

Knowledge on Use of Technological Devices among Nurses

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Abstract

Introduction: In today's world, technology plays an important role in every industry as well as in our personal lives. Out of all the industries that technology plays crucial role in, health care is definitely one of the most important. In the health care industry the dependence on medical technology cannot be overstated, and as a result of the development of these brilliant innovations, healthcare practitioners can continue to find ways to improve their practice – from better diagnosis, surgical procedures, and improved patient care. **Material and Methods:** The research approach used for this study was quantitative approach and the design selected was descriptive study design. By using convenient sampling technique 33 males nursing officers and 67 female nursing officers were selected for this research. Researcher assessed the level of knowledge among nursing officers using a structured questionnaire tool. **Results:** The study results shows that among 100 samples, 27% samples had adequate knowledge 60% samples had moderate knowledge and 13% samples had inadequate knowledge on use of technological devices. **Conclusion:** The study outcome shows the need for qualitative awareness and education programme about use of various technological devices to improve knowledge and competency, in achieving better health care.

Keywords: Knowledge; Technology; Technological devices; Nursing officers.

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Introduction

General public believes that technology will improve health care efficiency, quality, safety, and cost. However, few people consider that these same technologies may also introduce errors and adverse events. Given that nearly 5,000 types of medical devices are used by millions of health care providers around the world, device-related problems are inevitable. While technology has the potential to improve care, it is not without risks.

Patient care technologies of interest to nurses range from relatively simple devices, such as catheters and syringes, to highly complex devices, such as barcode medication administration systems and electronic health records. Technology can be broadly defined to include clinical protocols and other "paper" based tools, but for the purpose of this chapter, we will focus more on equipment and devices that nurses are likely to encounter in delivering direct care to patients. The purpose of this study is to provide a conceptual model for technologies that nurses are likely to encounter and to delineate strategies for promoting their effective and safe use.¹⁻¹⁰

The primary concept of health is preventive, promotive, and curative with the emphasis of knowledge of nursing officers in Pondicherry.

Materials and Methods

A quantitative research, descriptive study design was undertaken among nursing professionals working in selected hospitals in Puducherry. The

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variables explored under study were knowledge on use technological devices among study participants. A total of 100 nurses of both gender; and willing to participate were selected by using simple random sampling technique. Pretested and reliable structured questionnaire was used to gather data. The responses for all items of tool was categorized as correct response (Score 1) and wrong response (Score 0) respectively. The scoring procedure for knowledge was 'adequate, moderate and inadequate. The collected data was coded, tabulated and analyzed as per objectives by using descriptive (mean, SD) and inferential statistics (*t*-test, chi-square test and coefficient of correlation) wherever required, and $p < 0.05$ was considered as statistically significant. As the nurses are working in various multispecialty hospitals with advanced technology, we should assess the knowledge, practice and attitude towards the technological use and its application.

Results

Among 100 samples, 27 samples had adequate knowledge, 60 samples had moderate knowledge and 13 samples had inadequate knowledge. Where 43 samples belong to less than 30 years of age, 51 samples belongs to 31–45 years age and 6 samples belong to 46–60 years of age.

In less than 30 years of age 7 (7%) samples had adequate knowledge, 31 (31%) samples had moderate knowledge and 5 (5%) had inadequate knowledge.

In age group between 31–45, 19 (19%) samples had adequate knowledge, 25 (25%) samples had

moderate knowledge and 7 (7%) had inadequate knowledge.

In age group between 46–60, 1 (1%) sample had adequate knowledge, 4 (4%) samples had moderate knowledge and 1 (1%) sample had inadequate knowledge on use of technological devices.

In gender 33 samples were males and 63 samples were females. Among 33 male samples, 2 (2%) had adequate knowledge, 28 (28%) had moderate knowledge and 3 (3%) had inadequate knowledge on use of technological devices. Among 63 female samples, 25 (25%) had adequate knowledge, 29 (29%) samples had moderate knowledge and 13 (13%) samples had inadequate knowledge on use of technological devices.

In educational qualification, 20 samples belongs to GNM, 68 samples belongs to B.sc/PBBSC and 12 samples belongs to M.sc. In GNM, 4 (4%) had adequate knowledge, 11 (11%) had moderate knowledge, 5 (5%) had inadequate knowledge. In B.sc/PBBSC 18 (18%) samples adequate knowledge, 43 (43%) had moderate knowledge, 7 (7%) had inadequate knowledge on use of technological devices.

In year of experience, 27 samples belongs to less than 5 years of experience, 53 samples belongs to 6–10 years of experience. In year of experience less than 5 years of age 6 (6%) samples had adequate knowledge, 18 (18%) had moderate knowledge and 3 (3%) had inadequate knowledge. In year of experience 6–10 years 16 (16%) had adequate knowledge, 27 (27%) had moderate knowledge and 10 (10%) had inadequate knowledge on use of technological devices.

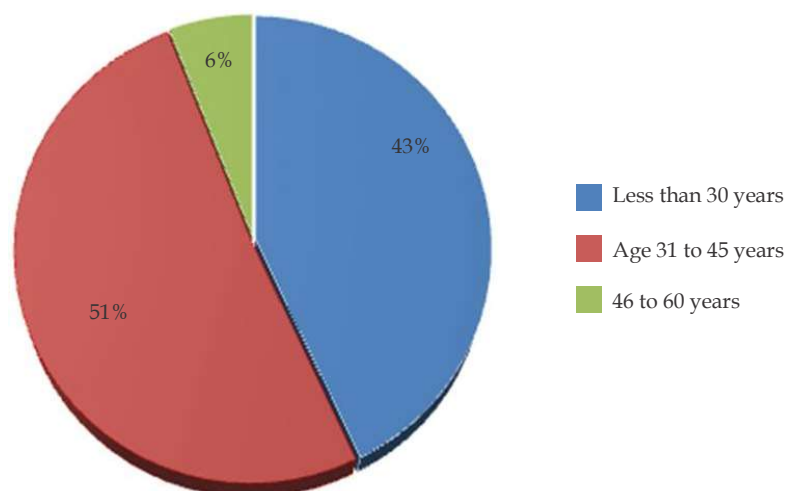


Fig. 1: Frequency distribution of nursing officers by their age.

Table 1: Frequency and percentage distribution of nursing officers by their gender

S. No	Gender	Frequency	Percentage
1	Male	33	33
2	Female	67	67

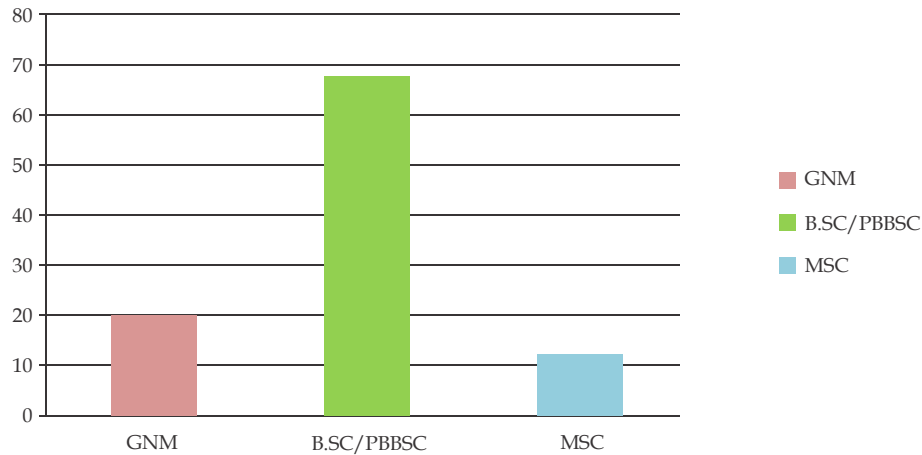


Fig. 2: Frequency distribution of nursing officers by their educational qualification.

Table 2: Frequency and percentage distribution of nursing officers by their year of experience

S. No	Year of experience	Frequency	Percentage
1	Less than 5 years	27	27%
2	6-10 years	53	53%
3	Greater than equal to 11 years	20	20%

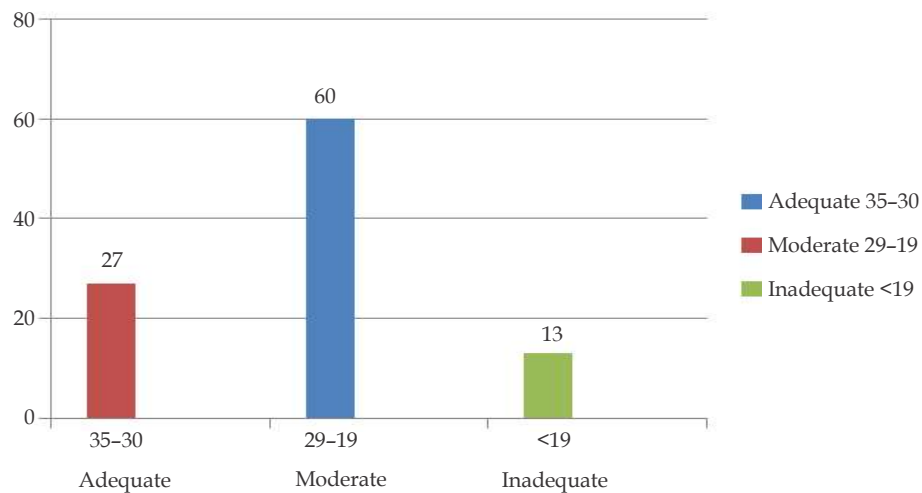


Fig. 3: Knowledge scores on use of technological devices.

Discussion

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Conclusion

The study reveals that out of 100 samples, level of knowledge: 27% had adequate knowledge, 60%

had moderate knowledge and 13% had inadequate knowledge respectively.

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