

Validation of the Bachelor of Science in Nursing Curriculum with a Measure of Achievement of Perceived Learning Outcomes and Students' Satisfaction

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ABSTRACT

Background: As revisions were made on the nursing curriculum, it is the task of the nursing department to meet a high standard level of education to provide to students. **Objective:** The study aims to validate the BSN curriculum's adequacy and how it relates to perceived learning outcome achievement and students' satisfaction. **Methods:** A descriptive correlational research design was conducted, and a total of 760 nursing students participated in the study. Data were interpreted and analysed using mean distribution and Spearman's rank order correlation coefficient (r_s). **Results:** Findings revealed that nursing students perceived the BSN curriculum as adequate with the different areas of the curriculum validation measures. Learning outcomes are perceived to be highly achieved at the end of levels one and two and moderately achieved under levels three and four. Nursing students are moderately satisfied with the BSN curriculum and its components. Results show statistically significant relationships between the extent of adequacy of the curriculum as perceived by the students and their level of satisfaction as to objectives ($r_s = 0.480, p = <0.001$), with content ($r_s = 0.480, p = <0.001$), as to faculty members ($r_s = 0.50, p = <0.001$), as to instruction ($r_s = 0.53, p = <0.001$), as to evaluative measures ($r_s = 0.48, p = <0.001$), as to enrichment ($r_s = 0.50, p = <0.001$), and as to other resources ($r_s = 0.45, p = <0.001$). **Conclusion:** The curriculum is effective in preparing the student for the practice of the nursing profession, and it is significantly related to perceived learning outcome achievement and to students' satisfaction.

Keywords: *Nursing Curriculum; Perceived Learning Outcome Curriculum Validation; Satisfaction*

INTRODUCTION

In the Philippines, where a significant number of educated registered nurses are employed internationally, ensuring the competitiveness of nursing education programs remains crucial and contentious (Appiah, 2020). To keep pace with rapidly evolving professional practices, nursing curricula must undergo continuous adjustments, enabling nurses to deliver safe, high-quality care and adapt effectively to diverse healthcare contexts (Fawaz *et al.*, 2018). The quality of nursing education is strongly linked to the curriculum (Li *et al.*, 2025), prompting ongoing curriculum enhancement to match changing healthcare needs and technological advancements. Consequently, Filipino nurses have built a global reputation for excellence, positioning the Philippines as the largest global provider of nurses, accounting for 25% of nurses working overseas, with Filipino nurses serving in over 50 countries worldwide (Smiley, 2020).

Recognizing the importance of quality education, laws were enacted to maintain and monitor standards among Higher Education Institutions (Jason *et al.*, 2024). Despite these efforts, assessing curriculum effectiveness remains essential. Student satisfaction, particularly within clinical learning environments, is an important indicator for curriculum assessment and development (Papastavrou *et al.*, 2016). Thus, this study seeks to evaluate the adequacy of the current Bachelor of Science in Nursing (BSN) curriculum regarding objectives, content, faculty, instructional methods, evaluation strategies, enrichment activities, and resources. Additionally, it explores student satisfaction with teaching methods, professional interactions, social experiences, and the overall learning environment, while examining the relationship between curriculum adequacy and student satisfaction.

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METHODOLOGY

Study Design

A descriptive research design that is correlational in nature was carried out at a private university in Manila, Philippines, wherein data gathering was done from September to December 2023. Correlational research is a non-experimental research design that examines the strength and direction of relationships between two or more variables as they naturally occur, describing the degree to which they change together, but without manipulating them or establishing causality (Polit & Beck, 2020; Creswell & Creswell, 2018).

Study Sample

A convenience sample of 760 student nurses enrolled during the First Term of Academic Year 2023-2024 consisting of Levels 1 to 4 at a Private University in Manila, was utilised in the study. The participants were aware of the study's purpose, procedures, potential risks, and benefits. Confidentiality and anonymity were maintained throughout the research process, with data being stored securely and only accessible to the research team (Polit & Beck, 2020).

Study Tools

Survey questionnaire was used in the study that contained three parts. The first part contains the demographic data of the respondents as to the sex and year level. The second part contained the respondents' perception of the curriculum wherein a scale was adopted to measure the adequacy of the curriculum as to the objectives, content, faculty members, instruction, evaluative measures, enrichment and other resources. The last part utilised the Nursing Student Satisfaction Scale (NSSS), which was developed by Chen *et al.* (2012). Validity and reliability of the tool were confirmed before all the data were collected. The internal consistency of the questionnaire was assessed using Cronbach's alpha, with a target value of 0.7 or higher to ensure reliability (Polit & Beck, 2020). For this study the tool had undergone predictive validity and Split-half reliability tests with a Cronbach alpha of 0.87 that equates to a good reliability index. Mazzotta *et al.* (2025) investigated the NSSS in nursing degree programmes and reported that it had strong measuring qualities, supporting its validity and reliability as a tool for assessing nursing student satisfaction in the Italian environment. Furthermore, the findings showed that, following translation and cultural adaptation of the scale, the concept of nursing student satisfaction is consistent with the theoretical model.

The survey was created in MS forms and was disseminated to students during the months of September to December in 2023.

Data Analysis

Both descriptive and inferential statistics were used in the study. Frequency and percentage distribution was shown to describe the characteristics or profiles of survey participants in terms of their sex and year level. Moreover, respondents' response was expressed using mean distribution and tables to determine the curriculum validation measures in terms of the seven (7) areas, the perceived level outcomes attainment, and the level of satisfaction of the students. Since the assumption for normality was not satisfied, a non-parametric test, Spearman's rank correlation coefficient or Spearman's ρ (rho), was utilised in determining the relationship between results using SPSS version 28. Statistical significance will be set at $p < 0.05$ for all analyses (Creswell & Creswell, 2018).

For the extent of the level of adequacy as perceived by the students, the following measures were used for the verbal interpretation of the scores. 0 – 0.50 Not applicable; 0.51 – 1.50 Not Adequate; 1.51 – 2.50 Slightly Adequate; 2.51 – 3.50 Minimally Adequate; 3.51 – 4.50 Adequate; 4.51 – 5.00 Highly Adequate

On perceived learning outcome achievements, the following were used: 0 – 0.50 Not Applicable; 0.51 – 1.50 Not Achieved; 1.51 – 2.50 Lowly Achieved; 2.51 – 3.50 Moderately Achieved; 3.51 – 4.50 Highly Achieved; 4.51 – 5.00 Very Highly Achieved.

The following arbitrary scale was used to interpret students' level of satisfaction in the different areas: 0 – 0.50 Not Satisfied at All; 0.51 – 1.50 Not Very Satisfied; 1.51 – 2.50 Somewhat Dissatisfied; 2.51 – 3.50

Somewhat Satisfied; 3.51 – 4.50 Satisfied; 4.51 – 5.00 Very Satisfied.

Ethical Consideration

The study received ethical approval from the College of Allied Health Research Ethics Review Committee, National University, Philippines with reference number CAHERC-2022-08-001 on 4th August, 2022.

RESULTS

Profile of the Respondents

Table 1: Profile of The Respondents

Sex	No.	Percentage%
Male	155	20.4%
Female	605	79.6%
	760	100%
Year Level	No.	%
First Year	57	7.5%
Second Year	393	51.7%
Third Year	180	23.7%
Fourth Year	130	17.1%
	760	100%

The study included 760 nursing students, as in table 1, mostly female (n=605, 79.6%). Majority of the participants belong to the level two students (n=393, 51.7%).

Curriculum Adequacy, Perceived Learning Outcomes and Level of Satisfaction

Table 2: Extent of the Adequacy of The Curriculum as Perceived by the Students

Indicator	Mean	Std. Deviation	Verbal Interpretation
Objectives	4.30	0.80	Adequate
Content	4.29	0.75	Adequate
Faculty Members	4.29	0.81	Adequate
Instruction	4.28	0.77	Adequate
Evaluative Measures	4.30	0.81	Adequate
Enrichment	4.20	0.82	Adequate
Other Resources	4.11	0.84	Adequate

Study revealed that all indicators in the curriculum are perceived by the students to be adequate. Among the indicators Objectives and Evaluative Measures got the highest mean of 4.3 followed by Content and Faculty members with mean scores of 4.29 each in table 2.

Table 3: Perceived Learning Outcomes Achievement of The Students

Learning Outcome	Mean	Std. Deviation	Verbal Interpretation
LO1. At the end of the first year, given simulated situations in selected settings, the learners demonstrate basic nursing skills in rendering safe and appropriate care utilizing the nursing process.	3.76	1.58	Highly Achieved
LO2. At the end of the second-year level, given a normal and high-risk mother and newborn, child, family, communities, and population groups in any healthcare setting, the learners demonstrate safe, a...	3.79	1.57	Highly Achieved
LO3. At the end of the third year, given individuals, families, population groups, and communities with physiologic and psychosocial health problems and maladaptive patterns of behaviour in varied health.	3.25	1.94	Moderately Achieved
LO4. At the end of the fourth year, given groups of clients (individuals, families, population groups, and communities) with health problems and special needs, the learners demonstrate safe, appropriate.	3.05	2.02	Moderately Achieved
Valid n (listwise)			

The students under levels one and two both perceived the learning outcomes to be Highly achieved with mean score of 3.76 and 3.79 each in table 3. Wherein the level four students perceived the learning outcomes to be moderately achieved with mean score of 3.05.

Table 4: Level of Satisfaction of The Students in Different Areas

Area	Mean	Std. Deviation	Verbal Interpretation
Professional Social Interaction	4.49	1.35	Satisfied
Nursing Curriculum and Teaching	4.49	1.34	Satisfied
Learning Environment	4.34	1.34	Satisfied
Over-all Mean	4.44	1.34	Satisfied

Table 4 shows the mean distribution for the level of satisfaction of students in terms of the three areas of student satisfaction. The result of this study implies that nursing students at National University-Manila are satisfied with the Bachelor of Science in Nursing (BSN) curriculum, as evidenced by the overall mean, which is 4.44 with a standard deviation of 1.32.

Relationships Between Variables

Table 5: Relationship between the Extent of Adequacy of the Curriculum Per Area and the Level of Satisfaction as Perceived by Students

Tests of Normality							
	Year Level	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Professional Social Interaction	First Year	0.20	57	<0.001	0.80	57	<0.001
	Second Year	0.16	393	<0.001	0.85	393	<0.001
	Third Year	0.13	180	<0.001	0.92	180	<0.001
	Fourth Year	0.14	130	<0.001	0.91	130	<0.001
Nursing Curriculum and Teaching	First Year	0.18	57	<0.001	0.81	57	<0.001
	Second Year	0.16	393	<0.001	0.85	393	<0.001
	Third Year	0.13	180	<0.001	0.91	180	<0.001
	Fourth Year	0.16	130	<0.001	0.91	130	<0.001
Learning Environment	First Year	0.17	57	<0.001	0.88	57	<0.001
	Second Year	0.15	393	<0.001	0.90	393	<0.001
	Third Year	0.12	180	<0.001	0.94	180	<0.001
	Fourth Year	0.14	130	<0.001	0.93	130	<0.001

a. Lilliefors Significance Correction

Results of the statistical tests in table 5 for normality showed that the response data comes from a non-normal distribution of the population ($p < 0.05$). Thus, the use of a non-parametric test for hypothesis testing is best. With this, a Spearman rho correlation was performed to test for a significant relationship between variables.

Table 6: Confidence Intervals of Spearman's RHO

Area	Level of Satisfaction												Verbal Interpretation
	Professional Social Interaction			Nursing Curriculum and Teaching			Learning Environment			Overall			
	<i>r_s</i>	<i>p value</i>	95% <i>CI</i>	<i>r_s</i>	<i>p value</i>	95% <i>CI</i>	<i>r_s</i>	<i>p value</i>	95% <i>CI</i>	<i>r_s</i>	<i>p value</i>	95% <i>CI</i>	
Objectives	0.48	<0.001	(0.45-0.51)	0.49	<0.001	(0.44-0.54)	0.43	<0.001	(0.37-0.49)	0.48	<0.001	(0.43-0.54)	Moderate
Content	0.48	<0.001	(0.44-0.52)	0.49	<0.001	(.044-.054)	0.44	<0.001	(0.38-0.50)	0.48	<0.001	(0.43-0.54)	Moderate
Faculty Members	0.52	<0.001	(0.48-0.56)	0.51	<0.001	(0.46-.056)	0.45	<0.001	(0.39-0.51)	0.50	<0.001	(0.46-0.54)	Moderate
Instruction	0.54	<0.001	(0.48-0.60)	0.53	<0.001	(0.47-0.58)	0.48	<0.001	(0.42-0.54)	0.53	<0.001	(0.47-0.59)	Moderate
Evaluative Measures	0.49	<0.001	(0.44-0.54)	0.48	<0.001	(0.43-0.54)	0.43	<0.001	(0.37-0.49)	0.48	<0.001	(0.43-0.54)	Moderate
Enrichment	0.49	<0.001	(0.43-0.55)	0.49	<0.001	(0.43-0.54)	0.46	<0.001	(0.40-0.52)	0.50	<0.001	(0.44-0.56)	Moderate
Other Resources	0.42	<0.001	(0.35-0.49)	0.43	<0.001	(0.38-0.48)	0.45	<0.001	(0.39-0.51)	0.45	<0.001	(0.39-0.51)	Moderate

In table 6, results show statistically moderate correlation between adequacy of the curriculum as perceived by the students and their level of satisfaction as to objectives ($r_s = 0.48, p = <0.001$), with content ($r_s = 0.48, p = <0.001$), as to faculty members ($r_s = 0.50, p = <0.001$), as to instruction ($r_s = 0.53, p = <0.001$), as to evaluative measures ($r_s = 0.48, p = <0.001$), as to enrichment ($r_s = 0.50, p = <0.001$), and as to other resources ($r_s = 0.45, p = <0.001$).

The following table of interpretation was used in the results above.

Range of Absolute Correlation Coefficient (r_s)	Strength of Correlation
0.80- 1.00	Very strong
0.60-0.79	Strong
0.40-0.59	Moderate
0.20-0.39	Weak
0.00-0.19	Very Weak

Given the level of satisfaction indicators and curriculum development, it can be noted that among the three indicators, Professional Social Interaction area under instruction and faculty members got mean scores of 0.54 and 0.52 respectively. Consequently, instruction and faculty members in relation to Nursing teaching and learning got the highest mean scores of 0.53 and 0.51 respectively. While the learning environment has a moderate correlation with instruction (MS = 0.48) and Enrichment with (MS = 0.46).

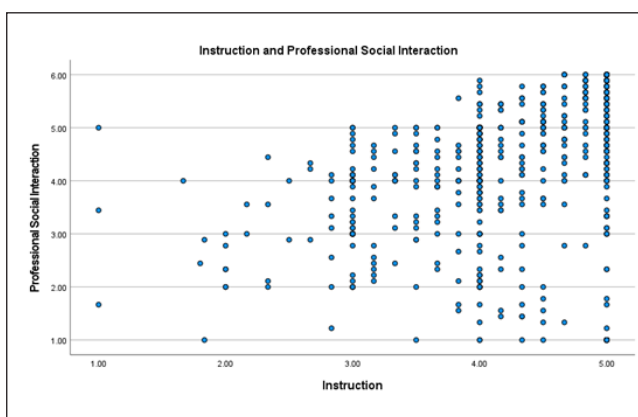
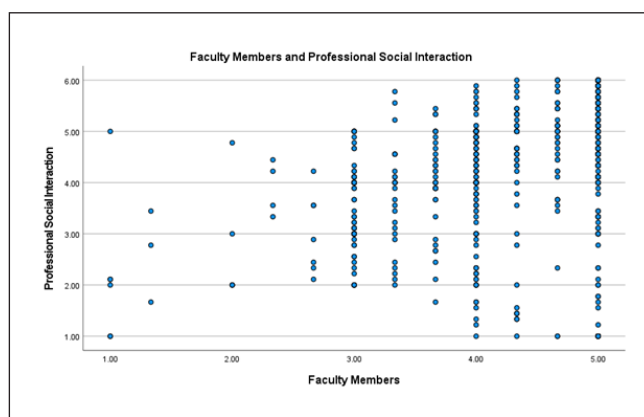
The computed coefficients of Spearman's rho (r_s) is the effect size itself as a means to quantify the strength and direction of each monotonic relationship. The standardized range of correlation coefficients make them inherently measures of effect size. The absolute value of r_s indicates the strength of the monotonic relationship. Please refer to the guideline below:

$|r_s| = 0.1$: Small effect

$|r_s| = 0.3$: Medium effect

$|r_s| = 0.5$: Large effect

The study revealed statistically significant, moderate-to-large positive monotonic relationships between students' perceived curriculum adequacy and their satisfaction across all measured dimensions (all $p < 0.001$). Spearman's rho coefficients (r_s ranging from 0.446 to 0.526) indicate moderate associations, while also signifying large practical effects according to Cohen's guidelines (Cohen, 1988). For instance, the strong correlation between perceived faculty adequacy and student satisfaction ($r_s = 0.50$) highlights its substantial impact. These findings, visually supported by scatterplots, underscore that enhancing curriculum quality significantly improves student satisfaction (Ikram & Kenayathulla, 2023), advocating for continuous curricular refinement in educational programs.



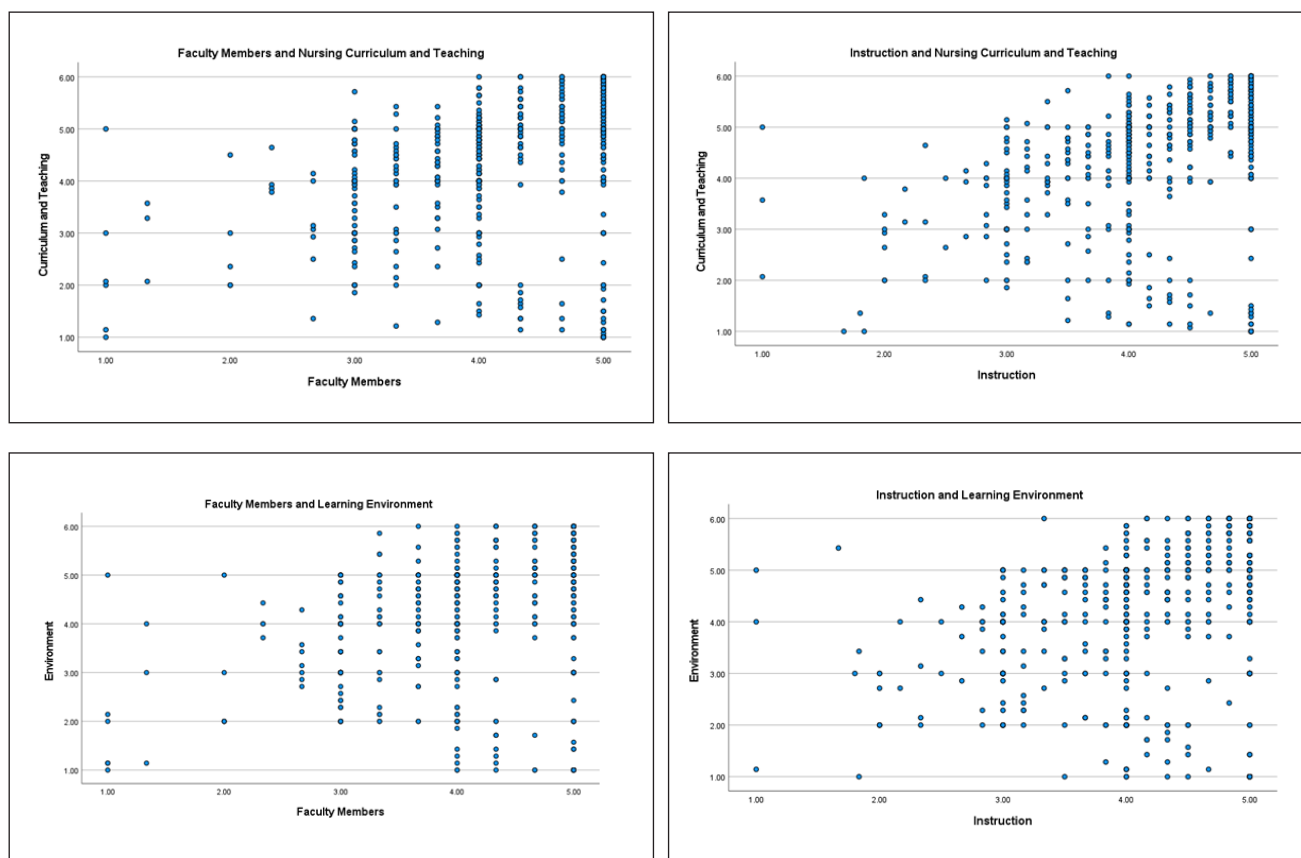


Figure 1: Scatterplots for the Areas on Faculty Members and Instruction in Relation to Professional Social Interaction, Nursing Curriculum and Learning and Learning Environment

The graphical representation in figure 1 through scatterplots further corroborates these findings, illustrating generally positive trends where increased scores on curriculum adequacy dimensions correspond with higher levels of student satisfaction, albeit with inherent variability typical of real-world data. The scatterplots visually corroborate these findings, generally depicting an upward trend. This indicates that as the perceived adequacy of curriculum components such as "Faculty Members," "Instruction," and "Enrichment" increases, there is a corresponding rise in student satisfaction in areas like "Professional Social Interaction," "Nursing Curriculum and Teaching," and "Learning Environment". While the dispersion in the plots reflects individual variability among students, the overall positive pattern consistently supports the calculated moderate positive correlations.

DISCUSSION

The findings indicate that nursing students perceive the curriculum as adequately meeting their needs and the demands of their chosen profession, with high ratings for understanding curriculum objectives ($\bar{x}=4.30$) and content relevance ($\bar{x}=4.29$). This highlights the critical importance of ensuring that curriculum objectives are closely aligned with students' needs and the broader educational goals. It further emphasizes that innovative educational frameworks and policies are fundamental for curriculum reform, aimed at producing competent, well-prepared nursing professionals. Policies that promote integrated, creative, and student-centered learning models have been particularly instrumental in the successful implementation and evolution of nursing curricula.

Additionally, the link between curriculum content and students' specialization areas enhances the focus and practicality of their learning experiences, making them more therapeutic and patient-centered.

Stakeholder engagement is also vital in curriculum development, as noted by Nasrabadi *et al.* (2021), who stress the importance of involving various parties and upstream policy support to foster innovative teaching methods. Systematic approaches that incorporate active learning, continuous feedback, and setting high expectations—such as the assessments discussed by Cant, Gazula and Ryan (2023)—are shown to significantly improve student satisfaction levels.

Concerning faculty, students generally regard instructors as qualified and competent in their teaching roles ($\bar{x}=4.29$). The teaching methods employed are perceived as relevant and aligned with students' needs ($\bar{x}=4.28$). Regular evaluations of student performance through tests, quizzes, recitations, and periodic assessments ($\bar{x}=4.30$) are also seen as effective in monitoring progress. Faculty development programs are essential in maintaining high teaching standards, and research by Dormire *et al.* (2025) highlights the importance of faculty leadership, stakeholder participation, and strategic planning in driving successful curriculum reforms. Ghasemi *et al.* (2023) further emphasize that faculty involvement in solving educational challenges fosters motivation, promotes innovative teaching strategies, and enhances overall learning experiences. Moreover, the quality of faculty-student relationships, supported by effective communication and consistent feedback, greatly influences student satisfaction and academic success—an aspect strongly supported by John *et al.* (2025).

Preceptor training programs have also been shown to improve clinical teaching quality. Alhassan, Duke, and Phillips (2024) demonstrated that students who received preceptor training reported higher satisfaction and perceived greater competency among their clinical supervisors, which positively influenced their clinical placements.

In the realm of enrichment activities, students find current experiential learning opportunities and the utilization of technological tools relevant and beneficial ($\bar{x}=4.20$). Additionally, they view the available resources, such as libraries, laboratories, and classroom facilities, as adequate and conducive to effective learning ($\bar{x}=4.11$). Incorporating simulations, virtual learning platforms, and real-world problem-solving activities—like WattsUp-Delivered Education (Mutair *et al.*, 2025)—are seen as ways to increase engagement, improve practical skills, and foster positive perceptions among students.

Furthermore, statistical analysis revealed significant relationships between the measures of curriculum validation, the achievement of learning outcomes, and student satisfaction. The correlation coefficients (r values) ranged from 0.649 to 0.760, all with p -values less than 0.01, indicating strong positive relationships. A well-structured, relevant curriculum delivered effectively by knowledgeable and engaging faculty members directly correlates with higher student satisfaction. While senior students generally demonstrate higher proficiency and confidence—often perceiving greater achievement of learning outcomes—this particular study observed that first- and second-year students rated the achievement of learning outcomes more highly than their senior counterparts, which suggests the influence of different learning experiences and perceptions at various stages of the program.

Student satisfaction is also closely linked to the quality of clinical learning environments. Studies such as those by Wong and Chapman (2023) highlight that aspects like supportive faculty interactions, meaningful clinical experiences, and access to resources significantly contribute to overall student satisfaction and career motivation. Similarly, Rana *et al.* (2024) found that clinical placements characterized by active involvement in pre- and post-conferences, faculty engagement, and positive supervision are associated with increased student satisfaction and a higher likelihood of pursuing nursing careers.

A study by Tesfaye *et al.* (2025) found that meeting clinical learning outcomes and frequent contact with clinical preceptors were significantly associated with higher levels of satisfaction among nursing students, with those meeting learning outcomes being nearly three times more likely to be satisfied and those meeting three times per week with clinical preceptors being almost three times more satisfied. These results collectively advocate for continuous evaluation and enhancement of curriculum design and delivery, particularly focusing on faculty development and instructional strategies. By investing in these areas,

educational institutions can foster a more satisfying learning environment, which is crucial for retaining students and preparing competent professionals.

Looking ahead, there are numerous opportunities for further research to enhance curriculum validation, learning outcomes, and student satisfaction. It is recommended that future studies broaden their scope by including input from other key stakeholders—such as industry partners, alumni, parents, and extended faculty—to achieve a comprehensive perspective. Additionally, examining the alignment between the institution's vision-mission, program objectives, and course content, both in general education and specialized nursing subjects, can provide deeper insights into curriculum relevance and coherence. Such efforts will support continuous improvement and ensure that nursing education remains contemporary, responsive, and aligned with evolving healthcare demands.

Limitation

This study employed convenience sampling technique, selecting participants exclusively from a private university in Manila, Philippines, which restricts the generalizability of the findings to other institutions or broader populations within and beyond the country. The study relied on self-reported questionnaires. The cross-sectional design restricts the ability to infer causality or track changes over time regarding curriculum adequacy, perceived achievement of learning outcomes, and student satisfaction. This preliminary study acknowledges that a longitudinal design would have enabled a more comprehensive understanding of temporal shifts in perceptions and the effectiveness of curriculum implementation across student cohorts. The study excludes other stakeholders such as faculty members, alumni, clinical supervisors, and industry partners. The inclusion of these additional perspectives is a key component in the next phases of a robust assessment of the curriculum's effectiveness and alignment with professional nursing practice requirements.

CONCLUSION

This study revealed that the nursing curriculum is very effective and relevant, successfully providing students with new skills and critical information. It significantly enhances their self-confidence and fully prepares them for both academic exams and practical clinical situations. The nursing faculty's dedication to innovative teaching methods and in-depth subject-matter knowledge is primarily responsible for this outstanding achievement. Additionally, the vast majority of the students believe that the curriculum gives them the necessary preparation for professional practice, which gives them confidence in their chosen field. The findings suggest that the curriculum design and pedagogical approach may positively influence student perceptions of learning outcomes and satisfaction. To strengthen the evidence regarding the effectiveness of the curriculum and pedagogical strategies, further research is recommended, including experimental or longitudinal designs, comparative evaluations across multiple institutions, and broader stakeholder perspectives to adequately prepare nursing graduates for the complexities and demands of professional healthcare practice.

Conflict of Interest

The authors declare that they have no competing interests.

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