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## **Discovering the Multiple Intelligences of Student-Nurses in Selected Nursing Schools in the Philippines**

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### **Abstract**

This descriptive-correlational study aims to discover the level of multiple intelligences of the nursing students in selected nursing schools as perceived by the two groups of respondents with respect to the different multiple intelligences indicator. There were 700 students who participated in the study from two higher education institutions that offer BS Nursing program which include Tomas del Rosario College and Asia Pacific College of Advance Studies. They were selected using stratified random sampling technique. To test the significant difference between the perceptions of the nursing student-respondents on the levels of multiple intelligence of the nursing students' in selected nursing schools in Bataan, the analysis of variance (ANOVA) were used. It was revealed in the study that majority of the students-respondents belong to the 16 years old bracket, second year college and female nursing students. The student-respondents assessment on the levels of multiple intelligences of the nursing students in selected nursing schools found to be above average in the four specific areas namely; musical strength, verbal strength, intrapersonal strength, and visual strength, while on the logical strength, interpersonal strength, and kinesthetic strength the nursing students found to be average. In the light of findings and conclusions of the study, it was recommended that students should understand how to look into themselves and become aware on the significance of learning and developing their skills. Students should know themselves more fully in order for them to overcome the difficulties involves in attaining knowledge in order for them to learn.

**Keywords:** multiple intelligence; Gardner; student-nurses.

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## **1. Introduction**

By examining the learners' learning styles and multiple intelligences, students may recognize their own strengths and limitations and learn from them. It is also critical for teachers to understand their students' learning styles and many intelligences so that they may carefully define their objectives and plan activities that target the various intelligences, as well as create student-centered activities. At the moment, the notion of multiple intelligences has captured the interest of hundreds of educators around the nation, and hundreds of schools are reimagining how they teach students. However, the reality is that some institutions continue to educate in the same old monotonous manner, through dry lectures, tedious worksheets, and textbooks. One of the most compelling, yet divisive, new approaches to education reform is the multiple intelligences theory, or MI. Developed by Howard Gardner of Harvard Graduate School of Education and Harvard Project Zero, MI first swept the worlds of education, cognitive science, and developmental psychology in 1982 with the publication of Gardner's treatise *Frames of Mind*. Since its release a decade ago, Dr. Gardner's work and the Multiple Intelligence hypothesis have confronted educators with a basic question: What is intelligence? Modern psychologists are arguing over whether there are numerous intelligences or whether there is just [1]. The majority of psychologists have connected their research to the intelligence quotient factor, often referred to as general intelligence. They have established a connection between their study and that of previous psychologists via the use of variables and constants associated with statistical representations. On the opposite end of the spectrum is Howard Gardner, who, after studying numerous individuals with impairments, concluded that all persons had a variety of intelligences distributed throughout the brain [2]. Gardner does not deny the existence of universal intelligence; he just emphasizes the importance he places on specialised intelligence. According to him, distinct intelligences are situated in distinct regions of the brain. Numerous colleagues concur that although various intelligences are possible, there is still a general intelligence. This is the underlying principle of all human thinking. According to Gardner's view, there is general intelligence, but the brain is divided into various distinct regions. His approach is markedly different from that of traditional theorists, who focus mostly on verbal and spatial thinking. One reason orthodox psychologists continue to discover evidence for universal intelligence is their failure to create and include measurements of other human talents, such as musical and athletic aptitude [3]. This point of contention is primarily semantic in nature, since Gardner broadens the realm of inquiry well beyond established bounds. Because the educational system has emphasized the significance of developing mathematical and verbal intelligences, it often measures student achievement only on those two intelligences' quantifiable abilities. According to proponents of Gardner's Theory of Multiple Intelligences, this focus is unjust. Kids with highly developed musical intelligences, for example, may be disregarded for gifted programs or put in a special education class if they do not meet the requisite math or language scores [4]. Teachers must strive to evaluate their students' learning in ways that provide an accurate picture of their abilities and limitations. As a result, it is critical for teachers to build intelligence profiles for each pupil. Knowing how each student learns enables the instructor to evaluate the student's development appropriately. This sort of personalized assessment enables teachers to make better informed choices about what to teach and how to convey knowledge. Students must demonstrate their knowledge in a prescribed way on traditional examinations such as multiple choice, matching type, and essays [5]. According to proponents of Gardner's theory, a more effective method to evaluation is to let students to explain the topic in their own unique manner, using their

many intelligences. Student portfolios, autonomous projects, student diaries, and assignment of creative assignments are all preferred evaluation approaches. In light of the above, the researcher will seek to characterize the many intelligences of nursing students enrolled in chosen nursing schools in Bataan.

## **2. Methodology**

This is a systematic inquiry where the Independent variables cannot be directly controlled since manifestations have been acquired before or they are in themselves manipulable. As called for by the nature of the research problems, the descriptive survey method was used. As we all know the descriptive method is an appropriately designed tool in investigating and gathering information about the present existing conditions. Samples were selected randomly, so variables were not controlled. The subjects are of different characteristic. This study involves the nursing students of Tomas del Rosario College and Asia Pacific College of Advance Studies. Among the one thousand thirty (1,030) nursing students of Tomas dell Rosario College and Asia Pacific College of Advance Studies, sixty-five percent (65 %) were considered in the study which brought about seven hundred (700) actual respondents to represent the samples. They are officially enrolled during the conduct of the data gathering. This was obtained with the use of the Slovin's formula in determining the actual size of samples within the given population. A lot of instruments in connection with this study have been read by the researcher. However, the main type of research instrument used in this study was a questionnaire consisted of two (2) parts, which was patterned from Dr. Howard Gardner's Multiple Intelligence Test. Frequency and percentage were used to answer Part I of the questionnaire. This is done to describe the profile of the respondents in terms of some selected variables. Ranking was used as another descriptive statistics for the different sizes and magnitudes of the weighted mean. It was used to describe the positional importance of the items discussed. Since the responses of the group were assigned points, the weighted mean was used as a measure of central tendency. To test the significant difference between the perceptions of the nursing student-respondents on the levels of multiple intelligence of the nursing students' in selected nursing schools in Bataan, the analysis of variance (ANOVA) were used. The analysis of variance is composed of the total sum of squares, the between column sum of squares, the within-column sum of grades, the total degrees of freedom, the between-column degrees of freedom, the within degrees of freedom, and the F-test ratio formula.

## **3. Results and Discussion**

Table 1 presents the profile of the students in terms of age, gender and year level.

**Table 1:** Personal Profile of the Student-Nurses.

<b>Personal Profile</b>	<b>Frequency</b>	<b>Percentage</b>
Age (16 years old)	155	22%
Gender (Female)	585	84%
Year Level (Second Year)	115	33%

It can be deduced from the table that majority of the student who involved themselves in the study are 16 years of age. This was 22% or 155 respondents out of the 700 students. A big bulk of students taking the BS Nursing program are actually first year students, hence, the big chunk of respondents came from their level. Moreover,

majority of the respondents are female which is composed of 585 students or 84%. Finally, most of the students who participated in the study are in their second year level. They are composed of 33% of the sample or 115 out of 700 students.

On the other hand, Table 2 shows the level of multiple intelligence of nursing students in selected nursing schools in northern Philippines. Two higher education institutions which offer BS Nursing program were used as the research locale of this study.

**Table 2:** 1 Level of Multiple Intelligence of Nursing Students in Selected Nursing Schools.

Multiple Intelligences	HEI No. 1		HEI No. 2	
	Mean	Descriptive Rating	Mean	Descriptive Rating
Musical Strength	3.70	Above Average	3.68	Above Average
Logical Strength	3.40	Average	3.37	Average
Interpersonal Strength	3.40	Average	3.37	Average
Kinesthetic Strength	3.39	Average	3.37	Average
Verbal Strength	3.70	Above Average	3.68	Above Average
Intrapersonal Strength	3.69	Above Average	3.68	Above Average
Visual Strength	3.70	Above Average	3.68	Above Average

The table shows that in terms of musical strength, students from both higher education institutions were rated as above average with school no. 1 getting a mean of 3.70 and school no. 2 with 3.68. For the logical intelligences, students from both higher education institutions were rated as average. The mean for school no. 1 is 3.40 while school no. 2 is 3.37. Under the interpersonal strength, the mean of school no. 1 is 3.40 while school no. 2 is 3.37 which means that students from both higher education institutions were rated as average. The same goes true under the kinesthetic strength wherein students from both higher education institutions were rated as average with school no. 1 having a mean of 3.39 and school no. 2 with a mean of 3.37. Verbal intelligence of the students were revealed to be above average with school no. 1 getting a mean of 3.70 and school no. 2 with 3.68 mean. Likewise, the students were found to have above average intrapersonal strength with a mean of 3.69 for school no. 1 and 3.68 for school no. 2. Finally, the visual strength of the students are above average with school no. 1 getting a mean of 3.70 and school no. 2 having a mean of 3.68.

**Table 3:** Significant Difference of the Two Groups of Respondents on the Levels of Multiple Intelligences of the Nursing Students in Selected Nursing Schools.

Source of Variation	Sum of Squares	Df	MSS = ss/df
Between column	0.96	1	0.96
Within column	0.69	12	0.06
Total	1.07	13	

Table 3 shows the level of multiple intelligences of the nursing students in selected nursing schools as perceived by the two groups of respondents with respect to the different multiple intelligences indicators. By testing the hypothesis of no significant perceptions of the two groups of respondents on the levels of multiple intelligences of the nursing students in selected nursing schools in terms of musical strength, logical strength, interpersonal strength, kinesthetic strength, verbal strength, intrapersonal, strength and visual strength, it obtained a computed f- ratio of -16 and an f tabular value of 4 66 at 5 % probability level at 1, 12 degrees of freedom. Hence, the

computed  $f$  - ratio value is greater than the tabular value, null hypothesis on the non-significance of difference is rejected. Therefore, there is a significant difference on the perception of the two groups of student-respondents on the levels of multiple intelligences of nursing students in selected nursing schools in Bataan in terms of musical strength, logical strength, interpersonal strength, kinesthetic strength, verbal strength, intrapersonal strength, and visual strength. From the findings above, the dominant multiple intelligences of the student-nurses are musical, verbal and visual. Verbal-linguistic intelligence is sometimes referred to as "word clever" [5] and a kind of intelligence that people often use while conversing with people, whether in official or casual settings to jot down our ideas, compose poems, or compose a note to a friend. It is the ability to communicate effectively, whether verbally or in writing. It encompasses the capacity to cope with many facets of a language, as well as the ability to alter the language's syntax or structure, as well as the pragmatic dimensions or practical applications of the language, and to apply it in a variety of settings [6]. This intelligence is important among nurses since effective communication skills have been found to be advantageous to the patient-nurse interaction and to be associated with better health outcomes [7]. Positive health outcomes include the following: (a) increased compliance, (b) increased satisfaction with treatment, and (c) improvements in physical and psychological health. Additionally, it has been shown that nurses with strong communication skills had fewer malpractice incidences, higher patient satisfaction, and more effective health care [8]. Effective communication skills are critical for the physician, the patient, and the health care institution, based on this knowledge. Another dominant multiple intelligence of the student-nurses is the visual intelligence. Visual/spatial intelligence is the capacity to mentally visualize space and things. Individuals with this kind of intellect would much sooner sketch a picture than write a paragraph. They are aware of color, forms, and patterns, as well as the way light falls on an item, and are capable of comprehending mental models. For nurses, visual intelligence is important in patient observation. This demands the use of a variety of abilities, including patient assessment, knowledge application, information interpretation, and finally clinical decision making, which is at the core of clinical practice [9]. Effective nurse observation is critical to patient safety and outcome since it is the first step in recognizing clinical symptoms of concern. Changes in the patient's physical condition result in instability as critical bodily functions fail. This can be detected by observing and recording the patient's physiological vital signs, such as respiratory rate, heart rate, blood pressure, and temperature, which gradually become more abnormal as the patient's condition deteriorates [10].

#### **4. Conclusion and Recommendation**

It was revealed from the study that majority of the students-respondents belong to the 16 years old bracket, second year college and female nursing students. The student-respondents assessment on the levels of multiple intelligences of the nursing students in selected nursing schools in Bataan found to be above average in the four specific areas namely; musical strength, verbal strength, intrapersonal strength, and visual strength, while on the logical strength, interpersonal strength, and kinesthetic strength the nursing students found to be average. There is a significant difference on the perception of the two groups of student-respondents on the level of multiple intelligence of nursing students in selected nursing schools in Bataan in terms of musical strength, logical strength, interpersonal strength, kinesthetic strength, verbal strength, intrapersonal strength, and visual strength. This study will help the school administrators understand the nature of their students which enables them to design a well balance program that will enhance the students' intellectual abilities and potentials. Furthermore, it

serves as a guide in designing a well balance curriculum to assure quality education and to reinforce their students' capabilities in order for them to become more effective in their chosen field of specialization. And lastly, it will also help them gain more objective insights into their styles of human resources management and thus have better understanding of some of the factors that affects and influenced them. On the part of the teacher, this study will help them develop a deep sense of responsibility, most primarily in dealing with their students. It will serve as their guide to know their students' intellectual abilities and potentials and makes them understand their students more fully. Furthermore, it will help them develop a better teaching strategy that is well fitted to their students' capacities and at the same time seek ways in improving the students' weakness. For the students, this will serve as an inspiration to them to study more and discover their full potentials in order to develop it. Furthermore, it will make them improved their academic performance well prepared and competent enough in their chosen field of specialization. For the school as a whole, this study will help in attaining the institution's mission and vision. It also help in providing a challenging leaching and learning partnership which attracts able students and produces graduates who are valued and sought after by employers and the wider community. Furthermore, it will help in providing an academic environment in which teaching is recognized as a professional responsibility wherein effective teaching is expected and valued, and lastly, it will help in providing resources to ensure quality teaching and learning outcomes. In the light of findings and conclusions of the study, it was recommended that students should understand how to look into themselves and become aware on the significance of learning and developing their skills. Students should know themselves more fully in order for them to overcome the difficulties involves in attaining knowledge in order for them to learn. They should develop a deep sense of responsibility. Also, students should develop self-confidence and trust for others and at the same time seek ways in improving their weakness or share what they think they excelled. They should be given insights on how to balance their time in order for them to develop their full potentials. Further studies of the same nature must be strongly recommended to strengthen the levels of multiple intelligence of the student.

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