

# Effectiveness of Audio-Visual Learning Package on Knowledge Regarding Gastro Intestinal Tract Assessment Among Under Graduate Student Nurses

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**Abstract:** Background: The body's Gastro Intestinal system is one of the most fascinating system in the human body. Most of the time it is found that the student nurses finds it difficult to assess a patient physically. So it needs to improve the quality of existing programmes and help to design new ways to learn G.I.T assessment skills. Objectives: 1) To assess the knowledge of undergraduate student nurses regarding G.I.T assessment. 2) To evaluate the effectiveness of Audio Visual learning package regarding G.I.T Assessment. 3) To find an association between pre and post test knowledge scores regarding G.I.T Assessment with selected socio demographic variables. Methods: An evaluative approach adopted. The Quasi-experimental one group pre-test post-test design used. The sample size for the present study was 91 Under Graduate student nurses of 2nd year Basic B.Sc. nursing class; Non probability convenient sampling technique was used to select the respondents. A structured knowledge questionnaire was administered to assess the pre and post test existing knowledge on G.I.T assessment. Results: The mean and S.D of knowledge scores obtained before administering learning package was 9.81 and 2.49 respectively, which was increased after administering Audio Visual learning package to 18 and 2.6 respectively. It shows that the knowledge regarding G.I.T assessment was increased after showing the Learning package on G.I.T assessment. Conclusion: It was concluded that the Audio Visual learning package on knowledge regarding G.I.T assessment was effective and good method to improve U.G student nurses knowledge regarding G.I.T assessment.

**Keywords:** Effectiveness, Knowledge, Audio-Visual Learning Package, Gastro Intestinal Tract assessment, Under Graduate student Nurses

## 1. Introduction

The human Gastro Intestinal Tract or G.I.T is an organ system responsible for consuming and digesting foodstuffs, absorbing nutrients and expelling waste. Not only is the G.I system responsible for the entry and exit of food, water and nutrients, but it also plays a key role in a number of body functions. It is not an overstatement to say that with a healthy gastrointestinal tract, that person will have a healthier body.

In the case of gastrointestinal disease or disorders, these functions of the gastrointestinal tract are not achieved successfully. Acute abdominal conditions, including peptic ulcer disease, appendicitis, and hernias are time-critical illnesses that need urgent surgical care. These are common, treatable conditions in high-income countries, but they remain important causes of premature mortality in India and many low-income and middle-income countries where access to surgical care remains poor. [1]

923 (1.1%) of 86806 study deaths at ages 0–69 years were identified as deaths from acute abdominal conditions, corresponding to 72000 deaths nationally in 2010 in India. Most deaths occurred at home (71%) and in rural areas (87%). Compared with 567 low-mortality geographical clusters, the 393 high-mortality clusters had a nine times higher age-standardized acute abdominal mortality rate and significantly greater distance to a well-resourced hospital. [1]

It is very important that the nurse works to prevent illness. However, if the patient is ill and if the nurse is skilled in detecting unhealthy conditions, then he or she can refer the patient to health care specialists. The ability to detect deviations from healthy norms is vital. There are many situations in which the nurse can be the one to perform the G.I.T assessment. Based on the exam results, the treatment team becomes familiar with the patient's health, discovers where the patient's health deviates from the norm, and is aided in developing a treatment plan.

My experiences as a nurse researcher have revealed that the student nurses faced difficulty to assess a patient physically. It focus the level of student nurses' proficiency in the health assessment skills was not satisfactory. So it needs to improve the quality of existing programmes and help to design new ways to learn G.I.T assessment skills. In multimedia learning, the student uses the three cognitive processes of selecting, organizing and integrating the incoming information and then makes connections between the verbal and visual models.

## 2. Review of Literature

The literature reviewed for the present study has been organized under the following sub headings:-

- 1) Literature related to use of Audio Visual Learning package or computer assisted teaching.
- 2) Literature related to Gastro Intestinal Tract assessment or Physical Examination.

**Sinmayee KD, Nirupama J. (2015)** carried out a study to assess the Effectiveness of Video Assisted Teaching Module (VATM) on Knowledge Regarding Care of Newborn Baby under Photo Therapy among Female Health Workers. Item wise comparison shows that there is effectiveness of VATM in increasing knowledge of the female health workers on care of the newborn baby under Phototherapy. [2] **Amosh T, Tukaram Z. (2014)** Carried out a research study to assess the effectiveness of Learning Package on Knowledge about Cardio-Respiratory Assessment among Under Graduate Student Nurses. The result shows that there was significant difference in-between pre test and post test knowledge regarding cardio respiratory assessment and reveals the effectiveness of the learning package. [3]

**Mohsen AH, Azade S. (2013)** carried out a cross sectional study to evaluate nurse's use and mastery in health assessment skills. The result shows that the level of nurses' proficiency in the health assessment skills was not satisfactory and the results suggests that modifying the curriculum and cooperating of nurse managers and nursing schools can help to improve the situation. [4] **McElhinney E. (2010)** carried out a study to find out Factors which influence nurse practitioners ability to carry out physical examination skills in the clinical area after a degree level. The results highlight the importance of individual self-confidence, role clarity, effective educational preparation and support from other disciplines to the nurse practitioners ability to carry out this new role. [5]

### 3. Materials and Methods

The research approach adopted for the present study was an evaluative approach. one group pre test post test design was adopted to assess the existing knowledge of under graduate student nurses on Gastro Intestinal Tract Assessment, Non probability convenient sampling technique was used to select the respondents. The setting for the study was Krishna Institute Of Nursing Science, Karad. The sample size for the present study was 91 under graduate student nurses of 2<sup>nd</sup> year (2015-2016) Basic.B.Sc Nursing. A structured knowledge questionnaire was used to assess the pre-existing knowledge on G.I.T assessment among U.G student nurses. The same day, the learning package (CD-ROM) was shown to all the participants. After 7 days of administration of learning package, the same structured knowledge questionnaire was used to participants who were present on the first day to assess the effectiveness of learning package by assessing gain in knowledge compared to pre-test.

#### Inclusion criteria

- Student nurses studying in 2<sup>nd</sup> yr B.BSc. Nursing course (2015 – 2016) KINS, Karad.
- Who were available during the period of data collection.
- Those who were willing to participate in the study.

#### Exclusion criteria

- Those who were not willing to participate in the study.
- Who were not available during the period of data collection.
- Those who were participated in the pilot study were excluded from the main study.

### 4. Development of Learning Package

The Audio Visual Learning package (instructional CD-ROM) on Gastro Intestinal Tract Assessment was developed based on the review of the related research / non – research literature, books, online as well as streaming media on the internet and standardized Instructional videos on GIT assessment, as well as objective stated. Content of the learning package were History taking (Focused abdominal history), Assessment of mouth, Inspection technique, Auscultation technique, Percussion technique, Palpation technique and Special palpation techniques for internal organs. Based on the content and instructions from the experts the script was prepared and shooting was hired by a professional videographer.

#### Description of the Tool

The structured questionnaire which assesses the knowledge of undergraduate student nurses regarding Gastro Intestinal Tract Assessment, which consists of two sections.

**Section A:** Deals with the socio – demographic data of the samples, which includes, Age, sex, Religion, Place of residence, occupation of the father and mother, Academic performance in 1<sup>st</sup> yr university exam and previous training in Gastro Intestinal Tract Assessment.

**Section B:** Contains multiple choice questions regarding knowledge of Gastro intestinal Tract assessment.

**Scoring:** For 25 items of this structured questionnaire, every correct response had a score of “1” mark, where as a score of “0” was given to every incorrect responses.

### 5. Findings

#### Section – A

This section deals with the distribution of undergraduate student nurses according to Socio Demographic variables. The maximum number 84 (92%) of U.G student nurses were in the age group of 18-20, the remaining 7 (8%) of respondents were in the age group of 21-23 and none of the students were in the age group of above 24. The maximum number of U.G student nurses 56 (62%) were Females and the remaining 35 (38%) were Males.

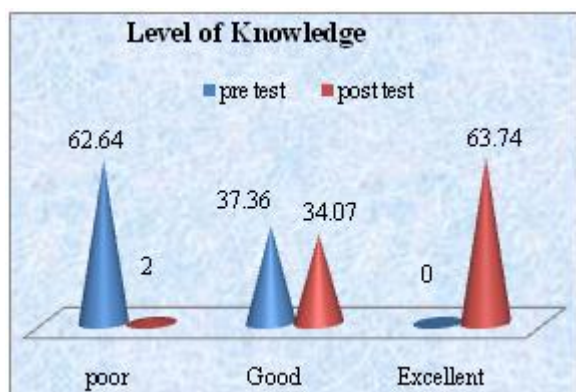
Maximum number of respondents 46 (51%) belongs to Hindu religion, 35 (38.46%) were Christians and 10 (11%) were Muslims. Majority of respondents 43 (47.25%) of under graduate student nurses lives in rural places, 26 (28.57%) in urban places and 22 (24.18%) in semi urban places. Majority of under graduate student nurse's fathers were in private service i.e., 36 (39.56%). And mothers were housewives i.e. 72 (79.12%).

Majority of under graduate student nurses 41 (45.05%) secured pass class in the first year university exam, 21 (23.09%) secured second class, 6 (6.59%) secured first class, 23 (25.27%) of under graduate student nurses got ATKT and none of the students got distinction. Majority of under graduate student nurses 79 (87%) have not taken prior training regarding Gastro Intestinal Tract Assessment and 12

(13.19%) students have taken prior training regarding G.I.T Assessment.

### Section – B

This section includes the Frequency and percentage distribution of pre-test and post test knowledge scores regarding G.I.T Assessment, Comparison of pre-test and post-test knowledge scores and Evaluate the effectiveness of Audio – Visual Learning package on G.I.T Assessment.



**Figure 1:** The Knowledge Level of U.G Student Nurses Regarding G.I.T Assessment Before and After Administering the Audio Visual Learning Package

**Table 1:** Mean and S.D Obtained Before and After Administering Learning Package.

Pre test			Post test			Mean gain percentage	Mann- Whitney statistic	p- value
Mean	Mean Percentage	SD	Mean	Mean Percentage	SD			
9.81	39.25	2.49	18	80	2.6	41	213.50	<0.0001

The Table.1 depicts the mean and S.D of knowledge scores obtained before administering learning package was 9.81 and 2.49 respectively, which was increased after administering Audio – Visual learning package to 18 and 2.6 respectively. It shows that the knowledge regarding Gastro Intestinal Tract assessment was increased after showing the Learning package (C.D ROM) on G.I.T assessment. Based on the paired 't' value of the findings  $H_0$  is rejected as there was significant difference between pre test and post test scores, so  $H_1$  was accepted. It reveals that the Audio Visual learning package on knowledge regarding Gastro Intestinal tract assessment was effective.

### Section - C

This section includes the association between pre-test and post-test knowledge scores on G.I.T assessment by under Graduate student nurses and selected socio demographic variables. The results shows that there was no any association found with socio demographic variables of under graduate student nurses and pre-test knowledge but there was significant association was found with place of residence ( $p < 0.05$ ) and post test knowledge of undergraduate student nurses on G.I.T assessment.

## 6. Conclusion

Based on the findings the result of the main study shows that the total pre-test mean knowledge score of the U.G student nurses was 9.81, which indicates that the U.G student nurses had poor knowledge on G.I.T assessment. In the post-test the mean knowledge score of the U.G student nurses was

The Fig.1 shows the majority of U.G student nurses 57 (62.64%) had poor level of knowledge about Gastro Intestinal Tract Assessment, whereas 34 (37.36%) of U.G student nurses had good level of knowledge and none of the U.G student nurses had excellent knowledge regarding Gastro Intestinal Tract Assessment before administration of audio visual learning package.

But in the post test majority of U.G student nurses 58 (63.74%) had excellent level of knowledge about Gastro Intestinal Tract Assessment whereas 31 (34.07%) of U.G student nurses had good level of knowledge and only 2 (2.20%) of U.G student nurses had poor knowledge regarding Gastro Intestinal Tract Assessment after administration of audio- visual learning package. Hence the data reveals the effectiveness of audio- visual learning package.

increased to 18. It is suggesting that there was significant difference of 8.19, which was the result of watching learning package on G.I.T assessment. Thus it was concluded that the Audio Visual Learning Package was effective method to improve U.G student nurses knowledge regarding Gastro Intestinal Tract assessment.

## 7. Scope of the Study

An alternative method of teaching can be used to teach G.I.T assessment i.e., traditional demonstration method which can be easily available to student and the Audio Visual learning package (CD-ROM) as a reference material in the library. The developed learning package on G.I.T assessment can be used as a teaching material for the training of the newly joined staff nurses in the Hospital for the introduction of G.I.T assessment. The learning package same as used in present study can be developed on various systems of Human body and can be assessed for its effectiveness.

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