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## PSYCHOLOGY

## Relationship of Emotional Intelligence and Coping Skills with Depressive Symptoms Among the Adolescents of Selected Sectarian Academies

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### Abstract

Depression is becoming a preeminent public health menace, and adolescents are being affected prevalently, and their manifestations can be different to adults. Nearly half of the people with depression are from the Southeast Asia and Pacific Regions, and Philippines has the highest number of depressed people in Southeast Asia. To contribute to the efforts in creating awareness in mental health in the Philippines, this study was conducted to identify the relationship of emotional intelligence and coping skills with depressive symptoms among adolescents. Using quantitative research design and convenient sampling technique, 30 junior and senior high school students enrolled in the academic year 2020-2021 participated. The survey questionnaires were adapted and modified. Data were gathered through online platform and were analyzed using the IBM SPSS Statistics version 23. Results showed that students' emotional intelligence scored *average* on self-regulation and motivation, and scored *high* on self-awareness, social skills, and empathy. Meanwhile, in terms of coping skills, they scored *low* on emotion-focused coping, and *average* on problem-focused coping. The depressive symptoms' severity is interpreted as *moderate* ( $M = 10.30$ ). Moreover, there is a *statistical negative moderate relationship* between self-regulation and depressive symptoms ( $r = -0.596, p = .001$ ). There is also a *positive moderate relationship* between self-awareness and problem-focused coping ( $r = .409, p < .001$ ), and social skills and problem-focused coping ( $r = .490, p < .006$ ). Recommendation includes utilizing a large sample population and exploring other factors that predicts or influence depressive symptoms can be considered.

**Keywords:** *emotional intelligence, coping skills, depressive symptoms, adolescents*

Depression is becoming a preeminent public health menace. Adolescents are being affected prevalently, and their manifestations can be different to adults. Nearly half of the people with depression are from the Southeast Asia and Pacific Regions. The Philippines has the highest number of depressed people in Southeast Asia. Mental illness ranked as the 3rd most common form of disability in the country as reported by the National Statistics Office. 3.3 million Filipinos are suffering from depressive disorders with suicide rates of 2.5 males and 1.7 females per 100,000 Filipino population according to the global burden of disease study in 2015, as reported by the National Center for Mental Health (Reyes, 2018). With the recently approved Mental Health Law by the government, it aims to help provide and improve the mental health facilities and promote mental health education to the school and community. However, the mental health awareness in the country is still not yet widespread- and conditions like depression is still not yet as acceptable as it should be; others make a fond joke and insults on it (Department of Health, 2019). According to Dr. Banaag, a professor emeritus at the University of the Philippines College of Medicine, young Filipinos today are amid mental health crisis such that young people are being depressed,

committing suicide, and are extremely stressed even at an early age. In addition, he cited WHO report on the increasing number of children and adolescents suffering from mental health disorder with an estimate of 10-20 percent. (Caruncho, 2019).

Despite the increasing awareness of depression, cases still arise (Rottenberg, 2014). Adolescent depression has a lot of negative effects in terms of education, relationships, health, and general functioning (Haugen et al., 2016). The study of Bhatia and Bhatia (2007) has a similar finding on depression affecting the children and adolescents' growth and development, academic performance, and relationships both in peers and family relations.

Emotional intelligence (EI), however, is defined as the person's ability to understand, manage, and use their own and other's feelings and emotions. A person with high EI can relate and empathize better with other people. Aguilar (2018) states that students with high EI can better handle their emotions, and they perform better in school. The study also revealed the correlation of internet and social media use to EI and mood. The more the student is exposed to interactive social media where they can relate with other people even virtual relations, the more they use social media, and the more they learn to manage their own emotions. It also plays an important role in the reduction of the negative mood state of an individual and is negatively related to perceived stress and depressive thoughts (Balluerka et al., 2013; Ciarrochi et al., 2002; Downey et al., 2010; Mikolajczak et al., 2009; Zavala & Lopez, 2012). However, EI is something not innate in a person but with proper treatment and intervention, it can be learned and improved.

Coping skills on the other hand is described as a constant change in the cognitive and behavioral effort in managing internal and external pressures beyond a person's capability (Lazarus & Folkman, 1984). Coping skills are methods used to handle life's stressful situations. Good coping skills is very essential for good mental health and wellness (Canadian Mental Health Association of Richmond, 2018). As elaborated by Sarafino and Smith (2019), coping is a continuous person-environment interaction as people thrive to manage the perceived discrepancy between the demand and appraisal in a stressful event.

Coping varies and does not necessarily succeed. There is no right or wrong coping as people use different coping skills to different problems and stressors and problems. It is only that people were able to develop habitual ways in dealing with their stressors and problems in life, and it also affects their interaction in facing new situations and challenges in life (Wei et al., 2008). Coping as a mechanism in times of adversity relies on the adaptiveness of the individual. When encountering a stressor, individuals either utilize emotion to maintain their psychological balance or would device to certain strategies to address it. Most researches agreed that emotion focused coping is used to address psychological distress, meanwhile, problem-focused coping is associated with less distress (Higgenbotham, 2015).

Thus, the goal of this study was to determine the influence of emotional intelligence and coping skills with depressive symptoms experienced by adolescents. This study is beneficial not only to the students, but to the parents, teachers, and counselors as well.

This study answered the following questions:

1. What is the respondents' level of emotional intelligence considering:
  - a. Self- awareness
  - b. Self- regulation
  - c. Motivation
  - d. Social Skills
  - e. Empathy

2. To what extent are the coping skills of the respondents in terms of:
  - a. Problem-focused coping
  - b. Emotion-focused coping
3. What is the extent of depressive symptoms manifested by the respondents?
4. Is there a significant relationship between the following variables?
  - a. Emotional Intelligence and Depressive Symptoms
  - b. Emotional Intelligence and Coping Skills
  - c. Coping Skills and Depressive Symptoms

## Methodology

### Research Design

The study utilized a quantitative research design more specifically descriptive and correlational research designs. Descriptive design was used to evaluate the influencing factor of emotional intelligence and coping skills on depressive symptoms experienced by adolescents. While correlational design was used to describe and explain the relationship emotional intelligence and depressive symptoms, emotional intelligence and coping skills, and coping skills and depressive symptoms.

### Population and Sampling Technique

This study was participated by 30 adolescents from 2 selected Christian high schools in the North Philippines, located in an urbanized area. Their age ranges are from 13 to 18 years old, enrolled in a junior or senior high school program for the academic year 2020-2021.

To get the sample from the target population, the researcher utilized convenient sampling technique. With the pandemic crisis being experienced at the time the study was conducted, convenient sampling method was deemed the most suitable for the situation. Samples were selected based on the respondents' availability, willingness to participate, and easy access on the researcher's part (Clemente, 2016).

### Respondent's Profile

The respondent's ages ranged from 13 to 18 years old, of which 63.33% are from 13-15 years old, and 36.67% are from aged 16 to 18 years old. In terms of sex, 53.3 % are female; and 46.7% are male. They were mostly Seventh Day Adventist (70%), Roman Catholic (23.3%), Born Again Christian (3.33%), and Iglesia ng Dios (3.33%). The respondents with a 10,000 and below monthly family income is 30%, 10,001 to 20, 000 is also 30%, meanwhile 26.67% have monthly family income of 20,001 to 40, 000, and 13.34 % from 40,001 and above.

### Instrumentation

Adopted and modified questionnaires were utilized to collect the data. It was submitted to content validity by 9 experts. The instrument was divided into 4 parts. The first part covered the demographic profile of the respondents such as their age, sex, religion, and monthly family income. The second part is a 9-item Patient Health questionnaire that measured depressive symptoms. The third part measured the emotional intelligence of the participants, and the last part measured the coping skills used by the respondents.



## Analysis of Data

A statistical analysis using SPSS version 23 was utilized in the analysis of the data. To determine the correlational component, the researcher used the Pearson-r correlation to examine the relationship between variables of emotional intelligence, coping skills, and depressive symptoms.

## Data Gathering Procedures

The collection of data was done through 2 mediums. One is the online platform utilizing the google forms, and second is paper and pen. This manner of data gathering was done due to the fluctuating internet connection to some students. The Links and the copy of the questionnaire were given to the schools' guidance counselors and through them, parents and students were reached, respectively.

## Ethical Considerations

Clearance from the university's Ethical Research Board was secured. Then an endorsement letter from AUP Center of Graduate Studies to the school principals were given prior to data collection. A detailed information on the purpose of the study and ethical considerations were explained in the parents' consent and participants' assent form since they were minor. Only those students with parents' consent and assent form were included in the study.

## Results and Discussions

### Respondents' Level of Emotional Intelligence

Table 1 shows the level of emotional intelligence of the respondents. Students' scored *average* on self-regulation and motivation, and *high* on self-awareness, social skills, and empathy. In general, scores showed that the respondents have *average to high* emotional intelligence. This means that they are aware of their own and other's emotions and know how to manage and control their emotions.

Students with high EI also predicts academic achievement, pro-social behavior, and self-management skills. They are emotionally pleasant, have good relations and are less likely to experience mental health problems. Those who can recognize and understand other people's emotional state and can express one's emotions are less likely to experience apprehension and are least likely to be unhappy (Lawal et al., 2018). This result agrees to the study of Razzaq et al., (2016) that there is a strong correlation between EI and higher quality of life. EI is also attributed to success in life and work in general, which leads to effective decision makings and achieves optimal relationships.

Table 1. *Emotional Intelligence*

Emotional Intelligence	Mean	SD	Verbal Interpretation
Self-awareness	3.79	0.50	High
Self-regulation	2.97	0.43	Average
Motivation	3.23	0.52	Average
Social Skills	3.67	0.60	High
Empathy	3.79	0.65	High

### Coping Skills Used by the Respondents

Table 2 presents the coping skills used by the respondents. Results showed that the respondents gained a low score on emotion-focused coping, and average on problem-focused coping. This implies that students are more likely to use problem-solving skills in dealing with their day to day challenges in life.

In the study of Spitzer (2012) on coping skills of freshmen college students, she discovered that students usually use problem-focused coping before they take an examination, and emotion-focused coping in receiving their grades. However, a different result was found by De Leon and Balila (2015) in their study for Filipino adolescents coping skills. They found out that adolescents use support, have the tendency to use substances, and humor, and look for best strategies in managing their distress. Further, people tend to use problem-focused coping if they think that their demands and resources are changeable (Sarafino & Smith, 2019).

Martyn-Nemeth et al. (2009) described that most adolescents use problem-focused coping in dealing with their school-related problems. Higgenbotham (2015) agrees with this result. Moreover, people respond in distress by utilizing problem-focused coping especially when they feel that there is constructive way in dealing with the stressor. Subramanian and Nithyanandan (2009) enumerated some examples of problem-focused coping such as active support seeking strategies, positive refocusing, planning, positive reappraisal, and use of right perspectives with positive interpretation.

However, it is not always the best to use problem-focused coping. In dealing with feeling of loss or situations where it is beyond one's capacity to control, it requires emotion-focused coping. People with low self-esteem are more likely to use emotion-focused coping (Moeller, 2013). Emotion-focused coping works best in dealing with the relationship on self-esteem, life satisfaction and rahubertycial racial identity. It is then essential that as an individual deal with the normal circumstances of life, he can emotionally process and adapt to what and why he feels it. McLeod (2009) (as cited by Moeller, 2013) stated that emotion-focused coping is the best choice in handling emotional stressors and when in situation that is beyond a person's control, as it does not provide a long-term solution.

Table 2. *Coping Skills*

Coping Skills	Mean	SD	Verbal Interpretation
Problem-focused coping	2.92	0.53	Average
Emotion-focused coping	2.48	0.54	Low

### Extent of Depressive Symptoms Manifested by the Respondents

Table 3 shows that there is a *moderate level* of depressive symptoms being experienced by the adolescents. Results implies that students do experience some level of depressive symptoms. Note that this result does not hold enough evidence to diagnose clinical depression among the students. Further interview and assessment must be done by a psychiatrist or a psychologist for a clinical diagnosis for depression to be established in a client.

Huberty (2012) described adolescents' depressive symptoms as different from adults. Manifest indicators can be in a form of sulking, acting out, involved in trouble at school, expresses negativity and felt misunderstood by others. He added that as many as 6 students in a classroom may be struggling with depression at any time, as teens have different struggles such as school, family, friends, and their identity. The moderate level of depressive symptoms manifested by the

respondents is alarming. Intervention and further assessment must be done to prevent it from escalating and manifesting to a severe level. Other factors such as the pandemic issues, the effects of the pandemic lockdowns and stresses due to online classes that can affect the respondent's depressive symptoms are limitations of this study. It was originally proposed before the pandemic started, and data were gathered during pandemic.

Table 3. *Depressive Symptoms*

	Mean	SD	Verbal Interpretation
Depressive Symptoms	10.30	5.05	Moderate

### Relationship of Emotional Intelligence and Depressive Symptoms

Table 4 shows that there is a *negative moderate relationship* between self-regulation and depressive symptoms ( $r = -0.596$ ,  $p < .001$ ). This implies that the greater the student's ability to regulate internal impulses, the lower the depressive symptoms is.

Self-regulation refers to the ability to control and manage self (Burman et al., 2015); control behaviors and express emotions appropriately (Cherry, 2019) employ proper coping and emotion regulation that will resist drives or temptations to perform or act that will become harmful to self or others (Ross & Witkiewitz, 2017; Brooks et al., 2017). Another factor to consider in self-regulation is emotion regulation. It is being able to withstand negative thoughts and be able to adapt to an aversive emotion. Individual with higher EI regulates their emotions better and deals with suicide ideation better (Abdollahi & Talib, 2015).

Table 4. *Emotional Intelligence and Depressive Symptoms*

Emotional Intelligence	Depressive Symptoms		
	$r$	$p$ -value	Interpretation
Self-awareness	-0.234	0.214	Not Significant
Self-regulation	-0.596	0.001	Significant
Motivation	-0.276	0.140	Not Significant
Social Skills	-0.156	0.409	Not Significant
Empathy	0.304	0.103	Not Significant

Legend: +1 Perfect Relationship, +0.91-+0.99 Very High Relationship, +0.71-+0.90 High Relationship, +0.41-+0.70

Moderate Relationship, +0.21-+0.40 Low Relationship, +0.01-+0.20 Negligible Relationship, 0 No Relationship

### Relationship of Emotional Intelligence and Coping Skills

Table 5 presents the relationship of emotional intelligence and coping skills. Result showed that there was a *positive moderate relationship* between EI and coping skills, particularly on the sub-scales of EI which are self-awareness and social skills, to the problem-focused coping sub-scale of coping skills. Moreover, there is *no statistically significant relationship* between EI and emotion-focused coping sub-scale. This implies that the more self-aware and the higher the social skills of the adolescent are, the more they lean into using problem-focused coping. This result is also congruent to the above result that adolescents are more likely to utilized problem-focused coping than emotion-focused coping.

Being self-aware means that a person can recognize and understand one's own and other's actions, moods, and emotions. He has the ability to recognize different emotional reactions and

react properly on situations. He is also aware of how he feels and behave. Self-aware individuals are capable of recognizing their own strengths and limitations, and are open for new information and experiences, and learn from their interactions with other people (Cherry, 2019). Thus, self-awareness helps the student to be dealing more with finding solution to the problem as they cope rather than focusing on feelings and emotions. Further, as described by Lazarus and Folkman (as cited by Saha et al., 2012), people tend to use problem-focused coping if they think that their demands and resources are changeable, or if they have a control over the stressor.

Social skills also have a relationship with problem-focused coping. This means that the more the adolescent can create and maintain healthy interpersonal relationship, the more they lean on utilizing problem-focused coping in dealing with their challenges in life. It also deals with the ability to influence others for the better and can deal skillfully with different issues. Those who possess high social skills can be a great catalyst for change, and can deals with conflicts appropriately (Serrat, 2017). Social-skills and self-confidence are important factors for youth's resiliency (Fergus & Zimmerman, 2005).

Table 5. *Emotional Intelligence and Coping Skills*

Emotional Intelligence	Problem-focused coping		
	<i>r</i>	<i>p</i> -value	Interpretation
Self-awareness	0.409	0.024	Significant
Self-regulation	0.334	0.071	Not Significant
Motivation	0.342	0.064	Not Significant
Social Skills	0.490	0.006	Significant
Empathy	-0.010	0.959	Not Significant

Emotional Intelligence	Emotion-focused coping		
	<i>r</i>	<i>p</i> -value	Interpretation
Self-awareness	-0.093	0.624	Not Significant
Self-regulation	0.095	0.619	Not Significant
Motivation	0.202	0.283	Not Significant
Social Skills	0.204	0.280	Not Significant
Empathy	-0.202	0.283	Not Significant

Legend: +1 Perfect Relationship, +0.91-+0.99 Very High Relationship, +0.71-+0.90 High Relationship, +0.41-+0.70

Moderate Relationship, +0.21-+0.40 Low Relationship, +0.01-+0.20 Negligible Relationship, 0 No Relationship

### Relationship of Coping Skills and Depressive Symptoms

Table 6 presents that there is no significant relationship between coping skills and depressive symptoms. Different studies have shown significant relationship between coping skills and depressive symptoms, however, that is not true to the result of this study.

Adolescents with lower self-esteem uses more avoidant coping strategies, and those who use more avoidant coping reported less healthy eating behavior. And adolescents with low self-esteem and high levels of stress may be at risk for depressive mood (Martyn-Nemeth, P. M., et al.,2009). In the study of Kasi, et. al. (2012), understanding the coping styles of patients with anxiety and depression, results revealed the association of depressive symptoms to

self-blame and emotional venting. However, patient's perception of his condition has a relationship with the kind of coping he uses. If the patient perceived negative thoughts on depression, more likely it will seek to more active coping, religious coping, and self-blame. While perception of depression as a chronic disease, leads to less planning on the patient.

Another study conducted by Holubova, et. al. (2018), investigating the quality of life and coping skills of outpatients with depressive disorder in a maintenance therapy. Result shows that depressed patients overly use negative coping strategies and in the most common form of escape from situation and resignation or giving in to feelings of hopelessness and helplessness in dealing with difficult life situation. However, it is also seen that depressive mood is decreased if do not develop on patients who have a high level of acceptance attitude and focuses on something else that is more positive. The use of more positive coping increases their quality of life and can better handle themselves in stressful situations.

Table 6. *Coping Skills and Depressive Symptoms*

Coping Skills	Depressive Symptoms		
	<i>r</i>	p-value	Interpretation
Problem-focused coping	-0.159	0.402	Not Significant
Emotion-focused coping	0.011	0.953	Not Significant

Legend: +1 Perfect Relationship, +0.91-+0.99 Very High Relationship, +0.71-+0.90 High Relationship, +0.41-+0.70

Moderate Relationship, +0.21-+0.40 Low Relationship, +0.01-+0.20 Negligible Relationship, 0 No Relationship

This study concludes the correlational between emotional intelligence and coping skills with depressive symptoms among adolescents of selected sectarian academies. It was found that respondents possess an average to high emotional intelligence and they scored average problem-focused coping. While manifesting moderate depressive symptoms.

Further, it is revealed that among the subscale of emotional intelligence, there was a negative moderate relationship between self-regulation and depressive symptoms, which means that higher the self-regulation is, the lower the depressive symptoms are. There was also a notable positive moderate relationship between self-awareness and problem-focused coping, and social skills and problem-focused coping. This result also showed that adolescents are more likely to use problem-focused coping than emotion-focused coping. Lastly, there was no statistically significant relationship between coping skills and depressive symptoms. This was not in congruent to previous studies that proves the relationship of coping skills and depressive symptoms.

Results cannot be generalized to the overall population as the study was participated by 30 respondents only of the 2 selected sectarian academies in the urban area of the North Philippines. Therefore, it is recommended for further research to utilize a larger sample. The inclusion of students in the rural area can be considered to further validate the result of the study. Other factors that predicts or influence depressive symptoms, emotional intelligence, coping skills, and other related variables may also be explored.

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## PSYCHOLOGY

## Prayer-Related Attitude and Experience of Dormitory Residents in a Faith-Based University

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### Abstract

Most of the studies about prayers are conducted to elderly and adults; however, prayer life of students has limited studies, and most are about prayer liberty of students conducted in public schools and it was observed that faith-based institutions has limited literatures. Thus, this study aimed to know the prayer attitude and prayer experiences, determine the prayer style of residence hall students in a faith-based university, and see the relationship between their prayer attitude and prayer experiences. A total of 155 students from twelve dormitories participated in this correlational study. A non-probability sampling known as purposive sampling was utilized for sample selection. One-page self-constructed questionnaire that contains four sections was used to acquire the needed data. Result showed that majority of the residence hall students have *satisfactory* prayer attitude and prayer experience. Prayer of confession was found to be the most common prayer style. The study also revealed a *moderate positive linear correlation* between prayer-related attitude and experience. This implies that as the level of attitude towards prayer increases, the degree of prayer experience also increases. In conclusion, recognizing that they are sinful beings is a possible reason for prayer of confession to have the highest percentage for the respondents' prayer style. Meanwhile, if an individual will have a properly settled way of thinking or feeling regarding prayers, then they will be able to have an agreeable level of prayer experience.

**Keywords:** *prayer life, prayer attitude, prayer experience, dormitory students*

In human history, prayer has been existing way back centuries. Prayer is also being practiced by every exciting religions and denominations. Prayer is the simple opening of one's heart to a higher being and according to Simão, Caldeira and de Carvalho (2016), prayer in the Latin origin is *prex* which means a form of asking request and help from God. They further mentioned that prayer is a source of hope and comfort to an individual.

There are different reasons an individual prays. One factor could be their prayer attitude. Prayer attitude refers to the belief, outlook, or feeling of a person about praying. Babula (2020) stated that, "people throughout history have turned to religious activities in seeking happiness. Two emerging themes in the literature is that prayer and altruism may predict happiness" (p. 41). Thus, it could be that some people believed that uttering a prayer could be one of their resorts when they feel unhappy.

Praying is as talking to God; hence, it is being done with conviction that the God being spoken into prayer is present and involved (Immink, 2016). People pray with a hope that their request are being heard and will be provided (Froese & Jones, 2021). Bentzen (2020) mentioned

in his research that people tend to use prayer to cope with the hardship being experienced. He also mentioned that there is an increase of people searching in google website about prayer, and most of what they are searching are prayer about protection from diseases. An increase number of prayer search has also been noticed on poorer country. Furthermore, some believe that praying to God can lead to personal growth and transformation which lead people praying for the improvement of their character such as asking for patience, selflessness and understanding their fellow human being (Hatch et al., 2016). Hence, as stated by Froese & Jones (2021) why people pray frequently is because they had a confidence that “supplication to and communication with God will produce positive individual and social outcomes” (p.7)

People tend to have different experiences when praying. Prayer experience is about an encounter of a person during prayer, it can be their feelings or an occurrence when praying. In the research conducted by Simão, Caldeira and de Carvalho (2016), it consistently shows in their research result that prayer helps the patient to cope from their illness, as well as, when they are experiencing crisis. The research of Hayward and Krause (2014) also concluded that, “stronger trust-based prayer beliefs are associated with a greater sense of life satisfaction over time” (p. 1). Beach (2016) discussed in her study that prayer experience has similarity with Maslow’s highest level of hierarchy of needs which is self-actualization. Wherein the peak experience is often describe as pure joyfulness that characterized by intense perception and feeling. It also contribute to the sense of peace and wellbeing of a person, as well as, the feeling of God’s presence and His leading in someone’s life. Moreover Van der Merwe (2018) stated that, “prayer and the experience of God’s involvement in a believer’s life constitute human-divine dialogue. The experience of God in everyday life can result in both regular planned and unplanned prayer” (p. 7).

According to Bernock (2020), praying is like conversing with God. And just like having conversation to other people there is always a topic being focused about. Hence, this is where the different types of prayer comes in. As stated by Thompson (2016), there are 4 styles of prayers that people practice when praying. They are the prayers of adoration, prayers of confession, prayers of thanksgiving, and prayers of supplication. Prayers of adoration is a prayer wherein people verbalize their praises to God and give back the honor to Him. It is focusing on the mercy, goodness, power, and other characteristic of God (Mason et al., 2012). As stated in the book Christ Object Lesson of Ellen White (1900), “to praise God in fullness and sincerity of heart is as much a duty as is prayer. We are to show to the world and to all the heavenly intelligences that we appreciate the wonderful love of God for fallen humanity and that we are expecting larger and yet larger blessings from His infinite fullness” (p. 299). To continue, Palmer (2020) emphasized that the bible often reminds us that by confessing our sin, God is willing to forgive. Thus, prayer of confession as mentioned by Thompson (2016) is a prayer searching the heart. It is a form of prayer wherein a person disclose his/her sinfulness and shortcomings in the presence of the Lord. It is claiming that repenting to God can bring forgiveness and a new life. Moreover, prayers of thanksgiving are about the pouring out of a person’s appreciation, gratitude, and joy to God for the blessing that he/she has received (White, 1898). Pharo (2016) also mentioned that thanksgiving is a prayer of appreciation, it is giving thanks to God for the good gifts he has bestowed to the one praying; and that, being thankful is a way to combat hopelessness and self-pity. Meanwhile, the prayer of supplication is a type of prayer wherein a person calls for help or making a request to God (Mujahid, 2015).

Moreover, regarding the relationship of prayer attitude and experience, Immink (2016) mentioned that, prayer is believed to give impression of the dynamic relationship linking human being and God. People also believed that prayer create a personal relationship, and active interaction



and communication between humans and God. Thus, prayer evoke the presence of God, which means that the person or a group that is praying can experience the presence of the Almighty. Forgiveness and guidance from the Lord is felt as well.

It can be seen from the study of Immink (2016) that the prayer attitude or the outlook of an individual that God is present and communicating when praying has an effect on the prayer experience of the individual wherein they can feel that they are forgiven and guided when praying. However, the study was qualitative and was done by compiling literatures from different Christian authors. For that reason, the researchers aimed to determine the relationship of prayer attitude and experience of an individual through a quantitative research.

It was also observed that most of the research about prayer was conducted to adults and elderly, while student's prayer life has limited literature. Moreover, according by Kramer and Fahmy (2018), survey shows that 46 countries around the globe aging 18 to 39 years old are less likely to be religious than older adults. Younger respondents from 41 countries are less likely to identify themselves with any religion and daily prayers and attending worship services has also statistically decreased. With this statistics, the researchers wanted to know the prayer life of younger people in a faith based institution.

Additionally, most of the literatures about students' prayer life were about student's religious expression such as prayer rights and freedom in public schools (Zalaznick, 2019). It was also observed by the researchers that there are only few literatures can be found about prayer life of students in a faith based institution.

With all of those existing gaps, this study aimed to determine the prayer attitude and prayer experiences as well as the prayer style of residence hall students in a faith-based university in Cavite, Philippines, and see the relationship between their prayer attitude and prayer experiences.

## **Methodology**

### **Research Design**

In this study, the researchers utilized descriptive-correlational research design. Descriptive research design was used to figure out the level of prayer attitude and prayer experiences of the respondents as well as their prayer style. Moreover, correlation was applied to determine the relationship between prayer attitude and prayer experience.

### **Population and Sampling Techniques.**

Purposive sampling was applied to obtain 155 respondents. Researchers selected the respondents from twelve dormitories (6 each of male and female dormitories) of a faith-based institution in Cavite, Philippines. The age of several research participants was between 18-24 years old and there was only one research participant who is 35 years old or over. The sample was composed of enrolled high school or college students.

### **Instrumentation**

A one-page self-constructed questionnaire that contains four sections was used to acquire data for this study. The first section aimed to gather the respondents' demographic profiles which consists of year level, gender, and age while the second section inquired about the participant's prayer style. Moreover, attitude in prayer was addressed in the third section and the fourth section focusing on the participant's prayer experience.

A Likert' rating scale ranging from 1 for *strongly agree* to 5 *strongly disagree* was applied to obtain the participant's prayer attitude and experiences. After creating the questions, the instrument had gone through thorough revisions and validation with the help of the Statistical Techniques professor until it was finalized and ready for the gathering of data.

### Data Analysis

The gathered data were encoded in Microsoft Excel using the appropriate coding for each variable. After the encoding was completed, it was analyzed using statistical analysis. The researchers used central tendency to determine the result for the Likert' rating scale and correlation to determine attitude towards prayer and prayer experience of participants. Moreover, the data was analyzed using 2 tailed correlation and considered the p-value of the result to identify its significance.

### Ethical Considerations

The researchers coordinated and asked for consent from the dean of each dormitory of the university to gather the data. Moreover, the participants willingly and voluntarily answered the given questionnaire. Confidentiality and identity of the participants was also preserved. Personal information that may disclose the respondents' identities were not included in the questionnaire. The researchers also ensured that the data gathering cause no harm to any of the participants.

### Results and Discussion

This study determined the prayer attitude, prayer experience and prayer practices of resident hall students in a faith-based institution. According to the result, majority of the resident hall students have *satisfactory* prayer attitude. Some strongly believed that God hears fervent prayers and knows their needs, strongly believed prayer is important in maintaining relationship with God, thought that God answers prayer when they wait patiently on His timing, and agreed that prayer will strengthen their spiritual well-being and bring them closer to God. The result was supported by the study conducted by Immink (2016) which stated that people, when praying, have a deep conviction that the God can hear their uttered prayer and He is presently involved. Counted, Possamai and Meade (2018) mentioned that prayer brings positive changes to a person's cognitive, behavioral and psychological aspect of life

The resident hall students' prayer experience was also found to be *satisfactory* and many of them responded *agree* to the items. As they pray, they sensed the strong presence of God, felt a sense of inner peace, were able to positively change their life, understand where their life needed focus, and felt a sense of fulfillment and happiness. The study by Beach (2016) also agreed that prayer gives feeling of peace and influence the wellbeing of an individual that is praying consistently

Moreover, 25% of the research participants typically used prayer of confession as their prayer style followed by 23% who used prayer of thanksgiving, 22% used prayer of adoration and 20% used prayer of supplication. Only 10% of the sample population have prayer styles that is different from the mentioned prayer styles.

Furthermore, the study revealed a *moderate positive linear correlation* between prayer attitude and prayer experience. If the level of attitude towards prayer increases, the degree of prayer experience also increases. Thus, the result support the qualitative study of Immink (2016) which tells that the prayer attitude of a person, believing that God can hear and interacting when

praying could experience the presence, forgiveness, and guidance of God. Hatch (2016) and his fellow researchers about the power of prayer in transforming an individual has also revealed that participants who acknowledge that a God has the ability to help them improve their life and overcome challenging situation appears to experience surge of feelings of hope and positivity.

Table 1. *Descriptive Statistics of Attitude towards Prayer (n = 155)*

Items	Mean	SD	Scaled Response
1. I believe that God hears fervent prayers and knows my needs	1.31	0.88	Strongly Agree
2. I think prayer will strengthen my spiritual well- being	2.21	1.66	Agree
3. I believe prayer is important in maintaining relationship with God	1.21	0.66	Strongly Agree
4. I think God answers prayer when you wait patiently on His timing	1.24	0.68	Strongly Agree
5. I believe prayer will bring you closer to God	1.83	1.48	Agree
Attitude towards Prayer	1.56	0.72	Agree
Verbal Interpretation			Satisfactory

(Rating Scale: Strongly Agree-1, Agree-2, Moderately Agree-3, Disagree-4, Strongly Disagree-5)

Table 1. Table 1 reveals that some of the resident students responded agree in item 2 and 5 while the other resident students responded strongly agree on item 1, 3 and 4. Their responses show that they have satisfactory prayer attitude with a relevant mean of 1.56 ( $SD = 0.72$ ).

Table 2. *Descriptive Statistics of Prayer Experience (n = 155)*

Items	Mean	SD	Scaled Response
1. I sensed the strong presence of God as I pray	1.55	0.93	Agree
2. I feel a sense of inner peace as I pray	2.18	1.50	Agree
3. I was able to positively change my life as I pray	1.57	0.84	Agree
4. I am able to understand where my life needed focus as I pray	1.59	0.85	Agree
5. I feel a sense of fulfillment and happiness as I pray	2.12	1.51	Agree
Prayer Experience	1.80	0.75	Agree
Verbal Interpretation			Satisfactory

(Rating Scale: Strongly Agree-1, Agree-2, Moderately Agree-3, Disagree-4, Strongly Disagree-5)

Table 2. It shows that majority of the resident students responded agree in each of the item in prayer experience with a relevant mean of 1.80 ( $SD = 0.75$ ). The results revealed that resident students have satisfactory prayer experience.

Figure 1. Prayer practices of the participants

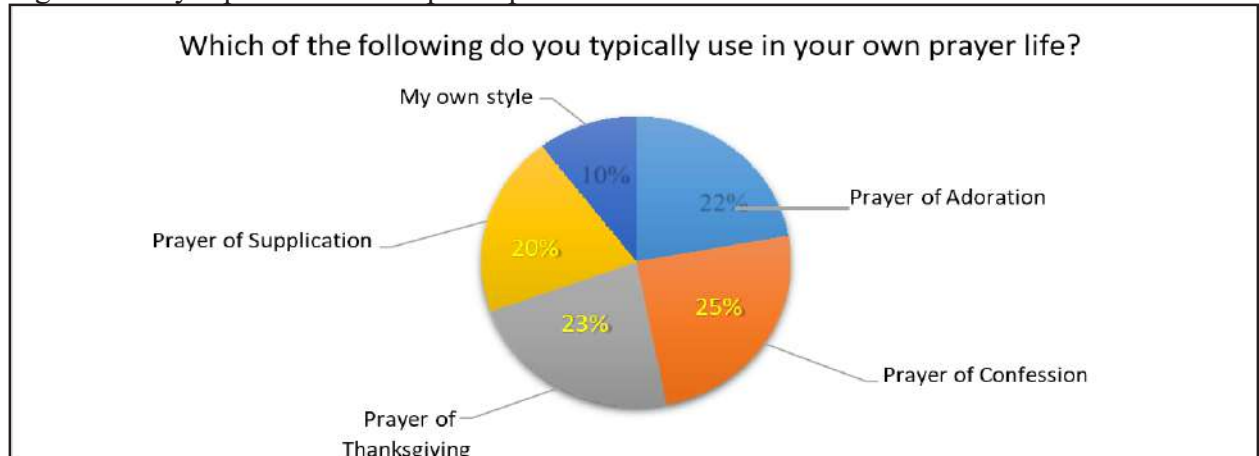


Figure 1. According to figure 1, when praying, most of respondents tend to use the prayer of confession among other prayer styles. It was followed by prayer of thanksgiving, prayer of adoration and prayer of supplication. On the other hand, aside from the prayer practices that was mentioned, some respondents also has their own style while praying.

Table 3. Correlation table of attitude towards prayer and prayer experience

<i>x</i>	<i>y</i>	<i>r</i>	<i>r crit</i>	<i>p-value</i>	<i>df</i>	<i>r</i> <sup>2</sup>	<i>y</i>	<i>Interpretation</i>
Attitude towards Prayer	Prayer Experience	0.57	0.087	0.00001	153	0.323	$0.5958x + 0.8703$	Significant

\*Correlation is significant at 0.5 level (2-tailed) \*Correlation is significant at 0.1 level (2-tailed)

Table 3. Table 3 shows that resident hall students' attitude towards prayer is significantly correlated to prayer experience ( $r_{comp}=0.57 > r_{crit} 0.087$ ,  $r=0.57 < p\text{-value}=0.00001$ ). The value of  $r^2$ , the coefficient of determination, is 0.323 which means that 32% of the variance for the degree of prayer experience can be correlated with the degree of attitude towards prayer. If the level of attitude towards prayer increases, then the degree of prayer experience will increase by 0.6.

Figure 2. Scatterplot of the Respondents' Prayer Attitude and Prayer Experiences

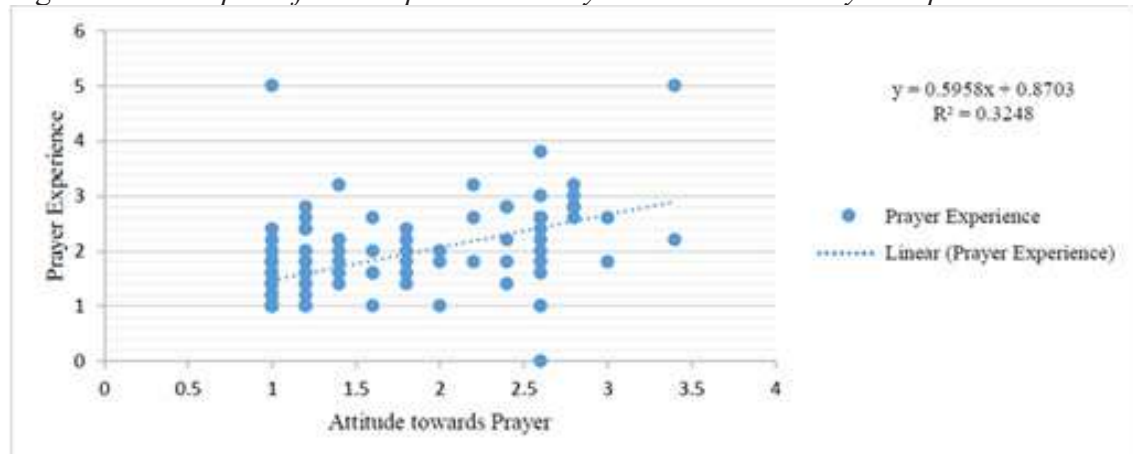


Figure 2. It present the scatterplot of research respondents' prayer attitude and prayer experience. The table shows that there is *moderate positive linear correlation*, which means there is a tendency for the prayer attitude level to go with the degree of prayer experience. Outliers were significantly noted.

### Conclusion

Based on the results of this study, it could be concluded that majority of the resident hall students in the faith-based institution have a satisfactory prayer life. This could be due to the provided spiritual atmosphere, nurturance, and activities of the school channeled through the residence hall management.

Moreover, according to Hutchinson (2012) prayer of confession was usually done to confess a specific sin with the hope to be forgiven. Thus, the possible reason why the highest percentage for the respondents' prayer style is the prayer of confession is possibly because of their recognition of being sinful beings. The next highest percentage is the prayer of thanksgiving; in spite of their transgressions, they are still grateful to God. As stated by Summer (2018), being grateful is deep rooted in the human evolutionary history, as well as in each person's brain and deoxyribonucleic acid (DNA) and in the development of a child. Sumner (2018) further discussed that, the idea of gratitude in a very young child develop as they mature. Thus it imply that being thankful runs deep in every person.

Furthermore, an individual's attitude towards prayer is an important factor to consider so that an individual will have a positive or satisfactory prayer experience. Argyle and Beit-Hallahmi (2014) stated that prayer was reported as having greater benefits than other aspects of religiosity. Statistically, there is a significant relationship between prayer attitude and prayer experience. If all individuals will have a properly settled way of thinking or feeling regarding prayers, then they will be able to have an agreeable level of prayer experience.

Based on the results and conclusions of this research study, it is hereby recommended that future researchers could venture more on the topic about prayer of students for their study because of limited researches conducted about the subject matter. Future researchers could also include a larger sample to further validate this study. Comparative research regarding the prayer life of residence hall students and off-campus students needed to be established as well. Furthermore, the faith-based institution together with the dormitory management could continuously strengthen the spiritual activities of the school and the dormitory to deepen the prayer life of the students.

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## PSYCHOLOGY

## Relationship of Attachment to Peer Acceptance and Academic Attitude Among Overseas Filipino Workers' Children

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### Abstract

Most studies focused on the parents' feelings of being far away from their children and only few studies take into account the effects of it to the children, thus this study was conducted to know the matter. The main purpose of the study was to determine the relationship of attachment, the style of attachment, to peer acceptance and academic attitude among overseas Filipino workers' children. The researchers used purposive and snowball sampling among 162 respondents from higher educational institutions. A self-constructed questionnaire measured the attachment style, peer acceptance level, and academic attitude level of the respondents. It was used to determine the relationship of attachment to peer acceptance and academic attitude. Statistical treatment such as Pearson-r correlation was used to measure the relationship of attachment to peer acceptance and to academic achievement. *T*-test and one-way analysis of variance (ANOVA) was used to measure the difference of attachment and peer acceptance to attachment and academic attitude. The result showed that there is a *significant positive relationship* between attachment to peer acceptance ( $r = 0.394, p = 0.001$ ) and academic attitude ( $r = 0.362, p = 0.000$ ). In conclusion, secure attachment predicts high peer acceptance and high academic attitude. Secure attachment needs to form in the family to help the members cope with the environment.

**Keywords:** *peer acceptance, OFW children, academic attitude, attachment, secure attachment*

The attachment of children to their parents will somehow determine the attitude of the child. Parents are the first friends and the first teachers of every child. They are the building blocks of how a child look upon creating their own group of friends in their peer group. The attitude and social behavior of children are determined by the attachment to their parents and parents place high regard on the academics of their children.

Parenting has a major influence on how a child develop socially accepted and appropriate behavior which are features to be accepted by peers (Danzig et al., 2015). Additionally, Asian parents influence their children to be successful in terms of academic and feel that the success of their children are theirs too (Huang & Gove, 2015).

Vargas, Garabiles, and Hall (2020) said that hands-on OFW mothers shifts their way of taking care of their family from direct and physical to technology use. However, technology cannot completely heal the pain of separation (Tungohan, 2013). And although the main communication is through technology, family ties were not weakened by overseas employment. Rather, it is strengthened when the OFW returned home (Yu, 2015).

A study shows that “left behind” children double their efforts on what they are doing compared to the children with parents beside them (Bi & Oyserman, 2015) there is a high-risk problem in social-emotional among left-behind children if the parent/s left them under the age of three. Care from the mother is strongly recommended for early childhood development (Shi, et al., 2021). Additionally, left-behind children had lower levels of self-esteem and social support than those children who live with their parents (Cui, et al., 2021). Further, left-behind children developed negative self-concept and negative views in life that in turn decreases their life satisfaction (Zhang, Zhao, Han, Wu, & Liu, 2020).

Many studies focus on the parents’ feelings on being far away from their children (Vargas, Garabiles, & Hall, 2020) (Yu, 2015). Only few takes into account the effects of working abroad to the overseas Filipino workers (OFW) children’s attachment to their parents in relation to peer acceptance and academic attitude, and how will modes of communication (i.e. Facebook, Skype, etc.) be of help to the them. Thus, this study will be conducted to further know the matter.

### Attachment

The quality of attachment relationship has molded the children’s understanding of oneself and others (Ontai & Thompson, 2008). Mo, et.al, (2021) agreed that parent-child attachment has correlation in children’s behavior. During the formative years, parents should be present to achieve the parent-child bonding—otherwise, the child might become a handicapped in social and personal adjustment. This can happen due to the migration of one or both parents. In addition, children who grow from their grandparents tend to be spoiled and not being able to feel being loved by their own parents.

Secure Attachment According to Bowlby’s definition, a person who has experienced a secure attachment has a tendency of having a characteristic of being available, responsive, and helpful (Cahillb & Ubhaa, 2014).

Young people who have secure attachment relationship to their parents have a more chance of having high levels of happiness (Cihangir Cankaya & Denizli, 2020). Moreover, having secure attachment relationship with the parents predicts high levels of perceived peer support in early adolescence (Pace, Zappulla, & Di Maggio, 2016). Secure attachments to parents and peers also result to decrease bullying characteristics and increases the possibility of standing up for a bully victim (Murphy, Laible, & Augustine, 2017). Additionally, Farhadi, Mohagheghi, & Moghadam (2020) stated that people with secure attachment style high emotional intelligence that reduces interpersonal problems.

Etemadi & Saadat (2015) said that secure attachment style increases academic self-efficacy beliefs of the students. Secure attachment style is promoted for adolescents to help them with their academic achievement (Annalakshmi, 2019). Moreover, securely attached children are more affective and have higher cognitive and behavioral empathic perspective-taking (Ştefan & Avram, 2019).

**Ambivalent Attachment.** Individuals who are ambivalently attached defined other people as unwilling to be closely involved with them and has a fear of rejection (Suzuki & Tomoda, 2015).

This type of attachment is rooted from the infant’s experience of inconsistent parenting when the child feels uneasy toward his/her caregiver and never quite sure if by expressing his feeling will be suitably attended to. The infant felt that exploring the world is a safe option if the parent is lack of consistent nurturing and protection. Thus, the child has a low threshold for

distress, but no confidence that he or she will be comforted (Malekpour, 2007). This is consistent with the study of Ştefan & Avram (2019), according to them the early parent-child interaction is important to help the children develop and be knowledgeable to other people's emotions. It was also stated in the same study that ambivalently attached individual focused more on their negative emotions hence, it lowered their ability in the behavioral perspective tasks. In early adolescence, fearful or preoccupied attachment is negatively correlated to perceived peer support and can also predict internalizing problems in late adolescence (Pace, Zappulla, & Di Maggio, 2016).

People with ambivalent attachment style remain passive especially in interacting with peers to minimize the possible psychological pain that they may experience in social environments (Chen & Santo, 2016). In addition, they are the kind of people who wants intimacy but reluctant of becoming close to others, and fears that people might not give back the feelings they invest to other people. If the child feels rejected, he or she might develop a self as unworthy of love and may affect interpersonal relationships, it is also related to anxiety disorders in adolescence and adulthood and may contribute to fear of rejection and fear of separation that hampers future relationships (Schimmenti & Bifulco, 2015). Cited in the same study, Ainsworth stated that ambivalent attachment style shows high levels of separation anxiety, and distress for longer periods of time compared to other children.

**Avoidant Attachment.** Melanie Klein believes that avoidant attachment style between parent and child shows that parents are not willing to invest in their children (Feist, Fest, & Roberts, 2018). Maternal deprivation could have serious consequences for the child. Bowlby (1980) (as cited in Feist, Fest, & Roberts, 2018), said that the main caregiver should make a secure base for the child this is because the infant should know that caregiver is accessible and dependable. The relationship between the child and the main caregiver becomes the working model for future friendships and love relationships.

Ainsworth (as cited in Chen & Santo, 2016) describes avoidant attachment style as shows no distress when separated and the child distance himself or herself when the caregiver comes back. It may cause by parents who are not emotionally available and less behaviorally responsive to their children than other parents. According to Al-Yagon (2015), use of deactivating strategies to cope with insecurity and distress, high tendency for self-reliance, preference for emotional distance, and individual's discomfort with the closeness of significant others are refers to attachment avoidance.

## Peer Acceptance

Peers are the most significant support outside family system for adolescents and young adults (Tajima, et.al, 2010). It is agreed by Shehu (2019) who mentioned that children who feels rejected by their group have difficulty making social circle when they become adults. Moreover, peer acceptance has a connection on what relationship has a child with their parents especially with their mother, structure of their family, how many siblings they have, and the dimensions of their attachment, so an adolescent who has more siblings, who live with single-mother, and who has a high anxious attachment described to have lower peer acceptance. Those who perceived that their relationship with their mother or grandmother showed higher scores in dependent attachment style (Tamm, et.al, 2014). Zarra-Nezhad, et al., (2019) agreed that mothers' style of parenting has an effect on children's peer acceptance throughout the primary school years.

Students who feel that they are accepted by their peers receive emotional support that facilitate engagement in classroom, experience greater sense of belonging at school, and have many opportunities to practice social skills necessary for success in the classroom. Additionally,



youth with high feelings of peer acceptance has a solid foundation of social emotional resource that they can rely on to maintain existing social relationships and build new relationships that can support them in directing academic challenges during the transition in their lives (Kingery, Erdley, & Marshall, 2011). It is agreed by recent study conducted by Antonopoulou, Chaidemenou, & Kouvava (2019) mentioned that peer acceptance has a great role in helping students develop their social and emotional skills that are needed for their effective adjustment at school. Moreover, it is stated that peer acceptance showed a significant correlation with euphoria (Jun & Shin, 2015)

### **Academic Attitude**

Academic attitude is defined as the thoughts and opinions about school and the relationship to school and learning. Academic attitude is associated with academic achievement, hence negative attitude towards school is positively correlated with poor academic performance Verešová & Malá (2016). Dagnew (2017) stated that students' attitude towards school and academic achievement has positive and significant correlation. In physics subject, negative attitude and lack of interest in the subject cause failure in some students (Veloo, et.al, 2015). Social factors can affect the students' attitude positively, teachers and parents have great impact on how students view learning Getie and Popescu (2019). In a study conducted by Ogunniyi (2015) it is agreed that there was a correlation in academic attitude and academic achievement. In the study, students who have negative attitude gets average academic achievement in their respective courses.

Sager (2015) stated that students with secure attachment have positive attitude in academic and those students who have avoidant or ambivalent attachment have negative attitude about academic.

## **Methodology**

### **Research Design**

This study applied a descriptive-correlational research design. Descriptive research design described the attachment of overseas Filipino workers' (OFW) children to their parents. Correlational research design was employed in order for the researchers to see if there was a relationship between the variables.

### **Population and Sampling Techniques**

The respondents of this study came from the population of OFW children that comprised college students from the age group of 15-21 and the participants were consisted of 162 OFW children. The researchers used purposive sampling design and snowball sampling design.

### **Instrumentation**

The instrument used in the study is self-constructed questionnaire, it is called JKRD Questionnaire. The JKRD Questionnaire measured attachment style, peer acceptance level, and academic attitude level of the respondents. The questionnaire was validated by ten (10) experts in the field of English, Psychology, Statistics, and Education to guarantee the suitability of the questionnaire to the study. It underwent pilot study of 52 participants from Manila Adventist College and Adventist University of the Philippines specifically in Acacia Dormitory.

In the final data gathering, the researchers collected 162 respondents from Adventist University of the Philippines, St. Ignatius Balibago, STI College Olivarez, and Asian Institute of Computer Studies Balibago. After collecting responses from the participants through JKRD

questionnaire, final data was encoded in a statistical software. The result of the statistical data was analyzed and interpreted.

### Data Analysis

In order to get the findings of the data, it was statistically treated by the software program Statistical Package for the Social Science (SPSS). After gathering all of the data, results were encoded and were treated statistically by experts. The researchers used mean, median, and mode to measure what extent of the respondents' attachment style in secured, ambivalent, and avoidant attachment, peer acceptance, and academic attitude among OFW children. Pearson-r correlation to measure the relationship of attachment to peer acceptance, the relationship of attachment to academic achievement, and the relationship between age and academic attitude, and age and peer acceptance. The researchers also considered t-test and one-way analysis of variance (ANOVA) to measure the difference of attachment and peer acceptance to attachment and academic achievement. Predictor multiple linear regression was used to know the predictor variables in peer acceptance and academic attitude.

### Ethical Considerations

The researchers gave informed consent to the participants as well as to the institutions where the questionnaires has been given. This study ensured that there was no harm that occurred in the participants. There are few ethical areas that this study considered. The study kept the confidentiality and identity of the participants, and did not reveal any of the results of the report. Inform consent was given to participants before they start answering the questionnaires. Participating in this study is pure voluntary and no forcing was implemented. After the questionnaires were interpreted, it was discussed to participants for their welfare and was explained to them the nature of the study.

### Results and Discussion

It was found out in the study that overseas Filipino workers' children are generally securely attached to their parents working abroad. The result also revealed that OFW children generally feels accepted in their peer group and has a positive attitude toward academic life.

Attachment is significantly correlated to peer acceptance and academic attitude. Secure attachment is positively correlated to peer acceptance and academic attitude, while ambivalent attachment and avoidant attachment are both negatively correlated to peer acceptance and academic attitude. The results showed that there is a significant difference between peer acceptance and gender, and peer acceptance and using of Facebook. In addition, regression analyses also revealed that secure attachment plays a big role in predicting peer acceptance and academic attitude.

Table 1. *Range, Scale, and Scale Response and Verbal Interpretation of Ambivalent and Avoidant Attachment Questionnaire*

Range	Scale	Scale Response	Verbal Interpretation
4.50 – 5.00	5	True of me	Very High
3.50 – 4.49	4	Somewhat true of me	High
2.50 – 3.49	3	Neutral	Neutral
1.50 – 2.49	2	Somewhat untrue of me	Low
1.00 – 1.49	1	Untrue of me	Very Low

Table 2. *Range, Scale, and Scale Response and Verbal Interpretation of Secure Attachment Questionnaire*

Range	Scale	Scale Response	Verbal Interpretation
4.50 – 5.00	5	Always	Very High
3.50 – 4.49	4	Often	High
2.50 – 3.49	3	Sometimes	Neutral
1.50 – 2.49	2	Rarely	Low
1.00 – 1.49	1	Never	Very Low

Table 3. *Scale, Scale Response and Verbal Interpretation of Academic Attitude Questionnaire*

Range	Scale	Scale Response	Verbal Interpretation
4.50 – 5.00	5	Always	Highly Positive Attitude
3.50 – 4.49	4	Often	Positive Attitude
2.50 – 3.49	3	Sometimes	Neutral
1.50 – 2.49	2	Rarely	Negative Attitude
1.00 – 1.49	1	Never	Highly Negative Attitude

Table 4. *Range, Scale, Scale Response, and Verbal Interpretation of Peer Acceptance Questionnaire*

Range	Scale	Scale Response	Verbal Interpretation
4.50 – 5.00	5	Always	Very high
3.50 – 4.49	4	Often	High
2.50 – 3.49	3	Sometimes	Neutral
1.50 – 2.49	2	Rarely	Low
1.00 – 1.49	1	Never	Very Low

There is *no significant difference* in peer acceptance and academic attitude considering demographic profile, and there is *no relationship* between age and peer acceptance, age and academic attitude is accepted. On the other hand, there is a *significant relationship* between attachment and peer acceptance, and between attachment and academic attitude among OFW children. There is also a variable that can predict peer acceptance and academic attitude, which is secure attachment.

The study concludes that children of OFW have high secure attachment, low ambivalent attachment, and very low avoidant attachment to their parents. Secure attachment plays a big role in peer acceptance and academic attitude. This emphasizes that being securely attached helps the children to feel accepted by their peers and to have a positive attitude to their academics. These findings indicate that OFW children who feel loved by parents and that their needs were met help them to feel accepted by their peers and to perform best in their academic endeavors.

The research study was conducted to Filipino adolescents who have parents working abroad. Religion, socioeconomic status, family related issues, and culture were not taken into account in this study. Only ages 14 to 21 were included. The data is only based on the respondents' answers to the questionnaire.

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## PSYCHOLOGY

## Thriving Amidst the COVID-19 Pandemic: The Role of Mental Toughness

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### Abstract

The COVID-19 pandemic has led to a dramatic change to students' life. The sudden shift to online classes because of COVID-19 placed a unique and serious strain on students, thereby posing psychological challenges and pressures such as anxiety of various concerns. But there remains much to be learned about them and what can be done to lessen their negative effects on student's academic journey. Through multi-stage sampling technique, 830 college students from public and private higher educational institutions in the Philippines participated in the study. Mediation analysis was conducted to understand the role of mental toughness between COVID-19 related anxiety and thriving quotient where it revealed a significant mediation effect. Specifically, the total effect of COVID-19 related anxiety (COV-19) on Thriving quotient (TQ) was significant ( $\beta = -0.139$ ,  $t = 5.587$ ,  $p = .000$ ). With the inclusion of mental toughness as a mediating variable (MT), the impact of COV-19 on TQ became insignificant. But the indirect effect of COV-19 on TQ through MT was found significant ( $\beta = -0.139$ ,  $t = 0.025$ ,  $p = .000$ ). The result suggests that building mental toughness among students is paramount to confidently endure the specific challenges such as COVID-19 related anxiety caused by the pandemic, and thus, move toward their goals and thrive. Strong support from the educational authorities and parents is recommended to help students develop a commendable level of mental toughness during the COVID-19 pandemic.

**Keywords:** *thriving quotient, mental toughness, COVID-19, pandemic*

The sudden shift to online classes because of the COVID-19 crises placed a unique and serious strain on students, thereby posing psychological challenges such as anxiety of various concerns. Several recent studies (e.g., Grubic et al., 2020; Wang et al., 2020; World Health Organization, 2020) have already pointed out that students go through some forms of psychological difficulties because of pandemic, but there remains much to be learned about them and what can be done to lessen their negative effects on students' academic journey. The ability to thrive is vital in student's success for it provides a path towards a meaningful student life and productive living. There is no doubt that COVID-19 crisis has been an unprecedented challenge for students as they learn. Ensuring that students are not just surviving but thriving throughout this uncertain period is an important undertaking to attain success. Garfinkle (2020) pointed out that thriving is a significant task that could provide a better vantage point during difficult times, uncertainties, ambiguities, and abrupt changes. Thriving was indicated in recent studies as a vital part in the academic journey of students and was used to measure college student success (Lloyd, 2019; Stephens et al., 2015).

As places around the world respond to the rapidly changing situation because of COVID-19 crisis, students are constantly experiencing psychological pressures (Cao et al., 2020). The novel coronavirus disease pandemic could be stressful for a lot of people. Imminent fear and anxiety about this new disease and what may happen could be very overwhelming and could cause strong emotions in all ages (Center for Disease Control and Prevention, 2020). It is normal to feel anxious and stressed during COVID-19 pandemic but everybody has a role to play in protecting a person's overall mental health according to the World Health Organization (2020). Wang et al. (2020) reflected in their study that there is a heightened prevalence of moderate-to-severe self-reported depressive and anxious symptomatology among the general public reflecting the widespread effects of uncertainty and health-related fears. As the new coronavirus continues to spread around the globe, so do COVID-19 related anxieties (McGuire, 2020). Mental health concerns are not new in the higher education, but this COVID-19 has suddenly augmented these pressing concerns due to an unprecedented level of student isolation and life disturbances affecting their academic functioning (Lyon et al., 2020). These psychological pressures are giving a toll on their general mental health, thus the ability to thrive may have been affected. However, a student's mental toughness amidst the pandemic could be a defense against any persistent pressure, uncertainty, and high level of anxiety.

Students who exhibit mental toughness traits know how to control their thoughts and manage their emotions; they are also behaving productively in times of distress (Clough et al., 2012). If students practice these traits, they may be able to experience thriving which could be related to them achieving success in their academics in various forms such as positive engagement in the learning process, social connectedness, positive perspective, and diverse citizenship as indicated in the study of Schreiner (2010). Catong (2019) indicated in her study that mental toughness has a significant influence on student engagement which is one indicator of thriving. Also, St Clair-Thompson et al. (2015) highlighted that having mental toughness could lead to good attendance, openness to learning, positive behavior and strong peer relationships in school. Stock et al., (2018) supported the statement of St. Clair-Thompson et al. which highlighted that mental toughness is indeed important for the overall academic success of students.

The primary aim of the current study was to examine the role of mental toughness in psychological health issues such as COVID-19 related anxiety and thriving of students during the COVID-19 pandemic in the Philippines. It was hypothesized that mental toughness may have a mediation role in the exogenous and endogenous variables. In addition, this study desired to contribute to the increasing number of literatures related to positive psychology and to the body of knowledge related to COVID-19 pandemic.

## Methodology

### Research Design

This study was quantitative in nature and primarily utilized a mediational design. According to Figgou and Pavlopoulos (2015), mediation analysis attempts to explain 'how' or 'why' an effect occurs. Shadish et al., (2002) emphasized that mediation model is a theoretical model implying causality and there are three requirements to infer that one variable causes another. First is temporal precedence, such that the causal variable precedes the dependent variable in time. Second is covariation between the hypothesized causal and dependent variables, such that the independent and dependent variables vary together. Third, no plausible alternative explanations account for the relation between the hypothesized causal and outcome variables.

## Population and Sampling Technique

The respondents were male and female college students from the selected high educational institutions in the Philippines during the academic year 2020-2021, with ages 18 years old and above and with academic level from first year to fifth year. Thornton et al., (2016) indicated in a systematic review that recruiting respondents is a challenge for several health, medical, and psychosocial research studies. This challenge is especially true during the COVID-19 pandemic. Thus, this study has employed the most reasonable sampling method to approximate the population. The researcher followed an internet-based survey and the applicable sampling method specifically the non-list-based sampling frames which can be conducted either via the web or by e-mail as indicated in the Sage Handbook of Online Research Methods (Fricker, 2017).

The process in non-list based sampling would be to allow for the selection of a probability-based sample without the need to actually enumerate a sampling frame. Internet-based surveys using non-list-based random sampling depend on contacting potential respondents via Facebook advertising platform to get adequate responses and customize the respondents whom the researcher wish to reach with the questionnaires. Google Form was used to host the open survey and allow for automatic capture of responses into a spreadsheet.

A social media application such as Facebook has been used to contact or follow up the respondents of the study. In the systematic literature review of Nurdin (2017), social media has been highlighted to be an important tool in online research space which provides researchers to extend their research setting and generate data within a broader environment. Additionally, contact mode has been found to increase response rates as indicated in the SAGE Encyclopedia of Communication Research Methods and the SAGE Handbook of Online Research Methods (Allen, 2017; Fricker, 2017).

## Instrumentation

In this study, questionnaires and validated research instruments were utilized. Demographic questionnaires were also used. Moreover, the reliability of the instruments has been analyzed using Cronbach's Alpha to specifically determine the internal consistency, thus, know the applicability of the items that has been used in the study.

**COVID-19 Related Anxiety Scale (CRAS-30).** CRAS is a self-constructed survey designed to measure the level of apprehension in relation to the experiences of students during the COVID-19 pandemic. It is rated on a 5-point scale rated on a 5-point Likert scale that ranges from 1 (Always) – 5 (Never). Described in table 3 is the scoring and verbal interpretation of CRAS-30. Specifically, all components revealed high internal consistencies. The 7 items of cognitive manifestation revealed *high internal consistency* ( $r = .76$ ) as well as the the 8 items of affective manifestation ( $r = 0.78$ ). Moreover, the 8 items of physical manifestation have *high internal consistency* ( $r = 0.85$ ) and the behavioral manifestation which has 7 items revealed a *high internal consistency* ( $r = 0.85$ ). All items were deemed to have good psychometric properties in relation to reliability and validity

**Thriving Quotient (TQ).** The TQ instrument which was developed by Schreiner (2010) has been used to determine the thriving of students. All items have been utilized but were modified based on the features and characteristics of the students as well as the context. This measure utilizes the 5 point Likert-type scale. Described in Table 4 is the scoring and verbal interpretation of TQ. Looking at the psychometric properties of each construct, it all revealed *high internal consistencies* for engaged learning with 5 items ( $r = 0.82$ ), academic determination with 6 items



( $r = 0.87$ ), positive perspective with 5 items ( $r = 0.76$ ), diverse citizenship with 6 items ( $r = 0.76$ ), and social connectedness ( $r = 0.70$ ) with 6 items. All components were deemed to have good psychometric properties.

The Mental Toughness Questionnaire (MTQ-18). The MTQ-18 uses a selection of items from the MTQ-18 (three Challenge, three Commitment, five Control, and seven Confidence). MTQ-18 has been utilized to understand the mental strength of students during the COVID-19 pandemic. All items of MTQ-18 have been used but were modified based on the characteristics and features of the respondents. In relation to the psychometric properties of mental toughness in the current study, the result revealed a good internal consistency for all components such as control ( $r = .71$ ), commitment ( $r = .71$ ), challenge ( $r = .81$ ), and confidence ( $r = .70$ ). All items revealed good psychometric properties applicable for the current study.

### Data Analysis

Using Statistical Package for the Social Science (SPSS), descriptive statistical analyses were performed by the statistician on the sample groups to obtain a clear understanding of the representative samples of the study. Measures of central tendency such as means and standard deviations was also computed. Moreover, t-test has been used to determine whether the age, sex, type of school, year level difference exists in the thriving of students. Additionally, mediation analysis was performed in SmartPLS which is a graphical user interface for variance-based structural equation modeling (SEM) using the partial least squares (PLS) path modeling method to analyze the model, path, relationships, and specific predictors of thriving of students.

### Ethical Considerations

The respondents were informed regarding the benefits, procedures and purposes of the study as indicated in the AUP Ethics Review Board template for surveys (ICF). It has been ensured that the physical, social, emotional and psychological health of the respondents in this research will not be seriously affected. The study protected the identity of the respondents and all efforts were made to maintain confidentiality of individuals who participated. Facebook was used only to advertise and direct interested individuals to the survey link, which was hosted with Google Forms. Data were securely kept on password-protected computers.

All processes and activities involving human demonstrated ethics approval such as the AUP ethics review certificate. It was ensured that the privacy of the students is protected as mandated by RA 10173 or the Data Privacy Act of 2012. As one of the licensed Psychology Practitioners in the Philippines, the researcher has carefully observed the Code of Ethics and Professional Standards instituted by the Psychological Association of the Philippines and the Scientific and Professional Ethics Committee.

## Results and Discussions

### Respondents' Level of Thriving Quotient

The Thriving Quotient of students was measured through the five specific indicators namely engaged learning, academic determination, social connectedness, diverse citizenship and positive perspective.

**Engaged Learning.** Table 1 presents the mean and standard deviation of the respondents' level of engaged learning which is the first component of Thriving Quotient. The grand mean of the respondents' level of engaged learning is 3.88 with a standard deviation of 0.73 verbally interpreted

as high. Item engage3 “*I find myself thinking about what I’m learning in online class even in different settings*” has the highest mean ( $M = 3.49$ ,  $SD = 1.17$ ) indicating that the respondents were highly engaged in relation to what they were learning in online classes from different settings. Item engage2 “*I can find ways of applying what I’m learning in online class to different areas in my life*” got the second highest mean ( $M = 3.08$ ,  $SD = 1.07$ ) showing that the respondents were able to apply what they were learning from online classes to different settings. The current results imply that the respondents were *moderately* engaged in their online classes despite the current negative situations such as economic crisis and the pandemic. Engaged students are focused and attentive to learning opportunities. They discuss, think, and are “energized by the learning process” where meaningful processing, focused attention and active participation are fostered (Schreiner, 2010). An active learning is a significant task that students should practice regularly especially during online learning where it is difficult to be fully engaged (Martin & Bolliger, 2018).

Table 1. *Mean and Standard Deviation of Respondents’ Level of Engaged Learning*

Item No.	Items	Mean	SD	Scale	VI
Engage1	I could relate with what I am learning things in my online classes.	3.02	1.06	Somewhat Agree	Moderate
Engage2	I can find ways of applying what I'm learning in online class to different areas in my life.	3.08	1.07	Somewhat Agree	Moderate
Engage3	I find myself thinking about what I'm learning in online class even in different settings.	3.49	1.17	Somewhat Agree	Moderate
Engage4	I feel energized by the ideas I am learning in most of my online classes.	2.61	1.14	Somewhat Agree	Moderate
Engage5	I am motivated to learn even if it's online class	2.66	1.27	Somewhat Agree	Moderate
Grand Mean		2.97	0.73	Somewhat Agree	Moderate

**Academic Determination.** Table 2 presents the mean and standard deviation of the respondents’ level of academic determination which is the second component of Thriving Quotient. The grand mean of the respondents’ level of academic determination was 3.42 with a standard deviation of 0.86 verbally interpreted as *moderate*. Item acad3 “*I apply my strengths to achieve academic success*” got the highest mean score ( $M = 3.87$ ,  $SD = 1.05$ ) showing that the respondents were continuously applying their strengths to achieve success in their academic related tasks. Item acad2 “*I find a way to keep working on my assignments until they are done well*” got the second highest mean score ( $M = 3.74$ ,  $SD = 1.15$ ) indicating that the respondents were doing their best to do the tasks given to them.

The current results indicate that the respondents are looking for effective ways and applying their strengths to help them be determined in school. Academic determination involves goal-setting and motivation to reach academic goals, as well as key strategies to persevere where effort regulation, self-regulated learning and environmental mastery are nurtured (Schreiner, 2015). A high level of motivation to reach academic goals is associated to better academic performance and grades (Kusurkar et al., 2013).

Table 2. Mean and Standard Deviation of Respondents' Level of Academic Determination

Item No.	Items	Mean	SD	Scale	VI
Acad1	I can reach my academic goals.	3.39	1.19	Somewhat Agree	Moderate
Acad2	I find a way to keep working on my assignments until they are done well.	3.74	1.15	Agree	High
Acad3	I apply my strengths to achieve academic success.	3.87	1.05	Agree	High
Acad4	I am good at juggling all the demands of college life.	2.95	1.07	Somewhat Agree	Moderate
Acad5	I am firm with my choices as a student.	3.23	1.15	Somewhat Agree	Moderate
Acad6	I can think of several ways to solve an academic problem.	3.35	1.04	Somewhat Agree	Moderate
Grand Mean		3.42	0.86	Somewhat Agree	Moderate

**Social Connectedness.** Table 3 presents the mean and standard deviation of the respondents' level of social connectedness which is the third component of Thriving Quotient. The grand mean of the respondents level of social connectedness is 3.15 with a standard deviation of 0.86 verbally interpreted as *moderate*. Item Soccon5 "*I feel content with the kinds of friendships I have despite our distance from each other*" got the highest mean ( $M = 4.01$ ,  $SD = 1.16$ ) showing that the respondents felt connected to their friends despite the distance. Additionally, item Soccon4 "*I feel like my friends really care about me even if we're far from each other*" got the second highest mean ( $M = 3.64$ ,  $SD = 1.28$ ) indicating that the respondents felt the care of their friends even from a far. The current results suggest that the respondents are still connected to their friends despite the distance because of the pandemic.

Keeping social connections strong is one of the effective means to combat quarantine boredom, fatigue, and some mental health problems (Brooks et al., 2020). Moreover, social connection was indicated as more broadly important in transmitting information about compliance with mobility restrictions during a pandemic especially in the COVID-19 virus infected areas (Charoenwong et al., 2020). Being socially connected for students is very important to help them cope with the pandemic.

Table 3. Mean and Standard Deviation of Respondents' Level of Academic Determination

Item No.	Items	Mean	SD	Scale	VI
Soccon1	I can make friends more easily even if its online.	2.76	1.36	Somewhat Agree	Moderate
Soccon2	I don't have as many close friends as I wish I had in online classes.	2.78	1.40	Somewhat Agree	Moderate
Soccon3	It is hard to make friends in my university because its online.	2.64	1.45	Somewhat Agree	Moderate
Soccon4	I feel like my friends really care about me even if we're far from each other.	3.64	1.28	Agree	High

{table continues on the next page}

Soccon5	I feel content with the kinds of friendships I have despite our distance from each other.	4.01	1.16	Agree	High
Soccon6	I feel lonely because I have few close friends with whom to share my concerns.	3.05	1.48	Somewhat Agree	Moderate
Grand Mean		3.15	0.86	Somewhat Agree	Moderate

**Diverse Citizenship.** Table 4 presents the mean and standard deviation of the respondents' level of diverse citizenship which is the fourth component of Thriving Quotient. The grand mean of the respondents' level of diverse citizenship is 3.97 with a standard deviation of 0.97 verbally interpreted as *high*. Item diverse6 "*It is important to become aware of other's differences*" got the highest mean score ( $M = 4.71$ ,  $SD = 0.63$ ) showing that the respondents believe the importance of being aware about others' differences. Item diverse5 "*I am aware of the perspectives of individuals from different backgrounds*" got the second highest mean score ( $M = 4.31$ ,  $SD = 0.87$ ) suggesting that the respondents are more aware of individual perspectives from different backgrounds. The current results imply that the respondents highly respect the differences of other people.

The current results showed that respecting individual differences and perspectives is highly being practiced by students which is in line with an earlier study emphasizing the need to learn from each other and the need to show respect for each other's peculiarity (Rose, 2016). It was emphasized in a previously published article that every opinion matters (Sensoy & DiAngelo, 2014) and that respect for persons and for cultures could be a basis for national and global citizenship (Haydon, 2006). Being able to show kindness and respect during the pandemic may really make a great difference in the lives of many.

Table 4. Mean and standard deviation of respondents' level of diverse citizenship

Item No.	Items	Mean	SD	Scale	VI
Diverse1	I spend time making a difference in other people's lives.	3.35	1.14	Somewhat Agree	Moderate
Diverse2	I know I can make a difference in my community.	3.54	1.16	Somewhat Agree	Moderate
Diverse3	It is important for me to make a contribution to my community.	3.91	1.04	Agree	High
Diverse4	I value interacting with people whose viewpoints are different from my own.	4.02	0.99	Agree	High
Diverse5	I am aware of the perspectives of individuals from different backgrounds.	4.31	0.87	Agree	High
Diverse6	It is important to become aware of other's differences.	4.71	0.63	Strongly Agree	Very High
Grand Mean		3.97	0.97	High	Moderate

**Positive Perspective.** Table 5 presents the mean and standard deviation of the respondents' level of positive perspective which is the fifth component of Thriving Quotient. The grand mean of the respondents' level of positive perspective is 3.80 with a standard deviation of 1.11 verbally interpreted as *high*. Item posit3 "*I expect what is best in life*" got the highest mean score

( $M=3.82, SD=1.10$ ) indicating that the participants somewhat positively expect the best in everything that they do. Item posit1 “*I look at the brighter side of life*” got the second highest mean score ( $M = 3.80, SD = 1.06$ ) showing that the respondents are somewhat positive in their life now by focusing on enjoyable things around them. Nonetheless, item posit2 “*I look for the best in any situation, even when things seem hopeless*” got the lowest mean score ( $M = 3.74, SD = 1.10$ ) suggesting that the respondents somewhat look for what is best in the hopeless situations. The current results imply that the respondents are somehow practicing positivity despite the negative situations like the pandemic. Students with a positive perspective are considered to be more hopeful for positive results in their current situation despite challenging or even grueling events such as the academic issues.

Students with a positive perspective are considered to be more hopeful for positive results in their current situation despite challenging or even grueling events such as the academic issues or the COVID-19 pandemic (Bransford et al., 2020; Wang et al., 2020). Positive perspective involves proactively coping with reality instead of avoiding situations or reacting negatively to circumstances (Schreiner, 2010). Looking at the brighter side of life amidst the negative situation may prove great benefits to a lot of students during the pandemic.

Table 5. Mean and standard deviation of respondents' level of positive perspective

Item No.	Items	Mean	SD	Scale	VI
Posit1	I look at the brighter side of life.	3.80	1.06	Somewhat Agree	Moderate
Posit2	I look for the best in any situation, even when things seem hopeless.	3.74	1.10	Somewhat Agree	Moderate
Posit3	I expect what is best in life.	3.84	1.10	Somewhat Agree	Moderate
Posit4	I am positive about my future.	3.60	1.21	Agree	High
Posit5	I expect good things to happen.	4.0	1.09	Agree	High
Grand Mean		3.80	1.11	High	Very High

### Correlation Analysis Between COVID-19 Related Anxiety and Thriving Quotient

Table 6. Relationship Between COVID-19 Related Anxiety and Thriving Quotient Dimensions

Thriving Quotient												
Engaged Learning		Academic Determination		Positive Perspective		Diverse Citizenship		Social Connectedness		Thriving Quotient		
<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>	
COVID-19 related anxiety											-0.31**	0.00
Cogni	-0.26**	0.00	-0.26**	0.00	-0.22**	0.00	-0.11**	0.00	-0.26**	0.00		
Affect	-0.19**	0.00	-0.17**	0.00	-0.09*	0.01	-0.04*	0.00	-0.24**	0.00		
Physic	-0.06	0.00	-0.08**	0.00	-0.05	0.00	-0.06	0.00	-0.20**	0.00		
Behav	-0.30**	0.00	-0.31**	0.00	-0.21**	0.00	-0.13**	0.00	-0.13**	0.00		



Table 6 shows the correlation analysis between the dimensions of COVID-19 related anxiety and thriving quotient. The sub-dimension of COVID-19 related anxiety which is cognitive manifestation is negatively correlated to all dimensions of thriving quotient such as engaged learning ( $r = 0.26, p = .00$ ), academic determination ( $r = 0.26, p = .00$ ), positive perspective ( $r = 0.22, p = .00$ ), diverse citizenship ( $r = 0.11, p = .00$ ), and social connectedness ( $r = 0.26, p = .00$ ). These signify that higher level of cognitive manifestations leads to lower level of thriving abilities. Students during the pandemic were pre-occupied with a lot of concerns. The current study revealed that students' cognitive manifestations which could be related to preoccupation with environmental concerns and academic related issues have a significant negative influence on their thriving abilities. In addition, the second sub-dimension of COVID-19 related anxiety which is affective manifestation is also negatively correlated to all dimensions of thriving quotient such as engaged learning ( $r = 0.19, p = .00$ ), academic determination ( $r = 0.17, p = .00$ ), positive perspective ( $r = 0.09, p = .01$ ), diverse citizenship ( $r = 0.11, p = .04$ ), and social connectedness ( $r = 0.24, p = .00$ ). These signify that higher level of affective manifestations leads to lower level of thriving. Looking at the magnitude of associations, the magnitudes mostly showed low or weak strength signifying there could be other factors that may contribute to the current thriving abilities of the respondents. The affective manifestation of COVID-19 related anxiety leads to lower level of thriving among students signifying the importance of properly managing emotions during uncertain times.

Additionally, the third sub-dimension of COVID-19 related anxiety which was physical manifestation was also *negatively correlated* to only two dimensions of thriving quotient such as academic determination ( $r = 0.08, p = .00$ ), and social connectedness ( $r = 0.20, p = .00$ ). These signify that higher level of physical manifestations leads to lower level of academic determination and social connectedness. Looking at the magnitude of associations, the magnitudes mostly showed low or weak strength. Physical stress affects students in many ways. The current result revealed that the physical manifestation of COVID-19 related anxiety has a *negative influence* on academic determination but regarded as having very low association.

Moreover, the fourth sub-dimension of COVID-19 related anxiety which is behavioral manifestation was also *negatively correlated* to all dimensions of thriving quotient such as engaged learning ( $r = 0.30, p = .00$ ), academic determination ( $r = 0.31, p = .00$ ), positive perspective ( $r = 0.21, p = .01$ ), diverse citizenship ( $r = 0.13, p = .04$ ), and social connectedness ( $r = 0.32, p = .00$ ). These signify that higher level of behavioral manifestations leads to lower level of thriving abilities. Looking at the magnitude of associations, the magnitudes mostly revealed medium strength. Students during the pandemic were confronted with several stressors affecting their overall productivity and functioning in personal and academic life. They were behaviorally manifesting signs of COVID-19 related anxiety primarily irritability and social isolation, it may negatively influence their overall quality of life and thriving abilities.

COVID-19 pandemic has suddenly amplified the pressing concerns due to an unprecedented level of student isolation and life disturbances affecting their academic functioning (Lyon & Matson, 2020). As a result of physical distancing measures and quarantine protocols implemented in response to COVID-19, higher education institutions have shifted to an emergency online learning format, which would be expected to further aggravate academic stressors for a lot of students (Grubic et al., 2020).

## Predictors of Thriving Quotient

Table 7. *Regression Analysis of Overall Thriving Quotient*

Variable	Unstandardized Coefficients		Standardized Coefficients		R <sup>2</sup> Change	Sig.
	B	Std. Error	$\beta$	<i>t</i>		
Behavioral Manifestations	-0.271	0.035	-0.334	-7.695	10.7%	0.000
Physical Manifestations	0.215	0.032	0.287	6.804	2.0%	0.000
Cognitive Manifestations	-0.152	0.032	-0.190	-4.747	2.3%	0.000

Table 7 shows that there were three indicators of COVID-19 related anxiety that entered the stepwise multiple regression analysis of overall thriving quotient. Behavioral manifestation best predicts thriving quotient with 10.7% variance with  $\beta = -0.334$ ,  $t = -7.695$ , and  $p < .000$ . Other predictors had less than 5% variance such as physical manifestation with 2.0% variance and with  $\beta = 0.287$ ,  $t = 6.804$  and  $p < 0.000$ , cognitive manifestations with 2.3 % variance and with  $\beta = -0.190$ ,  $t = -4.747$ , and  $p < 0.000$ . All factors were *significant* at the .05 level. The result indicated that when students lack motivation, irritable and exhausted, their level of thriving may be compromised. Thus, an intervention must be provided in this area. In relation to the behavioral manifestation being exhibited by the students, it was highlighted that students feel exhausted, lack motivation, have increased irritability, and have decreased academic performances during the COVID-19 pandemic (Maroco et al. 2020;). These specific concerns have a direct contribution to their thriving quotient.

Table 8. *Mediating effects of Mental Toughness on COVID-19 related Anxiety, and Thriving Quotient*

Path Name	Total Effect			Direct Effect			Indirect Effect		
	Coefficient	<i>t</i>	p-value	Coefficient	<i>t</i>	p-value	Coefficient	<i>t</i>	p-value
COV-19 -> MT -> TQ	-0.139	5.587	.000				-0.139*	0.025	.000

\*.Mediation effect is significant at the 0.05 level

Legend: OHISB=Online Health Information Seeking Behavior, MT=Mental Toughness,  
COV-19=COVID-19 Related Anxiety, TQ=Thriving Quotient

Mediation analysis was performed to assess the mediating effects of mental toughness on the association between COVID-19 related anxiety (COV-19) and thriving quotient (TQ). The path coefficients, specific indirect and total effects are tested using partial least squares structural equation modeling (PLS-SEM). The results (see Table 8) revealed that the total effect of COV-19 on TQ was *significant* ( $\beta = -0.139$ ,  $t = 5.587$ ,  $p = .000$ ). With the inclusion of the mediating variable mental toughness (MT), the impact of COV-19 on TQ became *insignificant*. Nonetheless, the indirect effect of COV-19 on TQ through MT was found significant ( $\beta = -0.139$ ,  $t = 0.025$ ,  $p = .000$ ). This shows that the relationship between COV-19 and TQ is fully mediated by MT.

The results show that the relationship between COV-19 and TQ is *fully mediated* by MT which indicates that without MT, COV-19 may not directly affect students' thriving quotient. This indicates the complete intervention of MT in the association between COV-19 and TQ. Academic

works explaining the current mediation analysis are not available. Nonetheless, the findings may still contribute to the growing body of knowledge related to the understanding of the specific role of mental toughness in COVID-19 related anxiety and thriving quotient of college students during lockdowns. The pandemic has shaken the lives of many. The set of evidence presented has explained the inevitable challenges of students during the pandemic which caused anxiety-related concerns. Also, applying MT as an important buffer against these concerns is a great help for students to thrive amidst the storm of stress in a pandemic situation for it is as vital to their overall well-being.

With COVID-19 cases abrupt rising in the Philippines, economic burdens, and personal challenges of students, it can be very difficult not to feel distress or feel despair (Cao et al., 2020). Nonetheless, in these unprecedented challenges during the pandemic, being mentally tough will surely make a difference in the life of students (Ketchell, 2021), for it could be a source of strength or shield against certain psychological burdens.

While the health professionals continue to battle the COVID-19 pandemic, college students are experiencing a growing mental health crisis. The pandemic itself has caused much anxiety among them. Several troubling data about the rising mental health challenges in the Philippines has been reported affecting students' thriving abilities. The study showed that the COVID-19 related anxiety of college students in the Philippines was regarded to be high. Looking at the specific indicators of COVID-19 related anxiety, cognitive manifestation was regarded as high and is mostly observed through preoccupation with the failure of the government to handle the COVID-19 crises, financial resources, and some environmental stresses. Additionally, students' affective manifestation was found to be high also manifested through feeling distressed about their academic-related tasks and financial concerns. Additionally, physical manifestation was observed to be moderate indicating an average physical stress mainly from their tasks in their academics. Moreover, a high level of behavioral manifestation was observed among them that are primarily triggered by their academics and the expectations from their teachers. Synthesizing the overall result of the COVID-19 related anxiety, it is predominantly instigated by their academic-related concerns and financial challenges which support previous literatures. During the COVID-19 pandemic, it is very important that students are not just surviving but they should be thriving as well. Assessing their thriving would entail exploring five specific indicators such as engaged learning, academic determination, positive perspective, diverse citizenship, and social connectedness. The first indicator which is engaged learning was found to be moderate indicating an average level in applying what they have learned in their online class in varied settings. Also, the students' level of academic determination was regarded as moderate and is primarily about finding ways to keep working and juggle all the demands of their academic life.

The students' level of positive perspective was nonetheless regarded to be high indicating that they expect the best and are looking for the brighter side of life despite the COVID-19 pandemic and despite their challenges. It was also revealed that their level of diverse citizenship was high indicating that they want to help others and want to make a difference in others' lives. Lastly, looking at the level of social connectedness among college students, it was revealed to be moderate denoting an average level of interpersonal relationship during the COVID-19 pandemic. The results show that students are thriving in other aspects but may need improvement in some aspects of their academic journey.

Being mentally tough during the pandemic is a proven trait to endure academic and psychological challenges and pressures in the literatures. Students' mental toughness was measured in four specific ways such as control, commitment, challenge, and confidence. Looking at the first component, students' level of control was regarded to be *moderate* showing that they have somewhat calm under pressures and stresses. Additionally, students had a *moderate level of commitment* which explains that they are somehow extra effortful and have a pledge in finishing their tasks. Looking at the third indicator of mental toughness, challenge which is all about flexibility or adaptability had been found to be *moderate* also indicating that they have average capacity to handle problems and managing difficult tasks during the COVID-19 pandemic. Finally, the confidence level of students was found to be *moderate* denoting that they are somehow not afraid to tell others their mistake or express their thoughts. Looking at the mental toughness of students, students' mental toughness may need to be improved to help them endure more difficult pressures with ease. Correlation analyses were done to understand the relationship among variables. Looking at the first correlation between COVID-19 related anxiety and thriving quotient, it was revealed to have a negative correlation indicating that thriving quotient of students could be negatively influenced by having a high level of COVID-19 related anxiety.

Life's worries are always hard-hitting for the public, but the COVID-19 pandemic has added an extra layer of intricacy for college students during these uncertain and difficult times which affected their thriving capacity. Finding a sense of balance may be most difficult for them, thus, retaining a sense of stability by controlling how they respond to uncertainties and COVID-19 related concerns is a helpful strategy to help them efficiently adapt. When students are able to practice mental toughness, they will be able to find effective solutions to achieve their academic goals given that being mentally tough is a great way to achieve a commendable level of engaged learning, academic determination, social connectedness, positive perspective and diverse citizenship. Being mentally tough may equate being able to thrive amidst the COVID-19 pandemic. Consequently, it is recommended that appropriate authorities such as parents and teachers should be able to support college students as they thrive amidst the COVID-19 pandemic. Due to physical distancing measures and quarantine protocols, the desired sampling data was not applied, thus, future studies should consider other sampling methods. Moreover, the need to further investigate thriving through other research designs and methods is highly recommended to explore the realities of students during the pandemic.

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## PSYCHOLOGY

## Case Study on Patients with Leukemia

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## Abstract

Most studies focused on the case control, causes, and prediction on early-stage diagnosis of leukemia and only few studies consider an in-depth study on what is the quality of life and how these patients cope in day-to-day basis, thus this study was conducted to know the matter. The study determined the quality of life and coping mechanism of patients with leukemia among individuals from Metro Manila. The researchers used case study design using purposive sampling of 2 outpatients by using a semi-constructed interview guide to meet the objectives of the study. The data were categorized and utilizing thematic analysis, themes were formed. The result showed that *low immune system, heredity, fear, sadness, limited socialization, and forgetfulness* affect their quality of life. The researchers concluded that the leukemia patient's quality of life did not meet the degree to which a person must enjoy the possibilities of life, yet they cope by having a *strong trust in God* and *well-built relationship with family*. As for future research, it is recommended to focus on how their quality of life is affected by their food diet and ways on how to help them have a positive outlook in life on day-to-day challenges.

**Keywords:** *quality of life, leukemia, coping mechanism, research observation, medical records*

Leukemia is one type of Cancer-Related Fatigue (CRF) that can have a major impact on the quality of life, with physical, emotional, and economic consequences. People with cancer who suffer from fatigue typically feel mentally and physically defeated. Thus, it interferes with their ability to fulfill daily responsibilities and enjoy life. Leukemia a health problem that requires medical management (The Leukemia and Lymphoma Society of Canada, 2016). According to the World Health Organization (WHO) statistics, the incidence of leukemia is 437000 worldwide and this shows that it is a huge problem that need our attention. (International Agency for Research on Cancer, World Cancer Report 2014). In the Philippines, the Department of Health (DOH) ranks leukemia as the 4<sup>th</sup> cancer killer. A Philippine health advisers' report places leukemia as the 5<sup>th</sup> on overall mortality. A 4<sup>th</sup> leading killing cancer, the attention of researchers, doctors, and readers are preoccupied with the 1<sup>st</sup> to 3<sup>rd</sup> leading cancer (Gloor, 2014).

Leukemia is caused by rapid copy of immature blood cells derived from permanent change on formation of blood stem cells inside the body. It is not a common disorder, but it is a significant cause of death in cancer (Howard & Hamilton, 2018). Leukemia can be defined almost all the time as the cancer of white blood cells yet some leukemia starts with other blood cell types. Leukemia

is the early formation of blood cells (American Cancer Society, 2017). The disease consists of two groups which are myeloid and lymphoid and could either be acute or chronic which falls into 4 categories, including Acute Lymphocytic Leukemia (ALL), Acute Myeloid Leukemia (AML), Chronic Lymphocytic Leukemia (CLL), and Chronic Myeloid Leukemia (CML).

The diagnosis of cancer and its treatment have a major impact on every aspect of patient's quality of life. According to the article Britannica, quality of life (QOL) is the individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns. Standard indicators of the quality of life include the subjective degree to which an individual is healthy, comfortable and able to have enjoyment to the important possibilities of his or her life such as wealth, employment, the environment, physical and mental health, education, recreation and leisure time, social belonging, religious beliefs, safety, security and freedom (Jenkinson C., 2016). Leukemia cancer patients may have a different standard of health, comfort, and happiness of their quality of life due to their conditions. Leukemia cancer patients face a lot of problem such as fatigue, depression, and anxiety that caused them to be stressed. They need to know what to expect and make plans on how to cope with stressful situation in cancer diagnosis (Mayo Clinic, 2020). It was observed that there were insufficient literatures regarding the in-depth study on leukemia in the Philippines thus, the researchers chose to investigate in this concern. The researchers conducted a study to have a clear understanding and knowledge about the quality of life of leukemia patients and their coping mechanism with their illness. The main purpose of the research was to have an in-depth study among outpatients with leukemia from Sampaloc, Manila and Imus, Cavite in the Luzon Area, Philippines, year 2017-2018. Specifically, this study identified the experiences of patients with leukemia as well as their coping mechanisms on the challenges they encountered because of their illness.

## **Methodology**

### **Research Design**

This research study used a qualitative research design specifically the case study method. A qualitative research design is a systematic subjective approach used to describe life experiences and give them meaning and gain insight; explore the depth, richness, and complexity inherent in the phenomenon. Qualitative study designs are beneficial for certain types of research questions such as those looking to provide unique insights into specific contexts or social situations (Deakin University, 2021). It is an in-depth interview with leukemia patients' quality of life and coping mechanisms. Along with the key informants, review of medical records and observations were conducted.

### **Population and Sampling Techniques**

The researchers used the purposive sampling technique. A purposive sample is a non-probability sample that is selected based on characteristics of a population and the objective of the study that is the most appropriate method in data gathering.

The population of the study is consisting of 2 young adult Filipino outpatients that experience Acute Lymphoblastic Leukemia. The application of purposive sampling relied on the chose characteristics of the chosen population who are mainly leukemia patients. Both patients are in continuous observation and undergoing chemotherapy to treat disease.

Table 1. *Exclusion and Inclusion Criteria*

Inclusion Criteria	Young adulthood that ages between 22-25 Diagnosed with Acute Lymphoblastic Leukemia Outpatient program Able to speak and understand English
Exclusion Criteria	Treatment course complicated by other medical conditions Severe physical consequences from their treatment

Table 2. *Semi-structured Guided Interview Outline*

Domain	Question
Physical	How does physical functioning affects you?
Emotional	How do you feel having leukemia cancer? How do you feel receiving chemotherapy?
Social	How are you affected by leukemia in your: a) school, b) job What do you miss outside hospital?
Cognitive	How is your memory affected by chemotherapy? What are you doing to protect your memory?
Coping mechanism	How do you cope with these challenges?

### Instrumentation

The researchers developed a semi-structured interview guide which was formulated based on the research questions and was validated by three experts. Suggestions were considered. The final edited questions guided the researcher as they interviewed the participants. The questions were in English language and was translated and elaborated by the researchers during the interview. The guide questions aimed to elicit responses from the leukemia patients for the purpose of gathering data and exploring a deeper understanding of their quality of life and coping mechanisms.

### Data Analysis

After gathering the data, the researchers interpreted information coming from the patients on that given moment. The data from the written field notes, interview, and transcripts underwent data condensation to make analysis of data easier but being careful to keep the main idea or information intact or the same. It is also used constant comparative method in which researchers compared earlier interviews from the next interviews. After all the data were gathered, the researchers transcribed the responses in verbatim. Through the recording and transcription of the interview, the researchers analyzed the data from saturation. The quality of life and coping mechanisms was categorized according to the research theme. The results were analyzed, and the researchers extracted a conclusion from the outcome of interview.

### Ethical Considerations

The data used in the case study was studied and used with honesty and integrity. The researchers got the participants' written consent to ensure the patients confirmed voluntarily. The transcriptions and theme analysis were validated by the research professor and chosen experts. The researchers also ensured that the participants were comfortable while answering the questions and took responsible when it comes to confidentiality with the data that had been gathered. The researchers asked for permission from the families and respected people inside the room. The researchers also gave incentives to the individuals that participated in the interview.

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## Results and Discussion

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### Experiences of Leukemia Patients

**Low Immune System.** Immune system plays an important role in protecting the body from diseases and possibly cancer. Physical aspect of leukemia patients tends to have a low blood cells that increase their possibility to have a low immune system or high risk to exposure on infections and viruses. The two participants stated they both often feel dizzy, lose their appetite, and vomit due to the low immune system brought by leukemia. These experiences caused negative changes in their body. Participant 1 explained being scared because her immune system is getting low, “Back then, things are very different because I used to love fast-food, go to party and drink alcohol.” Participant 2 stated that he “used to study law school yet due to stressors, it so happened I developed hydrocephalus and having a low immune system is a factor why it happened.”

Leukemia depresses one’s immune system which causes immunosuppression or lowered resistance to disease. The treatment of leukemia can further depress normal immune cells and further contribute to immunosuppression thus leading us to have a low white blood cells that protect us from bacteria. The bacteria can be quite aggressive that can enter blood and tissues of leukemia patients that can give them much lower immune system (Ball & Kagan, 2013). Participant 1 stated “many changes happened to my body and that includes different reaction to unhealthy foods to which I think brought by low immune system.” Participant 2 also experience lot of symptoms such as vomiting, loss of appetite and bruising to which he stated that it is automatic to have a low immune system that limits them to their potential. This imply that clients are prone to sickness and poor physical health due to low immune system brought by leukemia disease. The immune system protects the body against illness and infection that bacteria, viruses, fungi or parasites. The immune system is important to people with cancer because it can weaken the immune system and cancer treatments might weaken the immune system (Cancer Research UK, 2020). This may infer that the physical aspect of patients with leukemia might have a poor quality of life.

A cancer diagnosis can have a huge impact on most patients with many things that are changing in their body, patients seem to be more emotionally distressed. Patients always have the fear of death, suffering, pain or all of the unknown things lie ahead. As stated by one of the participants, “At first I questioned why am I the one who experience having leukemia although I am a good son? I have the same reaction just like any patients. I experience fear on having this type of cancer.” Another patient added, “I think of my future life and I started to feel weak when I learned I have a leukemia. I searched the net on how to fight cancer because I am afraid, I have the fear of passing away.” Sadness is also a theme of emotional aspect of patients wherein feelings of disadvantage, despair, grief and helplessness, disappointment and sorrow. The patient added “I cried when I think of my family.

It was very hard for me to fully accept why I have leukemia. The people I am with the hospital, some of them has already died that makes me feel sad.” Many adjustments have to made as these patients are faced with unplanned changes and upheavals in their lives. A diagnosis of blood cancer poses many challenges both for the person diagnosed and their loved ones. One response of the patient, “I am saddened because my family wants to have a lawyer in our family and I want to be a lawyer someday.” Returning to school after cancer treatment is a tough adjustment. Mark, one of the respondents said that sadness is always there but as a leukemia warrior, he did not allow this emotion to control his life. He finished his degree and had been in the law school for two years.

### Theme 3: Social: *Limited Socialization*

With the fact that leukemia patients have a low immune system, people surrounding them are limited and patients of family are being cautious to the people who visit the patients. In their condition, carefulness is a must including moments of their lives where they hang out with friends and family members.

“I don’t have that much friend when I went to school when I have leukemia. Yet, I have my girlfriend who is aware I have leukemia. The only people I’m usually with is my family, particularly my mom who quit her job just to take care of me.” Jia, (2015) stated that that social support has been identified as another important factor for health, in particular for reducing cancer-related distress in family. They found cohesive family structure to be particularly important to mothers. In the case of another participant, Rizz Pearl said that “With my first years of having leukemia, I really had a hard time meeting my friends and also some members of my family. Until now, I can only leave the house once a month.” The years of having a leukemia disease, patients have a hard time doing a lot of things due to low immune system that made them feel fear that leads to having a small amount of time hanging out with friends and family.

### Theme 4: Cognitive: *Forgetfulness*

The cognitive impairments are relatively seen with patients of Acute Lymphoblastic Leukemia (ALL) as one of the patient stated, Rizza “Yes, I am truly affected cognitively. During my first and second cycle, I tend to forget things and I am very forgetful on what am I going to say next in the middle of my sentences. Yet, to remember things that I will do, I write it on my diary or things to do list such as drinking my medicines right on time.” The other patient, Mark had different statement “I think the way I processed things are still the same before I had leukemia. I think because I still used my brain regularly, I kept on studying. But when I got hydrocephalus side effects, I had multiple breakdown and collapsed because the liquid that is in my head are starting to stream out.” Mark assumed that his memory was not affected at all when he started doing chemotherapy as a child till college since he was a nominee for Cum Laude and even started doing law school. However, due to the hydrocephalus that could be a manifestation of his leukemia disease, his cognitive aspect has been limited.

Table 4. *Coping Strategies of Leukemia Patients*

Theme 1	Support with Family
Theme 2	Trust in God

## Coping Strategies of Leukemia Patients

### Theme 1: Support with Family

“I have a support system that came from my family.”, “I have my family and also my boyfriend”. These two statements play a fundamental role in the treatment of these young adult outpatient that requires support and help them confront situation they are not prepared of.

### Theme 2: Trust in God

Many leukemia survivors find that life takes on new meaning after cancer and will renew their commitment to spiritual practices or organizational religion. Research suggest that spirituality



improve quality of life through strong social network, adaptive coping, lessened depression and better physiological function. As Participant 2 stated, “The trust I have for God was always there.” Another client name Participant 1 stated “I always pray and been active to Baptist Church, my religion.” To conclude, spiritual care program could successfully decrease anxiety levels in patients with leukemia.

Based on the summary of results the researchers therefore conclude that leukemia patients’ quality of life does not meet to the degree to which a person must enjoy the important possibilities of his or her life due to their conditions. The results implied because they have a low immune system, they must start a healthier lifestyle and they must protect their body from any diseases. Emotionally, the patients experienced fear and sadness that could hinder them from having an overwhelming happiness in life. Having a limited socialization can affect their social aspect of life which may result in isolation. More so, the treatment they were using affect the memory of patients. Family as social support and trust in God helped them cope with the challenges. These support groups made them stronger in fighting leukemia. The findings of this study are essential to further implement continuous improvement initiative for cancer patients.

For the recommendations, the leukemia patients are encouraged to have a stronger faith in God and have proper nutrition by eating healthy foods such as eggs, clean fruits, vegetables, and avoid undercooked food. They should also have a regular checkup. It is also important for the patients to always have a positive outlook in life to fully enjoy the quality of life. As for future research, it is recommended to focus on how their quality of life is affected by their food diet and ways on how to help them have a positive outlook in life on their day-to-day challenges.

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## PSYCHOLOGY

## Psychological Risk Factors, Social Networking Site Usage, and Cyberbullying Among Adolescents

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### Abstract

The use of social networking sites had been very popular among adolescents to communicate with friends and families. With the rise of social networking sites, bullying also took a big step. Bullying can now be done on the internet, specifically among various social networking sites. In this study, the researchers focused on two specific social networking sites: Facebook and Twitter. The study stands to determine whether there are psychological risk factors involved with cyberbullying, as well as the users' activities, age, gender, instrument used, and hours of use on such sites. The study used descriptive correlational method and composed of 317 respondents, ages 13-19 years-old from Metro Manila and Cavite. A six-part self-constructed test for the assessment of each variable was used in the study. Results showed that the users' behavioral intention, vicarious reinforcement, and social networking site usage were significantly correlated to cyberbullying. Considering the demographics profile, males were more likely to engage in cyberbullying behaviors than females and the same could be said when the users use such sites for 7 to 9 hours per day.

**Keywords:** *cyberbullying, SNS, SNS usage, behavioral intention, vicarious reinforcement*

In the recent years, social networking sites (SNSs) usage has become more evident in the lives of most people. The convergence of these SNSs made communicating, socializing, and updating with friends easy with just a tap from users' smartphones or laptops. The rise of this medium put one's social life not only on the physical world but also on the digital world. Events that happened in real life can be relived again online just by posting videos, photos, and statuses. Alongside the advantages of SNSs also come the adversities. With the accessibility of messaging, people can also easily send mischief. Social life evolved into the digital world and so is cyberbullying. Cyberbullying is the sending or posting harmful and embarrassing messages, photos, and videos on the internet.

According to Boyd and Ellison (2007), SNSs can be distinguished as web-based services that allow individuals to be virtually present by posting photos/videos and have personal descriptors of them, publicly displaying a list of other users with whom they share a connection, and traversing with their list of connections. Alongside this, SNSs entice unfavorable effect due to excessive use (Griffiths, 2013; Kanyinga & Lewis, 2015) like influencing negative societal norms and values and causing loneliness (Akram et al., 2015). Too much use of social network websites such as Facebook, Twitter, Instagram, YouTube, and the like has already become a widespread phenomenon.

Nowadays, adolescents' most common activity done was to view their friends' photos, posts, and comments (Pempek et al., 2009), including perhaps how many likes their status got in social media. However, the frequent use of SNS has provided a possibility for abuse and annoyance which typically results to cyberbullying. A common form of this is currently widespread is the cloned impersonated profile account or 'phishing' (Chukwudi et al., 2015). According to the Rickard (2015), phishing has reported 0.6 % financial losses, 24.9 % and 23.8% were male and female

victims, respectively, and 0.6% was through SNSs. In August 2012, there were 83 million Facebook accounts and 8.7% are fake accounts. Most of these are used for spamming and deceitful purposes.

A 2015 survey by the non-profit Stairway Foundation Inc. found out that 80% of young teens aged 13 to 16 have been bullied through social media. Further, 40% of the teens knew someone in their peers who also suffered the same predicaments. The survey also stated that only 50% of the teens' parents know that they were being bullied and only 40% of the teens answered that they were not comfortable that their parents know about their online activities (Takumi, 2016). These statistics showed that adolescents in the Philippines are really suffering from cyberbullying behaviors and that they do not know how to deal with it properly.

In a 2015 survey in the US, It was found the following age-groups used Twitter: 32% of 18- to 29-year-olds, 29% of 30- to 49-year-olds (Duggan, 2015). Twitter was used by an estimated 17% of adult Internet users, and in the United Kingdom, around 19% of online adults used the social media platform (Kemp, 2016; Sensis, 2015). Twitter is no stranger when it comes to a high number of cyberbullying.

This study considered the situational factors which conceive that behavioral modeling of siblings, peers, or adults who either engage in or are victims of interpersonal aggression were in need of additional study. Further, it concentrates on the real issue concerning what people are actually attracted to do on SNSs and become victims, bullies, or both. While there are scarce studies on cyberbullying locally on SNS (Gonzales, 2014), they are mainly researches on one particular site alone, which is Facebook (e.g., Griffiths, 2013; Griffiths et al., 2014). The current study aimed to bridge the gap of over generalizing cyberbullying results on one SNS and also consider using Twitter; and to fill the research gap involving SNSs being attacked by cyberbullies and their victims that is widely rampant amongst teenagers. Therefore, the purpose of the study was to know whether psychological risk factors specifically behavioral intention, vicarious reinforcement, and social networking sites usage on Facebook and Twitter were associated with cyberbullying among adolescents.

### Methodology

This correlational study utilized 317 adolescent Facebook and Twitter users with ages 13-19 from Manila and Cavite using stratified random sampling techniques. Overall, the respondents were on average 17 years old ( $M = 16.47$ ;  $SD = 1.49$ ). Out of the 317 distributed self-constructed questionnaires, 305 were valid and 12 were discarded for invalidity. The respondents' gender showed that 55% were females and 45% males. Most respondents ( $n = 283$ ) used smartphones than any other gadgets when it comes to accessing into the social media; 206 used personal computer/laptop, 97 used tablets/Ipads, and the least they use was public computers ( $n = 52$ ). Majority of the respondents ( $n = 97$ ) spent 1-3 hours on SNSs per day followed by, 4-6 hrs ( $n = 91$ ).

### Results and Discussion

#### Descriptive Analysis

Table 1. *Respondents' level of Psychological Risk Factors in terms of Behavioral Intention and Vicarious Reinforcement*

	Mean ( <i>SD</i> )	Scaled Responses	Verbal Interpretation
Overall Behavioral Intention	1.46 (0.36)	Unlikely	Very Low
Overall Vicarious Reinforcement	2.43 (0.69)	Rarely	Low

**Behavioral Intention.** The respondents' level of psychological risk factors in terms of behavioral intention is depicted in Table 1. Results showed that the respondents scored an overall mean of 1.46 and standard deviation of 0.36 which was interpreted as *very low*. This implies that the users had low urges to intently be sarcastic and annoying with making fun of their friends. Additionally, most of the respondents do not have the intention of doing something that might ruin their friends' reputation with rumors or undesirable statements.

These findings are similar to the findings of the study of Vandebosch and Cleemput (2009) which stated that cyberbullies think that their action towards another person's account is funny, while the self-reported victims did not see the humor of what cyberbullies do, instead they perceived it as hurtful actions. According to the study, there is higher chance that the victims of cyberbullying become the cyberbully, and when a group of children have the same positive attitude towards bullying, they are more likely to act as perpetrators (Heirman & Walrave, 2012).

**Vicarious Reinforcement.** Table 1 also shows the respondents' level of psychological factors in terms of vicarious reinforcement. The results suggest that the respondents have *low level* of vicarious reinforcement with an overall mean of 2.43 and standard deviation of 0.69. This implies that users have the small tendency to copy what their friends are doing and what is popular trend on SNS. Furthermore, the users do not focus much on celebrities and stuff that are in style, instead they focus more on what they like and seemed funny to them.

These results showed that when an individual observe another individual that is reinforced by his/her behavior the observer will change his/her behavior according to what he/she observed. Observers must feel that the model is similar enough or almost the same as them, for them to experience the same outcomes. The similarities that the observer needs from a model are physical traits, personality variables, or shared beliefs and attitudes (Fox & Bailenson, 2009).

Table 2. Respondents' level of Social Networking Site Usage

Social Networking Site Usage	Mean (SD)	Scaled Responses	Verbal Interpretation
Facebook	3.11 (0.60)	Sometimes	Average
Twitter	2.66 (1.04)	Sometimes	Average
Overall	2.89 (0.73)	Sometimes	Average

**Social Networking Site Usage.** Table 2 shows the respondents' level of SNS Usage. Results showed that the respondents scored a mean of 3.11 and standard deviation of 0.64 in Facebook and a mean of 2.66 and standard deviation of 1.04 in Twitter, which were both interpreted as *average*. The respondents scored an overall mean of 2.89 and standard deviation of 0.73 which was interpreted as *average*.

Based on the results, adolescents use Facebook in an average amount of time. This can be supported by a study by Junco (2012) reporting that the usage rates among undergraduate students are high.

Table 3. Respondents' level Cyberbullying

Cyberbullying	Mean (SD)	Scaled Responses	Verbal Interpretation
Cyberbullies	1.42 (0.55)	Never	Very Low Cyberbullies
Cybervictims	1.69 (0.63)	Rarely	Low Cybervictims
Overall	1.55 (0.47)	Rarely	Low Cyberbullying

**Cyberbullying.** Table 3 presents the respondents' level of Cyberbullying. Based on the results, the respondents scored a mean of 1.42 and standard deviation of 0.55 on Cyberbullies which was interpreted as very low. In cybervictims, the respondents attained a mean score of 1.69 and standard deviation of 0.63 which was interpreted as low. The overall mean attained was 1.55 and standard deviation was 0.47 which was interpreted as low cyberbullying.

A UK study stated that the internet is not the main reason for cyberbullying instead, it is more on the way the users use the internet (Sengupta & Chaudhuri, 2014.) Hence, with these results, it can be concluded that the respondents mostly did not engage or received any cyberbullying behaviors.

Table 4. *Respondents' Level of Being Cyberbullies in Terms of Denigration, Trolling, & Phishing*

	Items	Mean (SD)	Scaled Response	Verbal Interpretation
Trolling		1. 58 (0.54)	Rarely	Low
1	Signed in with someone else's screen name to gather information	1.30 (0.65)	Never	Very Low
7	Teased someone over Facebook.	1.95 (1.02)	Rarely	Low
8	Frightened someone over Facebook by claiming to hurt him/her.	1.14 (0.53)	Never	Very Low
9	Did not tell someone my real identity online.	1.75 (1.07)	Rarely	Low
14	Sent rude or scary things to someone.	1.76 (5.64)	Rarely	Low
15	Used bad language online.	1.91 (1.11)	Rarely	Low
Denigration		1.33 (0.45)	Never	Very Low
2	Sent a message from someone's account.	1.78 (0.95)	Rarely	Low
5	Used a program that would destroy someone's computerized data (i.e. virus).	1.07 (0.39)	Never	Very Low
10	Forwarded a private conversation without the permission of the other person.	1.55 (0.85)	Rarely	Low
11	Used someone else's photos when posting online.	1.29 (0.65)	Never	Very Low
12	Created an internet poll about someone without their consent.	1.09 (0.46)	Never	Very Low
13	Used information found online to embarrass someone.	1.19 (0.57)	Never	Very Low
Phising		1.15 (0.40)	Never	Very Low
3	Impersonated someone over Facebook.	1.19 (0.51)	Never	Very Low
4	Changed any information in another's computer files without the owner's knowledge or permission.	1.17 (0.56)	Never	Very Low
6	Gave to another person someone else's password without the owner's knowledge or permission.	1.09 (0.39)	Never	Very Low
Overall Cyberbullies		1.42 (0.55)	Never	Very Low



**Cyberbullies.** The respondents' level of being Cyberbullies is shown in Table 4. Results showed that the respondents obtained a grand mean of 1.2 and standard deviation of 0.55 which indicates *never* and verbally interpreted as *very low*. The variables denigration with a mean of 1.33 and standard deviation of 0.45 and phishing with a mean of 1.15 and standard deviation of 0.40 which was interpreted as verbally very low, while trolling with a mean of 1.58 and standard deviation of 0.54 that was verbally interpreted as *low*. This suggests that most of the respondents used annoying statements in engaging cyberbullying on other users on SNS because it seemed to be the simplest and most common form.

The top activities were as follows: "Teased someone over Facebook"; "Used bad language online"; "Sent a message from someone's account". This suggests that teasing someone and using profane words in messaging is rampant among the respondents because it was a collective idea. Cyberbullying is common to adolescents, and it is rapidly increasing because of our technology. The most common thing cyberbullies do is not respecting other individual's website like Facebook and sending harmful messages or post shameful comments about a person (Dredge et al., 2014).

Cyberbullies have behavioral problems which are associated with hyperactivity, so they tend to troll for them to seek the attention of others, and the possibility for them to be under substance abuse and have physical symptoms (Sourander et.al, 2010). Cyberbullies are not that much focused on destroying someone else's computer as a form of cyberbullying; they are more focused on arguments and denigrating someone over social networking sites.

Table 5. Respondents' Level of Being Cybervictims in Terms of Denigration, Trolling, & Phishing

	Items	Mean (SD)	Scaled Response	Verbal Interpretation
Denigration		2.10 (0.70)	Rarely	Low
1	I have received online messages that offended me.	2.38 (0.90)	Rarely	Low
2	My friends shared embarrassing photo/s of me on Facebook/Twitter.	2.37 (1.03)	Rarely	Low
6	I cannot understand whether something against me is what the person truly means or only a joke.	2.13 (1.09)	Rarely	Low
13	I saw someone online that was spreading lies about me.	1.50 (0.86)	Rarely	Low
Trolling		1.55 (0.61)	Rarely	Low
3	I received rude comments on my posts.	2.07 (5.63)	Rarely	Low
11	I received messages that contain profanities.	1.61 (0.95)	Rarely	Low
14	I received threatening messages from someone I do not know.	1.29 (0.68)	Never	Very Low
Phishing		1.50 (0.52)	Rarely	Low
4	I received links that were websites for viruses.	1.92 (1.06)	Rarely	Low
5	I have friends that pretended to be females and were actually males or males that were actually females.	1.62 (0.97)	Rarely	Low
7	I was fooled out of money by clicking on fake-emails or messages.	1.21 (0.60)	Never	Very Low

{table continues on the next page}

8	My friends sent me obscene or pornographic photos.	1.62 (0.94)	Rarely	Low
9	I was asked to sign up for a website that secretly took my personal passwords.	1.26 (0.65)	Never	Very Low
10	There were accounts that have the same bio profile as I have.	1.40 (0.83)	Never	Very Low
12	Someone else used my account without my permission.	1.72 (0.93)	Rarely	Low
Overall Cybervictims		1.69 (0.63)	Rarely	Low

**Cybervictims.** Table 5 shows the respondents' level of Cybervictims. Based on the results, the respondents obtained a grand mean of 1.69 and standard deviation of 0.63 and verbally interpret as low. This shows that the respondents received few or experienced low incidents of cyberbullying. In a more specific way, the variables denigration with a mean of 2.10 and standard deviation of 0.70, trolling with a mean of 1.55 and standard deviation of 0.61, phishing with a mean of 1.50 and standard deviation of 0.52, each was interpreted as low.

Instances that respondents experienced bullying were: "I have received online messages that offended me"; "My friends shared embarrassing photo/s of me on Facebook/Twitter"; "I cannot understand whether something against me is what the person truly means or only a joke". The latter statement underscores an idea that ambiguity of posts is intriguing to discern. Furthermore, this denotes that the cyberbullies mostly share embarrassing photos of their victims because photos like that are easy to make fun of because it is very visual.

Victims who have constant connection via internet can be attacked by cyberbullies anytime. Cyberbullying can be defined as an aggressive act to someone who cannot defend themselves, and it is repeated several times by an individual or a group of people by saying harmful words or posting embarrassing photos of another person using technology (Bauman, 2009; Smith et al., 2008).

### Correlational Analyses of Psychological Risk Factors and Cyberbullying

Table 6. *Relationship of Behavioral Intention, Vicarious Reinforcement, and Cyberbullies*

Psychological Risk Factors	Cyberbullies		Denigration		Trolling		Phishing		Verbal Interpretation
	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>	
Behavioral Intention	.422**	.000	.568**	.000	.534**	.000	.477**	.000	Significant
Vicarious Reinforcement	.285**	.000	.341**	.000	.308**	.000	.215**	.000	Significant

\*\**p* < .01 level of significance (2-tailed)

Table 6 shows the relationship of behavioral intention and cyberbullying. The scores demonstrate that the behavioral intention of the respondents was significantly related to cyberbullies ( $r = .422, p < .01$ ), denigration ( $r = .568, p < .01$ ), trolling ( $r = .534, p < .01$ ), and phishing ( $r = .477, p < .01$ ). The result suggests a *significant positive relationship* which means that the respondents' behavioral intention may lead them to become cyberbullies. This may imply that the respondents' intended to bully other users by degrading, deceiving, and making fun of them; and their attitude towards cyberbullying may be explicit.

The person's actual intentions lead them to engage in cyberbullying behaviors (Heirman & Walrave, 2012). In their study, attitude, subjective norm, and perceived behavioral control were

the most important factors that contributed to behavioral intention; in which they found out that attitude is the strongest predictor of intention; then the self-reported cyberbullying was found to be the adolescents' behavioral intention to do it. An interesting study on Singaporean adolescents has used behavioral intention to combat the problem cyber harassment. The harassment pertaining to this was similar to denigration, trolling, and phishing where their results showed 51% have experience it at least once (Lwin et al., 2012).

Table 6 also illustrates the relationship of vicarious reinforcement and cyberbullying. The result illustrates that vicarious reinforcement was significantly related to cyberbullies ( $r = .285$ ,  $p < .01$ ), denigration ( $r = .341$ ,  $p < .01$ ), trolling ( $r = .308$ ,  $p < .01$ ), phishing ( $r = .215$ ,  $p < .01$ ). The result suggests a *significant positive relationship* which implies that the respondents' vicarious reinforcement may lead them to become cyberbullies. This result implies that the respondents' have learned to engage in cyberbullying behaviors, such as denigration, trolling, and phishing, through observing others being reinforced when they engage in the said behavior.

Some people are able to harass others through speaking and the new word for harassment via internet is "trolling". Trollers make the user overly emotional or foolish in some way. If the unfortunate user falls into the trap, the trollers will meet their satisfaction to admonish someone. The more users fall to the trap, the more the troller became satisfied (Buckels et al., 2014). Trollers do what they do are because they are bored, attentions seeking, revenge, pleasure, and a desire to cause damage to others (Shachaf & Hara, 2010).

On the other hand, people who do phishing can impersonate a website and they are aiming to acquire private information like passwords, usernames, and social security numbers. It is created by dishonest persons to impersonate genuine websites. If the user has lack of basic knowledge about web threats or online threats the phisher will take their advantages to get the private information of the users (Mohammad et al., 2014).

Denigration can threaten one's self-esteem. The innocent victims of denigration sometimes see that good things happen to good people, and bad things happen to bad people (Saragin et al. 1998).

Table 7. Relationship of SNS Usage in Facebook, Twitter, and Cyberbullying

	Cyberbullies		Cybervictims		Verbal Interpretation
	<i>R</i>	<i>p</i>	<i>r</i>	<i>p</i>	
Facebook Usage	.222**	.000	.313**	.000	Significant
Twitter Usage	.181**	.001	.258**	.000	Significant

\*\* $p < .01$  level of significance (2-tailed)

Table 7 illustrates the relationship of Facebook usage and cyberbullying. The results stated that the respondents' use of Facebook was positively related to cyberbullies ( $r = .222$ ,  $p < .01$ ) and cybervictims ( $r = .313$ ,  $p < .01$ ). These results showed that the more the respondents engage in different activities in Facebook may lead them to become cyberbullies or cybervictims. This implies that the respondents may become cyberbullies or cybervictims by chatting with friends because users tend to send insensitive words, without thinking, because of too much familiarity. In line with this, a research concluded that internet use or frequency contributed to cyberbullying incidents (Sticca et al., 2013.)

For Twitter, results confirmed that the respondents' use of Twitter was positively related to cyberbullies ( $r = .181$ ,  $p < .01$ ) and cybervictims ( $r = .258$ ,  $p < .01$ ). These results explained that the more the respondents engage in different activities in Twitter may lead them to become

cyberbullies or cybervictims. This denotes that users receive or engage in cyberbullying because they might read offensive tweets from friends that they follow.

Engaging in different activities in Twitter may really lead to cyberbullying behaviors. One study concluded that users who dwell with anti-social contents on social media may lead to anti-social behaviors like cyberbullying with the use of Cyclic Process Model (Den Hamer et al., 2013.) They stated that bullying behaviors results in being even further bullied, thus, getting caught in a cyclic process. This may support that the activities the user engage with in social networking sites, like Twitter, may later affect their behavior; which in this case, cyberbullying.

### Differences in the Respondents' Cyberbullying Considering Age, Gender, Device/Gadget Used, and Hours of Use

Table 8. *Relationship of Age and Cyberbullying*

	Cyberbullies		Cybervictims		Verbal Interpretation
	<i>r</i>	<i>P</i>	<i>r</i>	<i>p</i>	
Age	.049	.396	.057	.317	Not Significant
Twitter Usage	.181**	.001	.258**	.000	Significant

\*\* $p < .01$  level of significance (2-tailed)

Table 8 shows the relationship of age to cyberbullies ( $r = .050$ ,  $p > .01$ ) and cybervictims ( $r = .058$ ,  $p > .310$ ). The table showed that age was *not positively correlated* with cyberbullying. It means that whether what the persons' age is, the person experienced being cyberbullied or engaging in cyberbullying behaviors.

Table 9. *Difference in the Respondents' Cyberbullying in terms of Gender*

Variable	Gender	Mean	<i>SD</i>	<i>t</i>	Sig.	Verbal Interpretation
Cyberbullies	Male	1.49	.75	2.267*	.024	Significant
	Female	1.35	.28			
Cybervictims	Male	1.70	.58	.210	.834	Not Significant
	Female	1.68	.66			

$N=305$ , \* $p < 0.05$  level of significance (2-tailed)

Table 9 depicted the significant difference of cyberbullying in terms of gender. The results revealed that male users were more likely to engage in cyberbullying than females ( $t = 2.267$ ,  $p < .05$ ). This implies that male users had higher urges to maintain higher social rank by bullying their peers than female users. In contrast, there was no significant difference between male and female respondents in terms of cybervictims ( $t = .210$ ,  $p > .05$ ). Male respondents attained a higher mean score ( $M = 1.49$ ,  $SD = .75$ ) than females ( $M = 1.35$ ,  $SD = .28$ ) in terms of cyberbullies. Male respondents also attained a higher mean score ( $M = 1.70$ ,  $SD = .58$ ) than females ( $M = 1.68$ ,  $SD = .66$ ) in terms of cybervictims.

One study found out that adolescent boys were more likely to post hurtful pictures or videos on the internet. The researcher further claimed that boys are more inclined to engage in electronic bullying (Adams, 2010).

Table 10. *Difference in Respondents' Cyberbullying in terms of Device/Gadget Used*

Variable	Smartphone	<i>N</i>	Mean	<i>SD</i>	<i>t</i>	Sig	Verbal Interpretation
Cyberbullies	Not used	22	1.79	1.47	3.393	.001*	Significant
	Used	283	1.39	.39			
Cybervictims	Not used	22	1.50	.45	-1.432	.153	Not Significant
	Used	283	1.70	.64			
Tablet							
Cyberbullies	Not used	208	1.41	.58	-.026	.979	Not Significant
	Used	97	1.42	.48			
Cybervictims	Not used	208	1.66	.63	-1.062	.289	Not Significant
	Used	97	1.74	.63			
Personal Computer							
Cyberbullies	Not used	99	1.34	.31	-1.621	.106	Not Significant
	Used	206	1.45	.62			
Cybervictims	Not used	99	1.63	.43	-1.027	.305	Not Significant
	Used	206	1.71	.70			
Public Computer							
Cyberbullies	Not used	252	1.41	.58	-.010	.992	Not Significant
	Used	52	1.42	.36			
Cybervictims	Not used	252	1.68	.65	-.465	.642	Not Significant
	Used	52	1.73	.54			

\* $p < .05$  level of significance (2-tailed)

Table 10 shows the differences in cyberbullying when the device used was considered. Results showed that only the use of smartphones was positively correlated with cyberbullying. The use of smartphones was related to cyberbullying because it is the most used device in accessing the internet.

Table 11. *Differences in Cyberbullying considering hours of use*

Variable	Source	df	SS	MS	F	p	Verbal Interpretation
Cyberbullies	Between Groups	5	3.92	.78	2.70*	.022	Significant
	Within Groups	299	87.48	.29			
	Total	304	91.40				
Cybervictims	Between Groups	5	2.69	.54	1.37	.236	Not Significant
	Within Groups	299	117.46	.39			
	Total	304	120.15				

\* $p < .05$ 

Table 11 illustrates the difference in cyberbullying of the respondents by their hours of use. The main effect of hours of use was found to be *significant* among cyberbullies,  $F(5,299) = 2.70$ ,  $p < .022$  but not on cybervictims,  $F(5,299) = 1.37$ ,  $p > .236$ . Participants reported being more cyberbullies by their length of SNS usage than those cybervictims. This suggests that the condition between cyberbullies and cybervictims may occur more often when users have longer hours of usage.

Hours of use in SNS or internet has been related to cyberbullying among adolescents. A study made by Li et al. (2011) in Japan among junior high school students revealed that 12 % of the respondents have spent more than 5 hours a day using the internet and almost 33% have been involved in cyberbullying. Higher rates are seen among cyberbullies (8%) versus cybervictims (7%).

Table 12. *Multiple Comparisons of Cyberbullies considering hours of SNS Usage*

Dependent Variable	(I) Hours	(J) Hours	Mean Difference (I-J)	Sig.	Verbal Interpretation
Cyberbullies	< 1 hour	1 hour	-.12491	.959	Not Significant
		1-3 hours	-.21626	.367	Not Significant
		4-7 hours	-.13679	.822	Not Significant
		7-9 hours	-.44779*	.012	Significant
		> 9 hours	-.26214	.410	Not Significant
	7-9 hours	< 1 hour	.44779*	.012	Significant
		1 hour	.32288	.242	Not Significant
		1-3 hours	.23153	.278	Not Significant
		4-7 hours	.31100	.056	Not Significant
		> 9 hours	.18565	.758	Not Significant

\*The mean difference is significant at the 0.05 level.

The post hoc analysis suggests that adolescents who have higher SNS usage (7 to 9 hours of use) tends to be cyberbullies compared to those who use less than 1 hour of SNS usage. This result was closely aligned to the study of Sampasa-Kanyinga and Hamilton (2015) where it tells that the risk of being cybervictims increased with time spent using SNSs. It happened that the behaviour of the respondents who uses Facebook and Twitter for 7 to 9 hours may become cyberbullies than respondents that use in less than 1 hour.

### Regression Analysis of Cyberbullying

Table 13. *Predictors of Cyberbullies*

Model	Predictor Variables	R	R <sup>2</sup>	F	$\beta$	t
1	Behavioral Intention	.422	.178	65.740	.422	8.108***
2	Behavioral Intention & Vicarious Reinforcement	.447	.200	37.652	.367	6.682***

\*\*\* $p < .001$ , \*\* $p < .01$

Table 13 shows the predictor variables of cyberbullies. It was found that behavioral intention significantly predicted cyberbullies ( $\beta = .422$ ,  $t = 8.108$ ,  $p < .001$ ). The results of the regression indicated a positive correlation indicating the higher the behavioral intention of respondents, the higher the level of cyberbullies they will become. This indicates that cyberbullies tend to various cyberbullying behaviors, by planning to or intentionally cyberbully others.

Another predictor of cyberbullies are behavioral intention and vicarious reinforcement ( $\beta = .367$ ,  $t = 6.682$ ,  $p < .001$ ). This result argues that the effect of behavioral intention to be a cyberbully can be increased if vicarious reinforcement is included. Also, cyberbullies who plan to engage in cyberbullying behaviors can be increased if they have also learned the behavior from observing others being reinforced when engaging on the same behavior. The positive relationship the higher is the behavioral intention as well as vicarious reinforcement the higher level of cyberbullies they will be performing accounting for the 20% of its total variance.



Behavioral intention was a significant predictor towards cyberbullying perpetration. Vicarious reinforcement also significantly predicts the behavior of cyberbullies through modeling those people around them. In light to this, a Neuroscience study has found that teaching others to learn has increased their predictive errors. The respondents acted up like a teacher providing hoax students a positive or negative feedback on a task; thus the teachers learn the correct responses of the task due to the observation and monitoring of the responses made by students. The teachers vicariously learned things as the outcomes of one's action become apparent to the students and in turn to themselves too (Apps et al., 2015).

Table 14. *Predictors of Cybervictims*

Model	Predictor Variable	R	R <sup>2</sup>	F	$\beta$	T
1	Facebook Usage	.313	.098	32.841	.313	5.731***
2	Behavioral Intention & Vicarious Reinforcement	.447	.200	37.652	.367	6.682***

\*\*\* $p < .001$ , \*\* $p < .01$

Table 14 shows the predictors of cybervictims. Results implied that Facebook usage significantly predicts cybervictims ( $\beta = .313$ ,  $t = 5.731$ ,  $p < .001$ ). Facebook usage is positively correlated to cybervictims. This means that the higher Facebook usage, there will be higher level of being cybervictims of the respondents. This also implies that the activities done by the users such as chatting with friends and families may make them vulnerable to cyberbullying.

From the foregoing results implicated, there is higher Facebook usage among adolescent and moreover they tend to use Facebook more than Twitter. Using the Internet has enabled numerous individuals anywhere with a fast increase of Social network sites such as Facebook and Twitter in recent years by the due to simplicity and convenience (Zhou, 2011). The most frequent users of networking sites are the youth or adolescents. Their results showed that 60% of the respondents prefer as the most used SNS. With comparison to Twitter as perceived information network, the reason for this is the privacy of member in Facebook, it is a user-friendly feature, can highly be customized, for socializing, and easy access to communication (Mahapatra, 2016).

The findings of the study suggest that the respondents' behavioral intention, vicarious reinforcement, and SNS usage may be contributing factors on their cyberbullying behaviors. Implications from these results may suggest that SNS users' actual intention to engage in cyberbullying is a factor. Further, users who observe others getting reinforced by bullying others on the internet may be influenced and may also engage in the same behavior. It also implies that the users' way of using SNS is a factor. Their different activities may contribute to their risk of being a cyberbullies or cybervictims. It can also be drawn from the results that users that stay online in SNSs for a significant amount of time, specifically 7 to 9 hours, were prone to become cyberbullies. Regarding the gender, the researchers concluded that, males were more prone to become cyberbullies than females. However, no significant differences in cybervictims considering gender. It can only be stated that cyberbullying does not discriminate from males and females. Everyone could be a cybervictim. Additionally, it can be concluded that behavioral intention and vicarious reinforcement are the best predictors for cyberbullies while facebook usage is the best predictor for cybervictims. To conclude, cyberbullying behaviors happen more frequently in Facebook than in Twitter.

Using social networking sites has its downside, so the users may be more sensitive with the activities they do on such sites and to lessen their time in Facebook and Twitter use. The parents also have big roles on the lives of their children. They may monitor the activities of their children

on Facebook and Twitter. They may also regulate the hours of use per day by lessening their time of use. Academic institutions may be more aware that adolescents are prone to cyberbullying behaviors. They may also put more focus on the male students because they are more likely to be cyberbullies than female. They may establish intervention programs about the awareness of cyberbullying and make it mandatory, so every student should be aware, because they are all prone to victimization. They may also establish a policy about not using smartphones during class time so they may lessen their hours of using SNSs per day. Lastly, mental health practitioners may consider making intervention programs to lessen the level of Behavioral Intention and Vicarious Reinforcement of the users to avoid cyberbullying behaviors in the future. They may also consider researching about further psychological risk factors that may contribute to cyberbullying behaviors.

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## HUMANITIES

# The Concept of Othering in Adriana Mather's *How to Hang a Witch*

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## Abstract

Bullying is a highly adverse expressive behavior that can affect anyone. Adriana Mather's Young Adult novel, *How to Hang a Witch*, reflects this concept by tackling the ramifications of The Salem Witch Trials in present-day Salem. This paper intended to bridge the gap between Othering in history and modern-day civilizations in a Young-Adult literature. Using Willey and Willey's Conditioned Response social theory and Greenblatt's New Historicism literary theory, the following research questions were answered: How does Adriana Mather's *How to Hang A Witch* reflect the concept of Othering? What are the vestiges of the Salem Witch trials that are present in the novel's modern-day socializations? What are the concepts of Othering in the novel that are present in the 21st-century socializations? Results showed that the concept of Othering is manifested in the novel through stereotypes, prejudice, discrimination, slurs, and physical violence based on Hobbs and Blank's Methods of Social Distance. Utilizing thematic analysis, it was found that fearful community, physical harm and visions, scapegoating, the powerful accusers, silence-caused death, and deviance are the vestiges of the Salem Witch Trials in modern-day Salem. Moreover, fear, social uncertainty, and dangerous group dynamics present in the text are the concepts of Othering in 21st-century socializations. In conclusion, fear is constantly at the center of the systematic Othering that happened and is still happening globally. It is recommended that an enhanced comparative analysis between the novel and real-world socializations be done using different literary elements or other literary theories.

**Keywords:** *othering, bullying, young adult literature, socialization, conditioned response*

"The problem of the twenty-first century is the problem of 'othering'" (Powell & Menendian, 2016, p. 14). This is because at the very core of most, if not all, social issues and conflicts is the perception of group-based differences. Consequently, people treat differently those whom they consider as part of their in-group versus those whom they see as "others" or not part of their group (Geher, 2019).

Among teens and children, bullying is a major manifestation of othering. It is a form and a consequence of othering which starts with a person exploiting a difference of another. A bully puts their victim under them on a power or hierarchy scale based on the victim's differences such as race, sexuality, disability, religion, or family background, thus resulting in practicing methods in maintaining social distance. Half of the world's 13-15 years old have experienced some form of bullying (UNICEF, 2018). Although bullying can affect any person, some characteristics and



circumstances put certain young people of different sexuality, race, economic status, or religion at higher risk for being the target of bullying because of their palpable queerness (Robinson & Espelage, 2012).

Bullying affects everyone involved in the act—the bullied, the bullies, and the bystanders. It is linked to several negative outcomes including effects on mental and physical health, drug use, lower academic achievement, and suicide (Goodboy et al., 2018). Bullying among school-age children occurs worldwide. In Tajikistan and Samoa, it ranges from a low of 7% of all adolescents to 74% in various schools from the said areas. 44% of adolescents in Afghanistan claimed that they experienced bullying; 42% in America, while in Canada, the problem prevails among 35% of the adolescents, 26% in Tanzania and 24% in Argentina (UNESCO, 2018.)

The National Center for Educational Statistics (2019) reports that more than one out of every five students are being bullied, and 41% of the students who testified being bullied pointed out that they think the bullying would occur again. Physical appearance, race/ethnicity, gender, disability, religion, and sexual orientation are primarily the reasons behind the bullying as disclosed by the victims. However, bullying does not only happen to adolescents, it also happens to adults. According to Sanchez and Rodriguez (2019), perpetrators are most likely to target those whom they perceive to be diverse. An example of this is the racial discrimination and abuse of power that is still prominent in America. In Minneapolis, an African-American man was killed by a police officer by kneeling on the black man's neck. This is an example of bullying because the white police used his power to repress the powerless black man (Graves, 2020). This sparked outrage in the States and caused riots in various places in support of the “Black Lives Matter” movement, an ongoing protest founded in 2013 (Friedersdorf, 2017).

In the Philippines, a recent study revealed that bullying or abuse is experienced by six in ten Filipino school children (Domingo, 2019). Also, the students in the Philippines reported that they felt various types of bullying which include being made fun of or being called names, left out of activities by others and made to do things the student did not want to (Ancho & Park, 2013). One prominent example of bullying in the Philippines is the viral video taken at Ateneo de Manila which shows a high school student bullying and physically assaulting a fellow student after challenging the latter to a fight (Nelz, 2018). Additionally, physical bullying is not the only prevalent form of bullying in the country as it is reported that cyberviolence affects almost 50% of Filipino children aged 13-17 (NBS-VAC, 2016; UNICEF, 2019).

Othering in the context of research is the term used to communicate instances of perpetuating prejudice, discrimination, and injustice. Borrero et al. (2012) focused on othering that involves cultural and racial ambiguity, categorization, and hierarchical power dynamics to dissect the experiences of the “othered” youth. Their findings revealed several emergent themes: multiple identities, stereotypes, racism, and cultural pride that highlight cultural assets and experiences with being the “other” at school. Moreover, in Saltaga's thesis about students' experiences of othering (2017), she explored the experience and potential consequences of “othering” in the university classroom. Saltaga states that othering can easily manifest into an “us versus them” mentality. She also revealed that othering has detrimental effects on a student's motivation, identity, and comfort in a school setting. As a result, a student's self-esteem, and overall success in higher education might suffer.

Curwood (2013) implies that nowadays, a broad set of literary works for the youth presents a realistic and sophisticated representation of personas, differences, and disabilities. These themes are usually incited in various literary works for young people and create possibilities to take



into consideration how infirmities and disabilities are constituted in society and demonstrated in literature. Nevertheless, Hossain and Karim (2013) believe that modern literary works are merely fixated on undertaking personal concerns and not of society. Popular culture is also sometimes seen as a mere variety of entertainment (Sekito, 2019). For this reason, only a few literary researchers delve into Young Adult fiction as their main source of data.

Young Adult (YA) literature is a category of fiction that focuses on a teenage protagonist experiences life's emotional upheaval such as love, friendship, and identity crisis (Outten, 2020). This type of fiction is specifically written for adolescents ranging between the ages of twelve to eighteen (Peck, 2007). In the 21st century, books such as *The Hunger Games*, *Divergent*, *The Maze Runner*, *The Mortal Instruments*, and *How to Hang a Witch* all became New York Times #1 bestselling novels, and they all have one theme in common—the concept of othering (Hardy, 2015).

Most studies about othering tend to favor issues such as race, social status, gender, and sexuality. However, this paper mainly provides a conceptual analysis of othering as a product of conditioned response to fear as mirrored in the novel. Additionally, *How to Hang a Witch* was recently published last 2016 and has not been used yet as a main source of data for research. The historical phenomenon of the Salem Witch Trials was also highlighted in this paper. Moreover, no study has yet been found on the concept of Othering as a product of fear in a Young Adult novel in which real-world history and modern-day socializations are interrelated.

Through this research analysis, the researchers would bridge the gap between Othering in history and modern-day socializations as reflected in Young Adult literature. The main purpose of this study is to discover the manifestations of the concept of Othering as portrayed in the Young Adult novel, *How to Hang a Witch*. Further, this study aims to shed light on the following questions:

1. How does Adriana Mather's *How to Hang a Witch* reflect the concept of Othering?
2. What are the vestiges of the Salem Witch trials that are present in the novel's modern-day socializations?
3. What are the concepts of Othering in the novel that are also present in the 21st-century socializations?

## Theoretical Framework

This study is anchored on the New Historicism theory by Greenblatt (1980), the Conditioned Response theory by Willey and Willey (1924), and the Methods of Social Distance proposed by Hobbs and Blank (1985). New Historicism is an approach to literary criticism grounded on the perception that a literary work ought to be evaluated as a product of a place, time, and historical phenomena instead of the mere text itself. This theory also concedes to the notion that the environment, beliefs, and prejudices of the critics may also affect their response (Farmer, 2010). According to Stephen Greenblatt (1980), founder of New Historicism, there should be numerous versions to consider when reading a text: the past, the present, and the future.

New Historicism critics presume that texts are echoes and reactions of historical conditions. Scholars essentially focus on history and state that a text's interpretation would be inadequate if the background and relationship of the text to the associated discourses will not be assessed. Hence, one can come up with a text's meaning by gauging history and by investigating the different complex networks that bridge the discourses in a given text and its historical situation (Vesser, 1989). New Historicism is used in this study because the theory reevaluates a certain literature's social accounts based on an actual event being described, as well as the relationship of the socio-cultural events surrounding the occurrence of the text.

Conditioned Response, another theory utilized in this study, refers to a learning process in which a potent stimulus (e.g. food) is put together with a formerly neutral stimulus (e.g. a bell). It also alludes to the learning procedure that ensues from this pairing, wherein the neutral stimulus comes to prompt a response (e.g. salivation) that is normally the same to the one evoked by the potent stimulus. This theory was a result of an experiment with dogs conducted by Ivan Pavlov in the late 1800s (Coon & Mitterer, 2008). One form of Pavlovian Conditioning is the Fear Conditioning paradigm. It is learning that specific contextual stimuli presage unpleasant events through which individuals learn to fear people, places, objects, and animals (Maren, 2001). Essentially, this paradigm refers to the connections between non-threatening environmental stimuli and threatening stimulation whereby these primarily nonthreatening stimuli come to produce new responses once paired with threatening stimuli (Fanselow & Sterlace, 2014).

Fear conditioning is a theory established by Watson and Rayner in a Rat-baby experiment conducted in 1920. It is a form of associative learning task which involves neutral stimulus and potent stimulus. After repeated pairings of both stimuli, an individual learns to also fear both the objects. They experimented on a nine-month-old baby named "Little Albert" and demonstrated how the white rat did not originally evoke any fear on Albert, but when the rat was paired six times with a loud sound that naturally disturbed the baby, Albert also started crying at the sight of the white rat. Even other animals and objects that have the same characteristics (fur) as the rat that were later presented to the baby such as a monkey, a rabbit, a dog and even a mask of Santa Claus with white beard elicited fear in Little Albert. This is called "generalization" and in Watson and Rayner's words, "This was as convincing a case of a completely conditioned fear response as could have been theoretically pictured" (Maren, 2001, p.898).

Willey and Willey (1924) then state that conditioned response could also be considered as an element to support Giddings' notion of the Consciousness of Kind wherein individuals find their resemblances with other beings then form their own group. Willey and Willey claim that groupmates and non-groupmates are determined by the transfer conditioning of emotions. They use the analogy of Puritans disliking a foreign man with uncouthness because it is contrary to their beliefs; the disapproval is then transferred to the group of which the original foreigner is a part of. This is a form of "generalization" as conjectured by Watson and Rayner. Willey and Willey also mention the Rat-baby experiment because the rat itself is an object to which other objects may be conditioned to produce the fear reaction from the baby. Through the aforementioned analogies, it can be deduced that fear conditioning is a factor that contributes to the manifestation of Othering. People do not initially abhor the members of the "out-group", but because of the presence of fear (e.g. fear of being surpassed, fear of imbalance, fear of danger), they create greater divisions to protect their in-group. This theory is used in this research study because the story included events that fear is present in the novel's characters that results in othering.

Additionally, Hobbs and Blank (1985) proposed five methods in maintaining social distance: Stereotypes, Prejudice, Discrimination, Slurs, and Physical Violence wherein the 3 latter methods are the concrete types of Othering. Powell and Menendian (2016) believe that "othering" is essential to both survival and intelligence hence creating categories is immanent in human beings. Nevertheless, they also add that othering may be natural but the implications associated with those categories and how humans tend to act on it are socially constructed. Generally, it is innate in humans to create in-groups and out-groups in their minds; however, the feelings and reactions towards the out-group are what materializes the concept of Othering. Hobbs and Blanks' methods of social distance were also used in this study because the protagonist's peculiarities from

the normative are emphasized and misunderstood by the majority, resulting in society's alienation and/or dehumanization.

The three aforementioned theories are interrelated because *How to Hang a Witch* discusses the proceedings in the old Massachusetts wherein the fear of the Devil, a conditioned response, is said to trigger the beginning of the historical witch hunt; thus ensuing a rampant social distancing in the town. Further, the main character's connection to the instigator of the historical witch hunt and the people's fear of losing the town's peace is considered to be the primary reason behind why the other students socially distanced themselves from the protagonist. The circumstances in the novel provided details leaning towards the elaboration of "othering" in young adult literature, also mirroring real-world situations through relatable lineaments outlined by the author.

## Methodology

This section presents the research design, source of data, and analysis of data utilized in the study. It also discusses the scope and limitations of the study.

## Research Design

To interpret gathered data and to put the theoretical framework into a concept, the researchers made use of the qualitative content analysis approach towards the study so that this study will provide an in-depth understanding of the scope of exploration. The qualitative research method is concerned with social and cultural phenomena by studying and analyzing people and the social-cultural contexts within people's life and behavior; their knowledge, attitudes, beliefs, and fears (Corbin & Strauss, 2008). The study used descriptive analysis dealing with the fictional elements of the literary work such as characterization, settings, conflicts, and themes. In this context, individual and collective characters are broken down, historical and connotative relations of the setting are considered, and clear and ambiguous symbols in the novel are explicated.

The following criteria were used in choosing the text to study:

1. The text must show the concept of Othering.
2. The text must give more focus on the content than the author.
3. The text must be a Young Adult fiction.
4. The text must be based on a historical event.

Additionally, the study focused on the concept of Othering in literature. This notion aims to present how othering is involved in the identity formation of a young adult (or any person) among marginalized minorities in the society and how it is presented in this literary piece along with similar research of other young adult literary works.

The first step is the selection of the literary piece wherein the researchers chose a novel by Adriana Mather that discusses the concept of Othering which fits the researchers' criteria. The second step is literary review where the researchers gathered and read books, online resources, and related studies. The third step is literary analysis in which the researchers did an analytical procedure of qualitative content analysis that includes indicating the research questions to be answered, selecting the sample to be analyzed, determining the criteria to be applied, mapping out the novel's themes, analyzing the novel's themes, establishing validity, and evaluating the results of the analyzed themes which will answer the objectives based on the chosen novel and gathered related literature. The last step is to present the findings, conclusions and providing recommendations to students, teachers, and future researchers.

Throughout the process of this study, the researchers investigated the underpinnings of “*How to Hang a Witch*” as a novel discussing the concept of Othering as a product of fear and its manifestations in the 21st-century socializations. As such, a descriptive study was utilized in elaborating these characteristics.

### Sources of Data

The main source of data in this study is the novel *How to Hang a Witch* of Adriana Mather. As the novel is itself a historical elaboration of Salem, the researchers utilized written works translating the ecclesiastical history of Salem, constructing a window to the social aberrations recorded throughout the course of civilization. Thus, helping the researchers carefully interpret the phenomena outlined by the novelist related to the presentation of othering among young adults. The researchers will also use up-to-date news articles relating to 21st-century socializations.

### Analysis of Data

After the identification of text, data segregation was done, according to which research questions they individually fall. There are four phases of data analysis in this study, particularly:

1. *Data Preparation*  
Selecting Adriana Mather's *How to Hang a Witch*.
2. *Thorough Reading*  
Reading and understanding the story and history of the Salem Witch Trials through the novel *How to Hang a Witch*.
3. *Application of Suitable Literary Theories*  
Analyzing the novel through New Historicism and Conditioned Response to Fear.
4. *Discussion of the literary theories as portrayed in the novel.*  
Discovering the manifestation of the Concept of Othering in the novel using the two theories.

### Scope and Limitations

*How to Hang a Witch* was written by Adriana Mather, a real descendent of Cotton Mather who was one of the persecutors of the so-called witches in the 1600's. The writer's family background, imagination, and biases could affect the factuality of the real Salem Trials written in her novel such as the author's relation to one of the villains in the historical event. The author evidently did not live during the Trials hence the complexity of this significant event could not be fully captured in her novel. Furthermore, the Salem Witch Trials dates back in the 17th century, about 300 years before this research was conducted thus the references found by the researchers may not be a hundred percent accurate and may contain biases from the historians depending on which side of the history they preferred. The researchers' prejudices, beliefs, and experiences were also brought into this study such as the researchers are Christians who believe in the dark supernatural for the reason that the Bible confirms its existence and proper punishment for sorcerers (wizards and witches). Nevertheless, the researchers do not condone punishment without justified trial.

It is also worth noting that the members of the research group experienced being bullied and even being a bully at some point in their lives and this may affect the study's viewpoint towards bullying in general. Additionally, the researchers' knowledge about the theories used in this study and the historical Salem Witch Trials in North America is only limited to what they have learned in their literature classes and personal research.

Lastly, the researchers did not have a paperback copy of the novel due to its unavailability in the researchers' areas. An e-Book copy of the novel was used in this study. However, the eBook's page numbers change depending on the device's font size; thus, citation of the page numbers is not possible, but the novel's chapter numbers are indicated instead whenever they are necessary.

### Results and Discussion

*How to Hang a Witch* was written by Adriana Mather, a real descendent of Cotton Mather who was one of the persecutors of the so-called witches in the 1600's. The writer's family background, imagination, and biases may have affected the factuality of the real Salem Trials written in her novel such as the author's relation to one of the villains in the historical event. The author evidently did not live during the Trials hence the complexity of this significant event could not be fully captured in her novel.

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After a thorough analysis of Adriana Mather's *How to Hang a Witch*, the researchers found several evidences of the existence of the concept of Othering in the text; how it was reflected in the 1600's and modern-day Salem, and its continuance in the 21st century real world socializations. The researchers came up with the following findings.

#### Othering as Reflected in the Novel

Holslag (2015) states that the sense of belonging is a primary and basic essential for humans because once a person identifies his unique characteristics, he then seeks those who resemble his own features and creates their own group to feel the concept of Belongingness, but this concept can be so derivative that people will do anything to protect it which results to the concept Othering because he then excludes the different ones from his group, producing more social categories that segregate one attribute to another such as race, religion, sex, gender and the like. Once the concept of Othering is established in a person's mind towards another individual, expressions on how to demonstrate Othering emerge. With this in mind, the researchers limit the scope of analysis into knowing the existence of each of Hobbs and Blank's five methods of social distance in the text but not counting how often the factors occurred.

Hobbs and Blank proposed five methods of social distance namely stereotypes, prejudice, discrimination, slurs, and physical violence and these are all present in the novel as a form of Othering against Samantha, all of which are mainly caused by a conditioned response driven by fear of disorder. The citizens of Salem disliked the idea that Samantha could have the power to disrupt the peace in their town because of her family background and other capabilities, hence they distanced themselves from her and ostensibly created a social barrier between them, original citizens of Salem, and Samantha, an outsider. Table 1 presents a summary of the expressions of othering reflected in the novel.



Table 1. *Expressions of Othering in the Novel*

Expressions of Othering	Events
Stereotypes	<ul style="list-style-type: none"> <li>The people of old Salem had a belief that anything outside of the norm is evil.</li> <li>The students of Salem High believed that the Mathers are dangerous based on history, hence they thought Samantha is the cause of unfortunate events in their town.</li> </ul>
Prejudice	<ul style="list-style-type: none"> <li>People of old Salem did not like having evildoers in their Puritan community.</li> <li>The students of Salem, mainly The Descendants, initially disliked Samantha because of her relation to Cotton Mather.</li> </ul>
Discrimination	<ul style="list-style-type: none"> <li>People of old Salem complained about their neighbors and accused them, particularly the less privileged ones, as doers of witchcraft.</li> <li>Students tend to give judgmental stares towards Sam whenever they become aware of her last name.</li> </ul>
Slurs	<ul style="list-style-type: none"> <li>People of old Salem termed the deviant ones as “witches”.</li> <li>Students wrote the word “Psycho” on Samantha’s locker. She was also called “cursed” and a “murderer”.</li> </ul>
Physical Violence	<ul style="list-style-type: none"> <li>People of old Salem jailed, tortured, and/or hanged the accused witches.</li> <li>The students attacked Sam during a party. Moreover, John ambushed and tried to choke her during their rehearsals.</li> </ul>

### The Vestiges of Salem Witch Trials in Modern-Day Salem

There were several factors that contributed to the inception of the Salem Witch Trials. Among these is the stringent implementation of Puritanism in the town. Puritans from England were fixated on the idea of purifying the church and the community. In the early 17th century, English Puritans colonized a region in North America, particularly New England that was previously colonized by English Pilgrims.

By the year 1629, the Puritans helped establish the province of Massachusetts Bay Colony, where the town of Salem is located (Daining, 2015). The English Puritans in North America urged the natives to convert into their belief system and live a purified life. However, they also believed in the presence of the Devil and wanted to eradicate all forms of immorality to maintain purity in the community. Hence, when the rumors of witchcraft escalated quickly across the town of Salem, the Puritans used extreme measures to regulate the community.

This study showed that these measures, particularly ridicule, ostracism, and physical violence, are also presented in the modern setting of *How to Hang a Witch*. New Historicism was applied in this study in order to classify the events in the Salem Witch Trials and mirror them to modern-day socializations in 21st century Salem through Hobbs and Blank's *Methods of Social Distance and Order* (1985). The researchers of this study compared and contrast the incidents that happened in the real Salem Witch Trials in the 17th century and the bullying that happened to Samantha in the 21st Century, and discovered that both events started in fear, proved by visions,



led to scapegoating and was spearheaded by powerful accusers who pointed fingers to the deviants. Social order was also enforced upon the citizens of old Salem which can be found based on the underlying themes found in the novel:

Table 2. *Vestiges of Salem Witch Trials to 21st Century Salem*

Themes	Salem Witch Trials 1692	21st Century Salem
Fearful Community	<ul style="list-style-type: none"> <li>French and England battles made New Englanders uneasy.</li> </ul>	<ul style="list-style-type: none"> <li>Mysterious deaths in Salem made the people uneasy</li> </ul>
Physical Harm and Visions	<ul style="list-style-type: none"> <li>Some individuals had symptoms of convulsion while some envisioned the devil within Salem</li> </ul>	<ul style="list-style-type: none"> <li>The rash outbreak at the party. Visions of Samantha of people's deaths.</li> </ul>
Scapegoating	<ul style="list-style-type: none"> <li>They blamed the Devil in the form of the witches for their losses and fears</li> </ul>	<ul style="list-style-type: none"> <li>They blamed Samantha for the sudden deaths and bad events</li> </ul>
The Powerful Accusers	<ul style="list-style-type: none"> <li>Puritan Ministers and Families</li> </ul>	<ul style="list-style-type: none"> <li>The Descendants</li> </ul>
Silence-caused Death	<ul style="list-style-type: none"> <li>No one in town would stand up to Puritan ministers for fear of the same accusation</li> </ul>	<ul style="list-style-type: none"> <li>The students of Salem were scared to stand up to the Descendants</li> </ul>
Deviance	<ul style="list-style-type: none"> <li>The people of old Salem accused those whom they deem unfit in the community</li> </ul>	<ul style="list-style-type: none"> <li>The students of Salem High othered Samantha for being a foreigner in their town</li> </ul>

Therefore, the researchers believe that Othering in the modern-day Salem also happens with the five aforementioned themes present. Students feared disorder, and once physical harm or any misfortune occurs, the powerful accusers often scapegoat and project their hatred towards the deviants. And if no one speaks up about the maltreatment, the bullying continues.

### Concepts of Othering in the 21st-Century Socializations

The methods to demonstrate the concept of Othering such as *Stereotypes*, *Prejudice*, *Discrimination*, *Slurs*, and *Physical Violence* manifest among today's generation in their different socialization. On their way to finding their uniqueness from the rest, individuals create social in-groups and out-groups within their age category. Having identified their in-group memberships using their personal internal and external resemblance test, young individuals then develop the concept of belonging, and, respectively, the concept of othering.

In light of the New Historicism theory, it is important to find out the environment of the author and the readers that could affect the meaning of the text. Seeing as the novel and this study were written in the 21st century, recent real-world data were gathered. The researchers discovered that the concept of Othering seen in the old and new Salem as described in the novel is also manifested among the 21st-century socializations through the three themes mentioned by the author of the novel.

## Conclusion

*How to Hang a Witch* was written to specifically highlight the verity that the bullying that happened in the 1692 Salem Witch Trials is still prevalent in the 21st century (Mather, 2016). The author used fictional characters to foreground the concept of Othering in the novel. Through the lens of New Historicism theory and Conditioned Response to Fear theory, it was revealed that the concept of Othering is manifested in the novel through Hobbs and Blank's methods of social distance. Further, six themes were extracted from the novel to discover the vestiges of the Salem Witch Trials in modern-day Salem.

The author of the novel also mentioned three underlying themes from her text which the researchers used to find out the concepts of Othering in the 21st century. The researchers also used the collected data about modern-day Othering apropos the foundation of this area of the study. Similarly, with the help of Hobbs and Blank's Methods of Social, the results expose the parallel patterns of the novel, world history, and recent real-world events. Ergo, via this study, it can be interpreted that the concept of Othering is both manifested in the novel and in the 21st-century socializations.

This study was able to render the manifestations of the concept of Othering in Adriana Mather's *How to Hang a Witch* through Hobbs and Blank's five methods of social distance which are connected to each other. Othering starts in the mind as a mere stereotypical notion which then becomes affective when a person begins to have negative feelings towards another human being based on a given cognitive category, this is called prejudice. Meanwhile, discrimination, slurs, and physical violence are the methods that can be seen, heard, or felt of the "othered" individual or group. Therefore, the concept of Othering becomes "bullying" when a person acts on their negative thoughts and feelings.

The study also revealed that the three themes conceived from the novel Fear, Social Uncertainty, and Dangerous Group Dynamics could generally be considered as factors present in Othering. In conclusion, fear is constantly at the center of the systematic Othering that had happened and is still happening globally. Further, the concept of Othering can be drawn out using the five methods of social distance. Although there is more than a 300-year gap between the 1692 Salem Witch Trials and the modern Salem in the story, the aforementioned methods still exist in the 21st-century socializations as proven by the events in the Young Adult novel and the recent real-world data gathered by the researchers.

## Recommendations

Based on the findings and conclusions drawn, this study could be of help to AB English students to have a better understanding of the New Historicism theory in a given text—how the author and readers' environment could affect a text's meaning. It is therefore recommended that an enhanced comparative analysis between Adriana Mather's *How to Hang a Witch* and real-world socializations be done based on the novel's setting, dialogues, plot, and characters' behaviors in a social context. Future researchers could also delve into the novel's elements using other literary theories, particularly Feminism or Deconstruction theory, given that the female protagonist has a strong personality and the plot of the novel tackles how the tables have turned between the bullies and the bullied. It is also recommended to further explain how the concept of Othering is manifested in 21st-century socializations using other proponents and/or themes.

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## EDUCATION

## Influence of Physical and Social Environment in Relation to Academic Performance of University Students in the New Normal Context

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### Abstract

Educational process of development occurs in the physical, social, and psychological environment. Many researches indicated that physical and social environment have positive influence on the students' performance, but most of them focused on the elementary and secondary schools, only a little research was conducted in higher education especially in the new normal context. Since the COVID-19 was spread in the whole world, learning mode is online mode, and the environment has changed. In this context, this study was conducted to determine the influence of school environment on the academic performance of students in a university. The research used a correlation research design, through online questionnaire which was accomplished by 100 respondents. The study found that there was *no significant relationship* between school physical and social environment and students' academic performance. Further results revealed that there was *no significant age difference* ( $p = 0.174 > 0.05$  at 5% levels) in students' academic performance, but there was a *significant status difference* ( $p = 0.038 < 0.05$  at 5% levels) in students' academic performance. School is an important setting in the development of individuals, but educators should pay attention to a broader environment related to online learning mode, help students through using the best social work strategies and interventions, so that students can feel comfortable, safe, and happy, devote themselves to learning and improve their academic performance. Future research suggests that more spiritual factors should be considered, and qualitative method will be used too.

**Keywords:** *school physical environment, school social environment, students' academic performance*

According to Bronfenbrenner's Ecological Systems theory, human development is influenced by the different types of environmental systems. The informal educational environment is a result of interaction among components of the learning environment. Learning environment is comprised of the learners, teachers, the physical situation, and the association between the learners' motivations and the time and place when and where knowledge is acquired. The main purpose of a learning environment is to support and enhance the physiological modes for human understanding, e.g., visual, auditory, and kinesthetic (Kopec, 2018). Taylor (2009) concluded that the ideal physical education environment is carefully designed, including nature, architecture, and culture. They work together to accommodate active learning across body, mind, and spirit.

Schools and colleges are the most important part of students' life. Patton et al. (2016) pointed out that educational institutions must have a clear understanding of how adults of all ages from different demographics learn, and how to meet the specific needs of a broad range of adult learners as its cornerstones. Because the characteristics of student development at each stage are different, the needs to be met are also different.



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## **Physical Environment**

McKenzie and Pinger (2014) defined the physical environment as physical plant—the buildings, surrounding areas, and all that come with them, and the behaviors of those using the buildings. The school plant, which refers to the physical facilities available in the school such as the school site, the buildings, equipment, machinery, furniture, electrical and water supply infrastructure, could simply be likened to the capital in an industrial setting (Torupere, 2016). In the context of the school system, they are those things that enable the teacher and students to carry out the teaching/learning process effectively and contribute to the performance of the school goals and objectives without fatigue and distraction, which refers to the level of upkeep, ambient noise, lighting, indoor air quality and/or thermal comfort of the school's physical building and its location within the community. All these improve works and health of both teachers and learners. Adams (2004) indicated that a quiet, cool, clean and beautiful physical environment makes the teacher and students happy and enhances their performance and productivity.

## ***School Location***

Ulrich et al., (2017) indicated that the location of the school and its surroundings affects the student's senses, which develops a familiarity with their community. Additionally, it is important to enhance the opportunities to connect the school with nearby places like museums, libraries, and parks. "If higher education was to better serve students and expand educational opportunities," the paper asserts, "then stakeholders must prioritize the importance of place and understand how it shapes college options" (Hillman & Weichman, 2016, p. 1).

## ***School Building***

According to Osuji (2016), school buildings include classroom, dormitories, libraries and laboratory buildings, staff rooms, teachers' quarters, examination halls and administrative buildings. When considering these school building environments, focus on the school-building age, layout of building, and indoor environment of the building.

The quality of school buildings could help or hinder learning and teaching, Sogol et al. (2017) claimed. Well-designed buildings and pleasant surroundings can lead to better attendance and concentration as well as motivation and self-esteem - factors which can improve performance, the research found.

On the other hand, social space should provide a place for quiet contemplation and formal and informal play (Baafi, 2020). Effective educational spaces enable students to collaborate with each other and improve their cognitive function (Sogol et al., 2017).

## ***Facilities***

School facilities are all physical facilities and equipment within the school, which are used by members of the school community (Abraham, 2003). Thus, Obi and Ezegbe (2002) defined school facilities as the space interpretation of the school curriculum. In other words, school facilities can be said to be the physical expression of the school programs and activities. Learning is a complicated process; students cannot single achieve all their goals. Hence, they must be equipped with adequate technological facilities such as computer, school libraries, sports fields, sports facilities, science labs, multi-purpose hall, cafeteria, store, dormitory, health facility, internet, etc. It is a consciously designed and controlled environment with the sole aim of promoting teaching and learning activities within the school (Osuji, 2016). Titus (2016) pointed

that schools located in urban areas had better academic achievement than rural counterpart, because urban schools were superior to rural schools in the quality of teachers and facilities, which showed that the availability of good teaching facilities in schools had a positive or negative impact on students' performance.

### **Social Environment**

Social environment refers to students' and teachers' performance, satisfaction and enjoyment, sense of security and interaction between teachers and students (Langa, 2017). The social environment influenced students' social and emotional development. Students find a sense of connectedness, belongingness, or community in a supportive and caring school environment. This refers to students' having a close, respectful relationship with peers and adults at school. Therefore, students who experience a caring school community are more motivated and engaged in their learning. Also, students' active connection with their teachers and their perceptions that teachers care about them were what stimulate their effort and engagement (Wentzel, 2020).

### ***Academic Atmosphere***

Edinyang (2017) found that it would encourage students to misbehave because of absence of academic support for students with academic and behavior problems. Blazar and Kraft (2016) also emphasized that educators are also a factor that influence the students' behavior negatively if they do not provide academic feedback and guidance.

Teachers create an academic atmosphere for students through their rigorous work attitude. This academic atmosphere help students to study harder (Bruce & Carlos, 2016). The ministry of education also authorized schools to cultivate research culture, and research can help teachers and leaders to deal with the teaching and learning process. Moreover, it was found that doing research helps to create a research culture in school, this will stimulate students to study hard (Durrant and Holden, 2006).

### ***Teachers' Professional***

Many researchers have proved that teachers have an important influence on students' academic performance. They play a crucial role in educational attainment. Tucker and Stronge (2005) indicated that if a teacher were ineffective, students under the teacher's tutelage would achieve inadequate progress academically.

In a study done at the Cooper Elementary School, it was found that when the principal and teachers gave students higher expectations, students had better performance. The teachers are coached and taught how to carefully design the curriculum and regular and serious courses are conducted according to different students. The teachers' rigorous attitude created a good learning atmosphere, and the students were all seriously engaged in the learning process. In these processes, the positive impact of teachers' professionalism on students is fully reflected (Bruce & Carlos, 2016).

### ***Interaction between teachers and students***

School climate is closely linked to the interpersonal relations between students and teachers. The positive interaction that is initiated between teachers and students can benefit students and help them learn, increase their academic performance, and develop their cognitive skills (Bruce & Carlos, 2016).

Eschenmann (2016) along with other scholars proposed that if teachers take the time to construct interaction, they can motivate their students to learn. Moreover, students who trusted their teachers were more motivated and as a result perform better in school (Wentzel, 2020). When good relationship has been established, learners and educators enjoy with each other and the class, and learners feel more inspired to do well. This also confirmed that the relationship and interaction mentioned by Ahmad et al. (2017) would establish a good learning environment.

### ***Peer's Support***

The most common factors in the environment surrounding students are those of their peers – one belonging to the same societal group especially based on age, grade, or status. According to the definition, a peer group is defined as a small group of similarly age, fairly close friends, sharing the same activities. This is a smaller community of school, hence, is a special- interest group which can give the students belonging and safety. In this group, they learn together, share with each other, and grow together, they and their companions are affecting each other from attitude and behavior, whether negative or positive (Jeanne & Hammack, 2015). Peer groups are an important socialization agent.

Students are happiest when with friends (Papalia & Wendkos, 2010). The researcher reported that there is a positive interaction between students' academic accomplishment and the association with their companions, and according to Kessels and Heyder (2020), students will be affected by the surrounding environment, students will become disruptive if peers are disruptive in school, and if peers have high grades, students can also have high grades.

### **Students' Academic Performance**

Academic performance has always been a crucial point and the center of educational research despite varied statement about the aim of education. According to Narada and Abdullah (2016) academic performance is the knowledge gained which is assessed by marks by a teacher and/or educational goals set by students and teachers to be achieved over a specific period of time. It can be measured by grade-point average (GPA).

Student academic performance is paramount to every institution as well as the other stakeholders. High performance in school builds self-esteem, self- confidence and strengthens self-efficiency. Good academic record to certain extent predicts future of the child. It also helps the teacher to know whether teaching methods are effective or not and helps them in bringing improvement accordingly (Cachia et al., 2018). Thus, assessment of academic performance helps both the students and teacher to know where they stand.

Many researches indicated that physical and social environment have positive influence on the students' performance, but most of them focused on the elementary and secondary schools; only a little research was conducted in university setting. Especially under the epidemic situation, students' courses have been converted to online mode. Both the physical and social environments are faced with many challenges. This adds factors that influence students' performance.

Thus, the study aimed to (a) find out the extent of influence of physical and social environments to students' academic performance; (b) determine the influence of physical and social environments to academic performance of university students; and (c) determine the difference of academic performance when classified according to the age and civil status of the respondents for the Academic Year 2019-2020 wherein COVID-19 pandemic changed the landscape of mode of delivery.

## Methodology

### Research Design

This study employed quantitative research method as it aimed to describing current conditions and investigating relationships between two or more variables. A descriptive-correlational research approach was used to determine the relationships between independent (physical and social environment) and the dependent variable (academic performance).

### Population and Sampling Technique

This study focused on the undergraduate and graduate students of one of the faith-based universities in the Philippines. Students were purposively selected based on their willingness to participate and availability. A total of 100 questionnaires were retrieved from 120 the respondents via email.

### Instrumentation

Included in the self-constructed questionnaires validated by experts were the demographic profile, physical environment, social environment, and academic performance. The physical environment included three dimensions with 10 items each: school location, school building, and school facilities. School environment has four dimensions with 10 items each: teacher's professionalism, academic atmosphere, teacher and students' interaction, and peer support. Academic performance of the respondents was taken from the secondary data of their GPA data based on Academic Year 1st Semester 2019-2020.

### Ethical Consideration

In the conduct of research, ethical issues were examined by Ethics Review Board of AUP. To ensure quality and integrity of the research, the researcher requested only the participation of the target respondents of the study and the context from where it was supposed to be conducted. They were also informed that participation is voluntary. Confidentiality and anonymity were also strictly observed.

### Analysis of Data

Frequencies, percentage, means, and standard deviations were employed to demographic profile data, the extent of school culture, perception on management functions, and level of teachers' job satisfaction. Pearson product-moment correlation was used to determine the significant relationship between variables.

## Results and Discussion

In Table 1, the means of school location, school building, school facilities prove to have *positive influence* on student performance with an overall mean score of 4.25. Ranked first is school building with 4.37 mean score, followed by school facilities ( $M = 4.28$ ), and school location ( $M = 4.10$ ). The findings of the study are supported by the results of study that physical environment not only helps improve works and health of the learners but as well as the teachers (Baafi, 2020).

Table 1. *Descriptive Result of School Physical Environment Measurement*

Category	N	Minimum	Maximum	Mean	Verbal Interpretation
School Location	100	1.40	5.00	4.10	Positive Influence
School Building	100	1.20	5.00	4.37	Positive Influence
School Facilities	100	1.10	5.00	4.28	Positive Influence
Over all Mean Score				4.25	Positive Influence

*Legend: 4.5 – 5.0 Extremely Positive Influence; 3.5 – 4.4 Positive Influence; 2.5 – 3.4 Neutral Influence  
1.5 – 2.4 Negative Influence; 0.5 – 1.4 Extremely Negative Influence*

Table 2, indicate School Social Environment got an over-all mean score of 4.27 which is interpreted with “positive influence” to academic performance of University students. All the dimension such as: Academic Atmosphere, 4.48 mean score; Interaction between Students & Teachers, 4.36 mean score; Teachers’ Professionalism got 4.27 mean score, and Peers Support, 4.00 mean score as the lowest. This further indicate that while all dimensions have positive influence on academic performance, peer support dimension can be improved its influence but instituting venue for peer support and collaboration not necessarily face to face but virtual. The findings of the study are support by Blazar and Kraft (2016) who indicated that teachers through their specific roles have a positive influence on students’ academic performance, including to create an academic atmosphere, interact with students, show their professionalism, and Bankole (2019) who found that there was significant relationship between peer group and academic performance of students.

Table 2. *Descriptive result of School Social Environment measurement*

Category	N	Minimum	Maximum	Mean	Verbal Interpretation
Teachers' Professionalism	100	1.20	5.00	4.27	Positive Influence
Academic Atmosphere	100	1.00	5.00	4.48	Positive Influence
Interaction between Students and Teachers	100	1.10	5.00	4.36	Positive Influence
Peers Support	100	1.00	5.00	4.00	Positive Influence
Over all Mean Score				4.27	Positive Influence

*Legend: 4.5 – 5.0 Extremely Positive Influence; 3.5 – 4.4 Positive Influence; 2.5 – 3.4 Neutral Influence  
1.5 – 2.4 Negative Influence; 0.5 – 1.4 Extremely Negative Influence*

Table 3 shows the level of students’ academic performance in AUP. Mean=3.5, it is at range 3.1-3.5. It means that the level of students’ academic performance in AUP is high. The measure of academic performance as a symbol of school success can be traced way back from the Victorian period. Xie and Zhang (2020) pointed that students’ high performance has helped the school achieve greater success. This would increase the development of school, means better school physical and social environment, also forms a positive cycle.

Table 3. *Level of Academic Performance of University Students*

Survey	Range	Verbal Interpretation	N	Mean	Verbal Interpretation
Students' academic performance in AUP	3.6—4.0	Extremely High	100	3.5	High Performance
	3.1—3.5	High			
	2.6—3.0	Low			
	2.00—2.5	Extremely Low			

Table 4 shows the influence of School Physical and Social Environment on Students' Academic Performance. Since  $p > 0.005$ , the test was significant at 5% levels which means there is no significant relationship between Physical and Social Environment and Students' Academic Performance. The University students have higher GPA, but the table 5 revealed that the school physical environment and social environment did not related to students' academic performance. Since the COVID-19 was spread in the whole world, learning mode is online mode, and the environment has changed. All students stayed at home or dormitory, the influence of the school's physical environment and social environment had been greatly reduced. The students enjoyed online learning, according to Peytcheva-Forsyth (2018), he pointed that 64.6% college students preferred to online learning, this mode was more flexibility. 92.6% students would prefer to submit their paper online than face-to-face mode in age 18-24, they also preferred to use technologies to learn, there was no anxiety and demotivation for online learning, a safe learning environment. 84.7% students preferred to communicate with their professors through online. Another factor is higher cognitive ability and autonomous learning ability, learner autonomy is a primary learning outcome of Higher Education (Henri, 2017). Thirdly, learner characteristics are seen as traits, it meant that adult learner did not easily influenced by the external environment in higher education (Sasayama, 2018), learner characteristics can be personal, social/emotional, and/or cognitive in nature. AUP is Christian university which give bible-based education, spiritual education in an important part, Miller and Beazley (2018) indicated that spirituality is the foundation, which drives growth in other areas, such as personal, social/emotional, and/or cognitive.

Table 4. *Relationship between Physical and Social Environment with Students' Academic Performance*

Category	GPA	
School Location	Pearson Correlation	0.029
	Sig. (2-tailed)	0.778
School Building	Pearson Correlation	0.143
	Sig. (2-tailed)	0.156
School Facilities	Pearson Correlation	0.035
	Sig. (2-tailed)	0.732
Teachers' Professionalism	Pearson Correlation	0.002
	Sig. (2-tailed)	0.985
Academic Atmosphere	Pearson Correlation	0.016
	Sig. (2-tailed)	0.874
Interaction between Students and Teachers	Pearson Correlation	0.034
	Sig. (2-tailed)	0.738
Peers Support	Pearson Correlation	0.034
	Sig. (2-tailed)	0.738



Table 5 indicates that there is no significant age difference in Students' Academic Performance. Since  $P = 0.174 > 0.05$  at 5% levels. This implies that students' age has not much role to play in Students' Academic Performance. Kunze and Menges (2016) pointed out that students' learning was related to cognitive abilities. Younger cognitive abilities were higher than older people in the early stages of development, but they were not as stable as older people, and would tend to the older. But older students would make up for it with their own experience and ability to manage time.

Table 5. *Difference in Students' Academic Performance at different Age Level*

Age	N	Mean	Std.	Sig.	Remark at 5% level of significance
16-20	11	3.3636	0.30963	0.174	Not Significant
21-25	52	3.7115	0.53638		
26-30	13	3.5385	0.87706		
30-35	9	3.2222	0.66667		
36-40	10	3.3000	0.94868		
41-45	5	3.2000	0.44721		

Table 6 indicates that there is significant status difference in Students' Academic Performance. Since  $P = 0.038 < 0.05$  at 5% levels. This implies that students' civil statuses have much role to play in Students' Academic Performance. Under COVID-19, all students stayed at home or dormitory to have classes, but single students have no distractions, while married students have a lot of family responsibilities at home to grab their attention. Peng and Kievit (2019) indicated that sustained attention would affect students' academic performance. This also supported the finding of this study.

Table 6. *Difference in Students' Academic Performance between different Status*

Status	N	Mean	Std.	Sig.	Remark at 5% level of significance
Single	73	3.6301	0.69735	0.038	Significant
Married	27	3.2963	0.72403	0.044	Significant

This study demonstrated the influence of physical and social environment to academic performance of university students. Although physical and social environment indicate positive feedback among respondents, the results of correlation for both physical and social environment indicate that there is *no significant relationship*. This can be explained by the sudden shift of mode of delivery from face to face to virtual or flexible mode. Thus, the findings can be utilized to strategically implement intervention for the new normal context of virtual or flexible learning.

School is a very important setting in the development of individuals. A positive school environment is recognized as an important target for school reform and improving behavioral, academic, and mental health outcomes for students. However, online learning mode gave more other factors to reduce the impact of school physical and social environment, such as IT skills and curriculum. Therefore, it is necessary to create a positive online environment so that students can feel comfortable, safe, and happy, devote themselves to learning, and improve their academic performance, such as school should reduce barriers to equipment using, faculty and staff conduct

training on the use of online teaching platforms; teachers should design diversified classroom activities to attract students; and interact with students in a timely and active manner to help students who are struggling.

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## EDUCATION

## Teachers and Psychological Ownership: A Matter of 'Fit'(Person-Organization)?

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### Abstract

A school's performance overtime is shaped by the extent to which teachers have a sense of psychological ownership. While a plethora of research have identified multiple predictors associated with psychological ownership of workers in various settings; little is known about how teachers' perception of fit with the school environment may impact psychological ownership. Guided by the Attraction-Selection-Attrition framework, the study investigated the relationship between person-organization fit and psychological ownership of teachers; and whether gender and working experience influenced their levels. Utilizing a descriptive-correlational design, convenient sampling was used to draw 320 basic schoolteachers from across the northern zone of the Ghana education service. T-tests, ANOVA and multiple regression were used to test the hypotheses developed. The study found moderate levels of person-organization fit ( $M = 3.41, \pm 0.69$ ) among teachers and high levels of psychological ownership ( $M = 3.63, \pm 0.80$ ). A significant positive relationship was found between person-organization-fit and psychological ownership ( $\beta = .357, \text{sig} = .000$ ). Out of the four 'fit' measures, 'demand-ability fit' was the strongest predictor ( $r = .343, p < 0.01$ ) of psychological ownership. Also, findings showed a significant difference ( $\text{sig} = .001$ ) on person-organization fit when respondents are grouped according to gender. However, psychological ownership values between male and females were not significantly different ( $\text{sig} = .195$ ). Further, no significant difference was found on person-organization fit ( $\text{sig} = .344$ ) and psychological ownership ( $\text{sig} = .163$ ) with respect to working experience. It could be concluded that, improving teachers' 'fit' with organizational attributes could result in a sense of psychological ownership over their profession, classrooms, and their schools.

**Keywords:** *person-organization fit, demand-ability fit, psychological ownership, accountability, self-efficacy*

A school's performance overtime is shaped by the extent to which teachers have a sense of psychological ownership. Teachers who have learned organization-specific expertise and skills through experience and preparation make a significant contribution not only to students but to a country's entire economy. However, realizing the benefits from the contributions of these assets depend highly on the feeling of possessiveness they have towards the organization. Psychological ownership is defined as an individual's feelings toward a substantial or non-substantial target and characterized by a feeling of possession (Batool & Zafar, 2019). Pickford et al. (2016) defined psychological ownership as a state of mind in which individuals feel as though the target of ownership or a piece of that target is "theirs" According to Matilainen et al. (2017), the conceptual core of psychological ownership is a sense of possession toward a particular target, and it reflects a connection between themselves and various tangible and intangible "targets", stimulating

organizational behavior. Hence, employees who have developed a sense of and have high levels of psychological ownership come to perceive themselves as “owners”, and the possessions become part of their self-concept (Cocieru et al., 2019). According to Saunders et al. (2017), teachers have a stronger influence on student achievement than any other school-based factors. Thus, efforts to strengthen basic education must address not only the human capital that teachers bring to their classrooms but also the organizational processes within schools that shape their work experiences (Akkaya & Serin, 2020). One key consideration will be to take steps to increase the likelihood that the best teachers have a sense of psychological ownership. Accordingly, Schleicher (2017) argued that though many calls have been made for reforms that increase efforts in attracting and retaining the best of teachers, yet no matter how well prepared teachers may be, they are likely to have little impact on organizational outcomes until they perceive a sense of psychological ownership. White (1903) threw a challenge to educators stating that:

“It is the work of true education . . . to train the youth to be thinkers, and not mere reflectors of other men’s thought. Instead of confining their study to that which men have said or written, let students be directed to the sources of truth, to the vast fields opened for research in nature and revelation. Let them contemplate the great facts of duty and destiny, and the mind will expand and strengthen. “Instead of educated weaklings, institutions of learning may send forth men strong to think and to act, men who are masters and not slaves of circumstances, men who possess breadth of mind, clearness of thought, and the courage of their convictions” (pp. 17, 18).

White (1903) accentuated the important role teachers are expected to play and suggests that teachers are really needed at this time who will act as friends, philosophers, and guides (Saunders et al., 2017). Teachers are needed to mentor, taking a real interest in students’ aspirations, help students understand who they are, discover what their passions are and where they can capitalize on their specific strength, teach them how to love to learn, and build effective learning strategies as the foundation for lifelong learning (Schleicher, 2017). Accordingly, Saunders et al. (2017) asserted that though the key to students’ academic success is having talented teachers, it is no longer enough. Teachers that are psychologically integrated with the school organization, is what will cut it in today’s highly competitive landscape. Just as indicated by Pickford et al. (2016), such individuals become invested in the target of ownership (schools) as an expression of who they are and that to which they belong. Thus, results in teachers having a personal stake in the performance of the object, as its performance reflects upon their identity. It is revealed that employees’ behavior and attitudes characterized by a feeling of possession have positive influences (Ye & Gawronski, 2016). Pickford et al. (2016) asserted that psychological ownership is associated with a range of positive behaviors including increased motivation, company stewardship, and loyalty. Consequently, employees who develop a sense of responsibility toward targets over which they feel ownership (Wang & Han, 2020) may begin to voluntarily defend these targets of ownership (organizations) and feel more responsible for the achievement of its goals. Similarly, Saunders et al. (2017) revealed that teachers who show high levels of psychological ownership engender trust in students. Thus, it could be said that when teachers feel a sense of ownership over their classrooms and their profession, productive learning is deemed to result.

According to Kirk (2017), psychological ownership develops when an individual has control over the targeted object, knows intimately about that object, and invests their efforts, time, energy, and skills into that object. Having control of the object will make people feel the possession



of the target, and the more control, the stronger is the sense of ownership (Giordano et al., 2016). Investment of self refers to an individual investment of their personal time, energy, and other abilities into the job (Wang & Han, 2020). Putting ideas, skills, and physical, psychological, and intellectual energy into a job means investing oneself into the job and investing into the target of ownership develops feelings of psychological ownership (Wang et al., 2019). Further, intimately knowing about the object suggests that, the more information about the target the individual has, the deeper the understanding of the target. This results in a closer relationship between the individual and the target, and a strong feeling towards the target.

Five dimensions of psychological ownership are found in literature. Self-efficacy is the ability to successfully produce a result and is linked to the desire for control. The sense of efficacy can both foster a sense of ownership. With self-identity, people identify themselves through the things over which they feel ownership, and this can be felt toward a purpose, job, team, or an organization (Wang & Han, 2020). Self-identity suggests that feeling of ownership over the target of ownership acts as a symbolic expression of the self; may cause organizational members to regard targets as extensions of themselves and express this feeling using possessive vocabulary such as ‘this is my job’, or this is our company’. Belongingness is the feeling that one belongs in the organization. When people feel like owners in an organization, their need for belongingness is met by “having a place” in terms of their social and socio-emotional needs being met. The desire to belong is an essential part of being human and one that can be met through ownership. If this human need to belong is met by an organization, it can intensify the employee’s relationship with the organization. Similarly, Dawkins et. al. (2017) argued that psychological ownership will help workers cultivate positive and healthy feelings about an organization by satisfying their sense of belonging. Accountability refers to the implicit or explicit expectation that one may be called upon to justify one’s actions to others (Avey et al., 2012 as cited in Pickford et al., 2016). Psychological ownership manifests itself when individuals feel that they can be held accountable for the target of ownership and that they have the right to keep others accountable for their actions around it (Avey et al., 2012 as cited in Pickford et al., 2016). Thus, individuals in an organizational context will feel personally accountable for the outcome of a project whose success they are responsible for but will at the same time expect and require the participation and accountability of colleagues (Pickford et al., 2016). With respect to territoriality, organizational members can and become territorial over physical spaces, ideas, roles, relationships, and other potential possessions in organizations. Territoriality leads people to become preoccupied with objects of ownership, at the expense of their performance or other pro-social behaviors. Furthermore, the fear of losing one’s territory and associated self and social identity may promote politicking and prohibit transparency, collaboration, and information sharing. Thus, it can give rise to certain negative behaviors, related to individuals’ unwillingness to share the target of ownership with others, adaptation of other’s suggestions for change, or the need to retain exclusive control over the object of ownership (Brown & Zhu, 2016). Such behaviors may also impede cooperation among people and lead to a conflict situation related to the use of the target (Matilainen et al., 2017).

Person-organization fit is considered an essential dimension for enhancing psychological ownership (Batool & Zafar, 2019; Chung et al., 2015). It is the degree to which an employee perceives compatibility within the workplace. Sarıboğa and Serin (2020) emphasized that the relationships, school climate and the fit level between the teacher and school are important for a teacher’s success. According to Youngs et al. (2015) and Schleicher (2017), person-organization fit in education is important because good schools, first and foremost require quality teachers.

Similarly, Akkaya and Serin (2020) contended that high levels of compatibility between individual and organizational values will have positive consequences for all. Previous studies (Fan, 2018; Saraç et al., 2017) indicate that the more employees fit into their organization, the more positive work-related outcomes will be achieved. According to Fan (2018), it matters greatly in terms of work outcomes that there is congruence between personal attitudes and behaviors formed through individuals' decisions, beliefs, and organizational values. Yilmaz (2018) found a high level of person–organization fit of classroom teachers in his study. A good perception of the work conditions and the principles of an organization has been shown to improve the transition of employees to their employment and their resulting degree of happiness and feelings of belongingness (Mete et al., 2016). The attraction-selection-attrition (ASA) framework as developed by Schneider (1975) still comes in handy to suggest that job qualities are a central means by which individuals determine their P-O match and individuals are drawn to and pursue jobs with organizations that display specific characteristics to their own and organizations in effect prefer to choose individuals who are most comparable to the organization. Khaola and Sebotsa (2015) classified person-organization fit into a supplementary fit - when an individual possesses characteristics that are similar to existing organizational features, complementary fit - where an individual fills a void or adds something that is missing in the organization, need-supplies fit - when an organization satisfies an individual's needs, desires, or preferences, and demand-abilities fit - when an individual has the abilities required to meet organizational demands.

Few studies (Chung et al., 2015; Han et al., 2015) have established a relationship between person-organization fit and psychological ownership. Wang & Han (2020) asserted that employees who feel that their values are consistent with organizational values display positive behaviors that improve their sense of belongingness and allows them to experience a sense of home, within the organization. Therefore, employees with PO may consider themselves as organizational insiders, devote themselves to finishing their jobs through extra role behaviors and feeling more responsible for protecting the organizations to which they belong. Chung et al. (2015) contended that people with a 'weak' value fit but with a strong sense of ownership may continue to exhibit behavior necessary for the realization of organizational goals despite the 'poor fit'. On the other hand, Batool and Zafar (2019), found person-organization fit and psychological ownership to be positively related.

The relationship between demographic variables like gender and person-organization fit has been investigated by some researchers. Erkutlu et al. (2018) found that person-organization fit levels of male academics were higher than those of females. Similarly, Akkaya and Serin's (2020) study revealed a significant difference on person-organization fit according to gender. Erkutlu et al. (2018) discovered that academicians who had more than 10 years of seniority have higher person–organization fit than other seniority groups in their research. However, Yucel and Cetinkaya (2016) found no significant difference on person-organization with regard to years of service. Similarly, Dogan et al. (2019) confirmed that the levels of person–organization fit did not change significantly according to seniority. Also, Sariboğa and Serin (2020) concluded in their study that there was no significant difference between person-organization fit and years of service. Pickford et al., (2016) observed that tenure has a positive relation with psychological ownership where agents are motivated by feelings of responsibility or duty and concluded that longer periods spent investing in learning, effort, and time into the target increases psychological ownership.

From the foregoing, literature suggests psychological ownership will have significant impact on the success of educational goals. However, previous studies focused on teacher characteristics

that influence student learning and achievements (Bhai & Horoi, 2019; Schleicher, 2017) but seemed to have ignored one key possibility – a feeling of ownership. Batool and Zafar (2019) have contended that the concept of psychological ownership is still not particularly well known. Hence, there is a need to spread awareness of it to a wider audience that could benefit from its insights. Moreover, existing researches on its occurrence mechanisms mainly focused on key factors such as positive leadership, less structured work environments, employee participation in decision-making (Stander & Coxen, 2017) and so on. However, there is limited evidence linking person-organization fit to psychological ownership. Person-organization fit which has been proven to be a critical variable affecting positive work outcomes seem not to have been considered, especially, in the Ghanaian educational sector. Accordingly, there were few studies that have looked at the role that person-organization fit plays in explaining the psychological ownership of teachers. Thus, it is proposed that without a proper alignment of teachers with the school organization (person-organization fit); and its resultant feeling of psychological ownership, the ability to profit from teachers and their contribution to educational goals will be harmed. Within this framework, the study investigated the relationship between person-organization fit and psychological ownership of teachers in the northern zone of GES and determine whether there is a significant difference on person-organization fit and psychological ownership of teachers when respondents are grouped according to gender and years of service.

Accordingly, the following are hypothesized:

- i. There is a significant relationship between Person-organization fit and psychological ownership.
- ii. There a significant difference on person-organization fit when respondents are grouped according to gender and years of service.
- iii. There a significant difference on psychological ownership when respondents are grouped according to gender and years of service.

## **Methodology**

### **Research Design**

This study used a descriptive-correlational design. This was deemed fit for the study because descriptive research design describes the current status of the variables person-organization fit and psychological ownership. The correlational design will observe the relationships between the independent variables (person-organization fit and its dimensions) and psychological ownership.

### **Population and Sampling Techniques**

The study was conducted in a population of about 2000 basic school teachers around the northern zone of the Ghana Education Service. Convenience sampling was used to select 320 respondents, of which 34.1% were females and 65.9% were males.

### **Instrumentation**

To measure person-organization fit, four dimensions (demand-ability fit, needs-supply fit, complementary fit and supplementary fit) were measured on a 5-point Likert scale using the scale strongly disagree – strongly agree. The instrument consists of 16 items (five items for demand-abilities fit. Items was adapted from the demands-ability fit of Cable and DeRue (2002) and the demands-ability academic fit of Li et al. (2012). Supplementary fit (five items) and complementary fit (seven items) were sourced from Li et al. (2012) and Vahidi et al. (2016). Questions for Needs-

supplies fit (seven items) was adapted from the need-supply fit of Cable and DeRue (2002) and the need-supply academic fit of Li et al. (2012). The instrument for Psychological Ownership consists of 16 items (territoriality, self-efficacy, accountability, and self-identity) adapted from Avey et al. (2009).

### Analysis of Data

The study adopted both descriptive and inferential data analysis. With the descriptive statistics, the study adopted the means, percentages, and standard deviation in the analysis. With the inferential analysis, the study adopted t-test, ANOVA, and regression analysis for the study. The analysis was displayed using tables. Specifically, a one-sample t-test was used to determine the level of employee Psychological Ownership level of employees. The multiple regression was used to assess the effect of a person-organization fit on Psychological Ownership.

In a multiple regression model, a single predicted, Y, has more than one predictor variable. The model is expressed in the form as followed:

$$Y = B_0 + B_1 X_1 + B_2 X_2 + B_3 X_3 + B_4 X_4 + \dots + B_n X_n + \varepsilon \dots \dots \dots 1)$$

where  $X_n$  ( $n = 1, 2, 3, \dots, n$ ) are the independent variables (predictors) and Y the dependent variable (response or predicted).

### Ethical Considerations

Ethical considerations were observed to ensure confidentiality and anonymity in handling the data. Respondents were assured of anonymity and were asked not to provide any information that will identify them. The respondents' involvement was voluntary.

## Results and Discussion

### Demographic Data

This section covers the gender and working experience of the respondents as indicated in Table 1. As indicated in Table 1, the majority (65.9%) of the respondents were males, while the remaining 34.1% were females. With working experience, the majority (60.3%) had 1-5 years of working experience, followed by 6-10 years working experience group with 23.1% representation.

Table 1. *Demographic Data of Teachers*

Variable	Frequency	Percentage
Sex		
Female	109	34.1
Male	211	65.9
Working Experience Group (yrs)		
Less than 1	11	3.4
1-5	193	60.3
6-10	74	23.1
11-15	23	7.2
16-20	5	1.6
>20	14	4.4

Source: Field Survey (2020)

Besides, 11-15 years of working experience group represents 7.2%, over 20 years of working experience group represents 4.4%, followed by those with less than one year of working experience representing 3.4% and 16-20 years of working experience representing 1.6%. ...With the majority of teachers having work experience ranging from 1-20 years and above, it could be deduced that these teachers have a good knowledge of organisational attributes and practices within their respective schools. Accordingly, they are better positioned to assess their levels of fit and psychological ownership.

### Person-Organization Fit (PO Fit)

Table 2 presents results on both the perceived level of person-organization fit and psychological ownership among basic schoolteachers. The level of person-organization fit was evaluated in four perspectives; demand ability fit, need supply fit, supplementary fit, and complementary fit. The overall mean score is 3.41 which is interpreted as *moderate*. From Table 2, person-organization fit had a mean of 3.41 and a standard deviation of 0.693 and is interpreted as *moderate*. This implies person-organization fit dimensions, including demand ability fit, need supply fit, supplementary fit, and complementary fit, are moderately witnessed among teachers in various institutions.  $\pm .85$ ). Unlike previous studies (Ellis, et al., 2017; Yilmaz, 2018) that recorded high levels of person-organization fit among teachers, this study found moderate levels of PO fit. This notwithstanding, the fact that teachers scored high on the demand-ability fit dimension probably makes educational sense because teachers, among other agents of learning, are required to exhibit the highest level of competence in their various areas of specialisation if educational goals will be achieved. Accordingly, Saunders et al. (2017) asserted that teachers have a stronger influence on student achievement than any other school-based factors. Similarly, Sariboğa and Serin (2020) emphasized that the relationships, school climate, and the fit level between the teacher and school are important for a teacher's success. Further, PO fit in education is important because as indicated by Schleicher (2017), good schools, first and foremost require quality teachers.

Table 2. *Person-Organization Fit and Psychological Ownership*

Variable	Mean	Standard Deviation	Interpretation
Person-Organization Fit	3.41	.693	Moderate
Demand-Ability fit	3.82	.852	High
Need-Supply fit	3.23	.931	Moderate
Supplementary Fit	3.40	.908	Moderate
Complementary Fit	3.21	.949	Moderate
Psychological Ownership	3.63	.801	High
Territorial	2.94	1.110	Moderate
Self-Efficacy	4.07	1.038	high
Accountability	3.64	1.076	High
Belongingness	3.74	1.108	High
Self-identity	3.97	1.104	High

Legend: Very Low = 1.00 – 1.49, Low = 1.50 - 2.49, Moderate = 2.50 – 3.49, High = 3.50 – 4.49, Very High = 4.50 – 5.00



### Level of Psychological Ownership

Table 2 presents the level of psychological ownership among basic schoolteachers. The overall mean score is 3.63 which is interpreted as *high*. All the psychological ownership dimensions [self-efficacy ( $M = 4.07$ ,  $SD = 1.038$ ), accountability ( $M = 3.64$ ,  $SD = 1.076$ ), belongingness ( $M = 3.74$ ,  $SD = 1.108$ ), and self-identity ( $M = 3.97$ ,  $SD = 1.104$ )] except territoriality ( $M = 2.94$ ,  $SD = 1.11$ ), scored high. This implies that basic schoolteachers exhibit high levels of psychological ownership. This is supported by Saunders et al.'s (2017) findings that teachers that exhibited high levels of psychological ownership engender trust in students.

Low scores on territoriality are suggestive of low levels of perception of infringement which otherwise may result in dysfunctional behaviors. This is illuminating since some studies (e.g., Brown & Zhu, 2016; Cocieru, et al., 2019) have concluded that territoriality can give rise to certain negative behaviors, related to individuals' unwillingness to share the target of ownership with others, adaptation of other's suggestions for change, or the need to retain exclusive control over the object of ownership. Similarly, Matilainen et al. (2017) contended that such behaviors may impede cooperation among people, and lead to a conflict situation related to the use of the target.

### Gender Differences on Person-Organization Fit and Psychological Ownership

Table 3. *Group Mean Difference of Gender Group Statistics*

	Gender	N	Mean	Std. Deviation	Std. Error Mean
Person-Organization-Fit	Male	211	3.50	.699	.048
	Female	109	3.24	.651	.062
Psychological Ownership	Male	211	3.67	.764	.053
	Female	109	3.55	.866	.083

The findings in Table 3 revealed that there was a significant difference between gender on person-organization fit. As indicated in Table 3, males had higher levels of person-organization fit ( $M = 3.50$ ,  $SD = .699$ ) than females ( $M = 3.24$ ,  $SD = .651$ ). An independent sample t-test was further used to analyze the differences as presented in Table 4.

Table 4. *Independent Sample Test Analysis*

	Levene's Test for Equality of Variances					95% Confidence Interval			
	F	Sig.	t	df	Sig. (2-tail)	M.D.	S.D.	Lw	Upp
POF Equal variances assumed	4.730	.030	3.214	318	.001	.259	.081	-.100	.418
Equal variances not assumed			3.288	232.614	.001	.259	.079	.104	.414
PO Equal variances assumed	4.720	.031	1.299	318	.195	.123	.094	-.063	.308
Equal variances not assumed			1.248	195.938	.214	.123	.098	-.071	.316

Keys: POF= Person-Organization-Fit, PO= Psychological Ownership, M. D=Mean Difference, Sig=Significance, LW=Lower, Upp=Upper.

In Table 4, Levene's test (0.001) showed to be lower than 0.05 for the person-organization fit, so the study concludes that the variance of the person-organization-fit values between the male and female are *significantly different* (thus  $p\text{-value} = 0.000 < 0.05$ ). Hence, the study concludes that



there is a *significant difference* between the male and female in respect of person-organization fit. This implies that male teachers have a better fit with their school organization than females such that how well one aligned with institutional values differed by gender. This is supported by Erkutlu et al. (2018) and Akkaya and Serin (2020) who found that person-organization levels differed significantly according to gender. With regards to psychological ownership, the Levene's test for equality shows that there is *no significant difference* ( $\text{sig} = .195$ ). Thus, there is *no significant difference* on psychological ownership when respondents are grouped according to gender.

### Differences in Person-Organization Fit of Respondents According to Years of Service

The study examined whether there was a significant difference on person-organization fit when respondents are grouped according to years of service. ANOVA was used to examine this.

Table 5. *Difference of Years of Service on Person-Organization Fit and Psychological Ownership*

		Sum of Squares	df	Mean Square	F	Sig.
POF Total AVERAGE	Between Groups	2.710	5	.542	1.130	.344
	Within Groups	150.662	314	.480		
	Total	153.372	319			
POS Total AVERAGE	Between Groups	5.039	5	1.008	1.586	.163
	Within Groups	199.449	314	.635		
	Total	204.488	319			

From the results in Table 5, the  $F$ -value registered is 1.130 and non-significant at the 0.05 significance level ( $\text{sig} = 0.344 > 0.05$ ). This means that there is *no significant difference* on person-organization fit when respondents are grouped according to working experience. This implies that teachers' years of service does not determine their level of fit with institutional values. This is confirmed by Yucel and Cetinkaya (2016) who found no significant difference on person-organization fit levels when respondents are grouped according to years of service. Similarly, Dogan et al. (2019) found that the levels of person-organization fit did not change significantly according to seniority. Also, Sariboğa and Serin (2020) found no significant difference between person-organization fit in respect of years of service. Also, with respect to years of service and psychological ownership, the  $F$ -value registered is 1.586 and *non-significant* at 0.05 significance level ( $\text{sig} = .163 > 0.05$ ). This revealed that there is *no significant difference* on psychological ownership of teachers when years of experience is considered, thus, suggesting that teachers psychological ownership is not determined by years of experience. This is contrary to the findings of Pickford et al., (2016) who observed that tenure had a positive relation with psychological ownership.

### Predictors of Psychological Ownership

To calculate the relationship between person-organization fit and psychological ownership, linear regression was employed first by computing all the person-organization fit variables to form one variable called person-organization fit. The same was done to the psychological ownership variables, and a summary of the regression is illustrated in Table 7

## Correlation

The correlations between the variables of the study were calculated. Pearson correlation analysis was conducted in this study to determine the relationship between all the variables under study since this is a requirement for performing regression analysis. The correlation and its interpretation are shown in Table 6.

Table 6. *Correlation between Variables*

Variables	1	2	3	4	5
Demand Ability Fit	1				
Need Supply Fit	.377**	1			
Supplementary Fit	.387**	.499**	1		
Complementary Fit	.311**	.342**	.239**	1	
Psychological Ownership	.343**	.231**	.227**	.248**	1

\*\*Correlation is significant at 0.01 level (2-tailed)

\*Correlation is significant at 0.05 level (2-tailed)

The four types of person-organization fit correlate. Also, all the four types of person-organization fit correlate with psychological ownership. Demand ability Fit has the highest correlation ( $r = .343, p < 0.01$ ) followed by complementary fit ( $r = .248, p < 0.01$ ), need supply fit ( $r = .231, p < 0.01$ ), and supplementary fit ( $r = .227, p < 0.01$ ).

Table 7. *Summary of Regression*

Variables	R-square	$\beta$ -value	Model Fit	p-value
Person Organization Fit	.128	.357	0.000	0.000
Psychological Ownership				

The  $r$ -square value displayed in Table 7 shows that 12.8% of the variation in the dependent variable (psychological ownership) is explained by the independent variable (Person Organization Fit). The model fit value of 0.000 was significant in the sense that the independent variable tends to predict the dependent variable. The regression model's coefficient, which is .357, indicates the direction of the relationship between person-organization fit and psychological ownership. The study's finding showed a significant positive relationship between person-organization fit and psychological ownership ( $\beta$ -value = .357,  $p$ -value = .000). This reveals that as teachers' person-organization fit increases, psychological ownership increase. In support of this study, are studies of Han et al., (2015) and Chung et al., (2015) who found a relationship between person-organization fit and psychological ownership. Also, Batool and Zafar (2019), found person-organization fit and psychological ownership to be positively related.

Besides, a standard multiple regression analysis was conducted utilizing psychological ownership as the dependent variable by averaging all the psychological ownership constructs to form one variable called psychological ownership (dependent variable). Person-organization fit variables, including demand ability fit, need supply fit, supplementary fit, and complementary fit were adopted as the predicting variables. Table 8 to Table 10 gives vivid statistics.

Table 8. *Model Summary*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.385a	.149	.138	.743

a. Predictors: (Constant), Demand Ability Fit, Need Supply Fit, Supplementary Fit, and Complementary Fit

b. Dependent Variable: Psychological Ownership

Table 9. *ANOVA<sup>a</sup>*

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	30.374	4	7.594	13.738	.000b
	Residual	174.113	315	.553		
	Total	204.487	319			

a. Dependent Variable: Psychological Ownership

b. Predictors: (Constant), Demand Ability Fit, Need Supply Fit, Supplementary Fit, and Complementary Fit

Results from the Table 8 shows that 14.9% of the variation in the dependent variable (psychological ownership) was explained by the independent variable (person-organization Fit). As manifest from the ANOVA Table, it could be deduced that an F statistic of 13.738 inferred that the overall model was significant. This was supported by a probability value of (.000). The entire regression model is fit since the significant value is less than 0.05 ( $F = 13.738$ ,  $p\text{-value} = .000$ ). This means that the independent variable has the capability of predicting the dependent variable.

Table 10. *Coefficients<sup>a</sup>*

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error				Lower Bound	Upper Bound
1	(Constant)	1.998	.227		8.808	.000	1.552	2.444
	DAF AVERAGE	.239	.056	.254	4.299	.000	.129	.348
	NSF AVERAGE	.048	.054	.055	.875	.382	-.059	.155
	S Fit AVERAGE	.061	.055	.069	1.116	.265	-.047	.168
	C Fit AVERAGE	.112	.048	.133	2.354	.019	.018	.206

a. Dependent Variable: Psychological Ownership

From Table 10 all other things being equal, where there is Person Organization Fit including demand ability fit, need supply fit, supplementary fit, and complementary fit, psychological ownership will be positive, meaning it will increase. Results showed that only demand ability fit and complementary fit variables are significant, which implies that these variables contribute to the model. The model equation is therefore stated as:

$$\text{Psychological Ownership} = 1.998 + .239 (\text{demand ability fit}) + .048 (\text{need supply fit}) + .061 (\text{supplementary fit}) + .112 (\text{complementary fit}).$$

The coefficient of the regression model shows that there was a *significant positive association* between person organization fit variables (demand ability fit and complementary fit) and Psychological Ownership. There was a *significant positive relationship* between demand ability fit and psychological ownership ( $\beta = .239, p = .000$ ). Complementary fit also had a beta value of .112 with a p-value of .000 making it *significantly positive*, indicating that a unit increase in complementary fit increase psychological ownership by .112. However, *no significant positive association* is found between need supply fit and psychological ownership ( $\beta = .048, p = .382$ ) since the significant influence was greater than 0.05 ( $\beta = .048, p = .382$ ). Also, supplementary fit was *not significant* since the value was greater than 0.05 ( $\beta = .061, p = .265$ ). In general, it could be inferred that person organization fit variables (demand ability fit and complementary fit) do predict psychological ownership.

This study looked at person-organization fit and its relations with psychological ownership. According to the findings, person-organization fit levels of teachers was *moderate* while the psychological levels were *high*. Person-organization fit was found to be *positively and significantly related* to psychological ownership. Among the fit dimensions, demand-ability fit and complementary fit were found to be strong predictors of psychological ownership. This implies that person-organization fit is an essential dimension that predicts psychological ownership among teachers. Thus, an increase in the similarity between teachers and their school organization will result in increased levels of psychological ownership. Thus, when teachers experience a high degree of 'fit' with their schools, they are more likely to feel a sense of psychological ownership over their profession, classrooms, and their schools. It also, suggests that psychological ownership propelled by a person-organization fit could be a strategic tool to enhance the realizations of basic education goals. Further, while *significant differences* between gender were found on person-organization fit, *no differences* were found on psychological ownership among respondents with different working experiences. Thus, contrary to a layman's assumption that the number of years spent on a job could lead the growth of more feelings of possessiveness, this study suggests otherwise.

This study contributes to PO fit and psychological ownership literature by providing somewhat a novel way to understanding a teacher's experience, especially, at the basic schools, of psychological ownership. Currently, most research have examined mostly the value component of PO fit and its role in predicting employee attitudes and other work outcomes, other than psychological ownership. Further, it is assumed that used alone, each of the dimensions of person-organization fit may not be sufficient in advancing an appreciation and understanding of why teachers may experience a sense of psychological ownership. Thus, in this study PO fit allowed a consideration to be given to both individual characteristics and organizational characteristics (values, ideals) of person-organization fit when predicting psychological ownership.

The findings of this study also have some important implication for school heads, the Ghana Education Service (GES) and its leaders. It could thus, be concluded that in such a competitive environment where demand for the best talent is high but scarce, teachers have a lot of options, so, improving their 'fit' with organizational attributes could be used as a strategic tool to stimulate a sense of ownership in them. It is therefore, recommended that the GES in the selection process, painstakingly employ appropriate devices that unravel the person-organization fit of teachers; and more especially ensure a job-fit since demand-ability scored high and strongly predicted

psychological ownership. Also, systematic training and development for teachers is important to constantly enhance their capacity to perform.

Regarding future research, a number of issues merit attention. There could be negative outcomes as consequences of psychological ownership such as a ‘silo-mentality’ resulting from territoriality, a dimension of psychological ownership, but which the current study did not take into consideration. Further studies could examine the effect of the several dimensions of psychological ownership on both positive and negative types of outcomes. Also, the study provides initial evidence for the psychological ownership presence among basic schoolteachers across five regions in Ghana (Northern zone) and should be replicated across the other regions and at different educational levels. Further investigation is needed, considering different regional conditions and different educational levels. The effect of regional differences, educational level, and the type of school (public versus private) on person-organization and psychological ownership could be assessed and compared.

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## EDUCATION

## Stress and Anxiety Levels of the College of Teacher Education Students and Their Motivation to Learn: An Input to an Intervention Program

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### Abstract

The stress and anxiety experienced by many students during this pandemic affect their motivation to learn in this new normal education set up. Motivation is one of the major concerns irrespective of which study model is adopted whether online, blended, hybrid or a myriad variation. This descriptive-correlational study determined the perceived levels of stress, anxiety, and academic motivation to learn during this COVID-19 pandemic situation of the 191 students selected through simple random sampling of the College of Teacher Education and the relationship between students' level of stress and anxiety and their level of academic motivation. To assess the students' perceived stress, anxiety, and academic motivation, the COVID-19 Student Stress Questionnaire (CSSQ), Generalized Anxiety Disorder (GAD-7), and Academic Motivation Scale were utilized and administered through google forms. Findings revealed that more than 40% of the students perceived that their relationships with their relatives, colleagues, and university professors are *somewhat stressful*; 40% perceived the risk of COVID-19 as *moderately stressful*; 20% perceived their academic studying experience very stressful and more than 15% found the risk of contagion and social isolation very stressful. Moreover, 38% exhibit *moderate anxiety*, 29% are experiencing *mild anxiety*, 28% had *severe anxiety* and only 5 % have *minimal anxiety level*. For future research, same study may be done on other university students enrolled in different programs and adopt the intervention program so the students at the college may cope with the challenges of COVID-19.

**Keywords:** *stress, anxiety, motivation, pandemic*

The outbreak of coronavirus diseases (COVID-19) has been substantially influencing the lives of people across the world, especially after the declaration of a global pandemic by the World Health Organization in the second week of March 2020 (Islam, Barna, Khan, Hossain 2020). On March 16, 2020, the Philippine government imposed an enhanced community quarantine (ECQ) in Luzon (including its associated islands), which is effectively a total lockdown to ensure "social distance" through "home quarantine", thus restricting the movement of the population except for necessity, work, and health circumstances. Additional restrictions mandated the temporary closure of non-essential shops and businesses. This came in after two days of the implementation of the community quarantine in Metro Manila.

All education institutions were closed initially from March 16, 2020 across the country (nations of the world) and is still extended during the conduct of this research. According from Islam, Barna, Khan, Hossain (2020), this unprecedented experience of home quarantine under lockdown with the uncertainty of academic and professional career has multifaceted impacts on

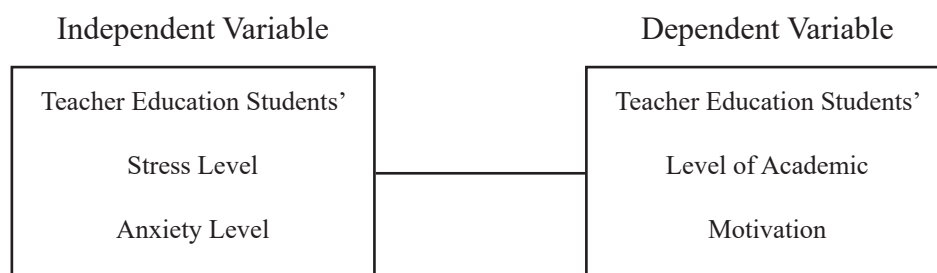
the mental health of students. Hadler (2021) mentioned that college students are especially prone to feelings of loneliness, and they experience higher rates of anxiety and depression compared to the general population. Further, the long period of social isolation, uncertainty, and abrupt transitions, further worsen these feelings. The students feel less connected with their friends, due to the absence of social support system and extracurricular activities, organizations, and hobbies. Related to this, they worry about their future, their own health, and the health of their friends and loved ones. They observed that the situation they are living through is stressful and anxiety provoking, as there is a constant fear of the unknown in addition to a loss of control, making them especially vulnerable to developing mental health concerns.

The pandemic has interrupted the learning of more than one billion students in 129 countries around the world according from the United Nation's Educational, Scientific, and Cultural Organization (UNESCO). Many universities worldwide have moved to emergency remote teaching (ERT) via online platforms, further inducing anxiety among the students. Studies on the effect of COVID-19 and lockdowns on college students in China reported significant adverse effects on the students' psychological well-being and high levels of anxiety (Bao et al., 2020; Cao et al., 2020; Wang et al., 2020). To date, several studies have been conducted on the effects of the COVID-19 pandemic and lockdowns from the public health perspective.

Moreover, Kroenke et al. (2007) emphasized that anxiety can be fueled by uncertainty and by fears of risk of harm to self or others. Anxiety is still undiagnosed and under-treated in the global context. Further, anxiety patients may also experience other physiological symptoms, such as feeling weak, fainting, pain or nausea, shivers, rapid breathing, etc. (Testa et al., 2013). Anxiety impairs focus and concentration, memory, and visual motor skills. The stress and anxiety levels may affect the motivation of the students to learn in this new normal education set up. Motivation plays a crucial role in learning. It not only sets in motion the activity resulting in learning, but also sustains and directs it. It is "the central factor in the effective management of the process of learning" (Kelley, 2002, Aggarwal, 2004, as cited in Singh, 2011). Reeve (2015) defined motivation as an internal process. Whether it is defined as a drive or a need, motivation is a condition inside individual that desires a change, either in the self or the environment. When everybody taps into this well of energy, motivation endows the person with the drive and direction needed to engage with the environment in an adaptive, open-ended, and problem-solving sort of way. Since students are at the core of learning process, a study tailored to their motivations and strategies and factors hindering their learning is imperative as students themselves play pivotal roles in shifting their own learning and acquiring enhanced academic achievement.

Accordingly, Pintrich (2003) acknowledged that research on student motivation is central to research in learning and teaching settings. Pintrich et al. (1994) have demonstrated that positive motivational beliefs are positively related to higher levels of self-regulated learning. Relative to this, Zimmerman (1990) stressed that there is a growing pedagogical need to comprehend how students develop the capability and motivation to regulate their own learning. Zimmerman believed that when students monitor their responding and attribute outcomes to their strategies, their learning becomes self-regulated, and they exhibit increased self-efficacy, greater intrinsic motivation, and higher academic achievement. Gbollie & Keamu (2017) noted that motivation plays an important role in learning because it greatly explains academic performance.

The study determined the relationship between College of Teacher Education students' levels of stress and anxiety and their level of academic motivation during this Covid-19 pandemic situation.

Figure 1. *Research Paradigm*

### Methodology

#### Research Design

According to Creswell (2008), correlational research designs are used by researchers to describe and measure the degree of relationship between two or more variables or sets of scores. A procedure in which subjects' scores on two variables are simply measured, without manipulation of any variables, to determine whether there is a relationship. Correlational research examines the relationship between two or more non manipulated variables.

The study determined the relationship between stress and anxiety levels and the teacher education students' level of motivation to learn.

#### Population and Sampling Technique

The population involved 191 from the 380 College of Teacher Education students of the Laguna State Polytechnic University, Los Banos Campus who were officially enrolled during the first semester of Academic Year 2020-2021. The researchers decided to set the margin of error at 5% and the confidence level at 95%. The respondents included 191 students selected through simple random sampling and those with access to the internet.

#### Instrumentation

The study adopted the COVID-19 Student Stress Questionnaire (CSSQ) by Zurlo et al., (2020). This was specifically developed to assess university students' perceived stress during the Covid-19 pandemic lockdown. It consists of 7 items on a 5-point Likert scale ranging from zero "not at all stressful" to four "extremely stressful".

Perceived stress was operationalized based on transactional models of stress (Lazarus & Folkman, 1984). Each item was developed to cover different domains that could have been subject to variations due to the COVID-19 pandemic lockdown, and, therefore, that may be potentially perceived as sources of stress (i.e., risk of contagion; social isolation; relationship with relatives; relationship with colleagues; relationship with professors; academic studying; couple's relationship, intimacy and sexual life). The scale provides a Global Stress score ranging from 0 to 28.

Anxiety was evaluated by using the Generalized Anxiety Disorder (GAD-7). The academic motivation of student-respondents was determined by adopting the Academic Motivation Scale (AMS) developed by Smith and Onencan (2020). The objectives are: (a) what motivates students to study at university, and (b) if the recent Covid-19 social distancing measures demotivated students to continue studying in university. On a 7-point Likert Scale, the students' degree of agreement on the questions was assessed.

## Analysis of Data

Mean and standard deviation were employed to evaluate the respondents' levels of stress, anxiety, and academic motivation. To determine the significant relationships between these variables, Pearson correlation coefficient was utilized.

## Ethical Considerations

Ethical considerations were observed to ensure confidentiality and anonymity in handling the data. The survey was conducted from the second week of December 2020 to January 2021. Students enrolled in the different courses of the College of Teacher Education served as the population. Adopted questionnaires were used to collect basic information on stress, anxiety, and level of motivation. Google form was used to distribute the e-questionnaires.

## Results and Discussion

Table 1 presents the stress level of the students at the College of Teacher Education. The indicator on "how they perceive their academic studying experience during this period of Covid- 19" obtained the highest mean of 3.16 (SD 1.00) and interpreted as *moderately stressful*. Meanwhile, the indicator which states "how they perceived the relationships with your relatives during this period of Covi-19 pandemic" got the lowest mean of 2.15 (SD 0.93) and is likewise interpreted as *moderately stressful*.

The students are moderately stressed since they can still attend their classes; meet their classmates in the virtual classroom and somehow had contact with professors; and since they stayed in their homes, continue their studies though experiencing intermittent internet connection, they are not alone since relatives are also in a work from home set up.

However, Sundarasan et al. (2020) found out that students faced uphill tasks in terms of technological infrastructure, mainly poor internet connection. Moreover, some students attended 6 to 8 hours of daily online classes using their mobile phones, which further contributed to stress and health issues. In addition, the overwhelming expectations from their instructors, with multiple assignments and no flexible deadlines, added to the students' anxiety. Uncertainty regarding their exams, completion of their semester and graduation, and the need to juggle household chores and take care of siblings while concurrently attending online classes had a huge impact on their anxiety levels.

Students, especially those graduating, were also distressed because they were helpless in their plans to launch their careers. Moreover, although universities promptly implemented remote online classes, most instructors still used the same curricula and learning outcomes meant for face-to-face teaching.

Table 1. *Perceived Stress Level of Teacher Education Students*

Indicators	Mean	SD	Descriptive Interpretation
How do you perceive the risk of contagion during this period of covid-19 pandemic?	2.94	0.89	Moderately Stressful
How do you perceive the social isolation during this period of covid-19 pandemic?	2.75	0.89	Moderately Stressful
How do you perceive the relationships with your relatives during this period of covid-19 pandemic?	2.15	0.93	Moderately Stressful

*{table continues on the next page}*



How do you perceive the relationships with your university colleagues during this period of covid-19 pandemic?	2.42	0.89	Moderately Stressful
How do you perceive your relationships with your university professors during this period of covid-19 pandemic?	2.43	0.98	Moderately Stressful
How do you perceive your academic studying experience during this period of covid-19 pandemic?	3.16	1.00	Moderately Stressful
Overall	2.64		Moderately Stressful

Legend: 1.0-1.5-Not at all Stressful; 1.51-2.50-Somewhat Stressful; 2.51-3.0-Moderately Stressful; 3.51-4.50-Very Stressful; 4.51-5.0-Extremely Stressful

Figure 2 illustrates the percentage contribution of each indicator to the overall assessment of students' stress level. Among the indicators, more than 40% of the students perceived their relationships with their relatives, colleagues, and university professors as somewhat stressful. More than 40% also perceived that the risk of COVID-19 contagion and academic studying experience during this period of covid-19 pandemic moderately stressful. However, almost 20% perceived their academic studying experience very stressful and more than 15% found the risk of contagion and social isolation during this pandemic period very stressful.

Figure 2. *Stress Level of Teacher Education Students, AY 2020-2021*

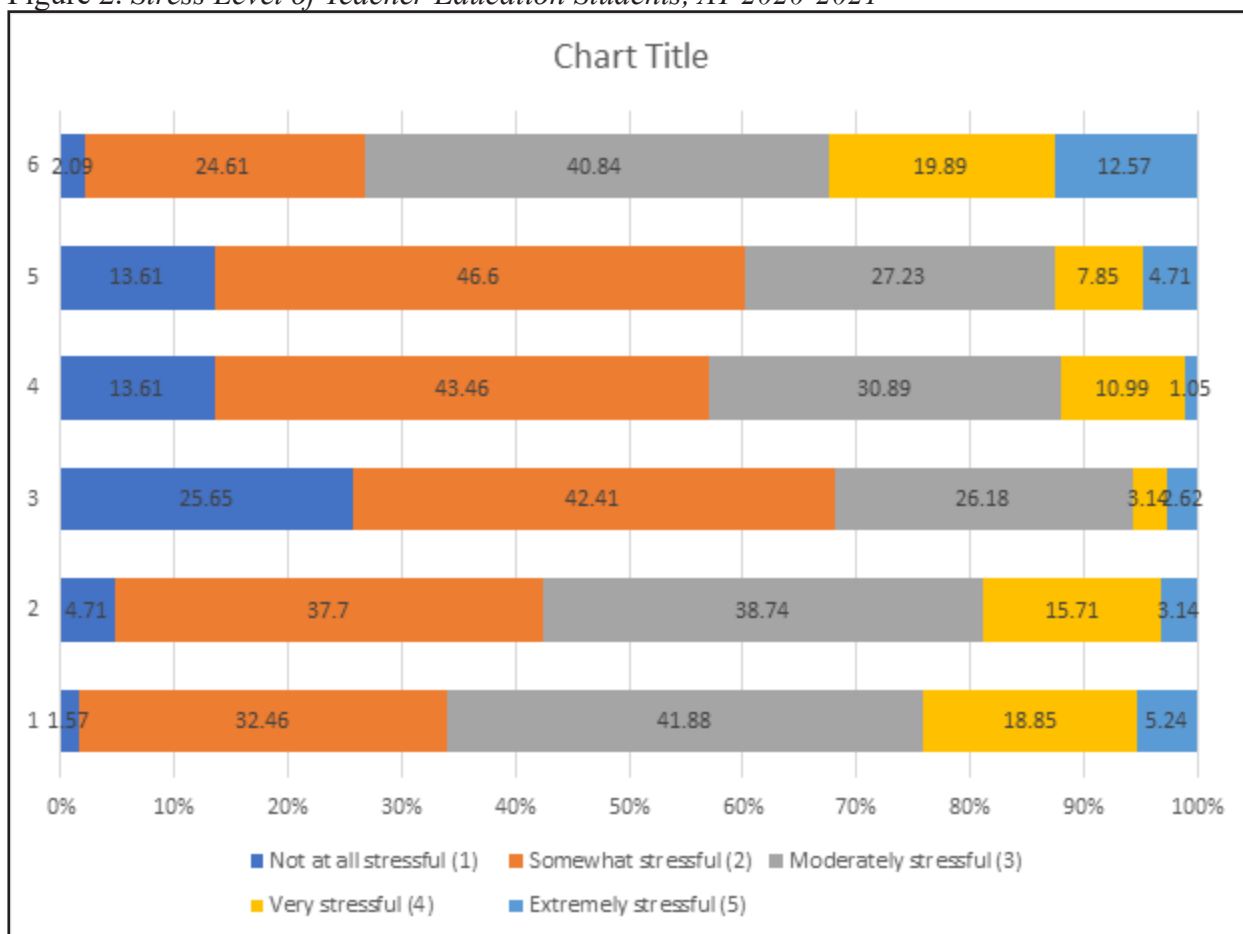
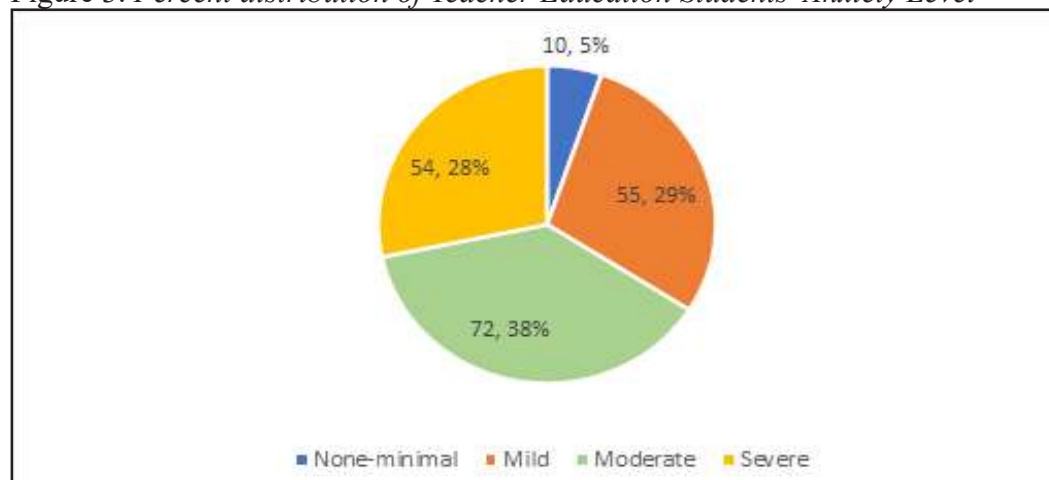


Figure 3 reflects the percent distribution of Teacher Education students' anxiety level. The results showed that 38% exhibited *moderate anxiety*, 29% experienced *mild anxiety*, while 28 % had *severe anxiety*, and only 5% had *none-minimal anxiety* level. The result implies that majority (67%) of the students experienced mild to moderate anxiety level only during this time of pandemic which is manageable.

Figure 3. *Percent distribution of Teacher Education Students' Anxiety Level*



Legend: < 5=none-minimal; 5-9=mild; 10-14=moderate; ≥15=severe

Table 2. *Anxiety Level of Teacher Education Students*

Indicative Statement	Mean	SD	Descriptive Interpretation
Over the last four months, how often have you been bothered by any of the following problems:			
Feeling nervous, anxious or on edge	2.69	0.86	Moderate
Not being able to stop or control worrying	2.59	0.90	Moderate
Worrying too much about different things	2.83	0.92	Moderate
Trouble relaxing	2.64	0.84	Moderate
Being so restless that it is hard to sit still	2.51	0.99	Moderate
Becoming easily annoyed or irritable	2.70	0.96	Moderate
Feeling afraid as if something awful might happen	2.74	0.89	Moderate
Overall	2.67		Moderate

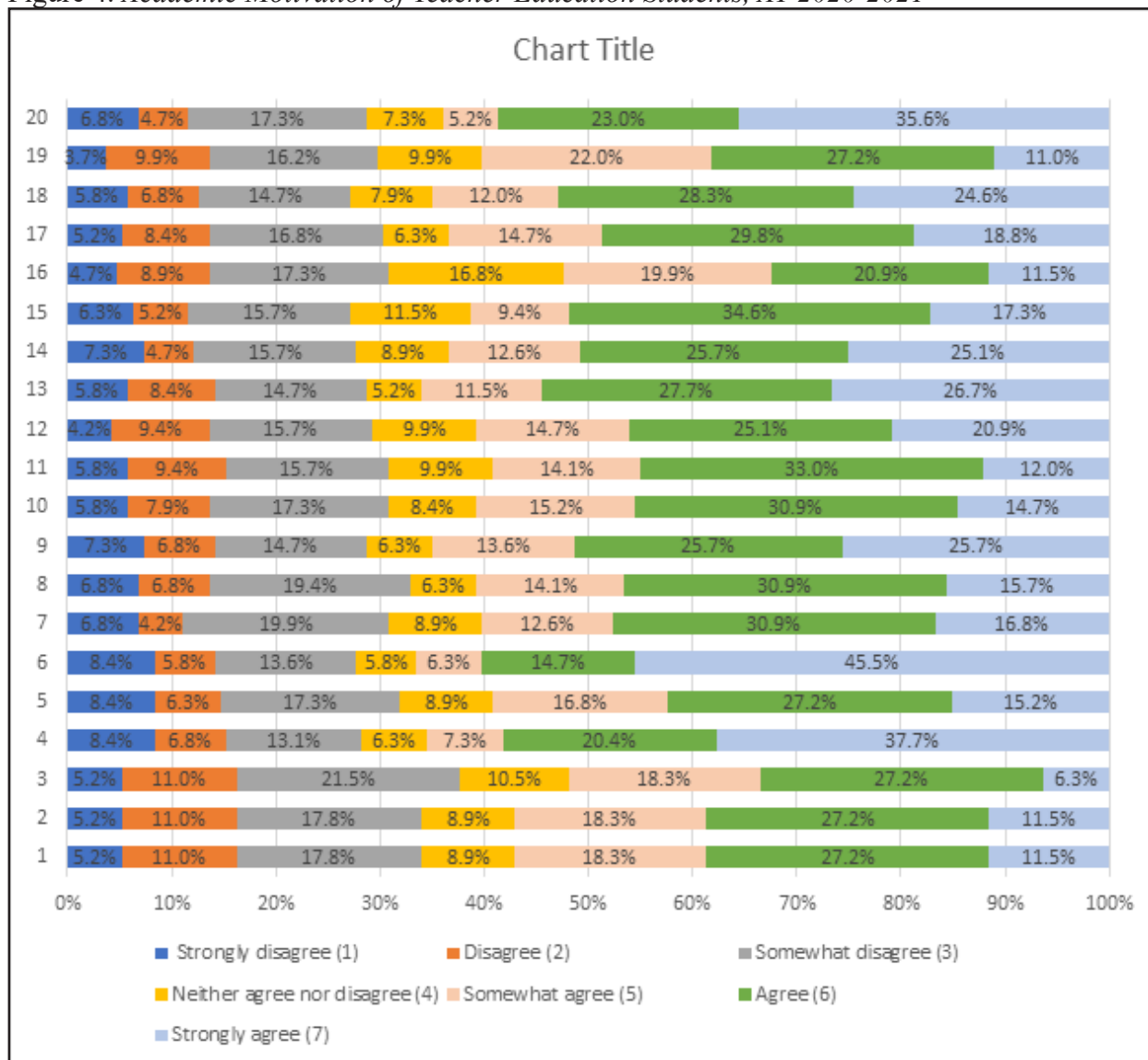
Legend: .1.0- 1.50 - none-minimal; 1, .51-; 2.50 - mild; 2.51-3.50 - moderate.; 3.51-4.0 - severe

The findings were consistent with the research done by Alyami et al. (2020) which looked at the anxiety level of university students in Saudi during COVID-19 and the results indicated that about 35% of the students experienced moderate to extreme levels of anxiety. Moreover, it is more or less similar to what was reported about students in Saudi Arabia before COVID-19 (Al-Gelban et al., 2009). This indicates that the level of anxiety was almost consistent with pre-pandemic status. Bahhawi et al. (2018) reported a higher level of anxiety. Looking outside Saudi Arabia, Cao et al. (2020) found that 0.9% of college students experienced severe anxiety during COVID-19, while around 24% experienced mild to moderate levels, which presents a low level of anxiety compared to previous literature on college students in general.

Table 3. *Motivation Level of Teacher Education Students*

Indicative Statements	Mean	SD	Descriptive Interpretation
1. I study because I experience pleasure and satisfaction while learning new things.	4.52	1.77	Somewhat Agree
2. I study for the pleasure I experience while surpassing myself in my studies.	4.34	1.69	Somewhat Agree
3. I study to prove to myself that I am capable of completing my college degree.	4.96	2.05	Somewhat Agree
4. I study because I believe that college education will help me better prepare for the career I have chosen.	5.09	2.07	Somewhat Agree
5. I study because when I succeed in university course, I feel important.	4.62	1.85	Somewhat Agree
6. I study because I want to have a good life later on.	5.22	2.10	Somewhat Agree
7. I study for the pleasure that I experience in broadening my knowledge about subjects which appeal to me.	4.76	1.81	Somewhat Agree
8. I study for the satisfaction I feel when I am in the process of accomplishing difficult academic activities.	4.70	1.84	Somewhat Agree
9. I study because my studies allow me to continue to learn about many things that interest me.	4.92	1.93	Somewhat Agree
10. I study for the high feeling that I experience while reading about various interesting subjects.	4.71	1.80	Somewhat Agree
11. I study because the university allows me to experience personal satisfaction in my quest for excellence in my studies.	4.64	1.79	Somewhat Agree
12. I study to have a better salary later on.	4.81	1.82	Somewhat Agree
13. I study because this will help me make a better choice regarding my career orientation.	4.98	1.92	Somewhat Agree
14. I study in order to obtain a more prestigious work later on.	4.92	1.89	Somewhat Agree
15. I study for the pleasure that I experience while I am surpassing myself in one of my personal accomplishment.	4.85	1.80	Somewhat Agree
16. I study because with a high school diploma I would not find a high paying job later on.	4.47	1.68	Neither agree nor disagree
17. I study for the pleasure I experience when I discover new things never seen before.	4.82	1.83	Somewhat Agree
18. I study because it will enable me to enter a work/job in which I really like.	4.97	1.87	Somewhat Agree
19. I study for the pleasure I experience when I read interesting authors.	4.62	1.68	Somewhat Agree
20. I study because I believe that college education will improve my competence as a worker.	5.11	1.99	Somewhat Agree
Overall	4.80		Somewhat Agree

Legend: 1.0-1.5- Strongly disagree; 1.51-2.50- Disagree; 2.51-3.50- Somewhat disagree; 3.51-4.50- Neither agree nor disagree; 4.51-5.50 Somewhat agree; 5.51-6.50 -Agree; 6.51-7.0- Strongly agree

Figure 4. *Academic Motivation of Teacher Education Students, AY 2020-2021*

Based on the findings, the indicative statements “I study because I want to have a good life later on” with a mean of 5.22; “I study because I believe that college education will improve my competence as a worker” with a mean of 5.11; and “I study because I believe that college education will help me better prepare for the career I have chosen” with a mean of 5.09 were interpreted as *somewhat agree*. The result implies that there other criteria not included in the study which may be their major motivation why they want to continue their studies.

In a study of Trigueros et al. (2020), results showed that motivation, critical thinking, and academic stress positively predicted academic performance. Furthermore, motivation moderated the effects of academic stress on academic performance, mitigating the negative effects of stress. These results have been described in a research with university populations, high school students, and distance learning students. These findings could be explained by the fact that metacognitive strategies are procedures that facilitate information processing by selecting, organizing, and regulating cognitive processes, students need to show a strong interest in the subject (i.e., an

internal motivation towards it), as it requires a conscious planning and use of these strategies, which facilitate academic performance. In the same way, critical thinking requires a high degree of effort on the part of students, who are only willing to invest if academic achievement is attainable. Therefore, students will be willing to try to think critically if they perceive a high degree of control over their academic achievement.

Table 4. *Stress and Motivation - Relationship*

Motivation/Stress	risk of contagion	social isolation	relationships with your relatives	relationships with your university colleagues	relationships with your university professors	academic studying experience
	r	r	r	r	r	r
Experience pleasure and satisfaction while learning new things.	.26*	.07	.07	.13	.01	.19*
Pleasure I experience while surpassing myself in my studies.	.26*	.13	.11	.17*	.04	.19*
Prove to myself that I am capable of completing my college degree.	.25*	.13	.12	.17*	.06	.32*
Believe that college education will help me better prepare for the career I have chosen.	.24*	.14	.10	.14	.02	.33*
When I succeed in university course I feel important.	.23*	.17	.15	.20	.04	.23
I want to have a good life later on.	.26*	.18*	.15*	.28*	.07	.35*
Pleasure that I experience in broadening my knowledge about subjects which appeal to me.	.27*	.17*	.08	.18*	.07	.24*
Satisfaction I feel when I am in the process of accomplishing difficult academic activities.	.23*	.16*	.07	.13	.02	.23*
My studies allow me to continue to learn about many things that interest me.	.25*	.17*	.04	.12	.02	.29*
High feeling that I experience while reading about various interesting subjects.	.22*	.17*	.10	.17*	.05	.27*
The university allows me to experience personal satisfaction in my quest for excellence in my studies.	.20*	.13	.05	.12	.03	.27*
To have a better salary later on.	.30*	.22*	.03	.20*	.12	.33*
This will help me make a better choice regarding my career orientation.	.26*	.20*	.09	.15	.06	.35*
In order to obtain a more prestigious work later on	.21*	.16*	.04	.13	.07	.35*
The pleasure that I experience while I am surpassing myself in one of my personal accomplishment	.25*	.15*	.08	.12	.02	.33*
With a high school diploma I would not find a high paying job later on.	.19*	.08	.003	.08	.02	.24*

*{table continues on the next page}*

Pleasure I experience when I discover new things never seen before.	.21*	.15*	.06	.14	.03	.29*
Enable me to enter a work/job in which I really like.	.21*	.18*	.09	.14	.05	.36*
Pleasure I experience when I read interesting authors.	.16*	.10	.05	.15*	.06	.22*
I believe that college education will improve my competence as a worker.	.21*	.12	.03	.14	.04	.36*

\*- significantly related at  $p < .05$

Results of significant relationship between motivation and stress level of the college of Teacher Education students as shown in Table 4 revealed that all the indicators of motivation have *positive significant relationships* with the stress indicators “risk of contagion and academic studying experience during this period of COVID-19 pandemic at  $p < .05$ . This means that the students were more motivated as stress level of the risk of contagion increases as well as academic studying experience during this pandemic. The respondents are more motivated also in most of its indicators which were *significantly related* to the stress level due to social isolation and relationships with university colleagues during this period of COVID-19 pandemic. Only two indicators of motivation “when I succeed in university course I feel important” and “I want to have a good life later on” were found to be *significantly related* to stress level on relationships with relatives during this covid-19 pandemic at  $p < .05$ . No *significant relationship* was revealed between motivation and relationship with university professors during this period of COVID-19 pandemic.

In terms of anxiety level and motivation, it was only on the motivation indicator “experience pleasure and satisfaction while learning new things” and anxiety indicator “fully nervous, anxious or on edge” that a *negative significant relationship* was found at  $p < .05$ . This implies that the more nervous, anxious or on edge is the student, the less pleasure and satisfaction while learning new things. This means that the certain anxiety indicator *negatively affects* the students pleasure and satisfaction in learning new things.

In the light of the findings, it is recommended to determine the relationship of the demographic profiles of the respondents to the stress, anxiety and levels of motivation to learn of the students and adopt the intervention program so the students at the college may cope with the challenges of COVID-19 pandemic.

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