally, any action that assists in the process of learning about a topic, solving issues, or memorizing a portion or all of the offered content is considered to be a part of this skill set. It is true that good study habits are the key to success, and they vary from person to person (Jafari et al., 2019).

The learning environment influences student engagement. This is the eighth theme that came out from the effects of stress predictors on students' academic engagement. Students

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engaged based on what is the condition on their surroundings. Students attend online classes but are distracted by noises at home. This devastation makes it difficult for them to concentrate on my studies. A student shared:

> *It is extremely difficult because there are so many devastations in family and school matters. I also need to work on it because I completely forgot about my study schedule. I attended class and also meetings, but the activities given will not be finished on time. I cannot give my full attention during classes because there is so much noise at home. (S5)*

Hendrix (2019) authored an essay in which she discusses how a variety of elements, such as sitting, lighting, noise, and even color, may influence one's capacity to learn. A good learning environment has been found to result in students who are more motivated, engaged, and possess greater overall learning capacity. Students learning in bad surroundings, on the other hand, such as those that are unpleasant, noisy, or full of distractions, will find it far more difficult to retain knowledge and remain engaged. There are several factors in our homes that are lacking for our children, which have a negative impact and a low correlation with students' academic achievement. As a result, it is recommended that students be provided with a peaceful home environment for studying, which may aid in students' overall development. The most appropriate method is to devote adequate time to children and to create an educational environment at home (Khan et al., 2019)

School support drives student engagement. This is the ninth and last theme that came out from the effects of stress predictors on students' academic engagement. The rules, protocols, and processes that organizations use to efficiently legislate, plan, and manage their operations, as well as successfully coordinate with others, in order to carry out their mandate are referred to as institutional arrangements. The intervention of the institution somewhat matters in students' academic engagement. They shared:

> *I don't really feel the full support from the school; they are not really cooperating with us. I imagine we are future educators and what they are doing lessens my trust in them. I really fell into the trap of feeling I don't want to be a teacher anymore. It really affects my academic engagement. (S2)*

> *We do not have formal classes because they just send us files. (S12)*

Physical resources and staff competency, according to Abbasi and Mir (2012), are essential factors in affecting the performance of children in school. Students' quantitative academic performance improve as a result of successful instruction, according to Trigwell and Prosser, for example. As a result, boosting teacher quality may be utilized as a technique to help students reach higher levels of success. Professor Heinesen (2010) went on to say that teachers' ability and competency are important factors in enhancing students' performance, and that instructors' teaching styles help students better comprehend the subjects they are taught. Ogbogu (2014), on the other hand, discovered in her research that, in general, institutional factors alone did not have a significant impact on students' performance.

The following results from the qualitative phase provided additional information to supplement the information acquired during the quantitative phase. The level of enjoyment experienced by the students had an impact on their academic engagement. Being able to access resources for new normal learning while also experiencing a rise in life pleasure leads to improved academic

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engagement. Students who have good study habits and maintain a typical level of life management are more likely to have an optimistic outlook on their academic performance. Studies have found that considerations about gender identity have no influence on academic participation and actually result in a more positive interest in studies. Students' academic engagement is affected by how much support they get from their friends and family. The more support they get, the more academic engagement they have.

Findings

From the survey conducted, the following were found.

1. Students' level of academic stress predictors

1.1 Life Satisfaction is interpreted as often satisfied. Since they have sufficient means to cover their fundamental needs, the students are living very close to their ideal lives. Individuals who believe their lives are more significant also report higher levels of satisfaction. They design ways to achieve what they seek to accomplish the important things in their lives.

1.2 Locus of Control is characterized by a low internal locus of control. This implies that, in the vast majority of situations, students are capable of directing and managing their own fate, and they never give up on their dreams and aspirations.

1.3 Gender Identity is sometimes interpreted. Throughout this study, students learn to express their gender identity freely, how to feel confident in their gender expression, and how to see their gender identity as a social structure that gives a virtue for being a contributing part of a community.

1.4 Social support is interpreted as sometimes received. Providing students with the required social support helps to reinforce the idea that social support improves overall quality of life and works as a protective buffer against negative life circumstances.

2. Level of Students' Academic Engagement

2.1 Students' level of affective engagement is interpreted as high. Students said that the campus is a good place to learn, that they were encouraged to try out new ideas, and that they felt like they belonged to a group of smart people at the college.

2.2 Students' level of cognitive engagement is interpreted as high. The resources offered at the college make students work hard to comprehend challenging information, push them to understand things that they found confusing, and help them acquire intellectual interests.

2.3 Students' level of behavioural engagement is interpreted as high. Students were free to study at their own speed, explore additional materials, and ask for assistance whenever necessary.

2.4 Students' level of social engagement is interpreted as high. The students connected and participated in social, cultural, and sporting events that were arranged by the University.

3. The significant academic stress predictors of the students are Life Satisfaction with a p-value of 0.015, Locus of Control with a p-value of 0.003, and Social Support with a p-value of <0.005. It emphasizes that among the stress predictors, life satisfaction, locus of control, and social support are statistically significant because the p-values for these terms are less than the significance level of 0.05.

4. There is a significant relationship between the significant stress predictor and student engagement, with an r-value of 0.448, that entails that there is a weak and negative correlation between the two variables.

Moreover, the p-value suggests that there is a significant relationship between the variables.

5. The following themes emerged on how stress predictors affect stress.

5.1. A higher level of life satisfaction increases students' engagement.

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5.2. Part-time work reduces academic engagement.
5.3. Positive attitude leads to higher academic engagement.
5.4. Students engage more when they have control over their own lives.
5.5. Sufficient social support encourages students to be more engaged.
5.6. The choice of learning modality affects student engagement.
5.7. Study habits have an impact on academic engagement.
5.8. The learning environment influences student engagement.
5.9. School support drives student engagement.

Conclusion

The study confirmed that a student's life satisfaction, locus of control, and social support influenced students' academic engagement, wherein there is a significant relationship between student engagement and the prevailing significant stress predictors.

The students' level of engagement is interpreted as high and can be enhanced through a learner-to-instructor engagement. This reinforces the belief that institutions need to design and deliver engaging learning experiences for students to be more engaged in any form of learning modality. On the other hand, students' learning environment should be taken into consideration to improve students' study habits. Taken together, institutional and home arrangement drives student engagement.

Recommendations

Based on the findings and conclusions drawn from the participants' responses, the following actions are recommended to address the significant academic stress predictors and increase student engagement:

The school must provide a learning environment for students in order to increase academic engagement to a more significant level. With this, the school has to come up with various programs to help students deal with their own stress accordingly.

The institution must revisit the curriculum arrangement in order to review its policies and determine the things needed to be retained, improved, or omitted.

The institution should conduct a symposium or workshop that aims to improve student and teacher engagement, and enhance skills needed in order to flexibly adapt new or modified learning strategies in different learning settings.

Invite parents or guardians to organized symposiums to give awareness about different stress predictors and their relationship with students' academic engagement. It will allow them to realize the importance of social support that gives students inspiration to perform well in school.

Students may participate in any activity designed by the College or teachers to help them develop a positive self-concept and ability to function independently, enjoy developing relationships with others, and believe they are capable of accomplishing their goals.

Future researchers can extend this study by figuring out the best coping mechanisms to diminish the impact of stressful events.

Further research with other academic stress predictors and their impact on student engagement in higher education in the Philippines during the pandemic may be undertaken.

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