ENVIRONMENTAL CHARACTERISTICS, STUDY HABITS, AND ACADEMIC PERFORMANCE OF STUDENT NURSES IN A PRIVATE UNIVERSITY

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The Researchers

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ABSTRACT

Understanding how environmental characteristics and study habits affect academic performance is crucial for improving learning conditions and student achievement. This study explored how these characteristics interact among student nurses at a private university. The population size comprised 235 second-year student nurses, from which a sample size of 150 was selected using a probability stratified random sampling method. Data were gathered using a 30-item questionnaire adapted from existing researchers and tailored by the researchers, distributed via Google Forms. Various aspects of the participants' academic environment and study practices were assessed.

Statistical analysis, including gamma values for association and p-values for significance, revealed several findings: While characteristics like noise, temperature, lighting, space or location, and internet connectivity showed some influence, their impact on academic performance seemed minor, as student nurses consistently achieved high grades regardless of these variables. Notably, air quality emerged as a subtle yet notable factor, suggesting its potential influence on academic outcomes. Additionally, the study found no significant link between study habits and academic performance, indicating a consistent approach to studying among student nurses. These results stress the importance of considering environmental characteristics in educational settings despite their modest impact. Overall, this research provides valuable insights into the complex characteristics affecting the academic experiences of student nurses, with implications for educational policies and practices.

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CHAPTER 1

INTRODUCTION

Background of the Study

Study habits are referred to as a student's strategy and technique in reviewing their lessons. Study habits may be systematic, effective, or ineffective that cater to the personal comfort of the person implying that effective study habits are associated with positive and improved performance while ineffective study habits may result in the opposite path (Ayodele & Adebiyi, 2013). According to Khan (2016), along with the right environment and supportive guidance, study habits aid greatly in the development of a healthy and balanced personality of a student. As adults, teachers and parents are big factors on these improvements and should exert effort into guiding the students in school and home.

Environmental characteristics can affect learning ability, including seating, light, noise, and even color. Increased student motivation, engagement, and overall learning capacity have all been related to positive learning environments. Therefore, it will be tougher for pupils to remember knowledge and maintain attention when studying in uncomfortable, distracting, or unpleasant learning environments (Hendrix, 2019).

According to some researchers' experiences, the optimal study environment of Jutare (2022) is not in his room, unless he is using an Ipad on instances where he has no time to read books, printed materials, or even on his laptop; while Jermia (2022), says her optimal study environment is when she is in a room with no noise and disturbances like being called to monitor her grandfather and do household chores like washing the dishes, sweeping the floor, or wiping or cleaning. Diversity in the status of their environment dramatically affects their focus on studying and their pattern of

studying is dependent on their current situation and place. Some study habits that work on others don't guarantee to work on another student. There are students who prefer to be surrounded by white noise while studying and others can only focus if it is dead silent (Jeon, 2019).

This goes to say that environmental characteristics and study habits are not a fit-size for all but are personal and should come from the person's preferences and capacity to achieve.

The learning environment is so important that it helps students to be as effective as possible in the learning process. Many educational scholars have emphasized the importance of the learning environment in achieving success in learning. According to Ashton (2001) and Umar (2017), the necessity to preserve the learning environment of students is with sufficient resources in their learning environments. Kilei (2012) asserts that adequate learning facilities and instructional resources in the learning environment are critical components that impact teaching and learning. Thus, in this study the environment of student nurses is not conducive to their study habits, and academic performance during day time and night time, due to specific environmental characteristics which are noise, inappropriate temperature, insufficient lighting, air quality, space or location a student is staying in, and internet connection.

The environment of students should be conducive to study. For students to be productive and efficient at studying in order to yield desirable results with regards to their academic performance should they find an optimal study environment. In line with this, having effective strategies such as possessing the right attitude, motivation, and resources adds to the efficacy of the students' study habits. (Brooks, A., 2019). A distraction-free environment calls for an uninterrupted study session. Because the ambience of a place affects the study habits of students, however, this varies from each

student. Moreover, timing should also be considered in order for students to be productive as it has been shown that studying or doing assignments—for 25-30 minutes—enhances productivity. It is then followed by a 5-minute break (in this time, one can take a walk or have a glass of water) and then go back to studying or doing assignments (Gamsky, J., 2016).

Parent participation in their child's academe has been proven to be consistently positively correlated with the child's academic learning and performance, as shown by parental support and involvement (Hill & Craft, 2003). Specifically, children who have more parental involvement in their schooling fare better academically than those whose parents are less interested. Empirical research has shown a link connecting parental involvement in a child's education and academic success, raising children's self-esteem and academic development as well as retention and attendance in school (Ross, 2016). Research has also shown that programs aimed at increasing parental participation in education benefit children, households, and the education system (Catalano and Catalano, 2014).

Family size and the relationship behavior correlates to the first reason about how parents are significantly affecting the students' behavior towards their academic performance. Children from large families mostly enroll late in school perform poorly and leave school early as compared to those from small family. The results from a study done by Francess, D. et.al, 2017 revealed financial problem, lack of parental attention and poor health as the primary reasons for students performing poorly in academics.

Performance pressure may originate from unattainable and unrealistic expectations from family, outside factors, or even personal goals. Regardless of the cause, it has been proven to be detrimental to the mental health of a student. Moreover,

fear and stress are not good, not only to the student but also to the student's grades as well. These two can be damaging to the academic performance of many students. (Global Indian International School, 2021)

Environmental characteristics and study habits are the common variables that seem to be attached to each other when academic performance of a student is discussed. This study entitled, Environmental Characteristics, Study Habits, And Academic Performance of Student Nurses At A Private University, aimed to determine whether environmental characteristics are related to the study habits, as well as their academic performance. Specifically, it aimed to find out the significance among the relationship between students' environmental characteristics, study habits, and their academic performance.

Accordingly, the following are cited as reasons for conducting this study; the study revolved around the varying approaches in studying and diverse locations; therefore, there was no concrete answers to the research problem; and the problem was currently existing as per the time frame of the sources used for this topic; all students were affected and may benefit from whatever information that would be collected from the results of the study; the study had a potential to become a piece of baseline information for further research regarding the correspondence of environment and the student's study habits to their academic performance.

For these reasons, the research was conducted to evaluate the relationship between respondents environmental characteristics, study habits, and students academic performance.

Objectives of the Study

This study was conducted to find out the Environmental Characteristics, Study Habits, and Academic Performance of Student Nurses At A Private University. Specifically, this study sought to:

1. Determine the environmental characteristics during study time of the students such as:
    - Noise
    - Temperature
    - Lighting
    - Air Quality
    - Space or location a student is studying in
    - Internet Connection;
2. Determine the students' study habits;
3. Determine the students' academic performance;
4. Determine whether there is a significant relationship between study habits and students' academic performance; and, finally,
5. Determine whether there is a significant relationship between environmental characteristics and students' academic performance.

Theoretical Framework

This research was based on the theory of Herbert J. Walberg's Theory of Educational Productivity, which states that: there are 4 fundamental elements that help to understand the overall performance of the students namely aptitude, instruction/teaching, environment, and learning. When evaluating a student's performance, it's important to pay more attention to the environment in which learning

takes place. (Rugutt et. al., 2005). In this study, students' academic performance is assumed to be associated with or affected by the independent variables which are environmental characteristics and study habits. As compared to the theory of Walberg, environmental characteristics are one of his elements that contributes to the learning of a student. His theory also gave examples of environmental characteristics he considers which some align to the listed characteristics of the researchers.

This study was anchored on the theory of John B. Watson's Behavioral Learning Theory, which states that: All behaviors are taught through interaction with the environment, according to behaviorism. The theory believes that the person's response to environmental stimuli shapes his/her actions. There are three key elements in the theory: stimulus, response, and reinforcement (Ragpala, 2021). In this study, students' academic performance is assumed to be associated with or affected by the independent variables which are environmental characteristics and study habits. In relation to the presented theory above, environmental characteristics act as the stimuli of the situation and response being the student's affected study habits which then results in reinforcement or known as the student's academic performance.

Conceptual Framework of the Study

Environmental characteristics can significantly impact the academic performance of student nurses. Characteristics such as seating, lighting, noise, and temperature can affect their ability to comprehend and understand the subject matter (Hendrix, 2019; Gilavand, A., 2016). Positive learning environments, characterized by suitable air temperature, sufficient lighting, and minimal distractions, have been associated with increased motivation, interest, and clearer thinking among learners (Hendrix, 2019). On the other hand, poor learning environments can make it challenging for students to focus, retain knowledge, and maintain attention (Hendrix, 2019). Furthermore, students'

study habits are influenced by their environment. Different students have different preferences, with some being able to concentrate better in a quiet environment while others may prefer white noise (Jeon, 2019). The environment in which students study greatly affects their focus and study patterns.

Effective study habits play a crucial role in academic performance. Engaging in daily practices such as reading, note-taking, and participating in study groups are examples of study habits that contribute to learning goals (Tus, Rayo, Lubo, & Cruz, 2020). Successful study habits lead to academic success, while ineffective study habits can result in underachievement (Ayodele & Adebiyi, 2013).

Considering these characteristics, it is reasonable to assume that environmental characteristics, study habits, and academic performance are correlated. The literature supports the notion that study habits and a conducive learning environment have a positive impact on students' academic outcomes (Hidayat, 2015).

In summary, environmental characteristics have a significant influence on student nurses' academic performance. Creating a positive learning environment and cultivating effective study habits are crucial for promoting academic success. The interplay between environmental characteristics, study habits, and academic performance underscores the need to investigate their relationship in the study.

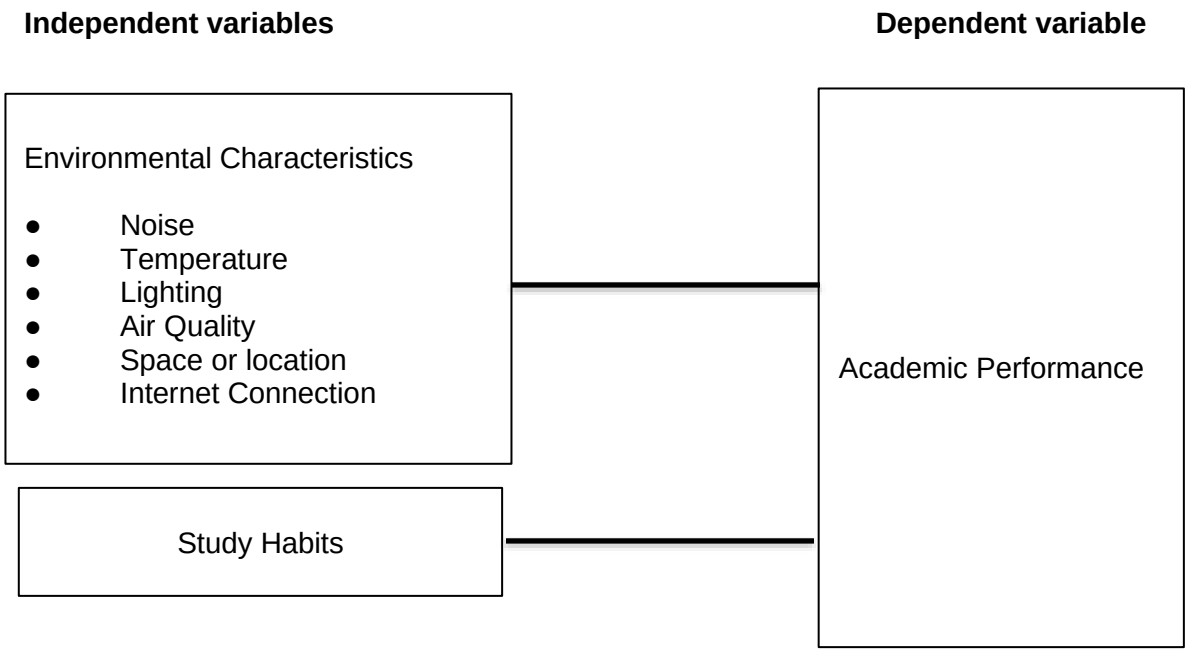

Figure 1. Paradigm of Variables

Hypotheses

H01: There is no significant relationship between environmental characteristics and students' academic performance.

H02: There is no significant relationship between study habits and students' academic performance.

Variable Definition

For the purpose of clarification, the following terminologies are defined conceptually and operationally

Independent Variable

Environmental characteristics

Environmental - Totality of all living and nonliving elements and their effects that affect human life. While all living or biotic elements are animals, plants, forests, fisheries and birds, non-living or abiotic elements can include water, land, sunlight, rocks and air. (Byjus.com, 2021)

Environmental characteristics- is any factor, abiotic or biotic, that influences living organisms (Avison, W. R., 2016)

In this study, *environmental characteristics* refer to the atmosphere of the study environment of the student in terms of the various surroundings during his/her study time.

Noise refers to the tolerance of the student with hearing people talking, white noise from television or other devices, listening to music, and dead silence. It is evaluated by a 4 items statement, and the Likert Scale was used to measure the respondents' answers. Using Excel, the responses are summed up and charted, to be able to visualize which statements the students' "strongly agree", "agree", "neither agree/disagree", "disagree on", or "strongly disagree" on.

Temperature is defined as the effects of hot, cold, or humid weather towards the student's comfort as he/she studies. It is evaluated by a 4 items statement, and the answers are measured by the Likert Scale, and Excel; are summed up and charted, to be able to conceive which statements the students' "strongly agree", "agree", "neither agree/disagree", "disagree", or "strongly disagree" on.

Lighting which refers to how bright the study area of the student prefers. It is measured by 4 item statements, and the respondents' answers are measured by the Likert Scale. Using Excel, the responses are summed up and charted, to be able to prove which statements the students' "strongly agree", "agree", "neither agree/disagree", "disagree on", or "strongly disagree" on.

Air quality which is defined as the student's inadequate building/home maintenance and ventilation, poor indoor air quality, and poor outdoor air quality. It is described by a 4 items statement, and the answers are measured by the Likert Scale, and Excel; are summed up and charted, to be able to visualize which statements the

students' "strongly agree", "agree", "neither agree/disagree", "disagree on", or "strongly disagree".

Space or location refers to the student's preference in studying at open or enclosed space, indoor or outdoor establishments, and the organization and cleanliness of the student's study area. It is measured by 4 item statements, and the respondents' answers are measured by the Likert Scale. Using Excel, the responses are summed up and charted, to be able to visualize which statements the students' "strongly agree", "agree", "neither agree/disagree", "disagree on", or "strongly disagree".

Internet Connection refers to the quality of internet connection a student uses during the desired study period whether it is slow, fluctuating, average, or fast. It is evaluated by a 4-item statement, and the answers are evaluated by the Likert Scale, and Excel; are summed up and charted, to be able to visualize which statements the students' "strongly agree", "agree", "neither agree/disagree", "disagree on", or "strongly disagree".

Study habit

Study habit - simply means how a pupil manages his/ her time in such a way that he/she can review and study regularly (Losare, R., 2009)

In this study, study habits are the students' way of studying, in an environment they are in; whether at home, in school or in other settings. Study habits in this study are categorized into: Active or Passive, Short-term or Long-term, and the different Learning Styles (visual, auditory, or kinesthetic). Each of these categories are given 1 corresponding questions measured by the Likert Scale and Excel; answers are then tallied and charted, to be able to present which statements the students' "strongly

agree", "agree", "neither agree/disagree", "disagree on", or "strongly disagree" with scores of 5, 4, 3, 2, 1 respectively.

Dependent variable

Academic Performance

Academic performance - is how a student is doing in school. This is usually measured by testing and observation (Vicente, J. 2020).

In this study, *academic performance* is the average grade of all subjects at the end of the semester. If the average grade is 1.0, it is categorized as excellent, 1.50 - 1.25 is categorized as very good, 2.0 - 1.75 is categorized as good, 2.25 - 3.0 is fair only, and any grade below 3.0 is categorized as unsatisfactory.

Significance of the Study

The results of this study will be beneficial to the following:

Students. The information from the results may be utilized as a guide for students to discover their preferred personalized study habits since they are the primary group that could benefit from this study.

Parents. The parents will support them regarding the environmental characteristics affecting their children's academic and study habits. This study will be the bridge to close the gap between parents and children.

Teachers. The teachers will be aware of what their students ought to do. Knowing more about students' academic performance may lead to a tight relationship between the

teachers and students.

Academic Administrators. The results from the study may be utilized as information for the quality of facilities and types of learning environments of schools to implement and establish.

Guidance Counselors. The information from the study will serve as a guide for guidance counselors to plan suitable activities and actions for students needing their help.

CHED Authorities. The results from the study may be utilized as information for the programs and projects to be implemented for quality education.

Future Researchers. This study may be used by future researchers as a source of information, a manual for similar studies, and a baseline for additional further investigation and analysis.

Scope and Limitation of the Study

This research aimed to identify the Environmental Characteristics, Study Habits, and Academic Performance of Student Nurses in a Private University, utilizing the descriptive-correlational research design. The total number of participants was 150, randomly selected from a population of 235 student nurses. The probability stratified random sampling method was used to ensure that the participants were proportionally represented. Data were gathered using a 30-item questionnaire adapted from existing researchers and tailored by the researchers, distributed via Google Forms. The online format allowed for efficient collection and management of responses, ensuring comprehensive data acquisition. SPSS was employed to efficiently manage and organize the data. The gamma statistic was utilized to examine the strength and

direction of the relationships between study habits and academic performance, as well as environmental characteristics and academic performance. P-values were calculated to determine the statistical significance of these relationships. This study was conducted from September 2022 to April 2024.

CHAPTER 2

REVIEW OF RELATED LITERATURE AND STUDIES

This chapter examined related studies and literature regarding the independent variables namely environmental characteristics, which are noise, temperature, lighting, air quality, space or location a student is studying in, and the internet connection, and study habits, and the dependent variable that is students' academic performance.

Related Concepts

Environmental Characteristics

The results of students' learning are significantly influenced by their learning environment. Noise, humidity, lighting, air quality, available study space, and the internet connection are all examples of environmental characteristics that may obscure or distract students from their learning process. This research will be done to determine how environmental characteristics (noise, temperature, lighting, air quality, space or location, and internet connectivity) affect the learning and academic achievement of students (Gilavand, 2022). Academic achievement is defined as excellence in all areas of study, both in class and in extracurricular activities. It encompasses excellence in sports, confidence, language skills, delivery time, arts, culture, and other activities that can only be attained when a person is well-adjusted (Badiger and Aiholli, 2017).

Noise

Noise has negative effects on students' academic performance, including diminished reading comprehension, motivation, and memory. The presence of noise affects the learner's performance in a significant manner (ASA, 2006). Penetrating noise from the outdoors and the rippling effect of noise from room to room within the building

at times, is significantly reduced. However, despite the significant reduction in noise, a large body of knowledge shows that the ability of students to learn is affected by unnecessary and lingering noises in the environment, and the presence of such noises may possibly pose a lasting cluster of cognitive consequences (Chere, B. & Kirkham, N., 2021). Noise affects the behavior and ability of students to understand their lessons, and being near rowdy places are not conducive for learning and make teaching more difficult and ineffective. While functioning in a fully accessible study environment, students can indeed be disturbed by noisy environments (FBE, 2021).

Temperature

There are studies suggesting how the temperature affects students' focus on studying. For example, (Baafi, R.K.A., 2020) said that heightened temperature of the classroom affected students' academic performance. For instance, (López-Chao et al., 2019) pointed out that cold temperatures often cause students to become distracted and more alert, which raises their nerve activity and primes their minds for action. As opposed to thermally neutral surroundings, hot environments have a negative impact on their performance.

Lighting

Because lighting directly affects pupils' growth, it is an important factor in how well they succeed academically. Uncomfortable lighting affects academic performance and comfort (Oselumese, I.B., 2016).

Air Quality

Low ventilation rates can expose people to indoor air contaminants more frequently, which is thought to be the main cause of negative impacts upon a person's

health and academic performance. Keeping proper thermal comfort and ventilation could improve an ordinary test result to "commended performance." (Shaughnessy,U., & Shaughnessy, R., 2015).

Space or Location of student studying in

Space describes the actual physical environment of a learning environment, or the location where teaching and learning take place (Wikipedia, 2022). Choosing the right location is an important factor to effective studying (Education Corner, 2022). Location gives the important effect to students' habits when they choose to study and to review the school material.

Internet Connection

The internet was integrated seamlessly with the current educational institutions. Academic institutions are becoming more and more reliant upon online resources (Gupta & Sanocki, 2002). The development of technology is another element that has a big influence on learning (Underwood 2003). By facilitating remote exchanges and cooperation as well as access to information and services, the use of the Internet for learning is considered to be a means to improve the accessibility, efficacy, and academic achievement (Kamba, 2009).

Study Habits

The period of time with a set schedule and no interruptions is the first step in developing a study habit. Without that, one stagnates and starts to restrict their own potential. Study habits are a good indicator of how much someone wants to study, how much further they want to go, and how much money they want to make. Some of this could have been influenced from one's lifelong study habits (AESS Pub., 2017).

Academic Performance

Academic performance or achievement refers to the degree to which a student, teacher, or educational institution has accomplished their educational objectives in the short or long term. This accomplishment is evaluated through methods like ongoing assessment or the calculation of cumulative grade point averages (GPA) (Tadese, M., 2022).

Related Studies

Environmental Characteristics

A couple of years back, environmental characteristics were not acknowledged as some of the variables that influence academic achievement in school, so they acquired minimal or no focus in academic discourse and discussion. However, over the last ten years, remarkable studies have revealed a correlation between the environment and the academic success of students. The environment has a significant impact on everyone's life, regardless of whether they are students, teachers, employers, or employees. Some people fail to believe that a conducive environment results in improved performance. Udoh (1980) identified certain hazardous practices in schools, such as overcrowding in classrooms, unsatisfactory facilities, poor ventilation, and so on. For students to learn effectively, the environment in which they are learning must be conducive. Studies show that the environment significantly affects a person's capacity for both physical and psychological development. As a result, it has been argued that a lack of proper environmental stimulation is to blame for a large number of students' failure to reach their full potential. The living environment, inadequate educational facilities, irresponsible use of technology like the internet, and the school atmosphere, such as the teacher-

student dynamic, are some environmental characteristics that have led to the students' poor performance (Chukwuemeka, 2013).

According to a study conducted by Ramli, et. al. (2021), three environmental characteristics were used in their survey-type research to investigate the effects of the environment on students' academic performance at the University Malaysia Kelantan. The results reveal that all variables had a significant impact on the students' academic performance. It also demonstrated that all different characteristics were important and relevant in influencing the students' life quality.

During the height of the COVID-19 pandemic, there was a major shift in the learning system of some schools around the world - from face-to-face classes to online learning. A study by Ragpala (2021) found that the most common environmental characteristics that strongly influenced students' academic performance were noise, temperature, light, and air quality in the respondents' study area.

Noise

Noise is any sound that interferes with someone's capacity to hear what they need or want to hear. A child's capacity to comprehend is negatively impacted by excessive noise exposure since it makes it harder for them to focus well. According to an article reported by the World Health Organization (WHO), students who are subjected to persistent disturbing noise may struggle academically and have comprehension issues. (Knauf Insulation, 2022).

A study entitled, “The Impact of Noise Level on Students’ Learning Performance at State Elementary School in Medan” by Matondang (2017) revealed that the effects of the noise were physiological, with the largest percentages of dizziness (22%), emotional

discomfort (21%), and teacher explanation disruption (22%), as well as a 22% drop in pupil learning performance.

Temperature

The link between temperature and learning ability was not well documented. Everyone in the classroom can agree that the heat was a sufficient justification for summer vacation during its peak months. The ability of students to learn is directly impacted by both extreme cold and excessive heat, claimed by (Perez, J., Montano, & Perez, J., 2014). When the temperature was 61°F, high school students performed better, scoring an average of 76 percent, and got worse, getting an average of 72 percent, when the temperature was 81°F. As the temperature hit 72°F, which is widely regarded as a nice condition, the pupils' average score improved to 90%.

In 2017, a Harvard graduate student did separate research that looked at data from 1999 to 2014. The purpose of the study was to determine whether the weather on examination day had any impact on the performance of students attending high schools in New York City. Typically, the exam was conducted in June, a month with the potential for high heat. Students had a 12% greater probability of failing their test if the outside temperature reached 90°F compared to 72°F, the research found (Park, 2017).

Lighting

A 1999 University of Georgia study on children's academic performance found that lighting had a significant impact on the brain's capacity for concentration (Boelcke, 2022). On a different conference paper, it explored the relationship between classroom lighting and its influence on student learning and performance. The authors aimed to contribute to the development of smarter classroom conditions by investigating the effects of lighting on educational outcomes. The findings indicated that classroom

lighting does have an effect on cognition, which is evident in terms of academic achievement, attention levels, work speed, productivity, and accuracy, among other observed effects. LED lighting was found to be the most suitable choice for enhancing psychological and cognitive processes in the classroom. The study emphasized the importance of using a higher correlated colour temperature (CCT) and achieving a balance between natural and artificial light. The results also highlighted the necessity of implementing dynamic lighting systems to cater to different classroom activities (Mogas-Recalde, J., 2020).

According to a 1995 study presented by Dr. Ellen Mannel Grangaard at the International Study Conference and Exhibition of the Association for Childhood Education, fluorescent light was a factor in off-task behavior like daydreaming, engaging in object play instead of listening, and conversing with others while in class. Students had an easier time focusing and avoiding distractions in environments with softer, more natural lighting. Dr. Grangaard's conclusions are supported by the University of Georgia investigation. It was shown that fluorescent lighting can exacerbate hyperactive behavior and hinder full-scale learning.

Air Quality

According to Wargocki et. al. (2020) there is a link between students' capacity for learning and the state of the air as air quality may affect the learning ability of students in a way that it compromises their attitude, motivation, and their willingness to finish their goals. Several studies have shown that having poor ventilation rates are related to poor performance in school. These may come as indoor air pollutants which are associated with adverse effects that may pose a negative outcome to the overall health and performance of learners. In contrast, a study conducted in Denmark found that having

increased ventilation rates results in improved performance in school (Haverinen-Shaughnessy & Shaughnessy, 2015).

Space or location

According to Santangelo (2019) the place in which a student occupies when studying poses an influence. Studying in a comfortable and conducive environment for learning can enhance concentration and allows the learner to be more productive. It is necessary to strive to be in the optimal environment so as to maximize the benefits of studying, even if it is ultimately up to each person to decide what works ideal for them.

In a study conducted by Clift, S. et.al (2009), the findings showed that students in big classes expressed more favorable feelings about their own class and their class image. They also asserted that they adhered to classroom rules more strictly and had stronger relationships with their professors than students in classrooms with limited space.

Internet Connection

According to Gierdowski (2021), many students are having difficulties with regards to having a stable internet connection, thus, affecting their learning process to the point that some of these students go to great lengths—being creative, resourceful, and by means of relocating just to name a few—just to gain back and improve their connection. However, students who live in unstable housing have the most difficulty. In England, 56% of the 1,416 respondents who were students have reported that the lack of access to appropriate online reading materials and resources had an impact on their studies (Mckie, 2020). The internet in education facilitates several aspects of learning development and benefits students who struggle with learning. This lends credence to the idea that due to distant learning, students today depend most heavily on the internet.

In addition, the effectiveness of internet connection for students has exceptional outcomes. However, a lack of dependable high to moderate internet speeds in homes may make it difficult for children to interact with fellow classmates, schoolmates, & teachers, conduct independent research, or even complete their schoolwork in a satisfactory and efficient manner. Roughly 65% of students utilize the internet to complete their assignments. Lack of internet connectivity will be a significant barrier to high-quality education. (Redondo et. al., 2021)

Environmental Characteristics *and Academic Performance*

For an institution, academic success is crucial to the positive outcomes that result in future job performance (Kuncel et al., 2005). Age, gender, and hometown have no bearing on academic performance, however those who live close to a university may perform significantly better than those who do not (Hijazi & Naqvi, 2006). According to Zajonc (1980), success lies on the student's willingness to improve and exert effort in doing so. A study by Gilavand (2016), has established several characteristics in the learning environment that significantly affect students' learning outcomes, such as noise, temperature, lighting, air quality, space or location a student is studying in, and internet connection. All these constitute characteristics and confounding variables that disrupt students in class.

Study Habits and Academic Performance

Time, stress, and the learning material are all variables that might affect how well someone studies. Their environment is the driving force that decides whether they are productive. When trying to learn well, some students may take into account their study environment, whether they prefer to do it in the quiet of their dorm room or the various background noises of the library (Rubio, 2022).

According to a study by Magulod, G. (2018), students in applied sciences courses preferred visual, collective, and sensorial styles of learning as core learning methods, with a modest level of study habits. Their academic performance is likewise rather high. According to a test of difference, academic achievement, the kind of the high school they graduated from, and the fathers' line of work all significantly influenced the learners' perceptual learning styles. When they were categorized according to their mothers' educational backgrounds, writing abilities, academic standing in high school, and test anxiety, they also indicated disparities in their study habits. Finally, there were significant relationships between students' academic success in applied science courses and their learning preferences, study techniques, and routines.

Study habits are the most important predictor of academic performance and global research has revealed that study habits affect academic performance. In this regard, medical students are faced with a large amount of information that is difficult to organize and learn, and requires knowledge and application of study skills. Evidence suggests that learners who do not have enough information about study strategies do not attain effective and stable learning, and therefore will not have an appropriate level of academic achievement. In other words, students with better academic achievement use these skills more than those with lower academic achievement. (Jafari, Aghaei, & Khatony, 2019).

Synthesis of Related Studies

This study’s main focus therefore, intends to ascertain the environmental characteristics that affect academic performance of second-year student nurses, judging from existing evidences that, the success of students is measured chiefly by academic performance which is linked to various environmental characteristics amongst others (Kuert, & Venkatkrishnan, 2016); Noise, Temperature, Lighting, Air Quality, Space or

Location, Internet connection, and the study habits of the student nurses in a private university.

The impact of environmental characteristics on students' academic performance has been extensively studied, revealing both supporting and contradicting perspectives. These characteristics encompass noise, temperature, lighting, air quality, space or location, and internet connectivity, all of which contribute to the overall learning environment. Ramli et al. (2021) conducted research at the University Malaysia Kelantan, finding that environmental characteristics such as noise, temperature, light, and air quality significantly influenced students' academic performance. This study emphasizes the importance of a conducive learning environment in promoting positive learning outcomes. Similarly, Wargocki et al. (2020) highlighted the link between air quality and students' learning abilities. Their study demonstrated that poor indoor air quality negatively impacted students' attitude, motivation, and willingness to achieve academic goals. Improved air quality and proper ventilation were associated with enhanced academic performance, reinforcing the role of air quality in learning environments. Santangelo (2019) emphasized the significance of the physical location in which students study. Their study underscored that a comfortable and conducive study environment enhances concentration and productivity, ultimately influencing academic outcomes. This perspective sheds light on the interplay between study habits and the chosen study environment.

However, López-Chao et al. (2019) introduced a different viewpoint on the influence of temperature on academic performance. Contrary to common assumptions, their study suggested that cold temperatures might enhance students' alertness and nervous system activity, leading to increased performance. This insight challenges conventional beliefs and warrants further investigation. Similarly, Matondang (2017)

offered a distinct perspective on the effects of noise. While most studies associate noise with negative learning outcomes, this study found physiological effects of noise exposure without a significant drop in learning performance. This complexity calls for a deeper understanding of the nuanced relationship between noise and academic achievement. Magulod (2018) provided an alternative insight into the connection between study habits and academic performance. Their study revealed that students with modest study habits achieved high academic performance. This contradicts the prevailing belief that strong study habits directly correlate with better outcomes, indicating the influence of additional characteristics. Gierdowski (2021) challenged the uniform benefits of internet connectivity for learning. Their study highlighted the significance of reliable internet access for remote learning, pointing out potential obstacles caused by a lack of connectivity. This perspective raises awareness about digital divides that can affect academic performance. In summary, the studies on environmental characteristics and academic performance present a diverse range of viewpoints. While some studies align with conventional beliefs, others introduce nuanced perspectives that emphasize the complexity of these relationships. Acknowledging these complexities is essential for creating learning environments that cater to the diverse needs of students.

CHAPTER 3

METHODOLOGY

Research Design

This was a descriptive correlational study. According to the Office of Human Research Protections, it is "any study that is not truly experimental." In accordance with research involving human participants, a descriptive study can reveal necessary data pertaining to several variables and/or other identified characteristics of a certain population. It may be less exciting in comparison to an experimental study, however, they are useful in science. While it may be more difficult to control specific variables, since these studies do not utilize treatment due to its nature, it enables subject research in environments that are naturally occurring. Moreover, it seeks to provide answers for "*who", "what", "where"* and "*when"* questions, but not "*why*" questions. (Keathley and Foist, 2022).

A study that examines the relationship between two or more variables is referred to as a relational study. The group or population already contains the variables that are to be compared. Studying the correlation across genders would involve examining the percentage of men and women's preferences (Cherry, 2020). In ascertaining the potency of a relationship in relation to two or more variables, "relational research can help determine the strength of relationships between entities." (Sam, N., 2013)

According to McBurney and White (2009), they identify that in research studies descriptive correlational design seek to present static images of circumstances to determine the link between various variables. Correlational research examines the relationship between two characteristics, such as a person's height and weight.

This study will describe the relationship between environmental characteristics and study habits, as well as the academic performance of the student nurses. The

correlation of environmental characteristics to study habits can affect learning ability, including the light, noise, and even color of the surroundings. Compared to students who study in a dim, noisy, or congested environment, positive learning environments have been shown to boost motivation, engagement, and general learning ability in student nurses (Hendrix, 2019). Moreover, study habits may also affect the academic performance of the student nurses, such as they are working more efficiently and experiencing less stress in the process as having a good environment can affect good study habits that create a more efficient academic environment (Marc, 2011). Furthermore, the relationship between these variables and academic performance depended on changes in environmental characteristics and study habits.

Study Population and Sampling

The total target population of this study was 235 second year student nurses at a private university for the academic year 2022-2023. The official list of the student nurses needed for this study was obtained from the college of nursing department office.

The inclusion criteria covered second-year student nurses who are male or female over the age of 18, and are currently enrolled at the private university under investigation. Additionally, they are actively attending classes during the designated study period, and these individuals willingly agreed to take part in the study after being provided with informed consent. On the contrary, the exclusion criteria outlined the circumstances under which individuals were considered for participation in the study. Firstly, individuals who were not student nurses were excluded from the research, as the study's focus centered exclusively on this particular population. Secondly, participants who were not actively enrolled during the study period were not included. Finally, individuals who did not provide informed consent or decline to participate were excluded from the study. To ensure data quality and reliability, participants who failed to complete

the questionnaires in their entirety or provided inaccurate or inconsistent responses were excluded from the analysis. Adhering to these criteria allowed the study to concentrate on the relevant population of student nurses at the private university and maintain the integrity and reliability of the collected data.

This study employed a probability stratified random sampling classifying the respondents into their respective sections. It guarantees that in a particular community, each subgroup is fairly represented across the total population sample of a research study (Hayes, 2022). Based on the Slovin's formula (Slovin, E., 1960), exact sample size were solved. The stratification variable to be used in the study is the section of the students which are sections A, B, C, D, E and F. Specifically, proportionate stratified random sampling were used which means only 16.6% of students from sections A-D, only 17.4% from section E and only 16.2% of the students from section F were chosen as respondents.

Slovin's formula (Slovin, E., 1960)

$$n = \frac{N}{1 + Ne^2} = \frac{235}{1 + (235)(0.05)^2} = 150$$

Table 1. *Stratification of Respondents According to Section and and sample size*

Section	N	%	n
A	39	16.6	25
B	39	16.6	25
C	39	16.6	25
D	39	16.6	25
E	41	17.4	26

Section	N	%	n
A	39	16.6	25
F	38	16.2	24
Total:	235	100	150

Research Instrument

The research instruments utilized were validated questionnaires with 2 parts: Environmental Characteristics and Study Habits. It was constructed by the researchers with the references of various studies and authors and it was measured by the Likert Scale. Finally, the third part was about Academic Performance that was based on what was reflected on the Student's Online Services.

Part 1: Environmental Characteristics are divided into six (6) topics:

Noise consists of 4 question statements based from "The Effect of Background Noise on a 'Studying for an Exam' Task in an Open Environment", a study by Braat-Eggen, E., et al (2021), and "Assessment of The Effects of Noise Pollution on Students' Performance in Kano Metropolitan Local Government Area" a research article by Abubakar, A., et al (2021).

Temperature consists of 4 question statements based from Alberto, Jiao, and Zhang's (2021) study entitled, "Too hot or too cold to study? The influence of temperature on students' time management."

Lighting consists of 4 question statements based on “Lighting affects students’ concentration positively: Findings from three Dutch studies” by Moolenaar, Galetzka, & Pruyn (2013).

Air Quality consists of 4 question statements based on a study by Shaughnessy,U., & Shaughnessy, R (2015), entitled “Effects of Classroom Ventilation Rate and Temperature on Students’ Test Scores”.

Space or location of student staying in consists of 4 question statements developed by the researchers.

*Interne*t *Connection consists* of 4 question statements based on a study entitled “Effect of Internet on Student’s Academic Performance and Social Life” by Soegoto, E. and Tjokroadiponto, S. (2018).

Part 2: Study Habits

Study habits of students which also consists of 4 questions based from an article by Rabia, M. (2017) that is “A Study on Students’ Study Habits And Academic Performance”.

Part 3: Academic Performance

Students’ academic performance was measured by their semestral grade and gathered from Student Online Services provided by the students, themselves, along with the right consent.

Validity of the Questionnaire

The validation of the instruments in this study was conducted by three faculty members holding Master's degrees in Nursing, each serving as clinical instructors at the university. These validators assessed the clarity and relevance of the tool, ensuring that it effectively captured the intended aims and aligned with the study's objectives. By involving experienced clinical instructors with a background in the nursing academe, the validation process benefited from their knowledge and understanding of the field, enhancing the instrument's validity and reliability. Suggestive remarks and recommendations had been noted and adjusted in accordance with the evaluator's comments. Afterwards, questionnaires were revised after validation was done.

Ethical Consideration

Seeking approval from the RERB office and other related offices/institution

Prior to the conduct of this study, formal approval was sought from the Research Ethics Review Board (RERB) office and any other relevant offices or institutions involved. The approval process will involve submitting a detailed research proposal outlining the study's objectives, methodology, inclusion and exclusion criteria, data collection methods, and measures to protect the participants' rights and confidentiality. The study will strictly adhere to ethical guidelines and regulations governing research involving human subjects. Informed consent was obtained from all participants, ensuring that they are fully informed about the study's purpose, procedures, potential risks, and their right to withdraw at any time without consequences. Confidentiality of participants' data will be ensured, and all information will be handled with the utmost privacy and discretion.

Any potential conflicts of interest or sources of bias was transparently disclosed in the research proposal, and steps were taken to mitigate their influence on the study's outcomes. The research team will also be prepared to address any questions or concerns raised by the RERB or other relevant authorities during the review process. Obtaining formal approval from the RERB and other related offices or institutions is an essential step to ensure the study's ethical conduct and compliance with research standards. It demonstrates the researchers' commitment to conducting the study responsibly, respecting the participants' rights, and contributing to the advancement of knowledge while upholding the highest ethical principles.

Risk Assessment

This research involved minimal risks such as information collection related to academic performance reflection. Mitigation measures included ensuring data anonymity, using secure platforms, providing clear instructions, rigorous data analysis, emphasizing voluntary participation, and offering support resources to prioritize participant welfare.

Benefits Assessment

The study offered several potential benefits to participants. By becoming aware of how environmental characteristics affected their study habits and academic performance, participants could make informed decisions to reduce or eliminate detrimental characteristics and create a more conducive environment for academic success. This increased self-awareness can lead to improved academic performance and overall outcomes. Furthermore, by contributing to research on the relationship between environmental characteristics, study habits, and academic performance, participants played a role in expanding their knowledge in this field. Participating in this research study offered student nurses the chance for personal growth by learning preferences

and developing strategies for improvement. Their involvement may lead to institutional enhancements in learning spaces and support services, benefiting all students. By understanding the impact of environmental characteristics allowed students to take proactive steps towards academic success in this field.

Withdrawal Criteria for Participants

Participants may withdraw from the study before study completion if they decided to do so, at any time for any reason. Participants were withdrawn from the study by the research team if: i) they did not meet the specific inclusion criteria for the study (e.g., age, academic status, year level, etc.), ii) they did not give informed consent to participate in the study, iii) they admitted to withdraw from the study midway.

Anonymity and confidentiality of participants

To ensure anonymity and confidentiality in the study, all participants' personal information, including names, and other identifying details were purely optional, safeguarding the identities of the student nurses involved in the study. To provide an additional layer of confidentiality, the research team should obtain informed consent from all participants, clearly explaining how their data were used, stored, and anonymized. This ensured that the student nurses were aware of the study's purpose and how their information was protected.

Voluntary, non-coercive recruitment of participants

In this study on "Environmental Characteristics , Study Habits, and Academic Performance of Student Nurses at a Private University," the recruitment process was strictly adhered to principles of voluntary and non-coercive participation. Student nurses were invited to participate in the research based on their willingness and interest,

ensuring that no form of pressure or coercion is applied. A clear and concise explanation of the study's objectives, procedures, and potential risks and benefits were provided to potential participants, empowering them to make informed decisions about their involvement. They were assured that declining participation or withdrawing from the study at any point would not result in any negative consequences or affect their academic standing. All recruitment materials and communication emphasize the voluntary nature of participation, stressing that their decision to be part of the study was entirely at their discretion.

Disposal of research materials and data

Disposing of a Google Forms link used in the study "Environmental Characteristics , Study Habits, and Academic Performance of Student Nurses at a Private University" was a crucial step to protect the privacy and confidentiality of the respondents and the data collected. Before taking any action, a backup data collected through the Google Forms link were secured. Download the responses as a spreadsheet or use Google Sheets to export the data. This backup would serve as a reference if needed in the future. After completing the data collection process and ensuring that all responses had been received, the researchers would manipulate the said form so that it could not accept any more responses and then, this were deleted. From the Google Drive, the trash bin was accessed and it would be emptied to permanently delete the form and any associated files. A record of the date and details of the disposal process, including when and how the Google Forms link and its data were disposed should be kept. This documentation was useful in case of any future inquiries or audits. By following these steps, it was ensured that the Google Forms link and its data were securely disposed of, respecting the privacy and confidentiality of the research participants.

Contribution to local capacity building and benefits to local communities

This study provided significant contributions to local capacity building and benefits local communities. It enhanced nursing education by enhancing curriculum design and instructional methods, resulting in enhanced student support services and assistance. It increased graduation rates by identifying at-risk students and implementing early interventions, thereby addressing the need for qualified nurses to meet local healthcare demands. In addition, the influence of the study on healthcare policies encouraged evidence-based practice and interdisciplinary collaborations for a comprehensive understanding of nursing education. Through the development of the university's research capabilities to address local challenges and the strengthening of university-community ties through collaborative research, this study promoted an interconnected approach that benefits nursing education, healthcare outcomes, university-community ties, research capacity, and ultimately the local community.

Incentives or compensation for participants

The information provided did not indicate any specific form of compensation for participants. It was possible that the study did not offer any monetary or material compensation for participation.

Disclosure of Potential Conflict of Interest

The researchers involved in the study declared that there were no conflicts of interest that could compromise the objectivity and integrity of this study. None of the researchers had any financial, professional, or personal affiliations that could pose a conflict of interest with the study's objectives, data interpretation, or results publication.

Reliability of the Questionnaire

A reliability test was conducted using Cronbach's alpha coefficient to assess the internal consistency of the questionnaire items. A minimum of 0.70 for Cronbach's alpha was used as an indicator of acceptable reliability. Then, a pilot test for 20% of the sample size, which is 30 out of 150 respondents, was conducted (Saunders et. al., 2007). These 30 respondents were excluded in the actual data of the study. This pilot test will serve to evaluate the consistency and reliability of the questionnaire in the specific context of the study. Any necessary adjustments or modifications to the questionnaire was made based on the feedback and responses obtained from the pilot test participants.

Dissemination Plan for the Study on "Environmental Characteristics , Study Habits, and Academic Performance of Student Nurses in a Private University"

The researchers prepared a comprehensive research paper detailing the study's methodology, findings, and implications. This paper was submitted to reputable peer-reviewed nursing education journals for publication, ensuring that the results reached the broader academic community and contribute to the field. To influence healthcare policies and educational practices, the researchers would prepare policy briefs that summarized the key findings and recommendations from the study. These briefs were shared with relevant educational institutions, nursing associations. The researchers used social media channels and relevant online platforms to share key insights and highlights from the study. These platforms would help the researchers engage with a broader audience, including students, nurses, and healthcare professionals. The researchers collaborated with local healthcare facilities and organizations to share the study's findings with nursing staff and administrators. This interaction facilitates the implementation of evidence-based practices and potentially influence nursing education strategies in real-

world settings. Creating infographics and visual summaries of the study's key findings could be an effective way to communicate complex information in a visually appealing manner. These materials could be shared on various platforms to enhance accessibility and understanding.

By implementing this dissemination plan, the researchers aimed to maximize the study's impact, foster evidence-based practices in nursing education, and contribute to the continuous improvement of healthcare outcomes in the local community and beyond.

Data Collection

Data were collected through google forms obtaining questions aligned to the Likert Scale with a total of 2 parts; the first part having six (6) topics and the second part having one (1) topic, with a total of 28 question statements corresponding to the environmental characteristics and study habits of the students. Prior to the access of the questionnaires, an informed consent was given and the respondents were asked to put their name and attach their signature. The participants of this study were recruited voluntarily, and they were made aware of their freedom to refuse and withdraw from the study. After gathering the questionnaires, the researchers encrypted the response. The information that was gathered for this study is kept confidential.

Data Processing and Statistical Analysis

The gathered data from the study were organized, evaluated, analyzed, and tabulated using statistical software such as SPSS. This software provided a range of tools suitable for analyzing the nominal and ordinal variables present in this study. Before delving into the analysis, the data were appropriately cleaned and checked for any missing values or outliers. SPSS was employed to efficiently manage and organize the data.

To explore the relationship between environmental characteristics (including noise, temperature, lighting, air quality, space or location, and internet connection) and academic performance, the chi-square test were utilized. This statistical test will determine whether there is a significant association between these variables. SPSS offers a built-in function for conducting the chi-square test, facilitating the analysis process.

Additionally, the chi-square test was employed to examine the relationship between study habits and academic performance. This analysis aimed to establish if there was a statistically significant association between these two variables.

It was crucial to properly interpret the outcomes of the chi-square tests by considering the significance level of 0.05 (p-value) and effect size measures. Adherence to the assumptions of the chi-square test, such as independent observations and an adequate sample size, was also imperative.

By leveraging SPSS and employing the chi-square test, this study investigated and drew conclusions regarding the associations between environmental characteristics, study habits, and academic performance among student nurses at the private university. The statistical analyses provided valuable insights into the relationships under examination and contribute to a better understanding of the characteristics influencing academic performance in this context.

The Pearson correlation coefficient served as a valuable descriptive statistic for examining the relationships between these variables. By calculating the coefficient between environmental characteristics (such as noise level and lighting conditions) and study habits or academic performance, it became possible to determine the strength and direction of these relationships. For instance, a positive correlation between noise level and study time may suggest that students tended to study more in noisier environments. Similarly, a positive correlation between lighting conditions and academic performance

may indicate that better lighting contributes to improved academic outcomes. These correlations helped identify the specific environmental characteristics and study habits that impacted academic performance.

CHAPTER 4

RESULTS AND DISCUSSION

This chapter contains a detailed presentation and discussion of the results; analysis and interpretation of the data on environmental characteristics, study habits, and academic performance of student nurses in a private university. The first part presents the descriptive statistics on the environmental characteristics, study habits, and academic performance of nursing students. The correlation between these variables is shown and discussed in the later section of this chapter. The findings of related research and literature are also discussed in order to recognize comparisons between the results of this study and the previous studies.

Environmental Characteristics, Study Habits, and Academic Performance of Student Nurses at a Private University

Environmental Characteristics, Study Habits, and Academic Performance of Student Nurses at a Private University was measured through a questionnaire comprising 30 items adapted and derived from different research studies. Under the category of environmental characteristics, respondents were asked to rate noise, temperature, lighting, air quality, space or location, and internet connection using ‘four questions’ each. Study habits were evaluated using ‘six questions’. They were answerable by (5) strongly agree, (4) agree, (3) neutral, (2) disagree, (1) strongly disagree. Academic performance was measured by the ‘general weighted average’ for the second semester of the academic year 2022-2023, with the available rating scale ranging from ‘1.0 to 5.0’.

Noise. In table 2, the distribution of responses on items under environmental characteristics in terms of noise provides valuable insights into individuals' perceptions

regarding environmental characteristics, specifically noise, and its impact on study habits.

Among 150 respondents studied, Table 2 shows that a significant majority comprising 71.3%, strongly agree that they prefer studying in a quiet environment to minimize distractions, while 21.3% agree with this statement. This indicates a strong consensus among respondents regarding the importance of a quiet study environment for concentration. However, 6.0% remain neutral on this matter, suggesting a degree of uncertainty or variability in individuals' responses. Importantly, a very small percentage (1.3%) disagrees or strongly disagrees (0.0%), indicating rare dissenting views regarding the preference for a quiet study environment. Similarly, 64.0% strongly agree and 24.7% agree that they actively seek out quiet places or study areas to avoid noise disturbances, while 11.3% remain neutral. Here again, there are no respondents who (0.0%) disagree or (0.0%) strongly disagree, emphasizing the widespread preference for quiet study spaces. Moreover, respondents acknowledge the negative effects of excessive noise on concentration, with 63.3% strongly agreeing and 26.0% agreeing with this sentiment. However, 7.3% remain neutral, and a small percentage (3.3%) disagrees, suggesting some variability in experiences with noise's impact. Notably, there are no respondents who (0.0%) strongly disagree. Interestingly, opinions vary regarding the effect of background noise, with 35.3% strongly agreeing and 31.3% agreeing that it helps them stay focused. However, 20.0% remain neutral, 10.7% disagree, and 2.7% strongly disagree, indicating a more diverse range of experiences and perspectives on the role of background noise. Overall, this highlights a strong preference for quiet study environments to minimize distractions and enhance concentration, while also revealing diverse perspectives and experiences regarding the potential benefits of background noise.

Table 2. *Distribution of Responses on items under Environmental Characteristics in terms of Noise.*

Items	Strongly Agree (%)	Agree (%)	Neutral (%)	Disagree (%)	Strongly Disagree (%)
I prefer studying in a quiet environment to minimize distractions.	71.3	21.3	6.0	1.3	0.0
I actively seek out quiet places or study areas to avoid noise disturbances.	64.0	24.7	11.3	0.0	0.0
Excessive noise in the surroundings negatively affects my concentration while studying	63.3	26.0	7.3	3.3	0.0
Background noise (e.g. soft instrumental music, white noise) helps me stay focused while studying.	35.3	31.3	20.0	10.7	2.7

In Table 3, the distribution of respondents' scale ratings on environmental characteristics, in terms of noise, provides valuable insights into their overall perceptions.

The table categorizes respondents into three groups based on their scale ratings: 4.11 or below, 4.12 to 4.61, and 4.62 or above, with corresponding frequencies and

percentages. Among the respondents, 30.0% rated their experience with noise-related environmental characteristics at 4.11 or below, indicating a relatively lower level of satisfaction or effectiveness. In contrast, 32.0% fell within the range of 4.12 to 4.61, while a majority of 38.0% rated their experience at 4.62 or above, suggesting a higher level of satisfaction or effectiveness. These percentages offer insights into the distribution of responses and highlight varying degrees of satisfaction or effectiveness among respondents regarding noise-related environmental characteristics.

Moreover, the summary statistics provided offer essential context for understanding these responses. The total number of respondents (N=150) indicates a substantial dataset for analysis, ensuring the reliability of the findings. The range of minimum and maximum scale ratings (Min=3.0, Max=5.0) reflects the diversity of experiences and perceptions among participants regarding noise-related environmental characteristics. The mean rating (Mean=4.37) indicates an overall positive trend in respondents' perceptions, with the majority rating their experiences above 4.12. This suggests a generally favorable outlook on noise-related environmental characteristics among respondents. Additionally, the moderate standard deviation (S.D.=51) indicates some variability in individual experiences and perceptions, despite the overall positive trend. This variability underscores the importance of considering diverse perspectives when addressing noise-related environmental characteristics. Overall, these statistics provide valuable insights into the distribution of responses and the general outlook among respondents regarding noise-related environmental characteristics, aiding in the development of strategies to enhance environmental conditions for optimal learning and well-being.

Table 3. *Distribution of Respondents according to their scale rating on Environmental Characteristics in terms of Noise.*

Noise Scale Rating	f	%
4.11 or below	45	30.0
4.12 to 4.61	48	32.0
4.62 or above	57	38.0

N=150 Min=3.0 Max=5.0 Mean=4.37 S.D. = 51

Temperature. Table 4 shows the distribution of responses on the questions under Environmental Characteristics in terms of temperature. In Table 4, respondents' perceptions of environmental characteristics, particularly temperature, were assessed. The majority strongly agreed (79.3%) and agreed (17.3%) that they preferred studying in well-ventilated and temperature-controlled spaces to enhance their learning experiences. Furthermore, a significant proportion (70.0%) indicated that high temperatures in their study environment hindered their concentration and focus on studies, with a smaller percentage (23.2%) agreeing. Additionally, a considerable portion (50.7%) found it challenging to concentrate and retain information in extreme temperatures, with 30.0% agreeing, suggesting a notable impact of temperature on cognitive functions. Cold temperatures were also highlighted as a concern, with 14.0% strongly agreeing, 27.3% agreeing that it negatively affected their productivity and ability to study effectively and 32.0% responded neutrally. These findings underscore the importance of maintaining optimal temperature conditions in study environments to facilitate concentration, focus, and overall learning outcomes. This is consistent with research by Lan et al. (2011), which found that classroom temperature affects students' performance and comfort. Similarly, studies by Mendell and Heath (2005) indicated that

temperature control is crucial for maintaining optimal cognitive function and productivity in learning environments.

Table 4. *Distribution of Responses on items under Environmental Characteristics in terms of Temperature.*

Items	Strongly Agree (%)	Agree (%)	Neutral (%)	Disagree (%)	Strongly Disagree (%)
I prefer to study in a well-ventilated and temperature controlled space to optimize my learning experience.	79.3	17.3	2.7	.7	0.0
High temperatures in my study environment make it difficult for me to concentrate and focus on my studies.	70.0	23.2	4.0	2.7	0.0
I find it challenging to concentrate and retain information when the temperature is too high or too low.	50.7	30.0	15.3	3.3	.7

Cold temperatures in my study environment negatively affect my productivity and ability to study effectively.	14.0	27.3	32.0	23.3	3.3

Table 5 illustrates the distribution of respondents based on their scale ratings concerning environmental characteristics, specifically focusing on temperature. Among the 150 participants surveyed, the majority, comprising 40.7%, fell within the scale rating range of 3.97 to 4.46, indicating a moderate perception of environmental temperatures. Meanwhile, 20.7% of respondents rated the temperature at 3.96 or below, representing a lower perception of environmental warmth. Conversely, 38.7% of participants rated the temperature at 4.67 or above, indicating a higher perception of warmth. The data highlights a diverse range of perceptions regarding environmental temperature among the respondents. The summary statistics reveal that the average rating for temperature was 4.2200, with a standard deviation of 0.51481, suggesting a moderate level of agreement among respondents regarding their perceptions of temperature.

Table 5. *Distribution of Respondents according to their scale rating on Environmental Characteristics in terms of Temperature.*

Temperature Scale Rating	f	%
3.96 or below	31	20.7
3.97 to 4.46	61	40.7

4.67 or above		58		38.7
N=150	Min= 2.00	Max= 5.00	Mean= 4.2200	S.D. = .51481

Lighting. Table 6 shows the distribution of responses on the questions under Environmental Characteristics in terms of lighting.

Findings show insights into respondents' perceptions regarding lighting conditions in their study environments. A significant majority strongly agreed (78.0%) and agreed (18.7%) that adequate lighting contributed to their alertness, focus, and engagement in studies, underscoring the importance of proper illumination for optimal learning experiences. Moreover, a substantial proportion (66.7%) expressed agreement that poor lighting conditions strained their eyes and impeded their ability to read and comprehend study materials, with 24.7% agreeing. Despite this, a notable percentage (60.0%) believed that the lighting in their study environment was adequate for comfortable reading and studying, while 33.3% agreed. However, it's noteworthy that a considerable number (58.7%) felt that insufficient lighting hindered their ability to concentrate and focus on studies, further emphasizing the significance of appropriate lighting arrangements to support effective learning. These findings highlight the crucial role of lighting in creating conducive study environments conducive to cognitive performance and academic success.

Table 6. *Distribution of Responses on items under Environmental Characteristics in terms of Lighting.*

Items	Strongly Agree (%)	Agree (%)	Neutral (%)	Disagree (%)	Strongly Disagree (%)
Adequate lighting in my study environment helps me stay alert,	78.0	18.7	3.3	0.0	0.0

focused, engaged in my studies.					
Poor lighting conditions in my study environment strain my eyes and make it difficult to read and comprehend study materials.	66.7	24.7	5.3	2.7	.7
The lighting in my study environment is adequate and allows me to read and study comfortably.	60.0	33.3	6.0	.7	0.0
Insufficient lighting in my study environment hinders my ability to concentrate and focus on my studies.	58.7	28.0	11.3	1.3	.7

Table 7 presents the distribution of respondents based on their scale ratings concerning environmental characteristics related to lighting. Out of 150 participants surveyed, the majority, comprising 43.3%, rated the lighting at 4.81 or above on the

scale. Following this, 32.7% of respondents rated the lighting at 4.30 or below, while 24.0% fell within the range of 4.31 to 4.80. The data showcase a generally positive perception of lighting conditions among the participants, with a mean rating of 4.5600 and a standard deviation of 0.52988. These findings suggest a favorable consensus regarding the lighting environment among the surveyed population.

Table 7. *Distribution of Respondents according to their scale rating on Environmental Characteristics in terms of Lighting.*

Lighting Scale Rating	f	%
4.30 or Below	49	32.7
4.31 to 4.80	36	24.0
4.81 or above	65	43.3

N=150 Min=2.50 Max=5.00 Mean= 4.5600 S.D. = .52988

Air Quality. Findings in Table 8 show that a significant majority of respondents, constituting 60%, strongly agreed that the quality of air in their surroundings significantly impacts their ability to concentrate on their studies. This indicates a recognition among the participants that fresher and cleaner air facilitates better focus during study sessions. Moreover, a majority strongly agrees (52.7%) concerning a preference for studying indoors, utilizing amenities like air conditioning or electric fans, as opposed to outdoor environments. This suggests a general inclination towards controlled indoor settings for studying, likely due to characteristics like comfort and convenience. On the other hand, a notable proportion strongly agrees, specifically 27.3%, reported frequently encountering unpleasant or strong odors in the air, which adversely affected their concentration and study effectiveness. This highlights a potential issue with indoor air quality that may need

to be addressed for optimal learning environments. Furthermore, a smaller but still noteworthy 9.3% indicated a preference for studying outdoors, prioritizing the benefits of open air over indoor amenities. This minority preference underscores the diversity of preferences among students regarding their study environments, indicating the need for flexible options to accommodate varying needs and preferences. Additionally, a substantial portion of respondents, accounting for 37.3% expressed a neutral stance on the preference to study outdoors with open air. It implies that while outdoor settings may hold some appeal, they may not be universally favored or prioritized by this segment of the population. Respondents who disagree constitute 29.3% of the population, this indicates a clear preference among these individuals for indoor study environments, and lastly, a smaller yet noteworthy segment of respondents, comprising 10.7%, strongly disagreed with the notion of studying outdoors. This strong opposition suggests that for some individuals, outdoor environments may not only be undesirable but actively avoided.

Table 8. *Distribution of Responses on items under Environmental Characteristics in terms of Air Quality.*

Items	Strongly Agree (%)	Agree (%)	Neutral (%)	Disagree (%)	Strongly Disagree (%)
The air quality in my surroundings is fresh and clean, allowing me to concentrate on my studies.	60.0	33.3	5.3	1.3	0.0

I prefer to study indoors with air conditioning or an electric fan, rather than outdoors.	52.7	24.0	21.3	.7	1.3
During my study time, I frequently encounter unpleasant or strong odors in the air and it affects my ability to concentrate and study effectively.	27.3	24.0	20.0	21.3	7.3
I prefer to study outdoors with open air rather than indoors.	9.3	13.3	37.3	29.3	10.7

Findings presented in Table 9 provide insight into the air quality perceptions of respondents in the study. The study involved 150 participants, with responses ranging from a minimum air quality scale rating of 2.75 to a maximum of 5.00. The mean air quality rating across all respondents was calculated to be 3.7550, with a standard deviation of .52093, indicating a degree of variability in perceptions among the participants. Analysis reveals that a majority of them, comprising 50.7% or 76 individuals, fell within the air quality scale rating range of 3.50 to 4.00. This indicates that

a significant portion of respondents perceived the air quality in their study environments to be relatively high or satisfactory. On the other hand, a notable proportion of participants, accounting for 25.3% or 38 individuals, reported air quality scale ratings of 3.49 or below. This suggests that a substantial minority of respondents perceived the air quality in their study settings to be less than optimal, potentially raising concerns about environmental characteristics that could impact their well-being or study experience. Additionally, the data shows that 24.0% or 36 respondents rated their study environment's air quality at 4.01 or above on the scale. This indicates that a significant subset of participants perceived the air quality to be exceptionally good or even above average, suggesting favorable conditions conducive to studying.

Table 9. *Distribution of Respondents according to their scale rating on Environmental Characteristics in terms of Air Quality.*

Air Quality Scale Rating	f	%
3.49 or Below	38	25.3
3.50 to 4.00	76	50.7
4.01 or above	36	24.0

N=150 Min=2.75 Max=5.00 Mean= 3.7550 S.D. = .52093

Location or Space. In Table 10, A significant majority of respondents, constituting 56.7%, strongly agreed that their chosen study location offers adequate privacy conducive to focused studying. This indicates that a sizable portion of participants highly values privacy as a factor contributing to an effective study environment. Similarly, a substantial proportion of respondents, accounting for 53.3%, also expressed a strong agreement regarding the easy accessibility of resources such as books, study materials,

and technology (e.g., computers or phones) in their study locations. This suggests that accessibility to essential study resources is a priority for many individuals when selecting a study environment. Additionally, nearly half of the respondents, specifically 44.7%, reported that their study area is conducive to effective studying. This indicates a significant perception among participants that their study environments possess qualities or attributes that support focused and productive academic work. When considering preferences for studying in social settings such as cafes or study hubs, the responses were more varied. A notable proportion of respondents, comprising 26%, expressed a neutral stance on this preference, indicating a lack of strong inclination either for or against studying in such environments. On the other hand, 27.3% of participants disagreed with the idea of studying in cafes or study hubs surrounded by people, suggesting a preference for quieter or more private study settings. Furthermore, 12.7% of respondents strongly disagreed with this preference, indicating a strong aversion to studying in social environments.

Table 10. *Distribution of Responses on items under Environmental Characteristics in terms of Space or Location.*

Items	Strongly Agree (%)	Agree (%)	Neutral (%)	Disagree (%)	Strongly Disagree (%)
My chosen study location offers adequate privacy for focused studying.	56.7	37.3	4.0	2.0	0.0
The study location	53.3	36.7	8.0	2.0	0.0

provides easy access to the resources I need for my studies (books, materials, technology).					
My study area for studying is conducive	44.7	37.3	15.3	2.7	0.0
I prefer studying in cafes and study hubs and be surrounded by people	20.0	14.0	26.0	27.3	12.7

The findings presented in Table 11 offer insights into respondents' perceptions of space or location quality in the study. The study encompassed 150 participants, with responses ranging from a minimum space or location scale rating of 1.75 to a maximum of 5.00. The mean rating across all respondents was calculated to be 4.0383, with a standard deviation of .62238, indicating a degree of variability in perceptions among the participants. Among the 150 participants surveyed, analysis reveals that a significant portion, comprising 48% or 72 individuals, fell within the space or location scale rating range of 3.73 to 4.32. This indicates that a substantial majority of respondents perceived the space or location where they studied to be of relatively high quality. Furthermore, a considerable number of participants, accounting for 30% or 45 individuals, reported space or location scale ratings of 4.33 or above. This suggests that a notable subset of

respondents perceived the space or location to be exceptionally good or above average, indicating favorable conditions for studying.

Table 11. *Distribution of Respondents according to their scale rating on Environmental Characteristics in terms of Space or Location.*

Space or Location Scale Rating	f	%
3.72 or Below	33	22.0
3.73 to 4.32	72	48.0
4.33 or above	45	30.0
N=150 Min=1.75 Max=5.00	Mean= 4.0383	S.D. = .62238

Internet Connection. In Table 12, the distribution of responses on items under environmental characteristics in terms of internet connection provides a comprehensive understanding of how internet connectivity influences various aspects of online learning.

Firstly, a significant majority, comprising 70.0% who strongly agree and 24.0% who agree, express satisfaction with the quick access to online resources facilitated by their internet connection. The minimal percentages expressing neutrality (4.7%), disagreement (0.7%), or strong disagreement (0.7%) with this statement underscore the widespread consensus on this aspect. Similarly, 63.3% strongly agree and 30.0% agree that their connection supports effective collaboration and participation in online learning activities, with negligible percentages expressing neutrality (4.7%), disagreement (1.3%), or strong disagreement (0.7%). Additionally, while 48.7% strongly agree and 38.0% agree that the quality of their internet connection impacts their ability to conduct online research, there are notable percentages expressing neutrality (8.0%), disagreement (2.7%), and strong disagreement (2.7%), indicating a potential lack of awareness or

uncertainty among some respondents regarding this correlation. However, a noteworthy portion, with 19.3% strongly agreeing and 32.0% agreeing, report experiencing frequent interruptions or disconnections during their online studying sessions. This issue is further highlighted by the 22.7% who remain neutral, along with 17.3% disagreeing and 8.7% strongly disagreeing, suggesting a significant number of students may encounter disruptions but haven't firmly attributed them to their internet connection. Finally, there's a minimal percentage who disagree or strongly disagree across all items, reflecting a general consensus on the importance of reliable internet connectivity for effective online learning while also suggesting opportunities for improvement.

Table 12. *Distribution of Responses on items under Environmental Characteristics in terms of Internet Connection.*

Items	Strongly Agree (%)	Agree (%)	Neutral (%)	Disagree (%)	Strongly Disagree (%)
My internet connection allows me to access online resources and materials quickly.	70.0	24.0	4.7	.7	.7
My internet connection enables me to effectively collaborate with peers or participate in online learning activities	63.3	30.0	4.7	1.3	.7

The quality of my internet connection affects my ability to conduct online research for my studies.	48.7	38.0	8.0	2.7	2.7
I experience frequent interruptions or disconnections while using the internet for studying.	19.3	32.0	22.7	17.3	8.7

In table 13, it presents the distribution of respondents based on their scale rating regarding Environmental Characteristics related to Internet Connection.

The ratings are categorized into three groups: 3.93 or below, 3.94 to 4.43, and 4.44 or above. The frequencies and percentages of respondents falling into each category are provided. The analysis reveals that the majority of respondents, comprising 35.3%, fall within the range of 3.94 to 4.43 on the scale rating, indicating a moderate to satisfactory level of satisfaction with their internet connection concerning environmental characteristics. Additionally, 24.0% of respondents rated their internet connection at 3.93 or below, signifying a lower level of satisfaction or perceived effectiveness in addressing environmental characteristics. On the other hand, a significant portion, accounting for 40.7% of respondents, rated their internet connection at 4.44 or above, indicating a higher level of satisfaction or effectiveness in addressing environmental characteristics.

The summary statistics provided offer additional context and insights into the distribution of responses and the overall satisfaction levels among the respondents regarding their internet connection's effectiveness in addressing environmental characteristics. Firstly, the total number of respondents (N=150) indicates the size of the sample used for this analysis, providing a sense of the data's breadth and representativeness. Secondly, the minimum and maximum scale ratings (Min=2.50, Max=5.00) illustrate the range of responses observed among the participants. In this case, the minimum rating of 2.50 suggests that some respondents rated their internet connection relatively low in terms of addressing environmental characteristics, while the maximum rating of 5.00 indicates that others rated it very highly. The mean rating (Mean=4.1983) provides the average score given by the respondents across the scale, serving as a central measure of the data's tendency. In this instance, the mean rating of 4.1983 suggests that, on average, respondents rated their internet connection quite positively regarding its effectiveness in addressing environmental characteristics. Lastly, the standard deviation (S.D.=.55207) indicates the dispersion or variability of responses around the mean. A smaller standard deviation suggests that responses are clustered closely around the mean, while a larger standard deviation indicates greater variability. In this case, the relatively small standard deviation of .55207 suggests that the responses are relatively consistent and clustered closely around the mean rating, indicating a degree of agreement among respondents regarding their internet connection's effectiveness. Overall, these summary statistics provide a comprehensive understanding of the distribution of responses and the overall satisfaction levels among the respondents, offering insights into the perceived effectiveness of internet connections in addressing environmental characteristics and highlighting areas for potential improvement.

Table 13. *Distribution of Respondents according to their scale rating on Environmental Characteristics in terms of Internet Connection.*

Internet Connection Scale Rating	f	%
3.93 or Below	36	24.0
3.94 to 4.43	53	35.3
4.44 or above	61	40.7

N=150 Min=2.50 Max=5.00 Mean= 4.1983 S.D. = .55207

Study Habits. In Table 14, the distribution of responses on items under environmental characteristics in terms of study habits provides valuable insights into the study habits of the participants.

Regarding the prioritization of school activities, a significant portion, with 44.0% strongly agreeing and 34.7% agreeing, indicate a tendency to complete pending school tasks before focusing entirely on studying. The percentages expressing neutrality (16.0%), disagreement (5.3%), and strongly disagreement (0.0%) are notable but relatively lower. Similarly, a considerable number, comprising 38.7% strongly agreeing and 34.0% agreeing, express a preference for scheduling study time in advance to maximize productivity, with 19.3% remaining neutral, and minimal percentages of disagreement (4.7%) and strongly disagreement (3.3%).

In terms of learning preferences, while 30.0% strongly agree and 36.7% agree that they find it helpful to learn through listening to recorded lectures or audio materials, a significant proportion, 24.0%, remain neutral, with 8.0% disagreeing and 1.3% strongly disagreeing, highlighting a substantial segment of individuals who may not strongly favor this method. Additionally, 29.3% strongly agree and 28.7% agree that they prefer

learning through visual aids, such as diagrams and charts, while a noteworthy 35.3% express neutrality, with 4.7% disagreeing and 2.0% strongly disagreeing, suggesting a divided preference among participants.

When it comes to study behavior, 19.3% strongly agree and 39.3% agree that they actively participate in group discussions or study groups, indicating a prevalent inclination towards collaborative learning. However, 26.7% remain neutral, with 10.0% disagreeing and 4.7% strongly disagreeing, hinting at a notable minority who do not actively engage in group learning. Finally, regarding study engagement, while 15.3% strongly agree and 27.3% agree that they prefer passive learning through reading or listening without actively interacting with the material, a significant proportion, 32.7%, express neutrality, with 17.3% disagreeing and 7.3% strongly disagreeing, indicating a notable segment who actively seek engagement with study materials. Overall, the analysis highlights diverse study habits among participants, with variations in preferences for learning methods and study behaviors.

Table 14. *Distribution of Responses on items under in terms of their Study Habits.*

Items	Strongly Agree (%)	Agree (%)	Neutral (%)	Disagree (%)	Strongly Disagree (%)
I do all my pending school activities and homework first before I can focus entirely on studying.	44.0	34.7	16.0	5.3	0.0
I like to schedule my time for	38.7	34.0	19.3	4.7	3.3

studying in advance to maximize my productivity.					
I find it helpful to learn through listening to recorded lectures or audio materials rather than relying solely on visual materials.	30.0	36.7	24.0	8.0	1.3
I would rather learn through visual aids such as diagrams, charts, and graphs than relying solely on written text.	29.3	28.7	35.3	4.7	2.0
I actively participate in group discussions or study groups to exchange ideas and learn from my peers	19.3	39.3	26.7	10.0	4.7
I prefer to	15.3	27.3	32.7	17.3	7.3

passively read or listen to the study material without actively interacting or engaging with it.

Table 15 presents the distribution of respondents based on their scale rating regarding Environmental Characteristics in terms of Study Habits.

The ratings are divided into three categories: 3.51 or below, 3.52 to 4.01, and 4.02 or above. The frequencies and percentages of respondents falling into each category are provided. The analysis reveals that the largest proportion of respondents, comprising 36.0%, fall within the range of 3.51 or below on the scale rating, suggesting a lower level of effectiveness in study habits concerning environmental characteristics. Additionally, 33.3% of respondents are categorized in the range of 3.52 to 4.01, indicating a moderate level of effectiveness in study habits related to environmental characteristics. On the other hand, 30.7% of respondents are rated at 4.02 or above, suggesting a higher level of effectiveness in study habits concerning environmental characteristics.

The summary statistics provided offer valuable insights into the distribution of responses and the overall satisfaction levels among the respondents regarding their study habits in relation to environmental characteristics. With a sample size of 150 respondents, the analysis captures a diverse range of perspectives. The minimum and maximum scale ratings, ranging from 2.33 to 5.00, illustrate the breadth of responses observed,

indicating variability in individual perceptions of study habits. Similarly, the breakdown of respondents' scale ratings into categories of 3.51 or below, 3.52 to 4.01, and 4.02 or above reveals distinct proportions within each range, highlighting differing levels of effectiveness in study habits concerning environmental characteristics. The relatively high mean rating of 43.7778 suggests an overall positive trend in study habits concerning environmental characteristics, reflecting a generally favorable assessment by respondents. Moreover, the small standard deviation of .56616 indicates a high degree of agreement among respondents regarding their study habits concerning environmental characteristics, signifying consistency in perceptions. These findings provide valuable insights for researchers, educators and policymakers to understand the effectiveness of current study habits and identify areas for improvement. By leveraging these insights, tailored strategies can be developed to enhance study habits and optimize learning environments to better meet the needs of students.

Table 15. *Distribution of Respondents according to their scale rating in terms of Study Habits.*

Study Habits Scale Rating	f	%
3.51 or Below	54	36.0
3.52 to 4.01	50	33.3
4.02 or above	46	30.7

N=150 Min=2.33 Max=5.00 Mean= 43.7778 S.D. = .56616

Academic Performance. Table 16 presents the distribution of respondents according to their academic performance scale rating on environmental characteristics. Findings show that 49 for every 150 respondents were found with high academic

performance with a general weighted average of 1.63 or below (32.7%), while 62 for every 150 respondents had a general weighted average of 1.64 to 1.83 (41.3%), and 39 for every 150 had a general weighted average of 1.84 or above (26.0%).

Table 16. *Distribution of Respondents according to their scale rating in terms of their Academic Performance.*

Academic Performance Scale Rating	f	%
1.63 or Below	49	32.7
1.64 to 1.83	62	41.3
1.84 or above	39	26.0

N=150 Min=1.26 Max=2.50 Mean= 1.7488 S.D. = .21748

Table 17 shows the relationship between Environmental Characteristics in terms of Noise and Academic Performance.

The findings for the test present an analysis of the relationship between environmental characteristics, specifically noise levels, and academic performance. The data is structured in a contingency table format, with rows representing different levels of academic performance (1.63 or below, 1.64 to 1.83, and 1.84 or above) and columns representing different noise level categories (4.11 or below, 4.12 to 4.61, and 4.62 or above). Each cell in the table displays the frequency (f) and percentage (%) of students falling into each combination of academic performance and noise level category, with totals provided for each row and column.

Upon examining the data, it becomes evident that there is a distribution of academic performance across different noise level categories. For instance, among

students with academic performance scores of 1.63 or below, 42.2% experienced noise levels of 4.11 or below, while 31.1% and 26.7% experienced noise levels in the categories of 4.12 to 4.61 and 4.62 or above, respectively. Similarly, for students with academic performance scores between 1.64 and 1.83, the distribution across noise level categories is 25.0%, 47.9%, and 43.9%, respectively. Lastly, for students with academic performance scores of 1.84 or above, the distribution across noise level categories is 31.6%, 43.9%, and 24.6%, respectively.

Analyzing the relationship between noise levels and academic performance, a Gamma coefficient of 0.054 is calculated with a corresponding p-value of 0.639, indicating that the relationship is not statistically significant at conventional levels ($p < 0.05$). This suggests that while there might be a slight association between noise levels and academic performance, it is not strong enough to be considered meaningful when considering the entire dataset. There is failure to reject the null hypothesis, noise has no bearing on students' academic performance.

Therefore, the findings do not coincide with a study by Knauf Insulation (2022) on how students who are subjected to persistently disturbing noise may struggle academically and have comprehension issues. Also, the findings contrast the study of Matondang (2017) on how the effects of the noise were physiological and affect pupil learning performance.

In summary, the analysis reveals a nuanced distribution of academic performance across different noise level categories, but the statistical tests suggest that the observed relationship is not significant. This implies that other characteristics beyond noise levels might have a more substantial influence on academic performance.

Table 17. Relationship between Environmental Characteristics in terms of Noise and Academic Performance

Variables	Academic Performance							
	1.63 or below		1.64 to 1.83		1.84 or above		Total	
	f	%	f	%	f	%	f	%
Noise								
4.11 or Below	19	42.2	14	31.1	12	26.7	45	100.0
4.12 to 4.61	12	25.0	23	47.9	13	27.1	48	100.0
4.62 or Above	18	31.6	25	43.9	14	24.6	57	100.0
Total	49	32.7	62	41.3	39	26.0	150	100.0

Gamma = 0.054 (No Association) p = .639 (Not Significant)

Table 18 illustrates the relationship between environmental characteristics, specifically temperature, and academic performance. Similar to the previous dataset, the information is structured in a contingency table format, with rows representing different levels of academic performance (1.63 or below, 1.64 to 1.83, and 1.84 or above) and columns representing different temperature categories (3.96 or below, 3.97 to 4.46, and 4.47 or above). Each cell of the table displays the frequency (f) and percentage (%) of students falling within a specific combination of academic performance and temperature category, with row and column totals provided for reference.

Upon initial examination, it's evident that there is variability in academic performance across different temperature categories. For instance, among students with academic performance scores of 1.63 or below, 29.0% experienced temperatures of 3.96 or below, while 38.7% and 32.3% encountered temperatures falling within the

categories of 3.97 to 4.46 and 4.47 or above, respectively. Similarly, for students with academic performance scores between 1.64 and 1.83, the distribution across temperature categories is 36.1%, 41.0%, and 43.1%, respectively. Lastly, for students with academic performance scores of 1.84 or above, the distribution across temperature categories is 31.0%, 43.1%, and 25.9%, respectively.

Analyzing the relationship between temperature and academic performance, a Gamma coefficient of -0.025 is computed with a corresponding p-value of 0.827, indicating that the relationship lacks statistical significance at conventional levels ($p < 0.05$). The null hypothesis (H0), which states that there is no association between temperature levels and academic performance, cannot be rejected based on these results. This suggests that there is no meaningful association between temperature levels and academic performance in this dataset. Consequently, the conclusion is that temperature does not significantly impact the academic performance of the nursing students surveyed.

According to Perez, J., Montano, & Perez, J., (2014) the ability of students to learn is directly impacted by both extreme cold and excessive heat, but the findings in Table 10 represent values on how temperature is not definitely affective of students' academic performance. Also, a study by Park (2017) determined that high temperature had a higher probability of students' failing, but the findings in Table 18 indicate no failing grades with regards to the temperature of their environment, thus rejecting Park's research.

In summary, the analysis reveals a varied distribution of academic performance across different temperature categories, but statistical tests suggest that the observed relationship is not significant. This implies that temperature levels alone may not be reliable predictors of academic success, highlighting the importance of considering other characteristics in understanding academic performance.

Table 18. *Relationship between Environmental Characteristics in terms of Temperature and Academic Performance*

Variables	Academic Performance							
	1.63 or below		1.64 to 1.83		1.84 or above		Total	
	f	%	f	%	f	%	f	%
Temperature								
3.96 or Below	9	29.0	12	38.7	10	32.3	31	100.0
3.97 to 4.46	22	36.1	25	41.0	14	23.0	61	100.0
4.47 or Above	18	31.0	25	43.1	15	25.9	58	100.0
Total	49	32.7	62	41.3	39	26.0	150	100.0

Gamma = -.025 (No Association) p = .827 (Not Significant)

Table 19 demonstrates the correlation between environmental characteristics, specifically lighting, and academic performance. Structured in a contingency table format, rows represent academic performance levels (1.63 or below, 1.64 to 1.83, and 1.84 or above), while columns denote lighting categories (4.30 or below, 4.31 to 4.80, and 4.81 or above). Each cell presents the frequency (f) and percentage (%) of students within a particular combination of academic performance and lighting category, alongside row and column totals for reference.

Upon review, it's evident that academic performance varies across lighting categories. For instance, among students with scores of 1.63 or below, 34.7% experienced lighting levels of 4.30 or below, while 38.8% and 26.5% encountered lighting falling within the categories of 4.31 to 4.80 and 4.81 or above, respectively.

Similarly, for students with scores between 1.64 and 1.83, the distribution across lighting categories is 33.3%, 47.2%, and 19.4%, respectively. Lastly, for students with scores of 1.84 or above, the distribution across lighting categories is 30.8%, 40.0%, and 29.2%, respectively.

Analyzing the relationship between lighting and academic performance, a Gamma coefficient of 0.060 is calculated with a corresponding p-value of 0.603, indicating a lack of statistical significance ($p < 0.05$). This suggests no meaningful association between lighting levels and academic performance in this dataset.

According to a study by Boelcke (2022), it is indicated that classroom lighting does have an effect on cognition, which is evident in terms of academic achievement, attention levels, work speed, productivity, and accuracy, among other observed effects. Meanwhile, Grangaard (1995) indicated in his study that students had an easier time focusing and avoiding distractions in environments with softer, more natural lighting. Although, the findings in Table 19 do not support both aforementioned studies.

In summary, while academic performance shows variability across lighting categories, statistical analysis suggests no significant relationship. This implies that lighting levels alone may not reliably predict academic success, underscoring the need to consider other characteristics in understanding academic performance.

Table 19. *Relationship between Environmental Characteristics in terms of Lighting and Academic Performance*

Variables	Academic Performance							
	1.63 or below		1.64 to 1.83		1.84 or above		Total	
	f	%	f	%	f	%	f	%
Lighting								
4.30 or Below	17	34.7	19	38.8	13	26.5	49	100.0
4.31 to 4.80	12	33.3	17	47.2	7	19.4	36	100.0
4.81 or Above	20	30.8	26	40.0	19	29.2	65	100.0
Total	49	32.7	62	41.3	39	26.0	150	100.0

Gamma = 0.060 (No Association) p= .603 (Not Significant)

Table 20 illustrates the relationship between air quality and academic performance, employing a contingency table format with rows representing different academic performance levels (1.63 or below, 1.64 to 1.83, and 1.84 or above) and columns representing air quality categories (3.49 or below, 3.50 to 4.00, and 4.01 or above). The table presents frequencies and percentages of students across these categories, revealing variations in academic performance based on air quality. For instance, among students with academic performance scores of 1.63 or below, 42.1% experienced air quality levels of 3.49 or below, while 39.5% and 18.4% experienced air quality levels in the categories of 3.50 to 4.00 and 4.01 or above, respectively. Similarly, for students with academic performance scores between 1.64 and 1.83, the distribution across air quality categories is 34.2%, 39.5%, and 26.3%, respectively. Lastly, for

students with academic performance scores of 1.84 or above, the distribution across air quality categories is 19.4%, 47.2%, and 33.3%, respectively.

Following analysis, a Gamma coefficient of 0.242 is calculated with a p-value of 0.026, indicating statistical significance. However, the relatively weak Gamma coefficient indicates that, while there is a significant association between air quality and academic performance in the dataset, the effect of air quality on academic outcomes may be insufficient to be practically meaningful. This finding lends some support to the cited research studies. It is consistent with Wargocki et al. (2020), who found that poor air quality could impair students' learning abilities and motivation, despite the observed weak association. There is also some support for Haverinen-Shaughnessy & Shaughnessy (2015), as increased ventilation rates may lead to improved performance, though the effect observed in the study may not be as significant. Emphasizing the importance of maintaining proper ventilation in order to optimize students' learning environments. Overall, while the study confirms a link between air quality and academic performance, it highlights the complexities of characteristics that influence academic outcomes, emphasizing the importance of taking environmental characteristics like air quality into account in educational settings.

Table 20. *Relationship between Environmental Characteristics in terms of Air Quality and Academic Performance*

Variables	Academic Performance							
	1.63 or below		1.64 to 1.83		1.84 or above		Total	
	f	%	f	%	f	%	f	%
Air Quality								
3.49 or	16	42.1	15	39.5	7	18.4	38	100.0

Below								
3.50 to 4.00	26	34.2	30	39.5	20	26.3	76	100.0
4.01 or Above	7	19.4	17	47.2	12	33.3	36	100.0
Total	49	32.7	62	41.3	39	26.0	150	100.0

Gamma = .242 (Weak Association) p = 0.026 (Significant)

Table 21 presents the relationship between academic performance and the spatial environment or location in which studying occurs. The table categorizes academic performance into three groups: 1.63 or below, 1.64 to 1.83, and 1.84 or above, and further divides the spatial environments into three categories: 3.72 or below, 3.73 to 4.32, and 4.33 or above. Each cell in the table displays the frequency and percentage of students falling into each combination of academic performance and spatial environment, with totals provided for each row and column. Among students with academic performance scores of 1.63 or below, 27.3% were associated with spatial environments rated as 3.72 or below, while 54.5% and 18.2% were linked to spatial environments in the categories of 3.73 to 4.32 and 4.33 or above, respectively. Similarly, for students with academic performance scores between 1.64 and 1.83, the distribution across spatial environment categories is 29.2%, 43.1%, and 27.8%, respectively. Lastly, for students with academic performance scores of 1.84 or above, the distribution across spatial environment categories is 42.2%, 28.9%, and 28.9%, respectively.

Upon analysis, a Gamma coefficient of -0.046 is calculated with a corresponding p-value of 0.684, indicating that the relationship between spatial environment or location and academic performance is not statistically significant. This suggests that there is no meaningful association between the two characteristics within the dataset.

According to Santangelo (2019), the spatial environment in which a student studies can influence their academic performance. A comfortable and conducive

environment may enhance concentration and productivity. However, the findings of this study do not support a significant relationship between spatial environment and academic performance.

Similarly, a study conducted by Clift et al. (2009) found that students in larger classes expressed more favorable feelings about their class and adhered to classroom rules more strictly, indicating that spatial environment can impact student perceptions and behavior. However, these findings are not reflected in the analysis of Table 21.

Table 21. *Relationship between Environmental Characteristics in terms of Space or Location and Academic Performance*

Variables	Academic Performance							
	1.63 or below		1.64 to 1.83		1.84 or above		Total	
	f	%	f	%	f	%	f	%
Space or Location								
3.72 or Below	9	27.3	18	54.5	6	18.2	33	100.0
3.73 to 4.32	21	29.2	31	43.1	20	27.8	72	100.0
4.33 or Above	19	42.2	13	28.9	13	28.9	45	100.0
Total	49	32.7	62	41.3	39	26.0	150	100.0

Gamma = 0.-046 (No Association) p= .684 (Not Significant)

Table 22 depicts the relationship between academic performance and internet connection. The table categorizes academic performance into three groups: 1.63 or below, 1.64 to 1.83, and 1.84 or above. Similarly, internet connection is divided into three categories: 3.93 or below, 3.94 to 4.43, and 4.44 or above. Each cell in the table presents the frequency and percentage of students falling into specific combinations of

academic performance and internet connection, with totals provided for each row and column.

Among students with academic performance scores of 1.63 or below, 25.0% were associated with internet connections rated as 3.93 or below, while 47.2% and 27.8% were linked to internet connections in the categories of 3.94 to 4.43 and 4.44 or above, respectively. Similarly, for students with academic performance scores between 1.64 and 1.83, the distribution across internet connection categories is 35.8%, 39.6%, and 24.5%, respectively. Lastly, for students with academic performance scores of 1.84 or above, the distribution across internet connection categories is 34.4%, 39.3%, and 26.2%, respectively.

Upon analysis, a Gamma coefficient of -0.063 is calculated with a corresponding p-value of 0.568, indicating that the relationship between internet connection and academic performance is not statistically significant. This suggests that there is no meaningful association between the two characteristics within the dataset.

The result of Table 22, indicating a non-significant relationship (Gamma = -0.063, p = 0.568) between internet connection and academic performance, does not support the claims made by the cited studies regarding the significant impact of internet connectivity on students' learning process and academic outcomes. These studies, including Gierdowski (2021) and Redondo et al. (2021), suggest that a stable and reliable internet connection is crucial for facilitating various aspects of learning and academic success. However, the lack of a significant association between internet connection and academic performance in Table 22 suggests that, within the context of this dataset, internet connectivity may not be a determining factor influencing academic outcomes.

Table 22. *Relationship between Environmental Characteristics in terms of Internet Connection and Academic Performance*

Variables	Academic Performance							
	1.63 or below		1.64 to 1.83		1.84 or above		Total	
	f	%	f	%	f	%	f	%
Internet Connection								
3.93 or below	9	25.0	17	47.2	10	27.8	36	100.0
3.94 to 4.43	19	35.8	21	39.6	13	24.5	53	100.0
4.44 or above	21	34.4	24	39.3	16	26.2	61	100.0
Total	49	32.7	62	41.3	39	26.0	150	100.0

Gamma = -.063 (No Association) p= .568 (Not Significant)

In summary, the analysis indicates that out of six environmental characteristics examined, five did not show a statistically significant relationship with academic performance, while one exhibited weak association but remained statistically significant in influencing the academic performance of student nurses. Therefore, the null hypothesis, "There is no significant relationship between environmental characteristics and students' academic performance," is not rejected.

Table 23 displays the relationship between academic performance and study habits, with academic performance categorized into three groups: 1.63 or below, 1.64 to 1.83, and 1.84 or above, and study habits categorized into three groups: 3.51 or below, 3.52 to 4.01, and 4.02 or above. The table presents the frequency and percentage of

students falling into specific combinations of academic performance and study habits, with totals provided for each row and column.

For instance, among students with academic performance scores of 1.63 or below, 33.3% were associated with study habits rated as 3.51 or below, while 40.7% and 25.9% were linked to study habits in the categories of 3.52 to 4.01 and 4.02 or above, respectively. Similarly, for students with academic performance scores between 1.64 and 1.83, the distribution across study habit categories is 34.0%, 36.0%, and 30.0%, respectively. Lastly, for students with academic performance scores of 1.84 or above, the distribution across study habit categories is 30.4%, 47.8%, and 21.7%, respectively.

The Gamma coefficient of -0.005 with a corresponding p-value of 0.963 indicates that there is no statistically significant relationship between study habits and academic performance within the dataset.

This result does not fully support the claims of the cited studies, including Rubio (2022), Magulod (2018), and Jafari et al. (2019), which suggest that study habits significantly influence academic performance. The lack of a significant association in Table 15 suggests that, within the context of this dataset, study habits may not be a determining factor influencing academic outcomes. Therefore, the null hypothesis, "There is no significant relationship between study habits and students’ academic performance," is not rejected.

The non-significant relationship between study habits and academic performance in Table 23 could suggest that nursing students, as a group, may have similar study habits across different academic performance levels. This implies that variations in academic performance among nursing students may not be primarily attributed to differences in study habits within this dataset.

Table 23. *Relationship between Environmental Characteristics in terms of Study Habits and Academic Performance*

Variables	Academic Performance							
	1.63 or below		1.64 to 1.83		1.84 or above		Total	
	f	%	f	%	f	%	f	%
Study Habits								
3.51 or Below	18	33.3	22	40.7	14	25.9	54	100.0
3.52 to 4.01	17	34.0	18	36.	15	30	50	100.0
4.02 or above	14	30.4	22	47.8	10	21.7	46	100.0
Total	49	32.7	62	41.3	39	26.0	150	100.0

Gamma = -.005 (No association) p= .963 (Not Significant)

CHAPTER 5

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This descriptive-correlational study was conducted to determine the environmental characteristics, study habits, and academic performance of student nurses in a private university during the second semester of the academic year 2022-2023.

Data were gathered using a questionnaire via Google Forms from 150 nursing students who were randomly chosen for this study. Random sampling was chosen to ensure that each student had an equal chance of being selected, thereby enhancing the representativeness and generalizability of the findings. The data were analyzed utilizing SPSS. The descriptive (mean, frequency, percentages, standard deviation, and tables) and inferential statistics (Gamma) were used. The findings, conclusion, and recommendations are summarized in this chapter.

The findings, conclusions, and recommendations are summarized in this chapter.

Specifically, this study sought to determine:

1. the environmental characteristics during study time of the students such as:
    - Noise
    - Temperature
    - Lighting
    - Air Quality
    - Space or location a student is studying in

- Internet Connection

2. the students' study habits;
3. the student’s academic performance;
4. whether there is a significant relationship between study habits and academic performance.
5. whether there is a significant relationship between environmental characteristics and academic performance.

Summary of Findings

1. The majority of student nurses strongly agreed (71.3%) in studying in a quiet environment to minimize distractions.
2. The majority of student nurses strongly agreed (79.3%) that they preferred studying in well-ventilated and temperature-controlled spaces to enhance their learning experiences.
3. The majority of student nurses strongly agreed (78.0%) that adequate lighting contributed to their alertness, focus, and engagement in studies, underscoring the importance of proper illumination for optimal learning experiences.
4. The majority of student nurses strongly agreed (60%) that the quality of air in their surroundings significantly impacts their ability to concentrate on their studies.
5. The majority of student nurses strongly agreed (56.7%) that their chosen study location provides them with sufficient privacy conducive to focused studying.
6. The majority of student nurses strongly agreed (70.0%) that their internet connection allows them to access online resources and materials quickly.

7. The majority of student nurses strongly agreed (44.0%) that as their study habit they prioritize completing pending school activities and homework before focusing entirely on studying.
8. There is no association between the different environmental characteristics (noise, temperature, lighting, space or location, and internet connection) and academic performance of student nurses. With gamma values 0.54, -.025, 0.60, .242, -.046, -.063 respectively, these values fall in the range 0.00 to ±0.24 which interprets “No Association” and p values of .639, .827, .603, .684, .568, respectively, which are above .05 therefore, such variables have no significant relationship with the academic performance of student nurses.
9. There is no association between environmental characteristics in terms of air quality and academic performance of student nurses. With the gamma value of .242, this value falls in the range 0.00 to ±0.24 which interprets “No Association” However its p value is .026 which is below 0.05 and is interpreted as significant, therefore this variable has a weak significant relationship with the academic performance of student nurses.
10. There is no association between study habits and academic performance of student nurses. With a gamma value of -.005, this value falls in the range 0.00 to ±0.24 which interprets “No Association” and its p value is .963 which is above 0.05 Therefore, such variable has no significant relationship with the academic performance of student nurses.

Conclusions

1. Student nurses in a private university are affected by the environmental factor: noise. There is an importance of maintaining optimal noise conditions in study

environments to foster concentration, enhance focus, and ultimately improve holistic learning outcomes for student nurses.

2. Student nurses in a private university are affected by the environmental factor: temperature. Extreme temperatures, whether too hot or too cold, can impair concentration, increase fatigue, and reduce cognitive function, ultimately hindering the learning of student nurses.
3. Student nurses in a private university are affected by the environmental factor: lighting. Adequate lighting can enhance concentration, reduce eye strain, and promote a conducive learning environment for student nurses.
4. Student nurses in a private university are affected by the environmental factor: air quality. Air quality in the learning environment is crucial for creating a safe, healthy, and conducive space for student nurses to develop their learning and knowledge.
5. Student nurses in a private university are affected by the environmental factor: space or location a student is studying in. The space and ambiance of study areas play a significant role in shaping the learning experience and academic performance of student nurses.
6. Student nurses in a private university are affected by the environmental factor: internet connection. The accessibility and stability of internet connectivity are essential for facilitating effective learning experiences and academic success among student nurses.
7. Student nurses in a private university exhibit a common set of study habits that significantly impact their academic performance. These shared habits tend to yield remarkably consistent grades among the student body. This uniformity underscores the influence of study habits on academic performance.

8. Environmental characteristics (noise, temperature, lighting, space or location, and internet connection) have no influence in academic performance among student nurses as their grades remain consistently high and closely clustered together.
9. Environmental factor in terms of air quality has weak association with academic performance among student nurses, the statistical significance of the relationship suggests that air quality may still have some impact on academic outcomes. This finding underscores the importance of considering environmental characteristics, such as air quality, in educational settings, despite the relatively modest influence observed.
10. The study habits have no bearing on the academic performance among student nurses suggests that variations in study habits do not significantly impact their academic outcomes. Despite individual differences in study habits, student nurses exhibit a consistent pattern in their approaches to studying, as evidenced by the lack of significant correlation with academic performance.

Recommendations

Based on the findings and conclusions of this study, the following are the recommendations:

1. Despite the study not showing a significant influence of temperature on academic performance, the high agreement among respondents that students can study better in a well-controlled temperature room suggests the importance of providing adequate ventilation in universities. Therefore, it is recommended that universities prioritize ensuring optimal ventilation systems to create comfortable learning environments for students, which may indirectly contribute to their academic success.

2. Given the potential impact of air quality on academic performance compared to other characteristics, it is recommended that universities prioritize measures to improve indoor air quality in educational settings. This could include regular maintenance of ventilation systems, implementation of air purification systems, and promoting practices that reduce indoor air pollution, such as prohibiting smoking indoors and minimizing the use of volatile organic compounds.
3. Conduct longitudinal studies to track changes in environmental characteristics and academic performance over time among student nurses. Long-term data collection can provide valuable insights into the dynamic relationship between environmental characteristics and academic outcomes.
4. Replicate the study across various academic programs or institutions where students face significant challenges with their grades. This broader scope can provide insights into how environmental characteristics impact academic performance across different educational contexts, allowing for a more comprehensive understanding of the issue.
5. Combine quantitative analysis with qualitative methods such as interviews or focus groups to gain a deeper understanding of how environmental characteristics influence academic performance among student nurses. Qualitative data can provide valuable insights into students' perceptions and experiences.

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APPENDICES

Appendix A

Informed Consent

RESEARCH ETHICS REVIEW BOARD

CENTRAL PHILIPPINE UNIVERSITY

Lopez Jaena St., Jaro, Iloilo City, Philippines

329-1971 to 79 local 3336

INFORMED CONSENT FORM (ICF) TEMPLATE

(VERSION No. 02-2023)

1. KEY INFORMATION ABOUT THE RESEARCHERS

Title of the Study: Environmental Characteristics, Study Habits, and Academic Performance of Student Nurses In A Private University

Name of Researcher/s: ***Mary Louise H. Jasa***
Kiana Vren B. Jermia
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Hanna Alyssa G. Joves
Mark H. Jutare

Research Adviser: Dr. Betty T. Polido, Ph.D

Department/College: College of Nursing

Institution: Central Philippine University

2. INTRODUCTION/BACKGROUND OF THE STUDY

You are invited to take part in this research study. This form contains information that will help you in deciding whether to participate or not in this study/research. Before you decide to participate in this study, you will be given enough time to read and understand the contents of the informed consent. If there are words or concepts that you do not understand feel free to ask questions at any time, the researchers are willing to explain it to you and your questions will be answered to your satisfaction.

The study will begin once you have signed the informed consent form.

This study explores the connection between environmental characteristics, study habits, and academic performance among student nurses in a private university. The main goal is to thoroughly investigate how different environmental aspects impact the academic achievements of these student nurses. Moreover, the research seeks to delve into the study habits of the participants, including their study routines, time management skills, use of study aids or strategies, and adherence to effective study practices. The anticipated findings of this study have practical implications for educational institutions, faculty members, and students themselves. They can help inform decisions and strategies to create supportive learning environments that foster academic success. The identification of influential environmental characteristics will enable universities to consider improvements, such as managing noise levels, enhancing lighting conditions, and ensuring access to essential resources, which can significantly enhance the overall learning experience for student nurses.

3. PURPOSE OF THE RESEARCH

The purpose of this research study is to investigate the relationship between environmental characteristics, study habits, and academic performance among student nurses enrolled in a private university. The research aims to examine how various environmental characteristics impact the academic performance of student nurses and to explore the study habits

of student nurses, including their study routines, time management skills, use of study aids or strategies, and adherence to effective study practices. By understanding these aspects, the study seeks to identify patterns or behaviors that may contribute to or hinder academic success among student nurses. The results of this study will have practical implications for educational institutions, faculty, and students themselves, enabling the creation of supportive learning environments that facilitate academic excellence.

4. TYPE OF RESEARCH INTERVENTION/DATA GATHERING INSTRUMENT

You will be provided with informed consent and ample time to understand the study's details before deciding to participate. Your questions and concerns will be addressed to ensure your satisfaction. Once the informed consent form is signed, the study will begin and consist of three parts. The research instruments used are validated questionnaires with two parts: one focusing on Environmental Characteristics and the other on Study Habits. These questionnaires have been carefully constructed by the researchers with references from various studies and authors, and your responses will be measured using the Likert Scale. The third part of the study will involve assessing Academic Performance, based on information retrieved from the Student's Online Services. To maintain confidentiality, each participant will be assigned a unique ID code known only to the researcher(s), and participant names will not be included in the forms filled out by the researcher. Rest assured that all information gathered during this study will be kept strictly confidential to uphold your privacy.

5. PARTICIPANT SELECTION (INCLUSION & EXCLUSION CRITERIA)

The inclusion criteria are second-year student nurses who are male or female over the age of 18, and are currently enrolled in the private university under investigation. Also, they should be actively attending classes during the designated study period, and these individuals must

willingly agree to take part in the study after being provided with informed consent. On the contrary, the exclusion criteria outline the circumstances under which individuals will not be considered for participation in the study. Firstly, individuals who are not student nurses will be excluded from the research, as the study's focus centers exclusively on this particular population. Secondly, participants who are not actively enrolled during the study period will not be included. Finally, individuals who do not provide informed consent or decline to participate will be excluded from the study. To ensure data quality and reliability, participants who fail to complete the questionnaires in their entirety or provide inaccurate or inconsistent responses may also be excluded from the analysis. Adhering to these criteria will allow the study to concentrate on the relevant population of student nurses in the private university and maintain the integrity and reliability of the collected data.

6. VOLUNTARY PARTICIPATION

Your participation in this study is entirely voluntary. It is your choice whether to participate or not. If you choose not to participate or to withdraw from the study at any time, there will be no penalty or other consequences and without need to give any reason.

7. PROCEDURE

You will participate in the questionnaire survey by providing your responses through a Google Form. The survey will be distributed electronically, and you will receive a link to access the Google Form online. This method allows for convenient data collection and ensures ease of participation from any location with internet access. To maintain the confidentiality and anonymity of participants, the Google Form will not collect any personal information such as names or email addresses. Your identity will be kept completely anonymous throughout the survey process. Once you complete the questionnaire on the Google Form, your responses will be automatically

recorded in a secure database accessible only to the designated research team. The data will be stored in a password-protected Google Drive account, ensuring its confidentiality and protection. The results of the survey will be aggregated and presented in a summarized format, ensuring that individual responses cannot be traced back to specific participants. The findings will be analyzed by the research team and presented in a report without disclosing any personally identifiable information. Access to the survey results will be limited to the research team, faculty advisors, and other authorized personnel involved in the study. Data obtained through the Google Form will be used exclusively for research purposes and will not be shared outside the scope of this study without prior consent.

8. DURATION OF THE STUDY

This study will be conducted from September 2022 to December 2023.

You will be given an estimated time of approximately 15 to 20 minutes to answer the questionnaire. The questions have been thoughtfully designed to be clear and concise, allowing you to provide your responses efficiently. Your time and input are greatly appreciated, and the allocated duration ensures that you can participate in the survey conveniently without undue burden on your schedule.

9. RISKS AND INCONVENIENCES

There is a low risk when answering this survey questionnaire. Participants may encounter privacy concerns due to the collection of sensitive information, potential emotional risks while reflecting on their study habits and academic performance, and the possibility of unintended consequences and misinterpretation of results when answering this survey questionnaire. If you are uncomfortable with the questions you do not have to answer them. The researcher will take specific precautions to safeguard your well-being and protect your privacy. Your identity and personal information will be treated

with utmost confidentiality throughout the study. All data collected from the survey will be securely stored and presented in a manner that ensures your anonymity. Before participating, you will receive clear instructions and comprehensive information about the study's objectives, enabling you to make an informed decision about your involvement.

Your welfare is a top priority for the researcher. If, at any point during the survey, you experience any psychosocial, medical, or physical discomfort, appropriate support resources will be made available to you. These resources may include access to counseling services, academic support, or any other necessary assistance. Your well-being is of the utmost importance, and the researcher is dedicated to ensuring that you feel supported and comfortable throughout the research process.

10. BENEFITS

This study might help student nurses by creating chances for personal growth by learning preferences and developing strategies for improvement. Their involvement may lead to institutional enhancements in learning spaces and support services, benefiting all students. Understanding the impact of environmental characteristics allows students to take proactive steps toward academic success in this field.

11. REIMBURSEMENTS

You will not receive any monetary or material reimbursements or forms of appreciation for participating in this research study. However, your contribution is invaluable in advancing knowledge in this field, and your participation will be sincerely appreciated. By taking part in the study, you will have the opportunity to contribute to important research and potentially gain insights into your own study habits and academic performance. Your

willingness to participate is vital to the success of this study, and your involvement will be treated with the utmost respect and consideration.

12. CONFIDENTIALITY

The information you have provided is solely for the purpose of this study. Your identity will be kept private and confidential to the extent provided by law. You will be assigned an ID number and your data will be stored with utmost respect to your privacy.

13. RIGHT TO REFUSE OR WITHDRAW

Your participation in this study is entirely voluntary. It is your choice whether to

participate or not. If you choose not to participate or to withdraw from the study at any time, there will be no penalty or other consequences and without need to give any reason. If at any time you withdraw from the study, your data will be discarded properly.

14. DECLARATION OF CONFLICT INTEREST

The researchers declare that there is no actual or apparent conflict of interest in the conduct of this study. They have no financial, personal, or professional affiliations that could potentially bias the research findings or compromise the objectivity of the study. The research is conducted with integrity and transparency, solely driven by the pursuit of knowledge and the desire to contribute to the academic community. The researchers are committed to adhering to ethical standards and ensuring the validity and reliability of the study's results. Any potential sources of bias or conflict of interest have been identified and addressed to maintain the credibility and credibility of this research endeavor.

15. STORAGE AND DISPOSAL OF RESEARCH DATA/MATERIALS

The electronic copy of the data will be kept in a computer that only the researcher(s) has/have access to. Hard copies will be stored in a locked cabinet that only the researcher(s) will have access to for five years or as per institutional or ethical guidelines and will be destroyed by shredding at the end of this study. Additionally, the softcopy data will be securely deleted or permanently erased from the computer. The deletion process will involve using data-wiping software or other appropriate methods to ensure that the information cannot be recovered.

16. SHARING OF RESULTS/DISSEMINATION PLAN

The results of this study will be shared within 3 months after data analysis and finalization. The information will be disseminated through various channels, including academic journal publications and thesis defense presentations. The research team aims to reach a wide audience, including the academic community, relevant stakeholders, and study participants, ensuring informed decisions and knowledge advancement. Additionally, a summary report will be provided to the university's faculty and administration to facilitate evidence-based decision-making. By employing these diverse dissemination methods, the research team aims to maximize the impact of the study and contribute to the advancement of knowledge in the field.
As a participants you will also be informed that the research findings will be shared more broadly, through publications and conferences.

17. WHO TO CONTACT

If you have any questions or clarifications regarding your participation in the study, you may contact:

Lead Researcher: HANNA ALYSSA G. JOVES
Address: East Valencia, Buenavista, Guimaras 5044

Contact Number: 09564015209

Email address: hannaalyssa.joves-20@cpu.edu.ph

If you have questions pertaining to your rights as a participant, you may contact:

Joy G. Raso, PhD.

Chair, CPU Research Ethics Review Board

Email: researchethics@cpu.edu.ph

Phone: 329-1971 (local 3336)

18. CERTIFICATE OF CONSENT

I have read the foregoing information, or it has been read and explained to me in a language/dialect I know and understand. I have had the opportunity to ask questions about it and any questions I have been asked have been answered to my satisfaction. I consent voluntarily to be a participant in this study.

Print name of participant_____

Signature of participant _____

Date _____

MM/DD/YYYY

Statement by the researcher/person taking consent

I have accurately read out the information sheet to the potential participant, and to the best on my ability made sure that the participant understands that the following will be done.

1. **How their participation in the study will contribute to the research objectives.**
2. **The specific tasks or activities they will be involved in during the study, which includes answering a questionnaire. The questionnaire is designed to gather information about their experiences, opinions, and perspectives related to the topic under investigation.**
3. **How their personal information will be collected, stored, and safeguarded, respecting their privacy and confidentiality.**

4. **Any potential benefits they might receive from participating and any possible risks or discomforts associated with their involvement.**

I confirm that the participant was given an opportunity to ask questions about the study, and all the questions asked by the participant have been answered correctly and to the best of my ability. I confirm that the individual has not been coerced into giving consent, and the consent has been given freely and voluntarily.

Print Name of Researcher/person taking the consent_____

Signature of Researcher/ person taking the consent_____

Date:_____

MM/DD/YYYY

Appendix B

Validated Questionnaire

CENTRAL PHILIPPINE UNIVERSITY
Jaro, Iloilo City, Philippines
COLLEGE OF NURSING

Environmental Characteristics, Study Habits, and Academic Performance of Student Nurses in a Private University Questionnaire

Name (Optional):_____ Year &
Section:_____
Sex: Male ___ Female:___ Age:_____

Directions: For each statement in the survey, please indicate how much you agree or disagree with the statement by **putting a check in the box** on the right side of each statement. There are no right or wrong answers. Your answers will be kept **strictly confidential** and you will not be identified.

Scale: 5 - Strongly Agree *(Indicates that the characteristic is always manifested)*
4 - Agree *(Indicates that the characteristic is often manifested)*
3 - Neutral *(Indicates that the characteristic is sometimes manifested)*
2 - Disagree *(Indicates that the characteristic is seldom manifested)*
1 - Strongly Disagree *(Indicates that the characteristic is never manifested)*

Part I. Environmental Characteristics

A. Noise	**5 Strongly Agree**	**4 Agree**	**3 Neutral**	**2 Disagree**	**1 Strongly Disagree**
Excessive noise in the surroundings negatively affects my concentration while studying					
Background noise (e.g. soft instrumental music, white noise) helps me stay focused while studying.					

I actively seek out quiet places or study areas to avoid noise disturbances.					
I prefer studying in a quiet environment to minimize distractions.					

B. Temperature	**5 Strongly Agree**	**4 Agree**	**3 Neutral**	**2 Disagree**	**1 Strongly Disagree**
High temperatures in my study environment make it difficult for me to concentrate and focus on my studies.					
Cold temperatures in my study environment negatively affect my productivity and ability to study effectively.					
I prefer to study in a well-ventilated and temperature controlled space to optimize my learning experience.					
I find it challenging to concentrate and retain information when the temperature is too high or too low.					

C. Lighting	**5 Strongly Agree**	**4 Agree**	**3 Neutral**	**2 Disagree**	**1 Strongly Disagree**
Insufficient lighting in my study environment hinders my ability to concentrate and focus on my studies.					
The lighting in my study environment is adequate and					

allows me to read and study comfortably.					
Poor lighting conditions in my study environment strain my eyes and make it difficult to read and comprehend study materials.					
Adequate lighting in my study environment helps me stay alert, focused, engaged in my studies.					

D. Air Quality	**5 Strongly Agree**	**4 Agree**	**3 Neutral**	**2 Disagree**	**1 Strongly Disagree**
During my study time, I frequently encounter unpleasant or strong odors in the air and it affects my ability to concentrate and study effectively.					
The air quality in my surroundings is fresh and clean, allowing me to concentrate on my studies.					
I prefer to study outdoors with open air rather than indoors.					
I prefer to study indoors with air conditioning or an electric fan, rather than outdoors.					

E. Space or Location	**5 Strongly Agree**	**4 Agree**	**3 Neutral**	**2 Disagree**	**1 Strongly Disagree**
My study area for studying is conducive					

The study location provides easy access to the resources I need for my studies (books, materials, technology).					
My chosen study location offers adequate privacy for focused studying.					
I prefer studying in cafes and study hubs and be surrounded by people					

F. Internet Connection	**5 Strongly Agree**	**4 Agree**	**3 Neutral**	**2 Disagree**	**1 Strongly Disagree**
My internet connection allows me to access online resources and materials quickly.					
I experience frequent interruptions or disconnections while using the internet for studying.					
The quality of my internet connection affects my ability to conduct online research for my studies.					
My internet connection enables me to effectively collaborate with peers or participate in online learning activities					

Part II. Study Habits

A. Study Habits	**5 Strongly Agree**	**4 Agree**	**3 Neutral**	**2 Disagree**	**1 Strongly Disagree**

I do all my pending school activities and homework first before I can focus entirely on studying.					
I like to schedule my time for studying in advance to maximize my productivity.					
I actively participate in group discussions or study groups to exchange ideas and learn from my peers					
I prefer to passively read or listen to the study material without actively interacting or engaging with it.					
I would rather learn through visual aids such as diagrams, charts, and graphs than relying solely on written text.					
I find it helpful to learn through listening to recorded lectures or audio materials rather than relying solely on visual materials.					

Part 3: Academic Performance

GWA (General Weighted Average) for A.Y. 2022-2023 2nd Semester	

Appendix C

Certificates of Validation

Central Philippine University
College of Nursing
Jaro, Iloilo city

CERTIFICATION OF RESEARCH INSTRUMENT VALIDATION
(QUANTITATIVE RESEARCH)

This is to certify that the study entitled "Environmental Factors, Study Habits, And Academic Performance Of Student Nurses In A Private University", has undergone instrument validation. Necessary changes have been checked and approved.

This certification is issued upon the request of the authors: Joves, Hanna Alyssa, Jasa, Mary Louise, Jermia, Kiana Vren, Jimenez, Princess Aliha, Jolo, Alana Joy, and Jutare, Mark. As an expert of this subject, I have reviewed the instruments and its contents as to its appropriateness and accuracy based on the problem statement, objectives, conceptual framework, and operational definition of terms.

Issued this 15th day of June, 2023 to the above mentioned student researchers in compliance with their requirements in their research subject.

Respectfully,

WENI MARIE V. BRAZA, MAN
Validator
(Printed Name and Signature)

Central Philippine University
College of Nursing
Jaro, Iloilo city

CERTIFICATION OF RESEARCH INSTRUMENT VALIDATION
(QUANTITATIVE RESEARCH)

This is to certify that the study entitled "Environmental Factors, Study Habits, And Academic Performance Of Student Nurses In A Private University", has undergone instrument validation. Necessary changes have been checked and approved.

This certification is issued upon the request of the authors: Joves, Hanna Alyssa, Jasa, Mary Louise, Jermia, Kiana Vren, Jimenez, Princess Aliha, Jolo, Alana Joy, and Jutare, Mark. As an expert of this subject, I have reviewed the instruments and its contents as to its appropriateness and accuracy based on the problem statement, objectives, conceptual framework, and operational definition of terms.

Issued this 6th day of June, 2023 to the above mentioned student researchers in compliance with their requirements in their research subject.

Respectfully,

HERME A. BORLADO, MAN
Validator
(Printed Name and Signature)

Central Philippine University
College of Nursing
Jaro, Iloilo city

CERTIFICATION OF RESEARCH INSTRUMENT VALIDATION
(QUANTITATIVE RESEARCH)

This is to certify that the study entitled "Environmental Factors, Study Habits, And Academic Performance Of Student Nurses In A Private University", has undergone instrument validation. Necessary changes have been checked and approved.

This certification is issued upon the request of the authors: Joves, Hanna Alyssa, Jasa, Mary Louise, Jermia, Kiana Vren, Jimenez, Princess Aliha, Jolo, Alana Joy, and Jutare, Mark. As an expert of this subject, I have reviewed the instruments and its contents as to its appropriateness and accuracy based on the problem statement, objectives, conceptual framework, and operational definition of terms.

Issued this 7th day of June, 2023 to the above mentioned student researchers in compliance with their requirements in their research subject.

Respectfully,

LENA P GIRON, MAN
Validator
(Printed Name and Signature)

Appendix D

Ethical Clearance

RESEARCH ETHICS REVIEW BOARD
CENTRAL PHILIPPINE UNIVERSITY
Lopez Jaena St., Jaro, Iloilo City, Philippines
329-1971 to 79 local 3336

ETHICAL CLEARANCE

RERB Form No 22-2
Version No. 04
Date of Effectivity: 17 May 2023

Date of Approval: October 10, 2023

RERB Code: 2023-218-UG-JOVES et al.

Protocol Title: *"ENVIRONMENTAL FACTORS, STUDY HABITS, AND ACADEMIC PERFORMANCE OF STUDENT NURSES IN A PRIVATE UNIVERSITY"*

Version No. 04

Researcher/s: **JASA, MARY LOUISE H.**
JERMIA, KIANA VREN B.
JIMENEZ, PRINCESS ALIHA M.
JOLO, ALANA JOY C.
JOVES, HANNA ALYSSA G.
JUTARE, MARK H.

Upon resubmission of the following documents, Research Proposal Chapters 1, 2, and 3 with references and Informed Consent Form, the above protocol is hereby **APPROVED** by the CPU-RERB. This ethical clearance is valid from **October 10, 2023** to **October 10, 2024**

The researcher/s are hereby required to submit the following:

- √ Progress Report on or before **November 10, 2023** to researchethics@cpu.edu.ph
- √ Final Report Form and one (1) copy of the completed protocol **within one (1) month** after completion of the study.

For any amendment or alteration in the protocol that will change the nature, or the level of risk involved after approval, the Research Ethics Review Board must be notified through writing and accomplishing the following forms as needed: Protocol Deviation Form, Serious Adverse Events, Amendment Form, and/or Early Termination Report.

Very truly yours,

JOY G. RASO, PhD.
Chair, CPU-RERB

Date: 10/10/23

Appendix E

Certificate of Technical Review

Central Philippine University
Jaro, Iloilo City
College of Nursing
The First Nursing School in the Philippines, 1906
Bachelor of Science in Nursing

ENDORSEMENT SHEET FOR ETHICS REVIEW

(Technical Panel Approval Sheet)

This undergraduate thesis proposal entitled "**Environmental Factors, Study Habits, And Academic Performance of Student Nurses In A Private University",** prepared and submitted by **Mary Louise Jasa, Kiana Vren Jermia, Princess Aliha Jimenez, Alana Joy Jolo, Hanna Alyssa Joves, and Mark Jutare** in partial fulfillment of the requirements for the degree of BACHELOR OF SCIENCE IN NURSING, has been presented in a Proposal Review on **May 9, 2023**.

Further, the suggestions and recommendations of the technical panel have been complied with.

This proposal is now recommended for ethical review.

	ALVIN JOHN H. GUSTILO, MAN	
	Panelist	
	SARLA F. DULLER, PH.D	
	Panelist	
	Approved by:	
	MELBA C. SALE, MAN	
	Dean, College of Nursing	

Appendix F

Turnitin Similarity Certificate

REVIEW, CONTINUING EDUCATION and CONSULTANCY CENTER
Central Philippine University
Jaro, Iloilo City
Tel. No. 329-1971 local 1008 email: rcecesec@cpu.edu.ph
Website: rcecc.cpu.edu.ph

March 08, 2023

CERTIFICATION

This is to certify that the research proposal entitled **"ILOILO UNIVERSITY'S SECOND-YEAR NURSING STUDENTS' ENVIRONMENTAL FACTORS, STUDY HABITS, AND ACADEMIC PERFORMANCE"** by **Jasa, Mary Louise H., Jermia, Kiana Vren B., Jimenez, Princess Aliha M., Jolo, Alana Joy C., Joves, Hanna Alyssa G., Jutare, Mark H.** has undergone Turnitin Similarity Checking with a passing percentage of **19%** and have passed the requirements (Chapter 1-3).

Prepared by:

PINKY E. LUTERO-TONGOL
Staff -in-charged

Approved by:

LENNY ROSE P. MUCHO, EdD.
Director, RCECC

REVIEW, CONTINUING EDUCATION and CONSULTANCY CENTER
Central Philippine University
Jaro, Iloilo City
Tel. No. 329-1971 local 1008 email: rceccsec@cpu.edu.ph
Website: rcecc.cpu.edu.ph

May 24, 2024

CERTIFICATION

This is to certify that the paper entitled **"Environmental Characteristics, Study Habits, and Academic Performance of Student Nurses in A Private University"** by **Jasa, Mary Louise H., Jermia, Kiana Vren B., Jimenez, Princess Aliha M., Jolo, Alana Joy C., Joves, Hanna Alyssa G., and Jutare, Mark H.** had undergone Turnitin Similarity Checking with a passing percentage of **18%** and had passed the requirements (Chapter 1-5).

Prepared by:

PINKY LUTERO-TONGOL
Staff-in-Charge

Appendix G

Statistician's Certification

Central Philippine University
Jaro, Iloilo City

STATISTICIAN'S CERTIFICATION

This is to certify that this research study entitled, Environmental Factors, Study Habits and Academic Performance of Student Nurses in a Private University and submitted by Jasa, Mary Louise H.; Jermia, Kiana Vren B.; Jimenez, Princess Aliha M.; Jolo, Alana Joy C.; Joves, Hanna Alyssa G.; Jutare, Mark H.

For the degree of Bachelor of Science in Nursing is certified to have undergone statistical analysis and reviewed by the undersigned.

Issued this 23rd day of April 2024, Central Philippine University, Jaro, Iloilo City, Philippines.

Prof. Tony Ray Canaman
Statistician

Appendix H

Final Report Form

CENTRAL PHILIPPINE UNIVERSITY
RESEARCH ETHICS REVIEW BOARD
Lopez Jaena St., Jaro, Iloilo City, Philippines
329-1971 to 79 local 3336

FINAL REPORT FORM	RERB Form No. 13-1
	Version No. 01
	Date of Effectivity: 17 May 2023

INSTRUCTIONS TO THE RESEARCHER/s:
This form is required upon completion of the study. Obtain an electronic copy of this form and supply all information required in the space provided. This form shall be signed by the researcher and adviser before submission to researchethics@cpu.edu.ph

GENERAL INFORMATION

RERB Code	2023-218-UG-JOVES et al.	Date (DD/MM/YYYY)	7/16/2024
Protocol Title	Environmental Charactertistics, Study Habits, And Academic Performance Os Student Nurses At A Private University		
Principal Investigator/s	Jasa, Mary Louise H., Jermia, Kiana Vren B., Jimenez, Princess Aliha M., Jolo, Alana Joy C., Joves, Hanna Alyssa G., Jutare, Mark H.		
Department/College	College of Nursing		
Contact No.	09564015209	*Email Address	hannaalyssa.joves-20@cpu.edu.ph
Co-investigator/s (if any)			
Contact No.		Email Address	
Institution of Researcher/s	Central Philippine University		
Address of Institution	Jaro, Iloilo City		
Effective period of Ethical Clearance	From: October 10, 2023 To: October 10, 2024		
*(*for RERB)* Primary Reviewer/s			
Type of Study	☐ Clinical ☐ Epidemiology ☐ Observational study		
	☐ Document Review ☐ Individual based ☐ Genetic		
	☐ Social Survey ☒ Others, specify Descriptive Correlational		
Review Status	☐ Full Board ☐ Expedited		

FINAL REPORT

1. Start/end of the Study: September 2022 – April 2024
2. Number of enrolled participants: 150
3. Number of required participants:150
4. Number of participants who withdraw: 0
5. Deviations from the approved protocol:

6. Issues/problems encountered:

7. Summary of findings:
   1. The majority of student nurses strongly agreed (71.3%) in studying in a quiet environment to minimize distractions.
   2. The majority of student nurses strongly agreed (79.3%) that they preferred studying in well-ventilated and temperature-controlled spaces to enhance their learning experiences.
   3. The majority of student nurses strongly agreed (78.0%) that adequate lighting contributed to their alertness, focus, and engagement in studies, underscoring the importance of proper illumination for optimal learning experiences.
   4. The majority of student nurses strongly agreed (60%) that the quality of air in their surroundings significantly impacts their ability to concentrate on their studies.
   5. The majority of student nurses strongly agreed (56.7%) that their chosen study location provides them with sufficient privacy conducive to focused studying.
   6. The majority of student nurses strongly agreed (70.0%) that their internet connection allows them to access online resources and materials quickly.
   7. The majority of student nurses strongly agreed (44.0%) that as their study habit they prioritize completing pending school activities and homework before focusing entirely on studying.
   8. There is no association between the different environmental characteristics (noise, temperature, lighting, space or location, and internet connection) and academic performance of student nurses. With gamma values 0.54, -.025, 0.60, .242, -.046, -.063 respectively, these values fall in the range 0.00 to ±0.24 which interprets "No Association" and p values of .639, .827, .603, .684, .568, respectively, which are above .05 therefore, such variables have no significant relationship with the academic performance of student nurses.
   9. There is no association between environmental characteristics in terms of air quality and academic performance of student nurses. With the gamma value of .242, this value falls in the range 0.00 to ±0.24 which interprets "No Association" However its p value is .026 which is below 0.05 and is interpreted as significant, therefore this variable has a weak significant relationship with the academic performance of student nurses.
   10. There is no association between study habits and academic performance of student nurses. With a gamma value of -.005, this value falls in the range 0.00 to ±0.24 which interprets "No Association" and its p value is .963 which is above 0.05 Therefore, such variable has no significant relationship with the academic performance of student nurses.

8. Conclusions/Recommendations:

1. Student nurses in a private university are affected by the environmental factor: noise. There is an importance of maintaining optimal noise conditions in study environments to foster concentration, enhance focus, and ultimately improve holistic learning outcomes for student nurses.
2. Student nurses in a private university are affected by the environmental factor: temperature. Extreme temperatures, whether too hot or too cold, can impair concentration, increase fatigue, and reduce cognitive function, ultimately hindering the learning of student nurses.
3. Student nurses in a private university are affected by the environmental factor: lighting. Adequate lighting can enhance concentration, reduce eye strain, and promote a conducive learning environment for student nurses.
4. Student nurses in a private university are affected by the environmental factor: air quality. Air quality in the learning environment is crucial for creating a safe, healthy, and conducive space for student nurses to develop their learning and knowledge.
5. Student nurses in a private university are affected by the environmental factor: space or location a student is studying in. The space and ambiance of study areas play a significant role in shaping the learning experience and academic performance of student nurses.
6. Student nurses in a private university are affected by the environmental factor: internet connection. The accessibility and stability of internet connectivity are essential for facilitating effective learning experiences and academic success among student nurses.

7. Student nurses in a private university exhibit a common set of study habits that significantly impact their academic performance. These shared habits tend to yield remarkably consistent grades among the student body. This uniformity underscores the influence of study habits on academic performance.
8. Environmental characteristics (noise, temperature, lighting, space or location, and internet connection) have no influence in academic performance among student nurses as their grades remain consistently high and closely clustered together.
9. Environmental factor in terms of air quality has weak association with academic performance among student nurses, the statistical significance of the relationship suggests that air quality may still have some impact on academic outcomes. This finding underscores the importance of considering environmental characteristics, such as air quality, in educational settings, despite the relatively modest influence observed.
10. The study habits have no bearing on the academic performance among student nurses suggests that variations in study habits do not significantly impact their academic outcomes. Despite individual differences in study habits, student nurses exhibit a consistent pattern in their approaches to studying, as evidenced by the lack of significant correlation with academic performance.

Recommendations

Based on the findings and conclusions of this study, the following are the recommendations:

1. Despite the study not showing a significant influence of temperature on academic performance, the high agreement among respondents that students can study better in a well-controlled temperature room suggests the importance of providing adequate ventilation in universities. Therefore, it is recommended that universities prioritize ensuring optimal ventilation systems to create comfortable learning environments for students, which may indirectly contribute to their academic success.
2. Given the potential impact of air quality on academic performance compared to other characteristics, it is recommended that universities prioritize measures to improve indoor air quality in educational settings. This could include regular maintenance of ventilation systems, implementation of air purification systems, and promoting practices that reduce indoor air pollution, such as prohibiting smoking indoors and minimizing the use of volatile organic compounds.
3. Conduct longitudinal studies to track changes in environmental characteristics and academic performance over time among student nurses. Long-term data collection can provide valuable insights into the dynamic relationship between environmental characteristics and academic outcomes.
4. Replicate the study across various academic programs or institutions where students face significant challenges with their grades. This broader scope can provide insights into how environmental characteristics impact academic performance across different educational contexts, allowing for a more comprehensive understanding of the issue.
5. Combine quantitative analysis with qualitative methods such as interviews or focus groups to gain a deeper understanding of how environmental characteristics influence academic performance among student nurses. Qualitative data can provide valuable insights into students' perceptions and experiences.

9. Actions for dissemination of study results:

1. Publication in Peer-Reviewed Journals: The study results will be submitted for publication in reputable peer-reviewed journals related to nursing education and environmental psychology. This will ensure that the findings are accessible to academics, practitioners, and policymakers.
2. Workshops and Seminars: The researchers will organize workshops and seminars at the university and other educational institutions to discuss the findings and their implications for improving academic environments and study habits.
3. Online Platforms and Social Media: The results will be disseminated through the university's website, academic blogs, and social media platforms. This will help reach a wider audience, including students, educators, and the general public.
4. Follow-Up Studies: To further validate and expand upon the findings, the researchers plan to encourage other researchers to explore related topics.

Researcher/s:

MARY LOUISE H. JASA
Signature Over Printed Name

KIANA VREN B. JERMIA
Signature Over Printed Name

PRINCESS ALIHA M. JIMENEZ
Signature Over Printed Name

ALANA JOY C. JOLO
Signature Over Printed Name

HANNA ALYSSA G. JOVES
Signature Over Printed Name

MARK H. JUTARE
Signature Over Printed Name

Date: 7/16/2024

Adviser:

BETTY T. POLIDO, EdD
Signature Over Printed Name

Date: 7/16/2024

Appendix I

CURRICULUM VITAE

Overview
Name: Mary Louise H. Jasa
Address: Blk15 Lot4 Sta. Rosa North Subd., Cagamutan sur, Leganes, Iloilo
Age: 23 years old
Nationality: Filipino
Status: Single
Date of Birth: January 29, 2001
Mobile Number: 09216017775
Email Address: marylouise.jasa-20@cpu.edu.ph

Education

College
Bachelor of Science in Nursing
Central Philippine University
Jaro, Iloilo City

Senior High School
June 2020, with honors
West Visayas State University
Luna St. La Paz, Jaro, Iloilo City 5000 Philippines

Junior High School
March 2018,
Dance Awardee
West Visayas State University - Integrated Laboratory School
Luna St. La Paz, Jaro, Iloilo City 5000 Philippines

Elementary
March 2014,

West Visayas State University - Integrated Laboratory School
Luna St. La Paz, Jaro, Iloilo City 5000 Philippines

Relevant Experience

Conducted a study entitled: **Lemon Grass (Cympobogon) as a Mosquito repellant.**

Took units in Practical Research 1 - Senior High School at West Visayas State University, S.Y 2019-2020 1st semester.
Took units in Practical Research 2 - Senior High School at West Visayas State University conducted in Senior High School, S.Y 2019-2020 2nd semester.

Conducted a study entitled: **Molluscicidal Property of Leaf Extract of Solanum Melongena (Eggplant) on Pomacea Canaliculata (Golden Apple Snail).**

Research Adviser: Dr. Betty Polido

Education:

Relevant Experience:

CURRICULUM VITAE

Overview

Name: Kiana Vren B. Jermia
Address: Blk 22 Lot 8 Deca Homes Pavia Resort and Residences 2, Pavia, Iloilo
Age: 21 years old
Nationality: Filipino
Status: Single
Date of Birth: November 6, 2002
Mobile Number: 09274044388
Email Address: kianavren.jermia-20@cpu.edu.ph

Education

College
Bachelor of Science in Nursing
Central Philippine University
Jaro, Iloilo City, 5000, Philippines

Senior High School
June 2020, With High Honors, GWA: 95.00
University of Antique Tario-Lim Memorial Campus
Poblacion, Tibiao, Antique, 5707, Philippines

Junior High School
March 2018, With Honors, GWA: 94.00
University of Antique Tario-Lim Memorial Campus
Poblacion, Tibiao, Antique, 5707, Philippines

Elementary
March 2014
Malabor Baptist Christian Academy
Malabor, Tibiao, Antique, 5707, Philippines

Relevant Experience

Conducted a study entitled: **Medicinal and Food Usage of Macroscopic Fungi in Barangay Tuno, Tibiao and Barangay Capoyuan, Barbaza, Province of Antique, Philippines**

Took units in Practical Research 1 - Senior High School at University of Antique Tario-Lim Memorial Campus, 2019-2020 1st semester.
Took units in Practical Research 2 - Senior High School at University of Antique Tario-Lim Memorial Campus, S.Y 2019-2020 2nd semester.

Research Adviser:
Dr. Betty T. Polido

Education:

Relevant Experience:

CURRICULUM VITAE

Overview

Name: Princess Aliha M. Jimenez
Address: Brgy. Rizal Street Lapuz Sur, Iloilo City, Iloilo
Age: 22 years old
Nationality: Filipino
Status: Single
Date of Birth: November 25, 2001
Mobile Number: 09460819075
Email Address: princessaliha.jimenez-14@cpu.edu.ph

Education

Elementary
Year Graduated: 2014
Iloilo Central Elementary School General Luna, Iloilo City

Junior High School
Year Graduated: 2018
Central Philippine University Jaro, Iloilo City

Senior High School
Year Graduated: 2020
Central Philippine University Jaro, Iloilo City

College
Bachelor of Science in Nursing
Central Philippine University Jaro, Iloilo City

Relevant Experience

Conducted a study entitled: ***Choices of Music and Psychological Dispositions of Senior High School Students***

- Completed the Practical Research 1 course during the first semester of the 2018-2019 academic year. In the second semester of the same school year, I also took units in Practical Research 2 at Central Philippine University. Study was defended last 2019.

Conducted a study entitled: ***Termiticidal Activity of Rambutan (Nephelium lappaceum, Linnaeus, 1761) seed and bark extract against Asian Subterranean termites (Coptotermes gestroi, Wasmann, 1896), last March 2020***

- Completed the Practical Research 1 course during the first semester of the 2019-2020 academic year. In the second semester of the same school year, I also took units in Practical Research 2 at Central Philippine University. Study was defended last 2020.

Research Adviser: Dr. Betty Polido

Education:

Relevant Experience:

CURRICULUM VITAE

Overview

Name: Alana Joy C. Jolo
Address: Mabini St., Basa Mabini Bonifacio, Dumangas, Iloilo
Age: 23 years old
Nationality: Filipino
Status: Single
Date of Birth: March 21, 2001
Mobile Number: 09489504859
Email Address: alanajoy.jolo-20@cpu.edu.ph

Education

College
Bachelor of Science in Nursing
Central Philippine University
Jaro, Iloilo City

Senior High School
May 2020, with Honors
Dumangas National High School
Ilaya 1st, Dumangas, Iloilo, Philippines

Junior High School
March 2018, with High Honors
Dumangas National High School
Ilaya 1st, Dumangas, Iloilo, Philippines

Elementary
March 2014,
Dumangas Central Elementary School
Evangelista St. Dumangas, Iloilo, Philippines

Relevant Experience

Conducted a study entitled: ***Biodegradable Plastic from Squid Pens***

Took units in Practical Research 1 - Senior High School at Dumangas National High School, S.Y 2019-2020 1st semester.
Took units in Practical Research 2 - Senior High School at Dumangas National High School conducted in Senior High School, S.Y 2019-2020 2nd semester.

Conducted a study entitled: ***The Antibacterial Potential of Mimosa Pudica Linn Leaf Extract Against E. Coli and M. Luteus***

Research Adviser: Dr. Betty Polido

Education:

Relevant Experience:

CURRICULUM VITAE

Overview

Name: Hanna Alyssa G. Joves
Address: Sitio Mampay, East Valencia, Buenavista, Guimaras
Age: 22 years old
Nationality: Filipino
Status: Single
Date of Birth: December 4, 2001
Mobile Number: 09564015209
Email Address: hannaalyssa.joves-20@cpu.edu.ph

Education

College
Bachelor of Science in Nursing
Central Philippine University
Jaro, Iloilo City

Senior High School
June 2020, with Honors
Western Institute of Technology
Luna St. La Paz, Iloilo City

Junior High School
April 2018, with Honors
Buenavista National High School
New Poblacion, Buenavista, Guimaras

Elementary
March 2014,
East Valencia Elementary School
East Valencia, Buenavista, Guimaras

Relevant Experience

Conducted a study entitled: **Phytochemical Analysis of Crude Ethanolic Extract of Seaweed and Gotu Kola Leaves**

Took units in Practical Research 1 - Senior High School at Western Institute of Technology, S.Y 2019-2020 1st semester.
Took units in Practical Research 2 - Senior High School at Western Institute of Technology conducted in Senior High School, S.Y 2019-2020 2nd semester.

Conducted a study entitled: **A Comparative Study of Calamansi and Pomelo Fruit Extracts Exposed to UV Rays from Sunlight as Disinfectants to Contaminated Water**

Research Adviser: Dr. Betty Polido

Education:

Relevant Experience:

CURRICULUM VITAE

Overview

Name: Mark H. Jutare
Address: #31 Doña Luz Avenue, Don Francisco Village, Jaro, Iloilo City
Age: 22 years old
Nationality: Filipino
Status: Single
Date of Birth: October 31, 2001
Mobile Number: 09162787783
Email Address: mark.jutare-08@cpu.edu.ph

Education

College
Bachelor of Science in Nursing
Central Philippine University
Lopez Jaena St., Jaro, Iloilo City

Senior High School
June 2020, with high honors
Central Philippine University
Lopez Jaena St., Jaro, Iloilo City

Junior High School
March 2018, with high honors
Central Philippine University
Lopez Jaena St., Jaro, Iloilo City

Elementary
March 2014,
Central Philippine University
Lopez Jaena St., Jaro, Iloilo City

Relevant Experience

Conducted a study entitled: **Food Preparation, Handling, and Sanitary Practices Among Dr. Alfonso Uy Student Union Building Food Kiosk Occupants**

Took units in Practical Research 1 - Senior High School at Central Philippine University, S.Y 2019-2020 1st semester.
Took units in Practical Research 2 - Senior High School at Central Philippine University conducted in Senior High School, S.Y 2019-2020 2nd semester.

Research Adviser: Dr. Betty Polido

Education:

Relevant Experience: