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A study to evaluate the effectiveness of structured teaching module on knowledge regarding care of patient with pacemaker among II year B.Sc. students in Ambika College of Nursing Kharar, Mohali, Punjab

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Abstract

Background: With the tremendous advances in cardiac pacing during the past four decades cardiac Pacemaker implantation is now a common clinical procedure. An artificial Pacemaker is a device that electronically stimulates the pulse initiation within the heart.

Methodology: A pre experimental study with one group pre and post-test was done. The study includes the assessment of knowledge regarding the care of Patient with Pacemaker among B.Sc. II year nursing students in the selected college of nursing Mohali. Total 40 Nursing students were selected by non-probability, convenient sampling technique. Pre-test knowledge regarding care of Patient with Pacemaker among students was assessed by using self-structured knowledge questionnaire. Post-test knowledge regarding care of Patient with Pacemaker was conducted after one week of administering a structured teaching module.

Results: The study finding showed that the obtained mean value on pre-test knowledge score was 13.15 with a standard deviation of 2.568. The obtained mean value on post-test knowledge was 22.50 with standard deviation of 2.088. The difference between Pre-test and Post- test means score was 9.35. The obtained P-value between Pre-test and Post-test level of knowledge was <0.000.

Conclusion: The finding showed that there was a statistically significant difference found between pre-test and post-test knowledge score. So, it was inferred that with administration of Structure Teaching Module there was significant increase in the knowledge of the students of II Year B.Sc. Nursing in Ambika College of Nursing regarding care of Patient with Pacemaker. Therefore it is recommended the same study can be conducted on larger sample size, staff nurses and two groups of students.

Keywords: Effectiveness, structured teaching module, II Year B.Sc. Nursing students, care of patient with Pacemaker

Introduction

The higher the degree of heart block, the more likely the need for a pacemaker. Pacemakers are almost always required with third-degree block, often with second-degree block, but rarely with the first-degree block. When a heart block occurs within the AV node it often causes "junctional escape rhythm. On the other hand, with a "distal" heart block, the block occurs in or below the His bundle. Distal heart block tends to worsen over time. So even in cases where it is currently causing an only first or second-degree block, distal heart block is considered dangerous, and virtually always requires treatment with a pacemaker.

In 2005, Maim and Hall Berg conducted a study on patient's experiences of daily living with a pacemaker. Thirteen patients were considered for the study out of which seven are women. Their age was 22-82 with a mean age of 59.2. The informants had Pacemaker from 0.5-.33 (mean 13.1) years.

Nursing presence is essential in the care of patient with a cardiac pacemaker. Knowledge assessment and educating cardiac patients in how to lead an active life after a Pacemaker implantation presents many challenges for nurses who minor, requiring minimal intervention others are very demanding requiring an intensive long-term level of care. Nurses, being independent in their management of these patients should initially assess the clients knowledge level and start the health teaching to avoid misconceptions in the field.

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Material and Methods

Tool comprised of structured knowledge closed-ended questionnaire with 30 multiple choice questions. For each correct response '1' mark was given and for incorrect responses 0' mark was given.

The knowledge score was interpreted on criterion scale as follows

Level of knowledge	Percentage	Knowledge score
Adequate	Above 76%	24-30
Moderately Adequate	Between 51% -75%	16-23
Inadequate	Below 50%	0-15

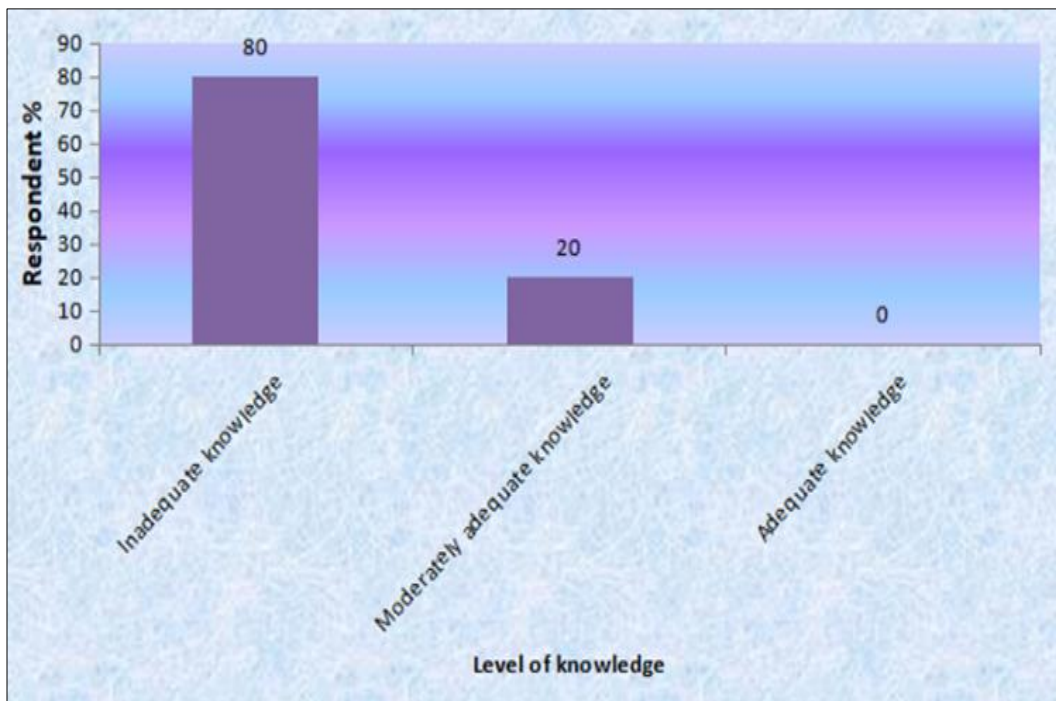
Data collection procedure

The data collected from II Year B.Sc. Nursing students at Ambika College of Nursing from 19 April 2019 to 27 April 2019. Prior permission from the authority was sought. The study sample was selected by Non-probability convenient based on sampling criteria. A total 40 students were

selected. A formal consent was obtained from them. The objective and purpose of the study was explained and confidentiality was maintained. Pre-test was conducted to assess the existing knowledge of students regarding care of patient with Pacemaker followed by a structured teaching module administered for 55 minutes by using Audio Visual aids. Post-test was conducted after one week of administering the structure teaching module to assess Post-test level of knowledge in order to evaluate the effectiveness of the structure teaching module.

Results

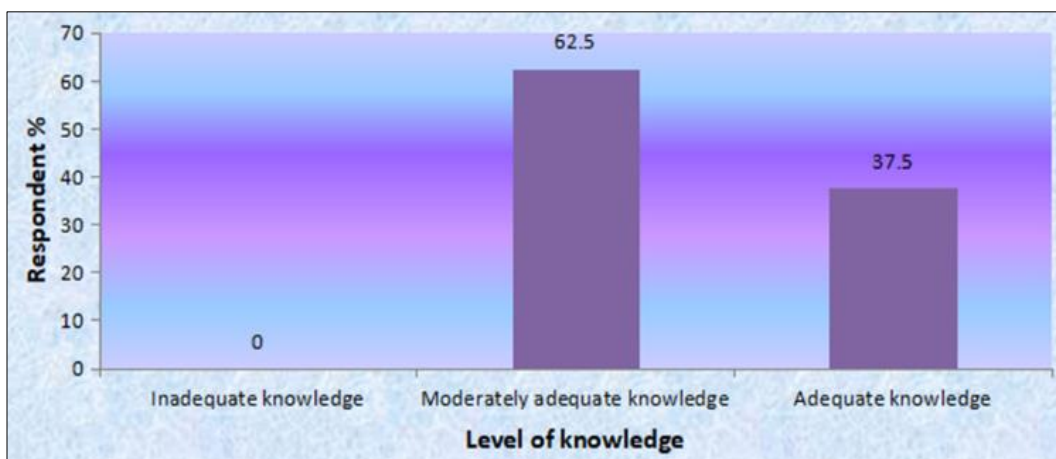
Majority of Students belong to the age group of 18-20 years i.e, 37 (92.5%) out of which females were (N=37). Religion wise distribution of the students indicated that majority of students were Hindu i.e, 29 (72.5%). Similarly most of the students were from rural community 28 (70%). As per previous knowledge distribution, it indicated 27(67.5%) students have little knowledge about the topic.



Graph 1: Distribution of respondents based on their pre-test level of knowledge regarding care of patient with pacemaker

This graph clearly shows that 80% had inadequate knowledge, 20% had Moderate adequate knowledge and

none of them had adequate knowledge regarding care of Patient with Pacemaker.



Graph 2: Distribution of respondents based on their post-test level of knowledge regarding care of patient with pacemaker

Graph reveals that 62.5% had moderate adequate knowledge, 37.5% had adequate Knowledge and none of them had inadequate knowledge regarding care of patient

with Pacemaker in Post-test after administration of a structured teaching module on care of patient with Pacemaker.

Table 1: This table showed that the post –test mean score (22.50) was higher than pre-test mean score (13.15)

Knowledge	Sample size (n)	Mean	Standard deviation	Mean difference	Paired t test (p value)
Pretest score	40	13.15	2.568	9.35	21.28 (.000)
Post test score	40	22.50	2.088		

This table showed that the post –test mean score (22.50) was higher than pre-test mean score (13.15). The difference was found to be statistically significant at 0.05 level by paired t' test ($t=21.28$). This finding shows that the structured teaching module has significant effects in increasing knowledge of II Year B.Sc. Nursing students regarding care of patient with Pacemaker.

Discussion

The present study was conducted to evaluate the effectiveness of structured teaching module on knowledge regarding care of patient with Pacemaker. An effective and evaluated research approach was selected on one group, a pretest and post-test design was conducted on them. A self-administered structured knowledge questionnaire was used to collect data from 40 II year B.Sc. Nursing students using non-probability convenient sampling technique in Ambika College of Nursing Mohali, Punjab. The findings are discussed based on study objectives and hypothesis.

The first objective was to assess the pre-test and post-test knowledge of students. Out of 40 students, the majority of students (80%) had inadequate knowledge, 20% had moderately adequate knowledge and none of them had adequate knowledge in Pre-test. In the post-test 62.5% students had moderately adequate knowledge, 37.5% had adequate knowledge and none of them had inadequate knowledge regarding care of patient with pacemaker.

The second objective was to develop and administer a structured teaching module regarding care of patient with Pacemaker. Structured teaching module was developed and administered for 55 minutes by using audio visual aids, flash cards, charts and black board on care of patient with Pacemaker.

The third objective was to associate pre-test and post-test knowledge score with selected socio-demographic variables. There was no significant association found between socio-demographic variables (Age, Gender, Religion, area of residence and previous knowledge) and level of knowledge among the nursing students. There was no statistically significant association found between socio-demographic variables (age, gender, religion, area of residence) and previous knowledge.

Conclusion

Majority of (62.5%) II Year B.Sc. Nursing Students had moderately adequate knowledge regarding care of patient with Pacemaker. This study was an innovative study to increase knowledge. There was a significant difference found between pre-test and post-test knowledge score. There was no significant association found between socio-demographic variables; age, gender, religion, area of residence and previous knowledge.

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Ethical Approval

This study was approved by the college Ethical Committee of Ambika college of nursing Mohali and Consent for participation in the study was taken from each study subject.

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