

Academic and Non-Academic Profile Affecting the Nurse Licensure Examination Performance of the Nursing Graduates of a Higher Education Institution in Davao City

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ABSTRACT

The Nurse Licensure Examination is conducted by the Professional Regulatory Commission to screen Nursing graduates who will be licensed to practice nursing. The study aimed to determine the academic and non-academic profiles of the respondents and their possible correlation to the respondents' Nurse Licensure Examination performance. Using total enumeration, sixty-seven Nursing graduates of the pioneering batch under CMO 14 s. 2009 were used as respondents. The academic profile included Nursing Care Management (NCM), Nurse Aptitude Test (NAT), English Proficiency, and Nursing Enhancement Program (NEP). The non-academic profile covered Emotional Quotient, the Otis-Lennon School Ability Test (OLSAT), and the Schedule of Examination. The study used the non-experimental descriptive-correlational research design. Frequency and percentage, mean, Pearson r , Chi-Square, and Linear Regression analysis were the statistical tools employed in the study. Results revealed that all individual parameters in the academic profile are significantly correlated to

the licensure examination performance. On the other hand, only the OLSAT in the non-academic profile showed a significant correlation to the licensure examination performance. Finally, the regression model obtained in the study is written as $NLEP = 18.139 + 0.413 (NCM) + 0.018 (NAT) - 0.195 (EngProf) + 0.399 (NEP)$.

Keywords— Education, academic and non-academic profile, nurse licensure examination performance, descriptive – correlation, linear regression analysis, Davao City

INTRODUCTION

There is a great decline in passing rates in the Philippine Nurse Licensure Examination. From the data obtained in the Professional Commission Regulation (PRC), there is a range of 80% to 90% passing rates from 1970 to 1980. From 1998 to 2008, the average passing rate ranged from 41.23% as the lowest to 57.55% as the highest. The lowest national passing rate was noted in December 2010, when only 35.26% of examinees passed (ABBA Personnel Services, 2022).

On a smaller scale, the passing rate of Davao Doctors College in the Nursing Licensure Examination for first-takers ranges from 25 % to 80 % from 2011 until 2013. In these years, the school first-taker ratings are higher than the national passing rate, except for July 2013, which ranges from 33.92% to 48.01% (Professional Regulation Commission, 2011).

According to Ordonez and Ordonez (2009), the decrease in the passing rate in various licensure examinations is a sign of the deterioration of the quality of education in the Philippines. This may be due to the failure to implement standards in Philippine education and other factors.

In the study of Arathuzik and Aber (1998), a significant correlation was found between success in NCLEX-RN and non-academic factors such as family responsibilities, emotional distress, fatigue, and financial and work burdens. Establishing comprehensive stress management programs, study skills classes, and test-taking were recommended to increase the chances of passing the examination.

The study conducted by Davenport (2007) shows that academic variables such as study habits, number of hours spent studying, academic performance, grades, and IQ, and non-academic variables include demographic variables, stress, number of hours of sleep and exercise, have an impact on the performance in NCLEX.

On the preceding premises, the researcher decided to conduct the study to know if the academic profile and Non-academic Profile will affect the performance in Nurse Licensure Examination. On a larger scale, the study will also aid the school and the graduates of Davao Doctors College to identify factors that would directly affect the Nursing Licensure Examination performance, help get a higher rating and increase the chance of being hired for work.

OBJECTIVES OF THE STUDY

The study aimed to determine the relationship between the Academic and Non-academic profiles to the Nurse Licensure Examination of the graduates under the CMO 14 series of 2009.

Specifically, it sought to (1) determine the Academic Profile of the respondents in terms of Performance in Nursing Care Management (NCM) subjects, Nurse Aptitude Test, English Proficiency, and Nursing Enhancement Program Performance, (2) identify the Non-Academic Profile of the respondents in terms of emotional Quotient, Otis-Lennon School Ability Test (OLSAT); and Schedule of Examination, (3) to determine the profile of the respondents in terms of the Nurse Licensure Examination, (4) to determine the significant correlation between the Academic Profile and Nurse Licensure Examination performance of the respondents, (5) to determine the significant correlation between the Non-academic Profile and Nurse Licensure Examination Performance of the respondents, (6) to identify the indicated factors that are significant predictors of the Nurse Licensure Examination Performance.

METHODOLOGY

Research Design

The researcher made use of the non-experimental descriptive-correlational research design. It is descriptive because it describes the Nurse Licensure Examination Performance of the Nursing graduates of Davao Doctors College. It further described the Academic Profile of the respondents in terms of Performance in Nursing Care Management subjects, Nurse Aptitude Test, English Proficiency, and Nursing Enhancement Program; and the Non-Academic Profile in terms of Emotional Quotient, Otis-Lennon School Ability Test (OLSAT) and Schedule of Examination. It is correlational as it determined the relationship between Academic Profile and Non-Academic Profile to the Nurse Licensure Examination Performance of the Nursing graduates of Davao Doctors College.

Participants

The respondents of the study were the first batch of CMO 14 graduates, the batch 2012 (Department of Nursing) of a higher education institution in Davao City. There were 112 graduates with Bachelor of Science in Nursing (BSN) degrees. The researcher employed purposive sampling. All graduates of batch 2012 under CMO 14 of the College of Nursing with complete data were used as respondents of the study. Out of 112 graduates, only 67 respondents' complete data were used in the study.

Instrumentation

The researcher utilized secondary data. The researcher used the registration data from the Registrar's Office and Guidance Center. The data for Performance in Nursing Care Management subjects, English Proficiency, Nursing Enhancement Program, Schedule of Examination, and Philippine Nurse Licensure Examination ratings were retrieved from the Registrar's Office. The data for Nurse Aptitude Test, Emotional Quotient, and Otis-Lennon School Ability Test (OLSAT) were retrieved from the Guidance Center.

Data Collection

The researcher asked permission from the Registrar's Office and Guidance Center to retrieve the data needed for the study. The researcher collated and tabulated the data, then processed, computed, interpreted, and analyzed. Implications were made according to the results of the study. Also, conclusions and recommendations were formulated based on the research findings.

Statistical Tool

The following statistical tools were used in the conduct of the study:

Frequency and Percentage. These were utilized to describe the number of occurrences and percentages of the academic and non-academic profile and the nurse licensure examination performance.

Mean. This was utilized to describe the academic and non-academic profile and the nurse licensure examination performance of the respondents.

Pearson Product Moment Correlation. This was utilized to determine if there is a significant relationship between the Academic and Non-academic Profiles of the respondents and their Nurse Licensure Examination Performance.

Chi-Square. This was utilized to determine if there is a significant association between the examination schedule and the nurse licensure examination performance of the respondents.

Linear Regression Model. This was utilized to determine what factors will best predict Nurse Licensure examinations.

Ethical Protocol

The researcher utilized registration data for this study. Consent was obtained from the higher educational institution to obtain and utilize the data for this research. All data obtained were confidential, and higher educational institutions approved the presented data to complete this research study. The research study was presented and approved by the panelist of the higher educational institution.

RESULTS AND DISCUSSION

Table 1. Academic Profile of the Respondents

Academic profile	Description	Frequency	Percentage
Performance in Nursing Care Management			
95-100	Outstanding	0	0
88-94	Very Satisfactory	1	1.49
81-87	Satisfactory	46	68.66
75-80	Fair	19	28.36
Below 75	Poor	1	1.49
Total		67	100
Nurse Aptitude Test			
751-800	Excellent	6	8.96
651-750	Superior	10	14.93
601-650	Above Average	7	10.45
551-600	High Average	23	34.33
451-550	Average	18	26.87
401-450	Low Average	3	4.48
Total		67	100
English Proficiency			
95-100	Outstanding	2	2.99
88-94	Very Satisfactory	30	44.78
81-87	Satisfactory	30	44.78
75-80	Fair	4	5.97
Below 75	Poor	1	1.49
Total		67	100

Nursing Enhancement Program Performance			
95-100	Outstanding	0	0
88-94	Very Satisfactory	27	40.30
81-87	Satisfactory	37	55.22
75-80	Fair	3	4.48
Below 75	Poor	0	0
Total		100	100

Table 1 presents the results of the four parameters under the academic profile of the respondents, namely: Nursing Care Management, Nurse Aptitude Test, English Proficiency, and Nursing Enhancement Program.

As to the Nursing Care Management, results indicated that most of the respondents got a Satisfactory rating constituting 68.66% of the respondents, and none of the respondents got a rating of Outstanding. This implies that most of the respondents have average knowledge and skills in terms of Nursing concepts and procedures, which are the main components of Nursing Care Management. These concepts consisted of Fundamentals in Nursing, Maternal and Child Nursing, Community Health Nursing, Psychiatric Nursing, and Leadership and Management in Nursing.

For the Nurse Aptitude Test, the highest percentage was a high average rating constituting 34.33%. On the other hand, only 4.48% of the respondents got a low average rating. This implies that most of the respondents have a high average level of aptitude and knowledge found to be predictive of success in the nursing course. This aligned with the result of a study entitled “Predictors of Nursing Board Examination Performance, “which revealed that as a whole, most (328 or 43.73%) of the BSN graduates for the period 2006 -2009 performed in the Nursing Aptitude Test at an “average passed” level. Also, 77 of them (10.27%) performed at a “high pass” level (Navarro, 2011).

In English Proficiency, most of the respondents got Very Satisfactory and Satisfactory ratings, each constituting 44.78%, while only 1.49% got a Poor rating. This indicates that most respondents got ratings within 81-94 in their English subjects under the BS Nursing curriculum. This is similar to the study entitled “Determinants of L.E.T. Performance of the Teacher Education Graduates in a State University,” which revealed that, on average, the English proficiency level of the respondents is higher than the 50% of the whole examinees for the English proficiency examination.

For the Nursing Enhancement Program, most respondents got a satisfactory rating of 55.22%. On the other hand, none of the respondents got an Outstanding

nor Poor rating. This implies that most respondents have average knowledge and strategies in answering questions patterned after the board examination as a preparation for the actual Nurse Licensure Examination.

Overall, the parameters under the Academic profile revealed that most respondents belong to the middle portion of the normal curve. The normal curve describes the mathematical concept called a normal distribution. The center contains the greatest number of a value and, therefore, would be the highest point on the arc of the line. That is why most respondents fall in the middle of the distribution. The important thing to note about normal distribution is that the curve is concentrated in the center and decreases on either side. This is significant because data have less tendency to produce unusually extreme values (Russell, 2015).

Table 2. Non-Academic Profile of the Respondents

Non-academic profile	Description	Frequency	Percentage
Emotional Quotient			
120-129	Very High	4	5.97
110-119	High	4	5.97
90-109	Average	35	52.24
80-89	Low	18	26.87
70-79	Very Low	4	5.97
Under 70	Markedly Low	2	2.99
Total		100	100
Otis-Lennon School Ability Test			
58-72	Above Average	6	8.96
35-57	Average	61	91.04
Total		67	100
Schedule of Examination			
December	2 nd Batch of takers	19	28.36
June	1 st Batch of takers	48	71.64
Total		67	100

Table 2 presents the results of the three parameters under the non-academic profile of the respondents, namely: Emotional Quotient, Intelligence Quotient, and Schedule of Examination.

As to the Emotional Quotient, results indicated that most of the respondents got an average scale constituting 52.24%, while only 2.99% belonged to a markedly low scale. This indicates that the respondents have a good mechanism

for coping with emotional distress.

In the Otis-Lennon School Ability Test, more than the majority of the respondents got an average scale, constituting 91.04% of the respondents. In contrast, none of the respondents belonged to the low average scale. This implies that the respondents have average cognitive abilities related to academic success. This aligned with the result of a study entitled “Predictors of Nursing Board Examination Performance,” which revealed that, as a whole, the majority (379 or 50.53%) of the nursing graduates performed at a “good” level in the UNP College Admission Test (UNP-CAT) (Navarro, 2011).

For the Schedule of Examination, most of the respondents took the examination in June, constituting 71.64%, while on the other hand, only 28.36% of the respondents took the examination in December. This was due to the recommendation of the respondents’ former dean to take the Nurse Licensure Examination in June.

Table 3. Profile of the Respondents in Terms of the Nurse Licensure Examination

Nurse Licensure Examination	Description	Frequency	Percentage
95-100	Outstanding	0	0
88-94	Very Satisfactory	0	0.00
81-87	Satisfactory	10	14.93
75-80	Fair	49	73.13
Below 75	Poor	8	11.94
Total		67	100

As shown in Table 3, the student’s performance in the Nurse Licensure Examination has the highest percentage of 73.13% posted in 75-80 rating qualitatively described as “fair.” This implies that most respondents performed fairly in the Nurse Licensure Examination.

On the other hand, the lowest percentage is 0% which was posted in the 95-100 rating qualitatively described as “outstanding” and 88-94 rating qualitatively described as “very satisfactory.” This implies that none of the respondents got either very satisfactory or outstanding performance in the Nurse Licensure Examination.

The results obtained in this study align with the results of the study by Russel (2015) indicating that most of the respondents’ performance in the Nurse Licensure examination falls in the middle of the normal distribution, which is the average, and the number decreases on both extremes of the curve which are

outstanding and poor. This may be due to the complexity of the examination or due to any other external factors.

Table 4. Relationship between the Respondents’ Academic Profile and Nurse Licensure Examination Performance

Parameters	Pearson r	P-Value	Decision	Conclusion
Academic Profile				
				Nurse Licensure Examination Performance
Nursing Care Management	0.628	0.000		There is a significant relationship between the respondents’ academic profiles. and the Nurse Licensure Examination Performance
Nurse Aptitude Test	0.617	0.000		
English Proficiency	0.402	0.001		
Nursing Enhancement Program	0.661	0.000	Reject Ho	
Overall	0.577	0.00025		

Table 4 indicates that all four parameters under the Academic Profile of the respondents, namely: Nursing Care Management performance, Nurse Aptitude Test result, English Proficiency, and Nursing Enhancement Program performance, revealed a significant relationship with the Nurse Licensure Examination performance as indicated by their P - values of 0.000, 0.000, 0.001, and 0.000, respectively, which are all lesser than 0.05. Thus, the null hypothesis that there is no significant relationship between the academic profile and Nurse Licensure Examination performance is rejected. This implies then that there is a significant relationship between the academic profile and the Nurse Licensure Examination Performance among the respondents. Further, this means that when the academic profile, namely Nursing Care Management performance, Nurse Aptitude Test result, English Proficiency, and Nursing Enhancement Program performance increase, the Nurse Licensure Examination performance correspondingly increases. These results are similar to the results obtained in the study by Oducado and Panuela (2014) that the NAT performance has a significant substantial correlation with the respondents’ academic performance in professional licensure examination, while high school performance and overall

performance in Math content courses have a significantly high correlation with academic performance. Further, a significant, very high correlation was found between overall performance in English and Science content courses and academic performance in professional nursing courses.

The results obtained in the current study substantiated the CHED Memorandum Order (CMO) 14 that mandates new regulations and standards of the previous nursing curriculum. The CHED Memorandum Order 14 (CMO 14) aims to amend the nursing curriculum to produce nursing graduates that can provide relevant and quality health services locally and internationally. This is designed to equip nursing students with the knowledge, skills, and attitude they need as future nurses. Nursing Care Management, Nurse Aptitude, English Proficiency, and Nursing Enhancement Program are just some of the content of this CMO 14.

Table 5. Relationship between the Respondents’ Non-Academic Profile and Nurse Licensure Examination Performance

Parameters		Pearson r	P-Value	Decision	Conclusion
Non-Academic Profile	Nurse Licensure Examination Performance				
Emotional Quotient		0.817	0.129	Accept Ho	There is no significant relationship between EQ and NLEP
Otis-Lennon School Ability Test	Nurse Licensure Examination Performance	0.374	0.002	Reject Ho	There is a significant relationship between IQ and NLEP
Parameters		Chi-Square Value	P-Value	Decision	Conclusion
Schedule of Examination	Nurse Licensure Examination Performance	36.647	0.392	Accept Ho	There is no significant association between the schedule of examination and NLEP

Table 5 indicates that among the three parameters under the Non-academic profile, one parameter, namely the Otis-Lennon School Ability Test, revealed

a significant relationship with the Nurse Licensure Examination results. This is indicated by a p-value of 0.002, which is lesser than 0.05; thus, the null hypothesis is rejected. This result is supported by the study of Ong et al. (2012) that there is a significant correlation between students' NLE performance with their college entrance examination performance-OLSAT (IQ, NAT, composite), college GPA, and pre-board performance. Students' performance in the entrance examination upon entry to the university, their IQ, aptitude in nursing, and academic achievement in college contribute to the success or failure of the respondents in the board examination. It is inferred that students who performed better in the entrance examination, college academic achievement, and pre-board examination performed better in the licensure examination. It is further implied that the quality of admission and retention policies of an institution is an important consideration that every college or university should strengthen in relation to their aspiration to have better licensure examination performance.

On the other hand, the two other parameters under Non-Academic Factors, namely: Emotional Quotient and Schedule of Examination, posted p-values of 0.129 and 0.392, respectively, which are all greater than 0.05; thus, the null hypothesis is accepted. This implies that Emotional Quotient and Schedule of Examination are not significantly correlated to the Nurse Licensure Examination Performance. This result is in consonance with the results of Estrada and Del Rosario (2010) study that emotional intelligence statistically has no impact in forecasting Nurse Licensure Performance. The study claimed that only the Nursing Care Management grades and Entrance Examination positively impact Nurse Licensure Examination Performance. This study further formulated this model: $PNLE = -4.109 + 0.946 (\text{NCM grade}) + 0.046 (\text{Entrance Exam})$.

Table 6. Regression Analysis Results

Model Summary					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	
1	0.761	0.579	0.529	2.5690	
Predictors: (Constant), Exam Sched, EQ, IQ, Eng Prof, NEP, NAT, NCM					
ANOVA					
Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	534.964	7	76.423	11.580	0.000
Residual	389.373	59	6.600		
Total	924.337	66			
Predictors: (Constant), Exam Sched, EQ, IQ, Eng Prof, NEP, NAT, NCM					
Dependent Variable: NLEP					
Coefficients					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	18.139	10.275		1.765	0.083
NCM	0.413	0.190	0.316	2.174	0.034*
NAT	0.018	0.005	0.417	3.367	0.001*
EngProf	-0.195	0.096	-0.257	-2.044	0.045*
NEP	0.399	0.135	0.384	2.945	0.005*
EQ	-0.006	0.026	-0.020	-0.224	0.824
IQ	-0.035	0.053	-0.072	-0.658	0.513
ExSched	-0.201	0.723	-0.024	-0.278	0.782

Dependent Variable: NLEP

The Model Summary in Table 6 revealed an R-value of 0.761, which indicates a high degree of correlation between the independent and dependent variables of the study. The R^2 obtained value of 0.579 means that the dependent variable, Nurse Licensure Examination Performance (NLEP), can be explained 57.9% by the independent variables, namely, the academic and non-academic profile of the respondents.

The ANOVA results of the regression analysis indicated that the regression model arrived at predicts the dependent variable significantly well. This is indicated by the obtained p-value (Sig column) of 0.000, which is lesser than 0.05. Moreover, this indicates that the regression model statistically significantly predicts the outcome variable.

The results in the Coefficients section indicated a value of 18.139 for the Constant. The results also indicated that all four parameters under the Academic Profile of the respondents, namely: Nursing Care Management performance, Nurse Aptitude Test result, English Proficiency, and Nursing Enhancement Program performance, contribute statistically significantly to the model as indicated by their significance value of 0.034, 0.001, 0.045, and 0.005, respectively, which are all lesser than 0.05. On the other hand, the Non-Academic variables, namely: Emotional Quotient, Intelligence Quotient, and Schedule of Examination, statistically do not significantly contribute to the model since their respective significance values of 0.824, 0.513, and 0.782 are all greater than 0.05. With the aforementioned results, the Regression Model can be written as: $NLEP = 18.139 + 0.413 (NCM) + 0.018 (NAT) - 0.195 (EngProf) + 0.399 (NEP)$

One of the findings in a similar study entitled “Factors Affecting the Passing Rate of Librarians Licensure Examination: Basis for Advocacy Program” indicated that the curriculum is intended to prepare students to succeed in society. It contains materials from someone’s analysis of what society requires for success. Castle (2014) stressed that the goal of licensure is to identify those individuals to process minimum competencies related to a specific vocation. These competencies expected to have been possessed by individuals are those that are supposed to have been acquired by them in the classroom based on the national curriculum and content coverage of the subjects provided by the government. If the national curriculum and content coverage of the subjects provided by the government are observed properly, the performance of graduates in the licensure may be raised (Canang, 2015).

CONCLUSION

Most respondents have a satisfactory academic profile rating: Nursing Care Management, Nurse Aptitude Test, English Proficiency, and Nursing Enhancement Program. Most of the respondents also belong to the central portion of the normal distribution, getting average ratings in terms of the non-academic factors: Emotional Quotient, Intelligence Quotient, and Schedule of Examination. Overall, the respondents have a fair performance in the Nurse Licensure Examination.

There is a significant relationship between the Academic Profile: Nursing Care Management performance, Nurse Aptitude Test result, English Proficiency, and Nursing Enhancement Program result, and the Nurse Licensure Examination Performance of the respondents.

There is a significant relationship between the Otis-Lennon School Ability Test (OLSAT) and the Nurse Licensure Examination results. However, Emotional Quotient and the Schedule of Examination have no significant relationship with the Nurse Licensure Examination Performance.

The Academic Profile of the respondents, namely: Nursing Care Management performance, Nurse Aptitude Test result, English Proficiency, and Nursing Enhancement Program performance, contributed statistically significantly and entered in the linear regression model obtained in the study.

TRANSLATIONAL RESEARCH

The findings and model ($NLEP = 18.139 + 0.413 (NCM) + 0.018 (NAT) - 0.195 (EngProf) + 0.399 (NEP)$) obtained from this research study may be utilized to strengthen its policies on admission and retention in the program. This also provides a guide to the instructors and guidance counselors to where they should periodically monitor the performance of the students to provide the needed intervention. The use of formative assessment is highly encouraged, and instructors should take the necessary steps to improve students' performance in areas where it is not satisfactory.

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