**PROBLEMS ENCOUNTERED BY STEM STUDENTS**



A RESEARCH PAPER

Presented to Ms. Maricel Amiler

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Iligan City National High School (ICNHS)

Iligan City

In Partial Fulfillment

of the Requirements for Grade 11 Curriculum

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**Conceptual and Theoretical Framework**

STUDENT’S PROFILE PROBLEMS ENCOUNTERED COPING MECHANISMS

Sleep

Playing Games

Movie Marathon

Eating

Attending Mass

Exercise / Zumba

Reading Novel

Meditation

Shopping

Travel

AFAM

Going Out

TikTok

Large Class

Time Management

Overloaded Activities

Learning Capacity

Mental Health

Peer Pressure

Parental Pressure

Laziness

Difficult Subjects

Lack of Motivation

Family Problem

Financial Problem

Age

Gender

Religion

Relationship Status

JHS Curriculum

Working Status

Father’s Highest Educational Attainment

Mother’s Highest Educational Attainment

Father’s Occupation

Mother’s Occupation

Parents’ Monthly Income

No. of hours sleeping at night





ASSISTANCE NEEDED

Free Printing Station h. Remedial Class

Health Break I. Tutor

Proper Security j. Spiritual Support

Public Library k. Less School Activities

Advice's l. Wash Day

Scholarships m. Free Lunch

Lessen Activities n. No Miscellaneous Fee

**Figure 1:** Schematic Diagram of the Study

**Statement of the Problem**

**Research Questions:**

1. What is student’s profile in terms of:

1. age;
2. gender;
3. religion;
4. relationship status;
5. JHS curriculum;
6. no. of hours sleeping at night;
7. father’s highest educational attainment;
8. mother’s highest educational attainment;
9. father’s occupation;
10. mother’s occupation; and
11. parent’s monthly income?

2. What are the problems encountered by STEM students?

3. Is there significant relationship between the problems encountered and student’s profile?

4. What are the coping mechanisms done by STEM students?

5. What are the assistance needed by STEM students?

**PAIS of the Table Assigned to Me**

Table 3 shows the religions of STEM Students. The table reveals that 27 or 50.94% of the respondents are Roman Catholic being the predominant group and followed by 14 or 26.42% are Islam.This indicates that the majority of the respondents were Roman Catholic and Islam. The notable presence of Roman Catholic and Islam affiliations among STEM students suggests that religious identity plays a role in shaping the problem encountered by Stem Students. As cited in the study by Seymour and Hunter (2019), factors like insecurity and social isolation are commonly encountered problems among STEM students. On the other hand this research can help educators develop programs to support STEM students from diverse backgrounds, including those with different religious affiliations.

**Table 3**: Religion of STEM Students

| Religion | Frequency | Percentage |
| --- | --- | --- |
| Islam | 14 | 26.42 |
| Roman Catholic | 27 | 50.94 |
| Pentecostal | 10 | 18.87 |
| INC | 0 | 0 |
| SDA | 2 | 3.77 |
| Jehova’s Witness | 0 | 0 |
| Mormons | 0 | 0 |
| Atheist | 0 | 0 |
| Overall Total | 53 | 100 |

Table 12 displays the parents’ monthly income of STEM students. The table reveals that among the surveyed STEM students, 20.75% have parents with a monthly income below ₱10,000, 24.53% have parents with incomes between ₱10,001 and ₱20,000, 28.30% have incomes between ₱20,001 and ₱30,000, and 26.42% have incomes above ₱30,001. These percentages add up to 100% of the total respondents. This implies that addressing financial constraints among parents could enhance STEM students' educational experiences and outcomes by enabling them to fully engage in educational opportunities and receive comprehensive academic support, both as students and as their children in general. According to Smith (2010), the findings in Table 12 underscore the socioeconomic challenges faced by parents of STEM students, emphasizing the urgent need for targeted interventions to alleviate financial burdens and foster a conducive learning environment for STEM education.

**Table 12**: Parent’s Monthly Income of Stem Students

|  |  |  |
| --- | --- | --- |
| Parent’s Monthly Income | Frequency | Percentage |
| Below-10,000 | 11 | 20.75 |
| 10,001-20,000 | 13 | 24.53 |
| 20,001-30,000 | 15 | 28.30 |
| 30,001-Above | 14 | 26.42 |
| OVERALL TOTAL | 53 | 100 |

Chapter 4

**PRESENTATION, ANALYSIS, AND INTERPRETATION OF DATA**

This chapter presents the analysis and interpretation of data concerning the perception of STEM students at Iligan City National High School regarding the Problems Encountered by STEM Students. The presentation, analysis, and interpretation of the gathered data follow the order of the identified problems. A questionnaire was utilized to determine the perception of the respondents.

Problem No. 1. What is the profile of the respondents in terms of:

1.1) age; 1.2) gender; 1.3) religion; 1.4) JHS curriculum; 1.5) working status; 1.6) time of sleeping at night; 1.7) father's highest educational attainment; 1.8) mother's highest educational attainment; 1.9) father's occupation; and 2.0) mother's occupation; 2.1) parents' monthly income?

1. **Age**

Table 1 shows the age of STEM students. The table reveals that among the respondents, 86.79% are aged 16-17, 11.32% are 18-19 of age, and only 1.89% are 20-21 of age. Furthermore, this implies that age can influence STEM students in facing their problems, may face challenges and difficulties in facing their problems due to the influence of their age and their maturity, while older students may find it challenging to face their problems due to their other responsibilities as they face adulthood. According to Rubio (2015), students of different ages face unique challenges in educational settings that can impact their ability to overcome obstacles.

**Table 1.** Age of STEM Students

|  |  |  |
| --- | --- | --- |
| **Age** | **Frequency** | **Percentage** |
| Below – 15 | 0 | 0 |
| 16 – 17 | 46 | 86.79 |
| 18 – 19 | 6 | 11.32 |
| 20 – 21 | 1 | 1.89 |
| 22 – 23 | 0 | 0 |
| 24 – above | 0 | 0 |
| **OVERALL TOTAL** | 53 | 100 |

1. **Gender**

Table 2 shows the gender of STEM students. The table reveals that 20 or 37.74% of the respondents are male, followed by 31 or 58.49% female students, and 2 or 3.77% LGBTQ students. This implies that challenges may be encountered by all students, alongside the varied experiences and perspectives influenced by individual gender. According to Frimpong (2023), the gender of students can indeed influence the challenges they face.

**Table 2.** Gender of STEM Students

|  |  |  |
| --- | --- | --- |
| **Gender** | **Frequency** | **Percentage** |
| Male | 20 | 37.74 |
| Female | 31 | 58.49 |
| LGBTQ | 2 | 3.77 |
| **OVERALL TOTAL** | 53 | 100 |

1. **Religion**

Table 3 displays the religious affiliations of STEM students. The table reveals that 50.94% of the respondents are Roman Catholic, followed by 26.42% identifying as Islam, 18.87% as Pentecostal, and 4.77% as Seventh-day Adventist (SDA), totaling 100%. This implies that half of the respondents will most likely encounter problems during their studies due to their religion's restrictions. As cited in the study of Khan (2020), students subjected to strict limitations based on religion often experience problems in their academic routines.

**Table 3.** Religion of STEM Students

|  |  |  |
| --- | --- | --- |
| **Religion** | **Frequency** | **Percentage** |
| Islam | 14 | 26.42 |
| Roman catholic | 27 | 50.94 |
| Penteconstal | 10 | 18.87 |
| INC | 0 | 0 |
| SDA | 2 | 3.77 |
| Jehova’s Witness | 0 | 0 |
| Mormons | 0 | 0 |
| Atheist | 0 | 0 |
| **OVERALL TOTAL** | 53 | 100 |

1. **Relationship Status**

Table 4 presents the relationship status of STEM students. The table reveals that among the STEM students surveyed, 83.03% or 44 are single, while only 16.98% or 9 are in a relationship. None of the students reported being in a complicated or open relationship. This indicates that most STEM students are single, and only a few are in relationships. The low number of complicated or open relationships suggests that these students might prioritize their studies over romantic relationships. But for those in relationships, there could be challenges, like managing time and having different goals for school and their relationship. According to Adams and Stevenson (2018), who explored the effects of relationship status on stress levels and coping strategies among university students, students in relationships may experience heightened stress due to the demands of balancing responsibilities as a student with relationship responsibilities.

**Table 4.** Relationship Status of STEM Students

|  |  |  |
| --- | --- | --- |
| **Relationship Status** | **Frequency** | **Percentage** |
| Single | 44 | 83.02 |
| In Relationship | 9 | 16.98 |
| Complicated | 0 | 0 |
| Open Relationship | 0 | 0 |
| **OVERALL TOTAL:** | 53 | 100 |

**E. JHS Curriculum**

Table 5 presents the JHS curriculums of STEM students. The table shows that many of the students, 33 or 94.34%, belong to the basic curriculum, 13 or 24.53% are in the science technology, and engineering program, 3 or 5.66% are from the sports and journalism curriculum, and 1 or 1.89% are from the arts curriculum. This indicates that their JHS curriculum influences the problems faced by STEM students. Among the challenges encountered by STEM students, large class sizes can impede personalized attention and hinder interactive learning experiences. Furthermore, managing overloaded activities alongside the demands of the Basic Curriculum can exacerbate time management struggles, potentially affecting academic performance and overall well-being. A study by Chen et al. (2020) explored the impact of class size on student engagement and found that it can impact students' experiences and challenges, supporting the idea that factors such as class sizes and time management within these curriculums can indeed influence the difficulties faced by students.

**Table 5.** JHS Curriculum of STEM Students

|  |  |  |
| --- | --- | --- |
| **JHS curriculum** | **Frequency** | **Percentage** |
| Science | 13 | 24.53 |
| Basic Curriculum | 33 | 62.26 |
| Open High | 0 | 0 |
| Arts | 1 | 1.89 |
| Sports | 3 | 5.66 |
| ALS | 0 | 0 |
| Journalism | 3 | 5.66 |
| SPED | 0 | 0 |
| OVERALL TOTAL: | 53 | 100 |

**F. Working Status**

Table 6 shows the working status of STEM students. The table reveals that only a small proportion, approximately 3 or 5.66%, hold jobs while studying. This implies that fewer students who are employed may directly experience the challenges faced by STEM students compared to those who are not working. However, it's worth noting that a significant number of STEM students are not employed, which suggests a potential challenge to their financial stability. According to a study by R. M. Summer, Megan McCoy, I. Barrena Trujillo, and Esperanza Rodriguez (2023), the difficulties encountered by STEM students, such as heavy coursework and demanding schedules, significantly impact working students, especially those who must juggle both work and academic responsibilities.

**Table 6.** Working Status of STEM Students

|  |  |  |
| --- | --- | --- |
| **Working Status** | **Frequency** | **Percentage** |
| Non-working | 50 | 94.34 |
| Working | 3 | 5.66 |
| **OVERALL TOTAL:** | 53 | 100 |

**G. No. of Hours Sleeping at Night**

Table 7 shows the number of hours STEM students sleep at night. It reveals that 2.77% of students sleep 1-3 hours per night, 66.04% sleep 4-6 hours, 30.19% sleep 7-9 hours, and 0% sleep 10 hours or more. A majority of STEM students had suboptimal sleep durations, defined as fewer than 7 hours. This implies that sleep duration influences the problems faced by STEM students. Students who do not get enough sleep may find it harder to handle problems. While students who sleep sufficiently are likely to address their problems due to having the correct amount of rest. According to the Centers for Disease Control and Prevention (2015), many middle and high school students aren't getting enough sleep, which can seriously affect their health and academic performance. On the other hand, students who get enough sleep are better equipped to tackle challenges because they benefit from the rest needed for their brains to function optimally.

**Table 7.** No. of Hours STEM Students Sleep at Night

|  |  |  |
| --- | --- | --- |
| **No. of Hours Sleeping at Night** | **Frequency** | **Percentage** |
| 1-3 | 2 | 2.77 |
| 4-6 | 35 | 64.04 |
| 7-9 | 16 | 30.19 |
| 10 - above | 0 | 0 |
| **OVERALL TOTAL:** | 53 | 100 |

**H. Father’s Highest Educational Attainment**

Table 8 presents the father's highest educational attainment among the STEM students. Table 8 reveals that 16.98 percent of fathers' are high school graduates, 15.09% are high college level, 11.32% are high school level, 1.89% are master's unit earners, and 1.8% are master's graduates, and the majority are college graduates with 30.19%. This implies that a father with a higher educational attainment means they have a high-paying job which also means they can completely support their children (students) financially, In contrast, fathers with no or low educational attainment cannot ‘completely’ or have a limit in supporting their children (students), which indicates that the educational attainment of fathers has a significant influence on the problems that STEM students face, as fathers' are one of the main contributors to the family. According to McMahon, W. W. (2009) , a higher education leads to better employability and higher pay.

**Table 8.** Father’s Highest Educational Attainment of STEM Students

|  |  |  |
| --- | --- | --- |
| **Father’s Highest**  **Educational Attainment** | **Frequency** | **Percentage** |
| None | 1 | 1.89 |
| Deceased | 4 | 7.55 |
| Elementary Level | 1 | 1.89 |
| Elementary Graduate | 2 | 3.77 |
| High School Level | 6 | 11.32 |
| High School Graduate | 9 | 16.98 |
| College Level | 8 | 15.09 |
| College Graduate | 16 | 30.19 |
| Master’s Unit Earner | 1 | 1.89 |
| Master’s Graduate PhD | 1 | 1.89 |
| Unit Earner | 0 | 0 |
| PhD Graduate | 0 | 0 |
| Vocational Skills Earner | 0 | 0 |
| Vocational Skills Graduate | 4 | 7.55 |
| **OVERALL TOTAL:** | 53 | 100 |

**I. Mother’s Highest Educational Attainment**

Table 9 shows the mother's highest educational attainment of STEM students. The table reveals that 16.98% of mothers have attained a college-level education, while 35.85% are college graduates. Additionally, 1.89% of mothers are master’s unit earners, 11.32% are master’s graduates, and 1.89% are vocational skills graduates. This implies that mothers with higher educational attainment are more likely to secure high-paying jobs, enabling them to provide comprehensive financial support for their children (students). According to Breiner (2016), mothers with higher educational attainment are more likely to have high-paying jobs, enabling them to provide better financial support for their children/students compared to mothers with lower educational attainment.

**Table 9.** Mother’s Highest Educational Attainment of STEM Students

|  |  |  |
| --- | --- | --- |
| **Mother’s Highest**  **Educational Attainment** | **Frequency** | **Percentage** |
| None | 1 | 1.89 |
| Deceased | 4 | 7.55 |
| Elementary Level | 1 | 1.89 |
| Elementary Graduate | 2 | 3.77 |
| High School Level | 6 | 11.32 |
| High School Graduate | 9 | 16.98 |
| College Level | 8 | 15.09 |
| College Graduate | 16 | 30.19 |
| Master’s Unit Earner | 1 | 1.89 |
| Master’s Graduate PhD | 1 | 1.89 |
| Unit Earner | 0 | 0 |
| PhD Graduate | 0 | 0 |
| Vocational Skills Earner | 0 | 0 |
| Vocational Skills Graduate | 4 | 7.55 |
| **OVERALL TOTAL:** | 53 | 100 |

**J. Father's Occupation**

Table 10 shows the father's occupations of STEM students. The table shows that among the respondents, 7.55% are unemployed, 7.55% are deceased, 7.55% are OFWs, 22.64% work in private organizations or are private employees, and 24.53% are employed in public organizations or are public employees. Lastly, 30.19% are self-employed. In light of this, STEM students are influenced by their fathers' occupations in facing their problems, students whose fathers have no occupation are more likely to face struggles in their problems due to financial instability, while students whose fathers are employed are more likely to be capable of addressing their issues due to their financial position. According to Shah (2021), parents' occupation status encompasses income and education realization. The nature of parents' occupation causes them to fail to provide whatever is needed to support and inspire their children and provide them with modern learning facilities to enhance their children's education due to the instability of finance, not only in academic matters but also in their needs as students.

**Table 10.** Father's Occupation of STEM Students

|  |  |  |
| --- | --- | --- |
| **Father’s Occupation** | **Frequency** | **Percentage** |
| Unemployed | 4 | 7.55 |
| Deceased | 4 | 7.55 |
| OFW | 4 | 7.55 |
| Private Employee | 12 | 22.64 |
| Public Employee | 13 | 24.53 |
| Self-employed | 16 | 30.19 |
| **OVERALL TOTAL:** | 53 | 100 |

**K. Mother’s Occupation**

Table 11 displays the mother's occupation among the STEM students. The table shows that 22.64% of mothers are self-employed, 13.21% are public employees, 20.75% are private employees, 1.89% are OFW, and the majority are housewives with 39.62%. This implies that the mother's occupation, especially housewife, has an impact on the problems that are encountered by STEM students, as mothers are an important part of the student's everyday lives as they nurture and provide for the family. As cited in the study of Claesson (1989), mothers' occupations, particularly housewives, play a significant role in shaping the problems encountered by STEM students.

**Table 11.** Mother’s Occupation of STEM Students

|  |  |  |
| --- | --- | --- |
| **Mother’s Occupation** | **Frequency** | **Percentage** |
| Housewife | 21 | 39.62 |
| Deceased | 1 | 1.89 |
| OFW | 1 | 1.89 |
| Private Employee | 11 | 20.75 |
| Public Employee | 17 | 13.21 |
| Self-employed | 12 | 22.64 |
| **OVERALL TOTAL:** | 53 | 100 |

**L. Parent’s Monthly Income**

Table 12 displays the parents’ monthly income of STEM students. The table reveals that among the surveyed STEM students, 20.75% have parents with a monthly income below ₱10,000, 24.53% have parents with incomes between ₱10,001 and ₱20,000, 28.30% have incomes between ₱20,001 and ₱30,000, and 26.42% have incomes above ₱30,001. These percentages add up to 100% of the total respondents. This implies that addressing financial constraints among parents could enhance STEM students' educational experiences and outcomes by enabling them to fully engage in educational opportunities and receive comprehensive academic support, both as students and as their children in general. According to Smith (2010), the findings in Table 12 underscore the socioeconomic challenges faced by parents of STEM students, emphasizing the urgent need for targeted interventions to alleviate financial burdens and foster a conducive learning environment for STEM education.

**Table 12.** Parent’s Monthly Income of Stem Students

|  |  |  |
| --- | --- | --- |
| **Parent’s Monthly Income** | **Frequency** | **Percentage** |
| Below - 10,000 | 11 | 20.75 |
| 10,001 - 20,000 | 13 | 24.53 |
| 20,001 - 30,000 | 15 | 28.30 |
| 30,001 - Above | 14 | 26.42 |
| **OVERALL TOTAL:** | 53 | 100 |

**M. Problems Encountered**

Table 13 presents the distribution of the respondents according to the problems they encountered. The table shows that 49 out of 53 students have a problem with time management, followed by 46 students with laziness, 43 students with overloaded activities, 36 students with difficult subjects, 32 students with lack of motivation, 29 students with mental health problems, 22 students with financial problems, 19 students with peer pressure, 17 students with learning capacity problems, 16 students with family problems, 12 students with parental pressure, and 9 students with large class problems. This implies that more than half of the respondents faced issues directly impacting their academic performance, including time management, laziness, and difficulties with subjects. These factors can be self-regulated by the students, hence their direct impact on academic performance. According to Keinonen (2018), problems such as time management, self-motivation, engagement, behavior, and attitudes—regulated by students themselves—are common among most students.

**Table 13. Problems Encountered by STEM Students**

|  |  |
| --- | --- |
| **Problems Encountered** | **Frequency** |
| Large Class | 9 |
| Time Management | 49 |
| Overloaded Activities | 42 |
| Learning Capacity | 17 |
| Mental Health | 26 |
| Peer Pressure | 23 |
| Parental Pressure | 30 |
| Laziness | 33 |
| Difficult Subjects | 28 |
| Subjects Lack of Motivation | 29 |
| Financial Problem | 22 |
| Family Problem | 20 |
| **OVERALL TOTAL:** | 328 |

**N. Coping Mechanisms**

Table 14 presents the coping mechanisms of STEM students. The table reveals that the most common coping mechanism is sleeping, accounting for 16.37%. Playing games and engaging in movie marathons were also prevalent, with 11.03% and 11.74% of students, respectively. Eating, attending church mass, and exercise or doing zumba were reported by 12.46%, 5.34%, and 3.91% of students, respectively. This implies that these coping mechanisms reflect the varied strategies employed by STEM students to manage their stress and navigate their academic and personal lives. According to Lazarus (1984), individuals engaging in coping strategies to manage internal and external stressors can certainly relieve stress and help students cope with their problems, as well as provide them with the tools to face life obstacles.

**Table 14.** Coping Mechanisms of STEM Students

|  |  |
| --- | --- |
| **Coping Mechanisms** | **Frequency** |
| Sleeping | 43 |
| Playing games | 30 |
| Movie Marathon | 33 |
| Eating | 35 |
| Attending Church Mass | 14 |
| Exercise/Zumba | 14 |
| Reading Novel | 20 |
| Meditation | 13 |
| Shopping | 14 |
| Doing Tiktok | 10 |
| Travel | 15 |
| Chatting With AFAM | 8 |
| Going Out With Friends | 33 |
| **OVERALL TOTAL:** | 282 |

CHAPTER 5

**FINDINGS, CONCLUSIONS, & RECOMMENDATIONS** This chapter presents the summary of findings, conclusions, and recommendations based on the data gathered.

**5.1 Summary**

This study determines the problems encountered by STEM students of Iligan City National High School during the school year 2023-2024. The descriptive research method was utilized in this study. The data were gathered through questionnaire and interview. The research instrument was validated by experts and subjected to tryout. This study sought to answer the following problems: (1) What is the profile of the respondents in terms of: (1.1) age; (1.2) gender; (1.3) religion; (1.4) relationship status; (1.5) JHS curriculum; (1.6) working status; (1.7) Father’s Highest Educational Attainment; (1.8) Mother’s Highest Educational Attainment; (1.9) Father’s Occupation; (1.10) Mother’s Occupation; (1.11) Parents’ Monthly Income; and (1.12) No. of hours sleeping at night. (2) What are the problems encountered by STEM students? (3) What are the coping mechanisms done by STEM students? (4) What are the assistance needed by STEM students?

**5.2 Findings**

Based on the analysis and interpretation of data gathered, the following findings were drawn:

1. The student’s profile in terms of:

1.1 86.79% are aged 16-17, 11.32% are 18-19 of age, and only 1.89% are 20-21 of age;

1.2 20 or 37.74% of the respondents are male, followed by 31 or 58.49% female students, and 2 or 3.77% LGBTQ students;

1.3 50.94% of the respondents are Roman Catholic, followed by 26.42% identifying as Islam, 18.87% as Pentecostal, and 4.77% as Seventh-day Adventist (SDA);

1.4 83.03% or 44 students are single, while only 16.98% or 9 students are in a relationship;

1.5 33 or 94.34%, belong to the basic curriculum, 13 or 24.53% are in the science technology, and engineering program, 3 or 5.66% are from the sports and journalism curriculum, and 1 or 1.89% are from the arts curriculum;

1.6 2.77% of students sleep 1-3 hours per night, 66.04% sleep 4-6 hours, 30.19% sleep 7-9 hours, and 0% sleep 10 hours or more;

1.7 50 or 94.34 are non-working students, and 3 or 5.66 are working students;

1.8 16.98 percent of fathers' are high school graduates, 15.09% are high college level, 11.32% are high school level, 1.89% are master's unit earners, and 1.8% are master's graduates, and the majority are college graduates with 30.19%;

1.9 16.98% of mothers have attained a college-level education, while 35.85% are college graduates. Additionally, 1.89% of mothers are master’s unit earners, 11.32% are master’s graduates, and 1.89% are vocational skills graduates;

1.10 7.55% of fathers are self-employed, 7.55% are deceased, 7.55% are OFWs, 22.64% work in private organizations or are private employees, and 24.53% are employed in public organizations or are public employees. Lastly, 30.19% are self-employed;

1.11 22.64% of mothers are self-employed, 13.21% are public employees, 20.75% are private employees, 1.89% are OFW, and the majority are housewives with 39.62%; and

1.12 20.75% have parents with a monthly income below ₱10,000, 24.53% have parents with incomes between ₱10,001 and ₱20,000, 28.30% have incomes between ₱20,001 and ₱30,000, and 26.42% have incomes above ₱30,001;

2. STEM students encounter a myriad of challenges throughout their academic journey, from navigating large class sizes to balancing overloaded activities and managing time effectively. The demanding coursework, coupled with high expectations for success, can often lead to mental health issues such as stress and anxiety. Moreover, peer and parental pressures can exacerbate these challenges, creating additional hurdles for students to overcome. Alongside academic difficulties, personal and financial problems may further impede their progress.

3. STEM students use various ways to cope with stress. They sleep well, play games, and watch movies for relaxation. Exercise, meditation, and attending religious services help them recharge physically and spiritually. Reading, shopping, and traveling provide enjoyable distractions. Socializing, exploring arts, and using platforms like TikTok offer fun and connection. These coping methods help STEM students stay balanced and resilient throughout their studies.

4. STEM students need various forms of support to succeed in their studies. This includes access to free printing and library resources, as well as extra help like tutoring if they're struggling. They also need a safe environment on campus with proper security. Taking breaks for health and offering spiritual support can boost their well-being. Financial assistance such as scholarships and free lunches helps ease their financial worries. It's also important to balance schoolwork with extracurricular activities. By providing this support, we can help STEM students thrive in their education.

**5.3 Conclusion**

The research delved into the demographic profiles of respondents, requiring their participation in a questionnaire to comprehensively understand the challenges confronting grade 11 STEM students at Mt. Pulag, Iligan City National High School. Consent was obtained prior to data collection, with inquiries covering age, gender, religion, JHS Curriculum, working status, Number of Hours sleeping at night, parents highest educational attainment and occupation, and family income. These factors were found to significantly influence the issues faced by STEM students.

A plethora of challenges emerged from the study, including large class, struggles with time management, overloaded activities , learning capacity, mental health, peer and parental pressures, laziness, difficult subjects, lack of motivation, and family and financial problem. Notably, time management emerged as the most pervasive issue among STEM students, warranting further attention.

The study illuminated various coping mechanisms adopted by STEM students to navigate these challenges. These strategies encompassed activities such as sleeping, playing games, movie marathon, eating, attending mass, excersices, reading novel, meditation, shopping, travel, AFAM, going out and doing tiktok. Among these coping mechanisms, sleeping emerged as the most prevalent solution embraced by STEM students as they grapple with the multitude of issues they encounter in their academic journey.

**5.4 Recommendation**

Provided with the findings of this study, the following are recommended:

1. There is a need for targeted interventions to improve time management skills and alleviate academic overload through personalized support mechanisms such as tutoring and mentorship programs.

2. Initiatives aimed at promoting mental health awareness and providing access to counseling services should be prioritized to support students' well-being.

3. Efforts should be made to alleviate financial burdens by offering scholarships, financial aid, and resources for students from low-income backgrounds. Providing a conducive learning environment with adequate resources and facilities, such as free printing and library access, can also enhance students' academic experiences.

4. Fostering a supportive and inclusive campus culture that values diversity and respects students' religious beliefs and cultural backgrounds is essential. This can be achieved through awareness campaigns, diversity training, and the promotion of inclusive policies and practices.

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**Abstract**

This study investigates the challenges encountered by Grade 11 STEM students at Iligan City National High School, focusing on demographic profiles and coping mechanisms. Through a questionnaire, data on age, gender, religion, curriculum, working status, sleep patterns, parental education, occupation, and family income were collected.

Findings reveal prevalent issues including time management, academic overload, mental health concerns, and financial pressures. Coping strategies such as sleep, gaming, and social activities were identified. Recommendations include providing academic support, addressing financial constraints, and promoting well-being initiatives.

Understanding these challenges and coping mechanisms is crucial for designing interventions to support STEM students effectively. This research contributes to enhancing student success and well-being in STEM education contexts.

**Reflection**

Practical research involves applying theoretical knowledge to real-world situations, ensuring that the results are relevant, actionable, and based on practical experience. Engaging in practical research equips student researchers with skills applicable to various aspects of life, fostering the ability to address real-world issues effectively with evidence-based solutions. Continuously participating in practical research aims to enhance problem-solving abilities, contribute positively to society, and foster innovation through empirical approaches.

Data collection, analysis, testing, and observation are key components of applied research, enabling informed decision-making through various techniques such as surveys, experiments, interviews, and observations. Analyzing gathered data allows researchers to deepen their understanding of the research topic by identifying patterns, trends, and connections, while experiments and observations help validate theories, assess results, and refine hypotheses. Literature reviews play a crucial role in practical research by informing hypothesis generation, technique development, and knowledge expansion, while creating research frameworks guides the study process from inception to conclusion.

Utilizing statistical software facilitates efficient data processing and interpretation, ensuring the credibility and reliability of research findings. Adherence to ethical standards and rigorous study methods promotes transparency and trustworthiness in research work. In summary, practical research provides a structured approach to conducting systematic investigations, generating new knowledge, and addressing everyday challenges. By employing practical research concepts, individuals, including students, can make informed decisions, propose innovative solutions, and contribute to positive change across various domains. The critical thinking, problem-solving, and data analysis skills honed through practical research enable individuals to effectively tackle complex problems with evidence-based approaches in both professional and academic settings. The application of practical research techniques holds the potential to drive advancements in healthcare, education, technology, and other fields, ultimately leading to societal improvement and progress.