Knowledge and Attitude Regarding Medication Error among Nursing Students in a Selected College at Mangaluru

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Abstract

Background & Aim: Errors are an integral part of human life. In the human healthcare system, advancements are all time high. The system of treatment is becoming more hi-tech and more sophisticated which is vulnerable to the errors at the same time. Effective medication error reporting is a necessary tool to prevent and reduce its occurrence. This study aimed to assess the knowledge and attitude regarding medication error among nursing students.

Methods: A Descriptive approach was adopted for the study. By Stratified Random sampling 125 Nursing Students were selected. The data was collected using Demographic Performa, Structured knowledge questionnaire and Attitude scale. The data obtained were analyzed by descriptive and inferential statistics using SPSS version 16.0.

Results: Results showed that majority 67.2% of the Nursing students had average knowledge and 88% had positive attitude towards the reporting of medication error. There was no significant correlation between knowledge and attitude among nursing student regarding medication error.

Conclusion: The Study concluded that despite sufficient knowledge and favourable attitudes towards medication error reporting, there is still an under-reporting of medication errors when it comes to practice. It was clear that the nurses need specific information about what constitutes medication error.

Key words: *Attitude, Knowledge, Medication error, Nursing Students*

Introduction

Medicines cure, but they can also kill or cause severe adverse reactions if a wrong medicine or wrong dose is administered. Medication error represents the largest single cause of error in the hospital settings.[1]Medication treatment is a basic primary treatment for any type of illness. It is a multi-disciplinary approach that requires coordinated efforts and involvement of healthcare professionals to carefully distribute medicines to the patients without causing any error.[2]

Patient safety is a common goal for every healthcare provider. One of the major issues for safety is medication errors. It is important indicator of health care delivery system because potential injury to patients, Over 2 million serious ADRs requiring hospitalization, causing death occur each year.[3]

Mostly everybody in the world takes medication at one time or another. In India, the medication errors and medication related problems are mainly due to irrational use of medications.[4]The number of errors and distribution of errors might vary in different settings. It has been reported that experts believe at least one medication error occurs per hospital patient every day. [5]

A study conducted on the medication error in a general hospital of Bangalore; Karnataka which showed that the overall incidence of medication error was 38.12%.[6]

Medication error is caused by the health care professionals, who involve in the direct patient care such as Nurses, Doctors and the Pharmacists which lead to the harmful effects on the patients which can end up in death sometimes. However, it can be prevented largely if an extra caution and concern is taken by the Nurses.[6]

Nurses play a major role in preventing, identifying and reporting the medication error. Inspite of the medication error, some nurses fail to report the error because of their perceived barrier. In order to prevent the medication error completely, nurse's perception should be changed by enhancing their knowledge regarding the safe practices of medication administration..[7]Hence the awareness regarding the various causes, management and reporting the medication error plays a major role in reducing the medication error incidents and its consequences.

Materials and Methods

The Descriptive correlational research is being conducted in Yenepoya Nursing College, Karnataka, India after obtaining the ethical clearance (Protocol no 2019/029) from Institutional Ethics Committee, Yenepoya (Deemed to be University). Nursing students of 2nd yr, 3rd yr , 4thyr.B.Sc. (N) course, 1st and 2nd yr P B B.Sc (N) course were included in the study. 125 Nursing students were selected by Stratified Random sampling. Informed consent was obtained and confidentiality of information were assured. Students of 1st yr B.Sc (N) not learnt about medication administration, Students of M.Sc Nursing course and Students who are not available during the period of data collection were excluded from the study. Data was collected using self prepared knowledge questionnaire and attitude scale, which was validated by 7 experts. The reliability coefficient of the tool was 0.795.

The data were analyzed by descriptive and inferential statistics using SPSS Version 16.0. Demographic variable, knowledge questionnaire, attitude scale were analyzed using the descriptive Statistics such as Frequency, Percentage, Mean and Standard Deviation, Karl Pearson co- relation co-efficient was used to correlate the knowledge and attitude score of nursing students and Chi-square test was used to find the association between the Knowledge and attitude score with selected demographic variable.

Results

Description of sample characteristics

Frequency and Percentage distribution was computed to describe the sample characteristics. The baseline sample characteristics of the participants showed that majority (93.6%) of the subjects was females and majority 46.4% belongs to the age group 18-20 years. With regard to education. Majority (72.8%) of the subjects were studying B.Sc Nursing. About 62.4% of the subjects had previous information about medication error through curriculum. About 84.8% of the subjects had medical professionals in the family of which 10.4% were doctors, 68.8% were nurses, 4.8% were pharmacists and 0.8% were dentist. Majority (76.2%) of the subjects have not witnessed medication error. 5 of the subjects have committed medication error. Majority 74.4% of the subjects have not attended any conference or workshops on medication error

Knowledge on Medication error

Table 1: Frequency and percentage distribution of nursing students according to the grading of their knowledge score n=125

Classification	Frequency (f)	Percentage (%)
Good Knowledge	0	0
Average Knowledge	84	67.2
Poor Knowledge	41	32.8

Table 1 shows that Majority (67.2%) subjects had average knowledge where as 32.8% had poor knowledge regarding medication error.

The Mean knowledge score of nursing students regarding medication error is 11.95 ±3.007.

Attitude of Attitude of nursing students towards reporting of medication error

n=125

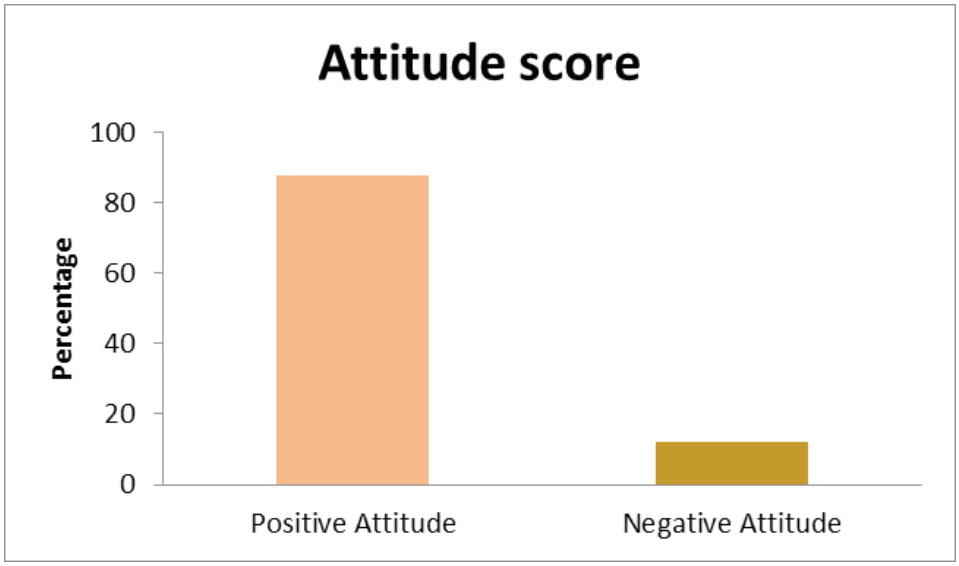

Fig no 1: Bar graph showing the distribution of attitude of nursing students towards reporting of medication error

Fig no 1 depicts that Majority 88% of the nursing students had positive attitude whereas 12% had negative attitude towards reporting of medication error.

Table 2: Mean and Mean percentage of Attitude Components n=125

Sl.no	Attitude aspects	Mean	Mean%
1.	Fear of Being recognized as incompetent	1.51	12.58
2.	Fear of Patient or families negative attitude	1.68	14
3.	Fear of Physicians reprimand	1.59	13.25
4.	Fear of nursing staffs reprimand	1.54	12.83
5.	Fear of teachers reprimand	1.75	14.58
6.	Fear of Decreasing evaluation score	1.90	15.83
7.	Fear of Being blamed of MAEs results	1.76	14.66
8.	Fear of Negative feed back	1.79	14.91
9.	Fear of reaction from peers groups or friends	2.09	17.41
10.	Think MAEs not important to report	2.14	17.83
11.	Too much time for reporting the error	2.14	17.83
12.	Lengthy procedure to report the error	2.18	18.16

Table no 2 depicts that The 5 most common barrier for reporting medication error was lengthy procedure to report medication error (18.16%), Too much time for reporting the error (17.83%), Think Medication administration errors not important to report (17.83%) , Fear of reaction from peers groups or friends (17.41%) and Fear of decreasing evaluation score (15.83%).

Correlation between knowledge and attitude score regarding Medication error

Karl Pearson co- relation co-efficient was used to correlate the knowledge and attitude score of nursing students. There was a no significant correlation between knowledge and attitude score of nursing student regarding medication error (p=0.057).

Association between knowledge score with selected demographic variables

Chi square association with knowledge score indicated that Age (χ^2=4.967, p<0.05), Year of study (χ^2=5.437, p <0.05) and Attended any conference or workshop (χ^2= 11.129, p<0.05) were statistically significant at 0.05 level.

The findings also revealed that gender, previous information, health professional in the family, witnessed medication error, committed medication error was statistically non significant at 0.05 level.

Association between Attitude score with selected demographic variables

Chi square association with Attitude score indicated that year of the study (χ^2 = 3.519, p < 0.05), Previous information (χ^2=1.909, p <0.05) were statistically significant at 0.05 level.

The findings also revealed that age, gender, health professional in the family, witnessed medication error, committed medication error, attended conferences was statistically non significant at 0.05 level.

Discussion

Medication error is a big threat to the patient's safety. It is the commonest error occurring in the health care set up due to the negligence or malpractice. This study was intended to assess the knowledge and attitude of nursing students regarding medication error.

The demographics of this study reflected that majority (93.6%) of the participants were females. This observation was common in a study conducted by Remya. E (2016) which reveal that the maximum number of subjects was females (96%).[7]

The present study showed that showed that 67.2% samples had average knowledge whereas 32.8% have poor knowledge regarding medication error. This finding is supported by a study conducted by A.Samundeeswari and G Muthamilselvi (2018) which revealed that majority (34%) of them have average knowledge and 30% had poor knowledge regarding medication error.[8]

According to the findings of the study most of the participants (88%) had positive attitude towards reporting of medication error. This finding was consistent with the study conducted by Alsulami SL et al (2019) which revealed that majority (90%) of them have positive attitude towards medication error reporting.[9] Another study conducted by Remya. E (2016) majority (62%) of the nurses had favorable attitude.[7]

This study finding revealed that there was no significant correlation between knowledge and attitude score of nursing students regarding medication error. This finding was consistent with the study conducted by Asem N (2019) which showed that there was no correlation between knowledge and attitude of the physicians.[10]

The present study revealed that there was a significant association between knowledge score and selected demographic variable such as age (χ^2=4.967, p<0.05). this finding was congruent with the study conducted by Carandang RR (2015) which showed that there was a significant association between knowledge score and selected demographic variable such as age (χ^2=7.370, p<0.05).[11]

As per the findings there was a significant association between attitude score and selected demographic variable such as education (χ^2=3.519, p<0.05). this findings is supported by the study conducted by Ramya E (2016) which showed that there was no association between attitude score and selected demographic variable such as education status (χ^2=8.09, p<0.05).[7]

Conclusion

Medication error is one of the preventable problem which is leading to serious complications. By virtue of the direct patient-care activities, nurses are in an excellent position to detect and to report the medication errors. The quality of care delivered can be improved, if the errors is identified, reported and necessary actions are taken to minimize the errors. Through this study it is concluded that majority of the nursing students had average knowledge and favourable attitude towards reporting medication error. Nurses need to be updated and trained regarding the safe medication administration. This will increase the competence of the nurses and also to maintains the standards of the Quality health care.

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Conflict of Intrest: All the authors declare that they have no conflict of interest

Informed Consent: Informed consent was obtained from all the study participants.

Ethical Approval: obtained the ethical clearance from Institutional Ethics Committee, Yenepoya (Deemed to be University) (Protocol no 2019/029).

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