

FISH BONE DIAGRAM AS A TEACHING TOOL.

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Abstract

The teaching tools and strategies are based on their educational philosophy, pedagogy, classroom demography, subject area and the institute's mission statement. The aim of the study was to assess the effectiveness of fish bone diagram as a teaching tool among nursing students in a selected college of nursing. The participants were selected using purposive sampling technique and data was collected from 90 undergraduate nursing students using structured knowledge questionnaire. The data were statistically analyzed and the results revealed that there was significant difference in the mean knowledge scores of nursing students towards regarding laboratory investigations and normal values at ($p < 0.001$). Majority of the nursing students (100%) had inadequate knowledge in pretest but 70% had adequate knowledge in post test. This article proposes the applicability of fish bone diagram as a teaching tool for laboratory investigations and normal values, thereby creating newer strategies in nursing education.

Keywords: Fish bone diagram, Laboratory investigations, Normal values, Nursing students, Nursing education.

Introduction

“It is the supreme art of the teacher to awaken joy in creative expression and knowledge”.

-Albert Einstein

Rapid changes of modern world have caused the Education System to face a great variety of challenges. Thus, research and exploration to figure out useful and effective teaching and learning methods are one of the most important necessities of educational systems. Teaching and learning process is

where new ideas germinate; roots strike and grow tall and sturdy. It is a unique space, which covers the entire universe of knowledge. It is where creative minds converge, interact with each other and construct visions of new realities. Established notions of truth are challenged in the pursuit of knowledge.

Nursing is multidimensional, a science and an art. Teaching nursing is more than a job; it is an art of assisting discovery. Teachers play a vital role to shape the students lives in immeasurable ways, both inside and outside the classroom. Despite the importance of good teaching, the outcomes are far from ideal (Gheorghe, 2010). There are existences of different teaching methods and tools, but the present study is designed to investigate the effectiveness of Fishbone diagram (Ishikawa) as a teaching tool to teach on laboratory investigations and normal values for nursing students.

Ishikawa diagram is generally called the Fishbone diagram because the diagram resembles that of a fishbone. In simple terms, Fishbone is brainstormed in a structured format. It represents a model of suggestive presentation for the correlations between an event (effect) and its multiple happening causes. The structure provided by the diagram helps team members think in a very systematic way. Some of the benefits of constructing a Fishbone diagram are that it helps determine the root causes of a problem or quality characteristic using a structured approach, encourages group participation and utilizes group knowledge. (Shirani et. al, 2016).

The Fishbone diagram is a known cause and effect diagram, is redesigned as a teaching tool for laboratory investigations and normal values in gaining a greater understanding and to evoke the

values rapidly. Acknowledging that teaching requires meticulous preparation to appropriately equip students, this study aims to explore suitable teaching methods used in nursing education. This field is a high-risk one in that lives of patients are at stake. The rapid evolution of educational technologies and emerging trends demand faculty to choose innovative teaching tools to match the learners need.

Statement of the problem

A pre experimental study to to assess the effectiveness of Fish Bone Diagram as a teaching tool on knowledge regarding laboratory investigations and normal values among the nursing students at a selected college, Chennai.

Objectives

- To assess the knowledge regarding laboratory investigations and normal values among the nursing students.
- To compare the pre test and post test knowledge scores on laboratory investigations and normal values among the nursing students.

Null Hypothesis

H₀1: There will not be any significant difference in the knowledge scores on laboratory investigations and normal values among the nursing students before and after the use of fish bone diagram.

Methodology

Descriptive exploratory research design was adopted for conducting the study. This study was conducted among 90 B.Sc., Nursing II year students studying at Apollo college of Nursing, Chennai. Samples were selected using non probability purposive sampling technique. Verbal consent was obtained from the participant students. Data was collected using baseline variable proforma and structured questionnaire on laboratory investigations and normal values through self administration method. The proforma for the baseline variables was used to collect the students' attributes like age, medium of education, percentage of marks in the first year.

Data collected using structured questionnaire on laboratory investigations and normal values consist of 70 questions with the scores issued for each of the following two categories:

- Investigation done under various panel such as Complete blood count–Hemoglobin, Packed Cell Volume, Total Leucocyte count, Differential count, platelets, and similarly with other panels, Renal function test, Thyroid function test, Cardiac profile, Arterial Blood Gas, liver function test, Coagulation profile, Possible blood glucose investigation.
- Normal laboratory values under each profile.

The reliability of the tool was found to be high and validity was obtained from experts in the field of nursing. After the pre test, laboratory investigations and normal values were taught to the nursing students using presentation on fish bone diagrams, a teaching tool for an hour. Students were able to follow the teaching and were interested in learning and after a week of teaching, post test was conducted. Collected data was analyzed through appropriate descriptive and inferential statistics.

Results and Discussion

Majority of the nursing students (86.7%) were <19 years of age and most of them (61.1%) were educated from English medium and most of the students (64.4%) have secured between 61-75% in their B.Sc. (N) first year.

It can be interpreted from the above data that, majority of the nursing students were young adults, as they joined nursing immediately after their higher education and even though most of students come from different backgrounds and have varied experiences and abilities they were educated from English medium, which indicates the awareness among the parents on importance of education and language. It is evident from the marks secured; that nursing faculty must have ample knowledge in both clinical and teaching areas to provide enriched quality of education, to fulfil the integral part of nursing curriculum and to prepare students to

achieve professional competence. These findings were also consistent with the study conducted by Thokozani (2015) who reported that the faculty role,

their clinical and teaching competences, clinical learning environment, are essential to prepare nursing students for today's health care setting.

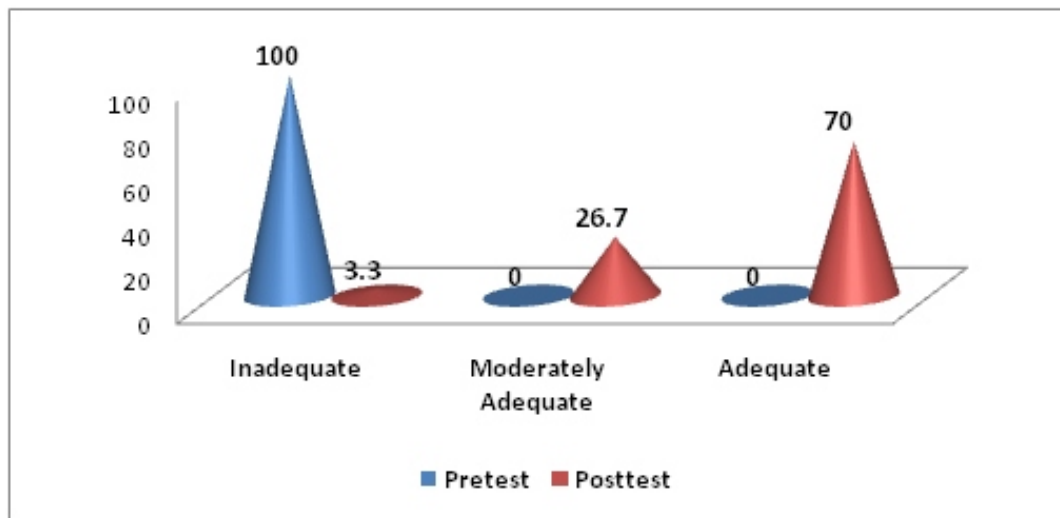
Table 1
Comparison of Knowledge Scores of Nursing Students regarding Investigation Profile and laboratory values. (N = 90)

Groups	Mean	Standard Deviation	"t" value
Pre test	15.58	6.43	42.3
Post test	55.8	7.98	

***p<0.001

The data reveals that there was a significant difference in the mean knowledge scores of nursing students regarding laboratory investigations and normal values at (p<0.001). Hence, the null hypothesis H₀1 was rejected. It is inferred from the data that the redesigned fish bone diagram to teach laboratory investigations and normal values is found to be an effective teaching tool and a new way to learn and remember numerous values in an enhanced way.

Fig 1. Percentage Distribution of level of Knowledge on laboratory investigations and normal values in pre test and post test. (N = 90)



The data presented in Fig 1 depicts that majority of the nursing students (100%) had inadequate knowledge before the teaching and after using fish bone diagram as a teaching tool for laboratory investigations and normal values majority of them (70%) had adequate knowledge.

It is evident from the results that fish bone diagram is an effective teaching tool that has significantly improved the knowledge level of the students regarding investigations and prepares students to achieve professional competence. These findings are supported and concur with the findings of Goodin, H. J., Stein, D. (2008) who states that teaching strategies can engage students in an active learning process. If they use these strategies well, nursing students are more likely to memorize the information associated with the lesson. It is important for nurse educators to select appropriate teaching strategies in order to deliver high-quality education.

Recommendation

- A comparative study can be done to identify the teaching tool preferences among the nursing students of different nursing colleges.

Conclusion

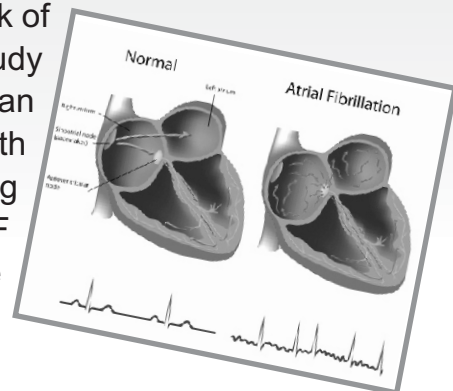
Fish bone diagrams are often used in problem solving. Here, fish bone diagram is used as a teaching tool by organizing the content in a structured format to create successful impact in teaching learning process, thereby nursing students gain sufficient knowledge to interpret and provide enriched quality care to the patient, thus this method creates great understanding and it is critical to good clinical practice and patient outcomes. Thus, a good teaching tool helps the students to question their preconceptions, and motivates them to learn, by putting them in a situation in which they come to see themselves as the authors of answers and the agents of responsibility for change.

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DEPRESSED PEOPLE HAVE AN INCREASED RISK OF ATRIAL FIBRILLATION.

Patients with depression have an increased risk of atrial fibrillation (AF), according to a study published in Nov. 20, 2018 in the *European Journal of Preventive Cardiology*. Compared with the general population, patients taking antidepressants had a 3.18-fold higher risk of AF during the first month of treatment. The association gradually reduced thereafter, to 1.37-fold at 2-6 months, and 1.11-fold at 6-12 months.



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“It is never too late to be what you might have been.”

- George Eliot