



NURSING STUDENT'S PROFESSIONAL BEHAVIOR AND ACADEMIC ENGAGEMENT IN A NURSING SCHOOL IN TAGUM CITY

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Abstract: This study determined the nursing students' professional behavior and academic engagement in a nursing school in Tagum City. The research employed a quantitative, predictive correlational design and involved 172 second, third, and fourth-year nursing students selected through power analysis using simple random sampling. The modified questionnaires by Goz and Geckil (2010) and Lam and Jimerson (2008) were employed to measure professional behavior and academic engagement with a Cronbach Alpha result of 0.902 and 0.779, respectively. The nursing students' professional behavior showed that professionalism is very high, which means they show excellent professionalism. The level of academic engagement was also very high, which suggests that nursing students' academic engagement is outstanding. Hence, cognitive engagement has the highest mean among the indicators of academic engagement, and behavioral engagement has the lowest mean. Thus, nursing students show strong and consistent dedication to academic pursuits but must work to display proactive behavior in their participation. Moreover, a significant positive relationship exists between students' professional behavior and academic engagement. This means that the increase in students' professional behavior increases their academic engagement. Furthermore, the results show that nursing students' professional behavior significantly affects their academic engagement. Therefore, the importance of professionalism should be established in the clinical setting and academic endeavors.

Keywords: *Nursing Students' Professional Behavior and Academic Engagement, Social Sciences, Predictive-Correlational, Tagum City, Philippines*

INTRODUCTION

Understanding the influence of students' professional behavior and academic engagement is a cornerstone for shaping effective teaching strategies and fostering student success. Professional behavior, encompassing traits like responsibility, integrity, and communication skills, mirrors students' preparedness for future professional endeavors (Dwivedi et al., 2021). Understanding students' behavior can provide valuable insights into how school instructions and academic practices unfold (Schroder, (2023). Thus, the dynamic nature of professional behavior and academic engagement demands clear conceptualization to ensure accurate measurement and interpretation of data (Education, 2021).

A previous study in Malaysia found that to elevate students' engagement, active engagement in learning activities through multiple approaches in cognitive and social engagements is needed to obtain learning goals (Sukor et al., 2020). Besides, China also found that high psychological capital in college students could promote learning, overcome barriers, and facilitate future goal achievement and was significantly positively related to academic engagement (Wang, 2021). It is also mentioned that academic level and integrated classroom and clinical learning experiences positively impacted students' academic ethical awareness (Alnajjar, 2021). In addition, a review concluded in Thailand that strong evidence supports the addition of explicit learning in undergraduate education, which involves students in instruction obviously geared to examine and build professional ideals (Antoniou et al., 2022). Therefore, the more students are engaged and empowered within their learning community in the United States, the more likely they are to channel that energy back into their learning, leading to further engagement (Bond et al., 2020).

Professional behavior in the Philippine context develops a sense of resilience. Nursing students who lack resilience and struggle to cope with stress in academic and clinical settings have been identified as a high-risk group of healthcare workers (Diffley & Duddle, 2022). This can negatively impact future nurses' academic and clinical performance (Hanratty, 2023). Nursing schools experienced the meditating consequence of nursing student's professional behavior and academic engagement. Research studies proved that nursing students with stress-related health difficulties engage poorly in academic activities (Bansal et al., 2022).

More research is needed on the relationship between nursing students' professional behavior and academic engagement in the Davao region. Existing studies have explored the relationship between nursing students' engagement and satisfaction (Abdel-Azeem, 2021), self-efficacy, social support, college life adaptation, and academic achievement (Li et al., 2019), and student's attitude toward the nursing profession, achievement motivation, and academic performance (Ali, 2019). However, these studies specifically focus on something other than the Davao region. The existing body of literature often needs to elucidate how the experiences and practices in academic settings contribute to developing professional behaviors (Dash et al., 2019). Therefore, further research is needed to understand the relationship and influence of nursing students' professional behavior and academic engagement behavior (Ghasemi, 2020).

THEORETICAL FRAMEWORK

Social exchange theory (SET) is a theoretical context created by George C. Homans (1961) and most broadly developed by John W. Thibaut, Harold H. Kelly, Peter M. Blau, Richard M. Emerson, and Claude Lévi-Strauss. This concept offers an outline for understanding how people assess the costs and benefits of their relationships with others. It helps clarify why people initiate, uphold, or end relationships based on perceived recompenses and charges. As an outcome, it has been helpful across various fields, including communication studies, sociology, psychology, organizational behavior, and economics. Exploring the influence of students' professional behavior and academic engagement needs essential and nuanced operationalization.

In nursing educational settings, social exchange theory helps explain student engagement in academic activities such as attending classes, participating in discussions, completing assignments, and seeking assistance when needed. Additionally, the theory can illuminate the role of social support in academic success so that students who perceive supportive exchanges with teachers, classmates, and mentors are more likely to feel motivated, confident, and connected to their academic environment. In conclusion, social exchange theory underscores the importance of reciprocal relationships in professional and academic contexts. Nursing students engage in social exchanges with faculty, preceptors, peers, patients, and other healthcare professionals. Hence, it also helps explain nursing students' motivations, behaviors, and interactions in academic and clinical settings. By applying this theory in this study, nursing educators can create learning environments that promote professional development, academic success, and excellence in patient care.

Conceptual Framework

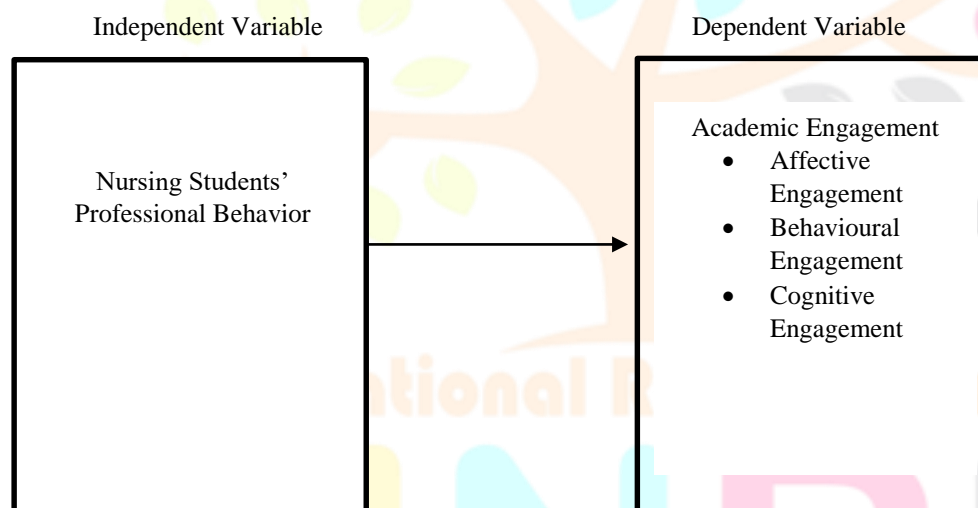


Figure 1. Conceptual Framework

It is projected that the idea of nursing student engagement in education includes the concepts of “professional engagement” and “academic and clinical engagement” (Valarmathi et al., 2024). Professionalism, a noteworthy objective for all professions, is necessary in health disciplines (Tahlil et al., 2020). Hence, professional behavior occurs in undergraduate education to create and develop a professional identity (Chowthi-Williams & Davis, 2022). The student's academic engagement is noticeable through any figure of cognitive, behavioral, and affective indicators across a curriculum. The further students are empowered and engaged in their educational community, the frequent they are to channel the energy they have back into their learning, leading to desirable and meaningful outcomes that can likewise further engagement (Bond et al., 2020). This research study investigates the relationship and influence of students' professional behavior and academic engagement on their educational outcomes through rigorous inquiry and thoughtful analysis.

Statement of the Problem

Nursing education is a demanding and rigorous process that exposes students to various stressors, potentially affecting their well-being and academic performance. This study wants to address this gap by exploring the relationship between nursing student's professional behavior and academic engagement with the following questions:

1. What is the level of the nursing students' professional behavior?
2. What is the level of the academic engagement of nursing students in terms of:
 - 2.1 Affective Engagement;
 - 2.2 Behavioral Engagement; and
 - 2.3. Cognitive Engagement?
3. Is there a significant relationship between the nursing students' professional behavior and academic engagement?
4. Does nursing students' professional behavior influence their academic engagement?

RESEARCH METHODOLOGY

Design

This study utilized quantitative, predictive, and correlational design. Quantitative research is used when researchers aim to collect and analyze numerical data to appreciate, define, or predict phenomena. It is appropriate for this study because the researcher needs to measure and calculate specific variables, such as the attitudes or behaviors of the nursing students (Smith, 2020). Predictive design involves using statistical algorithms and device learning methods to analyze past data and generalize predictions about forthcoming events or trends (Doleck et al., 2020). The relationships between nursing students' professional behavior and academic engagement were written as a measured equation that can assist foresee the result if one variable change. The analysis will prove the hypotheses of this study. The correlational design investigates the relationship between two or more variables without manipulating or controlling any of them (Vos, 2023). Since this design does not simply manipulate any variables, it focuses on describing the nature and strength of the relationship between Nursing Students' Professional Behavior and Academic Engagement.

Quantitative, predictive, and correlational designs offered complementary approaches to investigating the relationship between nursing students' professional behavior and academic engagement. By leveraging the strengths of each design, the researcher increased a complete understanding of the aspects influencing academic outcomes among nursing students and informed evidence-based interventions to support their success in academic and professional endeavors.

Setting

This study was conducted in one of the prestigious schools on Daang Maharlika Highway, Tagum City, Davao del Norte, Philippines. The chosen environment is a private educational facility that provides the Bachelor of Science in Nursing degree. It is committed to fostering excellence in nursing education, research, and practice. This nursing school has a dedicated and diverse faculty of experienced clinicians, researchers, and educators who can bring real-world expertise to the classroom.

The Philippines is situated on the eastern rim of Southeast Asia in the Asiatic Mediterranean. Manila is the capital and main port of entry. The three major island groups are Luzon in the north, Visayas in the center, and Mindanao in the south. Mindanao is the second-largest island in the Philippines, with a population of 26,252,442 people, according to the 2021 census.

Mindanao is divided into six administrative regions: the Zamboanga Peninsula, Northern Mindanao, the Caraga Region, the Davao Region, Soccsksargen, and the autonomous region of Bangsamoro. Davao City is the most populous city on the island, with 1,776,949 people, such as Zamboanga City, Cagayan de Oro, General Santos, Butuan, Iligan, and Cotabato City. Tagum, officially the City of Tagum, is a 1st class component city and capital of the Davao del Norte, Philippines, belonging to the Davao Region. It is one of the most habitable cities in the Philippines. It is composed of 23 barangays namely Apokon, Bincungan, Busaon, Canocotan, Cuambogan, La Filipina, Liboganon, Madaum, Magdum, Magugpo Poblacion, Magugpo East, Magugpo North, Magugpo South, Magugpo West, Mankilam, New Balamban, Nueva Fuerza, Pagsabangan, Pandapan, San Agustin, San Isidro, San Sonit, and Visayan Village.

Saint Mary's College Tagum City is located in the heart of Tagum City, Philippines. Specifically, it is situated along Pioneer Avenue, Barangay Magugpo West. The college's location offers several advantages to its students and faculty. Located centrally in Tagum City, it provides easy access to various amenities and transportation. This fosters a dynamic learning environment and promotes collaboration and networking opportunities among students and educators.

Participants

The statistical method that was utilized is power analysis. It is used to determine the sample size required for a study to detect a statistically significant effect, given a specific power and significance level. The researcher started by defining the parameters, precisely the significant level of the null hypothesis, which was set at 0.05. After this, an appropriate statistical test based on the research question and study design was chosen. Subsequently, G*Power was used for power analysis. The results then yielded how many respondents desired to detect a significant effect, given the effect size and desired power level. Power analysis also demonstrates that the study has sufficient statistical power to detect meaningful effects. In this study, the result can draw convincing conclusions from nonsignificant to significant results. However, more importantly, it helped ensure that the study is ethically conducted by minimizing the risk of underpowered studies that may expose participants to unnecessary risks and the respondents for a study detect meaningful effects, optimizes resource allocation, assesses feasibility, improves the precision of estimates, and upholds ethical considerations in research conduct.

The respondents of the study were identified through simple random sampling from the enrolled second-year, third-year, and fourth-year nursing students of a private educational institution in Tagum City that provides the degree of Bachelor of Science in Nursing the academic year 2023-2024 with a total population of three hundred-eighty students. The Pilot Test was conducted on thirty respondents. The total sample population of the nursing students was one hundred seventy-two, eighty-six from the second year, forty-four from the third year, and forty-two from the fourth year, respectively. One hundred eleven female and sixty-one male nursing students participated in the study.

Measures

The study used a modified questionnaire Nursing Students Professional Behaviors Scale (NSPBS) for professional behavior by Goz and Geckil (2010) and The Student Engagement in the Schools Questionnaire-Engagement Composite (SESQ-ENG) by Lam and Jimerson (2008).

Many experts have considered the NSPBS as a measuring tool that has high validity and reliability for the professional behaviors of nursing students. This comprises twenty-seven (27) statements that evaluate the students' professional behaviors during their education. The reliability was tested using Cronbach's Alpha and Composite Reliability (CR) for the three latent constructs that are fit. The Cronbach's Alpha of all latent constructs was above 0.80. So, the findings revealed that the reliability and internal consistency reliability indicators were adequate. Then, the validity was tested using convergent validity and discriminant validity. Average Variance Extracted (AVE) showed the convergent validity of the three latent constructs. Then, discriminant validity used the Fornell-Larcker criterion and cross-loadings. The findings indicate that the discriminant validity was well established, as it fulfills the Fornell-Larcker criterion. Furthermore, all correlations among the variables were significant.

This part was tested for reliability by three experts to confirm that the statements are valid and possessed consistency of items. The 27-item questionnaire on Nursing Student's Professional Behavior Assessment has an acceptable level of content validity since the value of $S-CVI/UA = 1.00$ is based on the overall agreement of three (3) content experts. In addition, the I-CVI value of all the items is 1.00, which indicates that all items are relevant, fit, and appropriate. A 5-point Likert gauge was used as the parameter measurement and interpretation, ranging from 1 for "very poor" to 5 for "excellent." The five orderable progressions with their respective range of mean, description, and interpretation are presented below:

Range of Means	Description	Interpretation
4.21-5.00	Very High	This means that the demonstrated professional behavior of the nursing student is excellent.
3.21-4.20	High	This means that the demonstrated professional behavior of the nursing student is good.
2.61-3.20	High Moderate	This means that the demonstrated professional behavior of the nursing student is fair.
1.81-2.60	Low	This means that the demonstrated professional behavior of the nursing student could be improved.
1.00-1.80	Very Low	This means that the demonstrated professional behavior of the nursing student is very poor.

Student Engagement in the Schools Questionnaire-Engagement Composite (SESQ-ENG) tool aims to assess and quantify engagement levels, a crucial aspect of the educational experience. To fill this need for a comprehensive instrument, the SESQ-ENG underwent reliability and validity testing with Cronbach's coefficient alpha (Kamis & Lynch, 2020). The Alpha is the ratio between the Variance of the actual scores and the observed scores, resulting in an interpretation that the higher the reliability, the closer the actual scores will be to the observed scores (Kamis & Lynch, 2020). The literature proves a range of adequate alpha levels from $.60 < \alpha < .90$ (Kamis & Lynch, 2020). The Acceptable coefficients for this study were set at $\alpha > .70$. The domains of the SESQ established good reliability, having the estimate range from $.65 < \alpha < .95$ for the SESQ.

The 33-item questionnaire was tested for reliability to ensure that the questions were valid and that the items were consistent. The result on Academic Engagement has an acceptable level of content validity since the value of $S-CVI/UA = 1.00$ is based on the overall agreement of three (3) content experts. It also shows that the three content experts agree on all the items of its sub-constructs (Affective, Behavioral, and Cognitive) since each sub-construct has an $S-CVI/UA$ value of 1.00. In addition, the I-CVI value of all the items is 1.00, which indicates that all items are relevant and appropriate.

SESQ-ENG has thirty-three (33) statements, and the second part of the questionnaire will evaluate student engagement according to affective, behavioral, and cognitive domains. The three indicators were divided into the following order: nine statements for affective engagement, another sixteen statements for behavioral engagement, and another eight for cognitive engagement. The parameter was measured and interpreted in a 5-point Likert gauge ranging from 1 for "poor" to 5 for "outstanding." The five orderable progressions with their respective range of mean, description, and interpretation are presented below:

Range of Means	Description	Interpretation
4.21-5.00	Very High	This means that the academic engagement of the nursing student is outstanding.
3.21-4.20	High	This means that the academic engagement of the nursing student is good.
2.61-3.20	Moderate	This means that the academic engagement of the nursing student is fair.
1.81-2.60	Low	This means that the academic engagement of the nursing student is poor.
1.00-1.80	Very Low	This means that the academic engagement of the nursing student is very poor.

Ethical Consideration

Social Value. The study aims to determine the relationship between nursing students' professional behavior and academic engagement in Tagum City. Furthermore, this will determine whether nursing students' professional behavior significantly influences their academic engagement. The results of this study will provide knowledge on people with the utmost concern regarding nursing students' professional behavior and academic engagement with their demographic profiles. The research results will also be disseminated to the community, specifically to those who will benefit the most.

Voluntary Participation. The respondents' participation in this study is voluntary. They have the right to refuse to participate if they do not feel comfortable in any way. Moreover, even if they initially decided to participate, they can withdraw from the study without penalty. If the respondents withdraw from the study, all information they have provided will not be included in the data collected.

Privacy and Confidentiality. In gathering, retaining, and processing personal data, researchers followed the criteria of transparency, legitimate purpose, and proportionality (Data Privacy Act of 2012). In terms of privacy and confidentiality, the respondents will be given the freedom to stay anonymous. Even if the respondents indicate their names and other identifying information, it will not be associated with any part of the written report of the research. The data that will be gathered in this study will be kept confidential.

If, in the future, this research study is published, any information indicated in the material will not reveal the respondent's identity in any way. Moreover, the researcher will only accept people connected with the study who will ask for any information

about the data gathered. The entire data collected will be kept strictly confidential and accessible only to the researchers. After the study, the participants may receive a copy of the results if they ask for it. Lastly, all the raw data will be disposed of after the study.

Procedures

The researcher observed the following step-by-step process in conducting this quantitative descriptive correlational study:

1. The pre-procedure phase involved careful planning, preparation, and consideration of various factors that shaped the direction of the study. It started by identifying the research title, objectives, and questions. After the adviser accepted the proposed title, the research objectives were clearly defined, and the research questions were formulated. This was followed by a comprehensive review of existing literature, which was important for finding gaps in the understanding and knowledge in the current state of research in this field, and informing the study's theoretical framework. After this, the researcher formulated hypotheses based on the research objectives and literature review. These hypotheses articulate the specific relationships and influence of nursing students' professional behavior and academic engagement, tested empirically. Consequently, the following were selected to help answer the research gap: design - descriptive correlational; setting – a prestigious nursing school in Tagum City; participants – the total respondents from second, third-, and fourth-year nursing students were one hundred seventy-two and are enrolled in the second semester of academic year 2023-2024; Research instrument – adapted questionnaire by Goz and Geckil, 2010 titled Nursing Students Professional Behaviors Scale (NSPBS) and The Student Engagement in the Schools Questionnaire-Engagement Composite (SESQ-ENG) by Lam and Jimerson, 2008; and the for data analysis – solving for the mean and standard deviation, Spearman-Rho, and Kernel regression. The panelists successfully presented and accepted the proposal; thus, the researcher obtained ethical approval from the ethics committee of Davao Doctors College and the participating institution. Simultaneously, the adapted questionnaire was subjected to a reliability and validity test. The result was acceptable. As a result, a pilot test for the instrument was conducted.

2. Thirty respondents participated in the pilot testing. After the pilot testing was accepted, the researcher secured enough questionnaires and conducted the data gathering face-to-face during the allotted time by the Program Head of the Nursing Department. The study lasted for two consecutive weeks following the protocol of the participating institution. For the safety of the respondents and the researcher, an informed consent was distributed and explained. After, the results of the questionnaire were secured and kept confidential. All data were treated using an expert statistician's statistical method. Subsequently, after the researcher interpreted and report findings in a comprehensive research manuscript.

3. The manuscript was presented to four distinguished experts and was accepted. Hence, this research output is readily available for future use.

Data Analysis

Mean. Mean represents the average value of a set of data. It is calculated by summing the values of all data points and dividing by the total number of data points. It measures central tendency, indicating the "typical" value within the dataset (Fabián, 2019).

Standard Deviation (SD). Standard Deviation (SD) measures the spread or dispersion of data points around the mean. Higher SD standards indicate data with more significant inconsistency, while lower SD values designate data with less inconsistency (Peach, 2019).

Analyzing survey responses by calculating the mean score on a nursing professional behavior scale and the SD will clarify the distribution of opinions. Examining the scale in academic engagement will determine the average of a group of students and the SD to assess the variability in academic achievement (Pallant, 2020).

The relationship between mean and SD is that they are complementary measures to solve the problem statement of the nursing student's professional behavior and the level of academic engagement. Together, they provide an all-inclusive picture of the data distribution. Knowing the mean and SD allows for more informed interpretations and comparisons of data sets. By considering and using the mean and SD effectively, the researcher can increase valuable understandings into the characteristics of the data and draw meaningful conclusions from this quantitative research about the level of nursing students' professional behavior and the level of nursing students in their academic engagement.

Spearman-Rho. Spearman's Rho is used to understand the strength of the relationship between two variables. The variables of interest can be continuous or ordinal and should have a monotonic relationship (Xu et al., 2019)

This study best applies Spearman-Rho since it aims to determine the relationship between two variables. The analysis will have a correlation coefficient ("Rho") and a p-value. Rho values range from -1 to 1. A negative r value indicates that the variables are inversely related; when one variable decreases, the other increases. On the other hand, values that are positive indicate that when one variable increases, so the other values follow.

The p-value signifies the chance of finding results relationships between variables. A p-value more than or equal to 0.05 means that the result is statistically insignificant, and that the difference is not due to chance alone.

Kernel regression. Kernel regression is a nonparametric method for estimating the restricted anticipation of a random variable. The objective is to determine a nonlinear association amid a couple of random variables, X and Y, showing that the conditional expectation of a variable is relative to another variable (Zhou & Peng, 2020).

In this study, Kernel Regression is helpful because the objective is to evaluate the relationship between one or more independent variables and a dependent variable using a kernel function. This provides a flexible and data-driven approach for exploring the influence of professionalism on academic engagement, allowing researchers to uncover patterns and relationships in the data without imposing strict assumptions about the underlying functional form of the relationship.

Scope and Limitation of the Study

This quantitative study investigated the correlation between nursing students' professional behavior and academic engagement within a nursing education program. The study utilized quantitative predictive correlational research methods and likely employed a modified questionnaire. The Nursing Students Professional Behaviors Scale (NSPBS) by Goz and Geckil (2010) and The Student Engagement in the Schools Questionnaire-Engagement Composite (SESQ-ENG) by Lam and Jimerson (2008) were utilized to gather data on both professional behavior and academic engagement. Statistical investigates, like finding the mean and

standard deviation, Spearman Rho, and Kernel regression, were used to explore the level of nursing students' professional behavior, the level of nursing students' academic engagement, relationship between professional behavior and academic engagement, and the influence of professional behavior in their academic engagement.

This study was completed with the voluntary participation of the respondents from a private institution in Tagum City, Davao del Norte, that offers a Bachelor of Science in Nursing degree. The respondents who were enrolled second-year, third-year, and fourth-year nursing students during the second semester of the school year 2023-2024, answered the modified questionnaires during the month of April and May of 2024. The duration of the study was during the second semester of the academic year.

The study was limited to a specific nursing education institution and that restrict the generalizability of findings to other contexts. The research design used quantitative, predictive, and correlational, which may need to be revised and to establish causality between professional behavior and academic engagement. In addition, the data analysis was limited to finding the mean, SD, using Spearman-rho, and Kernel regression. Findings from this study aim to provide insights into the factors influencing nursing students' academic success and professional development, potentially informing strategies for curriculum improvement and educational interventions.

RESULTS AND DISCUSSION

This section presents the study's results tabularly, along with a detailed explanation of their implications, which draws conclusions from the data analysis related to the research questions.

1. What is the level of the nursing student's professional behavior?

Table 1. The Level of Nursing Students' Professional Behavior

	N	Mean	Std. Dev.	Description
Level of Nursing Students' Professional Beh	172	4.67	0.26	Very High

Legend: 1.00-1.80—Very Low; 1.81-2.60—Low; 2.61-3.40—Moderate; 3.41-4.20—High; 4.21-5.00—Very High.

Table 1 shows the level of nursing student's professional behavior. Results show that the demonstration of professional behavior among nursing students is excellent. The overall mean result for the level of nursing students' professional behavior is 4.67, which indicates a descriptive equivalent of very high. Moreover, the value of the standard deviation is 0.26, which indicates that, in general, the responses of nursing students toward professional behavior are similar.

The item "I establish relations with health team members without discrimination" got the highest mean of 5.00, and the standard deviation was 0. The descriptive equivalent is very high. The items "I report unethical practices" and "I keep caretaking and treatment records accurately and completely" have mean results of 4.50 and a standard deviation of 0.58. Although these two got the lowest SD, it has the descriptive equivalent of very high.

The very high mean in this study of professional behavior suggests that the majority of participants in the study exhibit behaviors that align closely with what is considered professional or appropriate within a particular context. This indicates that nursing students are confident, excellent in professional behavior, and most likely confident in situations that demand professionalism (Makarem et al., 2019). Therefore, the requirement to assess professional behavior in nursing is both objective and subjective. Such involvement can meaningfully contribute to the progress of professional behavior among nursing students (Tomas et al., 2021). On the other hand, nursing students' self-reported professional behavior was high, scoring a relatively high mean, which specifies a strong commonness of positive professional behaviors among the individuals being studied (Poorchangizi, 2019).

2. What is the level of the academic engagement of nursing students in terms of affective engagement, behavioral engagement, and cognitive engagement?

Table 2. The Level of Nursing Students' Academic Engagement

Indicators	Mean	Std. Dev.	Description
Affective Engagement	4.23	0.26	Very High
Behavioral Engagement	4.15	0.25	Very High
Cognitive Engagement	4.59	0.30	Very High
Overall	4.32	0.21	Very High

Legend: 1.00-1.80—Very Low; 1.81-2.60—Low; 2.61-3.40—Moderate; 3.41-4.20—High; 4.21-5.00—Very High.

Table 2 displays the students' academic engagement level, including three indicators: affective, behavioral, and cognitive engagement. The overall results for academic engagement imply that the nursing students from second-year, third-year, and fourth-year levels exhibit a very high descriptive equivalent, meaning they have an outstanding level of academic engagement. Among the three indicators, cognitive and affective engagement got the highest mean of 4.59, followed by affective engagement with 4.23, and behavioral engagement got the lowest mean of 4.15. The grand mean of 4.32, coupled with a standard deviation of 0.21, signifies a notably high level of academic engagement among the participants in the study. These findings infer a descriptive equivalent of "very high" in academic engagement, indicating the sampled population's solid and consistent dedication to their academic pursuits. However, there is a need for improvement in the behavioral attributes of nursing students.

The grand mean is 4.32, and the standard deviation is 0.21, which has the descriptive equivalent of being very high. The result implies that nursing students' academic engagement is outstanding in all aspects of their learning process. This further means that the students actively participate, think critically, and display positive attitudes towards their studies. Additionally, these three indicators will support the holistic development of the student.

The three indicators of student engagement (cognitive, behavioral, and affective) were correlated to the student's academic performance, and it was determined that the more engaged students demonstrated higher academic achievement (Delfino, 2019). Furthermore, it was proposed that students who demonstrated greater engagement would also be more likely to attain academic

success (Gutiérrez & Tomás, 2019). Therefore, cognitive, behavioral, and emotional engagements predicted academic achievement and increased student involvement and engagement (Fredricks et al., 2019). The level of academic engagement of nursing students in terms of affective engagement has the following results: the item "I like my school" has the highest mean of 4.94 and standard deviation of 0.23, with the descriptive equivalent of very high. This result, with a very high mean in the affective indicator, suggests that participants exhibit strong positive emotions, attitudes, and feelings toward their academic experiences. This manifests enthusiasm for learning, a sense of enjoyment or satisfaction in the learning process, a positive attitude toward school and academic tasks, and a feeling of connection or belonging to the academic community (Poorchangizi, 2019). The outcome suggests that encouraging favorable emotions in students poses a significant challenge for principals, teachers, and parents to build professionalism and academic engagement, which may lead to higher academic performance (Carmona-Halty, 2021). Thus, learning is practical if students are highly motivated and supported, and vice versa (Delfino, 2019).

Meanwhile, the item "Learning I think is boring" has a mean of 1.17 and a standard deviation of 0.38, yielding a particularly noteworthy result with a very low descriptive equivalent. The mean score strongly disagrees with the notion that learning is boring, suggesting that most nursing students find their academic pursuits engaging, interesting, and meaningful (Ghasemi et al., 2020). This finding is further emphasized by the very low standard deviation of 0.38, indicating a high consensus among students regarding their attitude toward learning (Putri, 2023). In other words, there is minimal variability in students' responses to this item, with the vast majority expressing a consistent sentiment of enthusiasm and active engagement with their studies (Chen & Zhang, 2023).

In conclusion, the overall mean result is 4.23 with a standard deviation of 0.26, indicating that affective engagement is outstanding during academic and extracurricular activities. This result underscores the positive and motivated mindset prevalent among nursing students toward their academic endeavors within the behavioral domain, reveals a complex picture (Putri, 2023), emphasizes the role of individual differences in motivation, suggesting that coercion and pressure can sometimes be counterproductive (Saeedi, 2019).

The next indicator, behavioral engagement, has the following results: The item "If I have trouble understanding a problem, I go over it again until I understand it" has the highest mean of 4.65 and standard deviation of 0.48 with a descriptive equivalent of very high. The high mean result shows that respondents demonstrate active behaviors and substantial involvement in academic and extracurricular activities.

Consequently, the item "When I am in class, my mind wanders" has the lowest mean of 1.4 and a standard deviation of 0.35, yielding firm agreement among respondents regarding their focus and attention during classroom activities. The mean score implies a high degree of disagreement with the statement, indicating that most participants rarely experience their minds wandering while in class. They generally maintain high attentiveness and engagement with the course material and discussions, minimizing distractions and external thoughts during class time.

Academic engagement that can be observed is used to quantify positive behavioral engagement, such as participation in class discussions, participation in extracurricular and academic activities, time spent working, and persistency and resiliency when presented with complex tasks. Therefore, behaviorally engaged students display proactive behaviors by participating in campus life and extracurricular civic engagement activities (Klem & Connell, 2020). Positive behaviors like interacting and acting on circumstances were categorized as learning-oriented. Other examples of positive behaviors in learning included producing regular output and repeating practices (Baldwin, 2019). On the other hand, another study conducted explored the importance of hand-raising behavior as an observable indicator of behavior engagement related to academic achievement. This means that the more frequently one raises their hand, the higher the possibility of gaining an impressive academic result (Seidel, 2020).

Lastly, the level of academic engagement in terms of cognitive engagement has a very high result. Cognitive engagement is the students' investment and interest in their education, drive to study, and usage of self-regulated learning techniques, which are all examples of cognitive engagement. The degree of students' cognitive engagement affects their academic and behavioral engagement; more cognitively engaged students are more likely to attend class consistently, complete their assigned work, receive credits, and succeed academically (Fredricks et al., 2019). Moreover, students actively engage with their course materials, making better learning gains than passively engaged students. It is frequently stated that a crucial aspect of an educational experience is cognitive engagement. Mainly, there is a need to measure and assess engagement in ways that give teachers the knowledge they need to implement specific, feasible actions to encourage students' cognitive involvement (Barlow et al., 2020).

Consequently, these are the following results: The item "I try to think through topics and decide what I intended to derive knowledge from these experiences, instead of simply reviewing the subjects." has a mean of 4.67 and a standard deviation of 0.47 with a descriptive equivalent of very high. A very high mean in this study of the level of academic engagement in terms of the cognitive indicator suggests that participants prove consistent mental involvement, reliable intellectual interactions, and active thinking processes with academic content and learning experiences. This further explains that participants actively engage with academic content through reading, writing, problem-solving, discussion, and hands-on exploration.

Meanwhile, the item "When learning things for school, I often try to associate them with what I learned in other classes about the same or similar things" has a mean of 4.47 and a standard deviation of 0.56 with a descriptive equivalent of very high. This infers that those respondents who engage in reflective practices, self-assessment, and self-regulation to monitor and adjust their learning strategies and behaviors lead to a more effective learning outcome. Most notably, respondents demonstrate the ability to apply their knowledge and understanding to real-world contexts, demonstrating transferable skills and competencies.

3. Is there a significant relationship between the nursing student's professional behavior and academic engagement?

Table 3. Relationship between the level of Professional Behavior and Academic Engagement among Nursing Students

Variables	N	ρ	p-value	Decision	Interpretation
Nursing Professional Behavior and Academic Engagement	172	0.241	0.001	Reject H_0	Significant

Legend: $p < 0.05$ (Sig), $\rho = \text{spearman-rho}$, DV = Academic Engagement

Table 3 shows a positive significant relationship between students' professional behavior and academic engagement since $r=0.241$, $p\text{-value} < 0.001$. This means that as students' professional behavior increases, their academic engagement increases, and

vice versa. Hence, the null hypothesis is rejected. Therefore, a significant relationship exists between nursing students' professional behavior and academic engagement.

Analogous research focused on one of students' professional behaviors: being proactive. A proactive personality gives students strong competitiveness in academic learning (Li et al., 2019). A current study investigating the relationship between proactive personality and academic engagement showed a significant positive relationship between upbeat personality and academic engagement (Chen et al., 2021). Hence, academic self-efficacy and teacher-student relationships were found to mediate separately proactive personality and academic engagement. Moreover, the successive mediator model specified that proactive personality was sequentially related to academic engagement through self-efficacy and teacher-student relationships (Gutiérrez & Tomás, 2019).

4. Does nursing student's professional behavior influence their academic engagement?

Table 4. Significant Influence of the Level of Professional Behavior on Academic Engagement among Nursing Students

		Observed Estimate	Bootstrap SE	Z	p-value	Decision	Remarks
Mean	NSPB	4.318	0.017	254.56	0.000		
Effect	AE	0.222	0.076	2.92	0.003	Reject H ₀	Significant

: $p - val < 0.05$ (Sig), $R^2 = 0.1669$, $IV=NSPB$, $DV=AE$

Table 4 shows the significant influence of nursing students' professional behavior ($p=0.003$) on academic engagement. The observed estimate of 0.222 implies that an increase in nursing students' professional behavior would yield an increase in academic engagement. Moreover, the R^2 value of 0.1669 indicates that students' professional behavior can explain 83.31% of the variance in students' academic engagement level. The remaining 16.69% can be explained by other factors not mentioned in this study.

The dependent variable, Academic Engagement, was regressed using Nursing Students' Professional Behavior as the independent variable. The independent variable significantly predicts Academic Engagement, $F(1,170) = 12.971$, $p\text{-value} < 0.001$ which indicates that nursing students' professional behavior significantly affects academic engagement. Moreover, $R^2 = 0.071$ indicates that the model explains 7.1% of the variance in academic engagement.

Additionally, coefficients were assessed to measure the influence of Nursing Students' Professional Behavior on the dependent variable. The results revealed that it significantly and positively impacts academic engagement ($B=0.218$, $SE=0.060$, $t=3.601$, $p\text{-value} < 0.001$). Hence, the null hypothesis was rejected. Therefore, nursing students' professional behavior influences their academic engagement.

Significant associations between students' engagement, facilitating conditions, and motivation significantly affect academic achievement (Bayoumy, 2021). Therefore, understanding nursing students' professional values and ethical ideologies is essential as they may help inform evidence-informed curriculum decisions and education strategies to develop students' professional reflective competencies (Zhang, 2023). Therefore, professional values were significantly associated with ethical idealism. Nursing education is a transformative journey that prepares students to make a meaningful difference in the lives of others. It instills in them a sense of purpose, a commitment to excellence, and a passion for serving others (Tsimane & Downir, 2023). Thus, the holistic approach to nursing education ensures that future nurses are proficient in clinical skills and embody values essential for providing quality and ethical care to diverse populations (Giddens & Mansfield, 2023).

SUMMARY, CONCLUSION, AND RECOMMENDATIONS

The summary, conclusion, and recommendations provide a holistic understanding of its contributions and future directions. This document aims to encapsulate these critical elements of the study, offering a comprehensive overview for both seasoned researchers and those new to the topic.

Summary

This quantitative descriptive-correlational study investigated the relationship between nursing students' professional behavior and academic engagement within a nursing school in Tagum City. The study employed a modified questionnaire from Goz and Geckil (2010) for professional behavior and Lam and Jimerson (2008) for academic engagement, with Cronbach Alpha results of 0.902 and 0.779, respectively. The respondents were selected utilizing power analysis through simple random sampling. One hundred seventy-two enrolled second, third, and fourth-year nursing students voluntarily participated in the study, which lasted from April to May 2024.

Summary of Findings

The study's conclusions are based on the collected, examined, and evaluated data and include the following:

1. The level of nursing student's professional behavior results showed that the demonstration of professional behavior among the nursing students is excellent. The mean result for students' professional behavior is 4.67 with a standard deviation of 0.26, which indicates that professionalism is shown at a very high level during the performance of nursing practice and the interaction with the other healthcare members. Overall, the descriptive interpretation of the items was very high.

2. The results for the level of academic engagement imply that the nursing students exhibit a very high descriptive equivalent. Among the three indicators, cognitive-affective engagement got the highest mean of 4.59, followed by affective engagement with a mean of 4.23, and behavioral engagement got the lowest mean of 4.15. The grand mean is 4.32, and the standard deviation is 0.21, which has the descriptive equivalent of very high. The result implies that nursing students' academic engagement is outstanding in all aspects of the learning process.

3. There is a positive significant relationship between students' professional behavior and academic engagement since $r=0.267$, $p\text{-value} < 0.001$. This means that as students' professional behavior increases, their academic engagement increases.

4. Finally, the dependent variable, Academic Engagement, was regressed using Nursing Students' Professional Behavior as the independent variable. The independent variable significantly predicts Academic Engagement, $F(1,170) = 12.971$, $p\text{-value} < 0.001$.

value= <0.001 , which indicates that nursing students' professional behavior significantly affects academic engagement. Moreover, $R^2=0.071$ indicates that the model explains 7.1% of the variance in academic engagement.

Conclusion

Listed below are the conclusions made based on the findings of this study:

1. The study has provided a comprehensive assessment of the level of nursing professional behavior among one hundred seventy-two second, third-, and fourth-year enrolled in a prestigious school during the second semester of the academic year 2023-2024. Through rigorous data collection and analysis, the researcher found that the level of nursing professional behavior is very high, which further means that the students show sufficient professionalism.

2. The study has offered valuable insights into the level of academic engagement among one hundred seventy-two second, third-, and fourth-year enrolled in a prestigious school during the second semester of the academic year 2023-2024. Through meticulous data collection and analysis, the researcher we have observed [describe the main findings regarding academic engagement, such as high levels of engagement, specific factors influencing engagement, or variations among different demographic groups]. These results emphasize how crucial it is to Create an environment that fosters support and inclusivity for all learners. It promotes active participation, enthusiasm for learning, and investment in academic pursuits. By fostering an environment of inquisitiveness, teamwork, mutual support, and lifelong learning, we can empower students to succeed academically and contribute meaningfully to their academic and professional endeavors." The continuous manifestation of affective, behavioral, and cognitive engagement increases academic achievement and success.

3. There is a positive, significant relationship between students' professional behavior and academic engagement. This relationship determines that if students' professional behavior increases, their academic engagement also increases, and vice versa.

4. Academic Engagement, which is the dependent variable, was regressed using nursing students' professional behavior as the independent variable. The independent variable significantly predicts academic engagement. This further indicates that nursing students' professional behavior has a significant effect on academic engagement.

Recommendations

Based on the findings, the following recommendations were made:

Nursing Students. Nursing students should recognize the importance of professionalism not only in their clinical practice but also in their academic endeavors. Upholding ethical standards, demonstrating integrity, and fostering respectful interactions with peers, faculty, and patients can contribute to academic success and professional development. Subsequently, students should prioritize active participation, engagement, and investment in their academic pursuits. This includes attending classes regularly, actively participating in discussions, seeking clarification when needed, and dedicating sufficient time and effort to studying and coursework.

In addition, nursing students can benefit from mentorship and guidance from experienced faculty members, preceptors, or practicing nurses. Mentors can provide valuable insights, support, and advice on navigating academic challenges, enhancing professional skills, and fostering a commitment to lifelong learning. Further, students should develop organizational skills, set realistic goals, prioritize tasks, and create a schedule for adequate study time, clinical practice, and self-care. Furthermore, students must engage in regular self-reflection and self-assessment to identify strengths, areas for improvement, and personal goals. Students should reflect on their academic performance, professional behaviors, and learning experiences, seeking opportunities for growth and development. Finally, students need to develop a curiosity-based mindset, be receptive to new ideas, and remain committed to remaining current with the most recent advancements in evidence-based medicine to engage in continuous learning.

Nursing Educators. Nursing educators should integrate teaching and learning activities that explicitly focus on developing professional behaviors alongside academic content. Incorporating case studies, role-playing exercises, and reflective assignments can help students understand the importance of professionalism and its impact on academic success. Another recommendation is to provide mentorship, guide students in navigating academic challenges, and foster professional growth. Students should be encouraged to critically analyze their experiences, actions, and values through reflective practice. By offering organized reflection prompts and self-assessment opportunities, educators can support students in identifying areas for growth and cultivating a commitment to lifetime learning and career advancement. In addition, nursing educators must emphasize the development of communication and interpersonal skills, which are essential components of professionalism in nursing practice.

To conclude, nursing educators must provide timely and constructive feedback to students on their professional behaviors and academic performance. They should use formative assessments, rubrics, and objective criteria to evaluate students' progress and identify areas for improvement. Feedback should be tailored to each student's individual needs and learning goals.

Future Researchers. While this study has contributed significant insights into nursing professional behavior and academic engagement, it is essential to acknowledge a potential limitation that may warrant consideration by future researchers. The length of the research, the group being studied, and any other limitations in the methodology should be kept in mind. While inherent to this study design, this limitation underscores the need for future research to address an increase in the sample population and, eventually, employ other designs and methods relevant to the study. By addressing this limitation, future researchers can enhance the findings' validity, reliability, and applicability in advancing knowledge in nursing education and practice.

By implementing these recommendations, nursing students, educators, and future researchers can have a crucial impact on developing professionalism and academic achievement for successful careers as competent and compassionate nurses.

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