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STUDY TO ASSESS THE KNOWLEDGE LEVEL ON HOSPITAL EMERGENCY COLOR CODING AMONG NURSES

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ABSTRACT

Background: Hospitals play a vital role in delivering essential healthcare services, especially during emergencies. With specialized staff, equipment, and facilities like emergency departments, they are equipped to respond to a wide range of urgent medical needs. Additionally, hospital emergency color codes serve as a crucial tool for ensuring swift and discreet communication during emergencies, helping to maintain order and protect both patients and visitors. Emergency color codes are vital tools in healthcare facilities, designed to alert staff to specific emergencies quickly and effectively. ICU& emergency departmentare the areas where most patients are in critical condition and always need 24-hour attention, as nurses are always near the patient site, they should know how to tackle the critical situation with appropriate knowledge and skills. *Objective:* The study's Main purpose is to assess nurses' knowledge level regarding hospital emergency color codes in the selected hospital, Cuttack. *Methods:* The present study adopted a quantitative research approachwhere a descriptive research designwas used. A nonprobability convenience sampling technique was used to choose 60 nurses. The structured knowledge questionnaire was used to assess their knowledge. *Results:* it was found thatmajority of nurses (63.3%) were in the age group of 20-30 years, 56.6% had completed and majority of staff nurses have average knowledge (78.4%). There was association between the level of knowledge of staff nurses and their years of experience, was found to be statistically significant at 0.05 level of significance. Study concluded that staff nurses had average knowledge and need for regular in-service training and awareness programs to enhance the preparedness of nursing staff in handling hospital emergencies effectively.

INTRODUCTION

Nursing is a profession rooted in compassion, skill, and the ability to act swiftly during critical situations. Nurses play a crucial role in saving lives, particularly during the "golden hour" when timely intervention can drastically improve a patient's chance of survival. As the frontline responders in emergencies, nurses must possess not only clinical expertise but also a deep understanding of hospital emergency codes to ensure effective and efficient care delivery.The effectiveness of a nursing team in emergencies hinges on their preparedness, confidence, and clarity in their roles. Equipping nurses with comprehensive training and uniform emergency code protocols is essential to enhance their responsiveness, reduce panic, and ultimately improve patient outcomes. Recognizing this need, researchers have been motivated to further assess and strengthen the knowledge base of staff nurses regarding emergency codes, laying the groundwork for safer, more unified emergency care practices across healthcare facilities. However, many study findings point to a lack of standardization and clarity in code systems, leading to confusion and delayed response during critical moments, especially with high-stakes codes such as Code Blue.These color-coded indicators guide staff responses to incidents such as cardiac arrests, fires, or security threats, ensuring coordinated action to protect patients, visitors, and personnel. However, variations in code systems across facilities can lead to confusion and hinder effective response, especially for staff working in multiple locations. Uniform emergency codes enhance clarity, improve response times, and ensure a safer environment for everyone involved. By adopting a consistent code system, healthcare facilities can significantly improve emergency preparedness and overall safety.

METHODS

A descriptive design is used in the present study, with a quantitative research approach adopted. A nonprobability convenience sampling

technique was implemented, with a sample size of 60 nurses from the selected hospital in Cuttack.

Description of tool: Tool used for data collection included two sections, in that 1st one, A demographic profile proforma, was developed by researchers to collect the data regarding the selected socio-demographic variables (age, professional qualification, and total years of experience) of staff nurses regarding hospital emergency codes and section two, A structured knowledge questionnaire was developed to assess the knowledge of staff nurses regarding hospital emergency codes.

Content validity: The content validity of the tool was obtained by requesting 6 different experts, one from the field of emergency Medicine and five from the field of Nursing, to give their opinion and suggestions on the relevance, appropriateness, and adequacy of the item in the tool. As per the suggestion of experts, some items were deleted, and some items were added.

Reliability: The reliability was established by using the split-half method. The reliability of the modified Rhodes index scale is about r = 0.852. Hence, the tool was found to be reliable and feasible for the main study.

Ethical consideration: Ethical clearance was obtained from the research committee of the School of Nursing, DRIEMS University. Cuttack Odisha. Informed consent was taken from the hospitals where the data was collected. In this study, all rights of subjects as human beingshave been protected. Ethical consideration was taken into account for the study to assess the level of knowledge regarding emergency color coding among staff nurses at selected hospital, Cuttack.

Scoring procedure: There were 35 questions and 4 options to choose from, and the participants had to choose the best option by putting a tick mark on it.

A score value of one (1) was allotted to each correct answer. The total knowledge score ranged from 0-35. The tool was further divided arbitrarily into poor, average, and good. Poor is scored from (0-11), average (12-24), and good is scored from (25-35).

Pilot Study: The pilot study was conducted in Padmini Care Hospitals, Cuttack, from 19.04.24 to 24.04.24. A total of 10 patients were selected for the pilot study. The baseline data of the demographic variable proforma were collected, and informed consent was obtained from the patients. The subjects were chosen by a convenience sampling technique. The structural knowledge questionaries used to assess the level of knowledge among staff nurses regarding hospital color coding.

Data collection procedure: Formal administrative permission to conduct the study was obtained from the administrative heads. A written consent to participate in the study was obtained. The researcher took all care to look into the convenience and comfort of the respondents. Necessary precautions were taken to provide privacy and confidentiality of the response. All the selected nurses were met personally, and data was collected during the off-duty hours of nurses in separate rooms.Approximately 20 minutes were taken by each respondent to complete the questionnaire.

RESULTS

Datapresented in Table 1shows that majority of nurses (63.3%) were in the age group of 20-30, 23.3% were in the age group of 31-40,11.6%and were in the age group of 41-50, and remaining 1.8% were in the age group of 50 and above. The data regarding the professional qualification shows that majority of nurses 56.6% had completed GNM, 26.6% had completed BSC, and remaining 16.8% had completed PBBSc. The data also revealed that 40.1% of nurses had 1-5 years of experience, 23.3% of nurses had less than one year of experience, 18.3% nurses had 6-10 years and remaining 18.3% nurses had more than 11 years of experience.

Table 1. Frequency and percentage distribution of staff nurses according to their selected demographic variables. n=60

Selected demographic variables	Frequency	Percentage
Age (in years)		
20-30	38	63.3%
31-40	14	23.3%
41-50	7	11.6%
50 and above	1	1.8%
Qualification		
GNM	34	56.6%
BSc	16	26.6%
PBBSc	10	16.8%
MSC	-	-
Years of experience		
<1 year	14	23.3%
1-5 year	24	40.1%
6-10 year	11	18.3%
>11 years	11	18.3%

Table 2. Mean, median, range and standard deviation for knowledge score of staff nurses. n=60

Mean	Median	Range	Standard deviation
19.41	21	6-32	±5.41

Table 3. Frequency and percentage distribution of level of knowledge of nurses, n=60

Poor		Average		Good	
Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
6	10%	47	78.4%	7	11.6%

Table 4. Association of level of knowledge of staff nurses and their selected demographic variables

Sl. No	Selected demographic variables	Level of knowledge			χ2	df	P 0.05
		good	average	Poor			
1	Age in years						
	30-40	12	36	4			
	40 and above	1	6	1	0.59	2	NS
2	Qualification	7	22	5			
	GNM BSC PBBSC	4	12	-	4.26	4	NS
		2	8	-			

S: Significant p<0.05, NS: Not significant p>0.05

It is evident from Table 2 that, knowledge score of staff nurses ranges from 6-32 with a mean of 19.41 and a standard deviation of ±5.41. Table 3 shows that 10% of staff nurses have poor knowledge, 11.6% have good knowledge, and the majority of staff nurses have average knowledge (78.4%). Data presented in table 4 shows that the computed chi-square value of association between the level of knowledge of staff nurses and their years of experience is found to be statistically significant at 0.05 level of significance. Hence the researcher rejected the null hypothesis and accepted the research hypothesis indicating as years of experience increases their knowledge also increases. Table also shows that chi- square value for association between the level of knowledge of nurses and their selected demographic variables viz age, qualification was not statistically significant at 0.05 level of significance.

DISCUSSION

Section I: Findings related to demographic variables of staff nurses.
Section II: Findings related to the description of knowledge of staff nurses.
Section III: Findings related to the association of the level of knowledge of staff nurses and their selected demographic variables.

Section I: Findings related to demographic variables of staff nurses.

- Age in years: Findings in the present study revealed that the majority of staff　nurses (63.3 %) were in the age group of 20-30 years.
- Qualification: Study result shows that the majority of staff nurses (56.6%) had completed GNM.
- Total years of experience: The Majority of staff nurses (40%) had 1-5 years of experience.

Section II: Findings related to the description of knowledge of staff nurses.

The knowledge scores of staff nurses regarding the hospital emergency codes were assessed using a structured knowledge questionnaire. The mean knowledge score of staff nurses was 19.41.The result shows that 11.6% of them have good knowledge.

Section III: Findings related to the association of the level of knowledge of staff nurses and their selected demographic variables.

Results revealed that there was a significant association between staff nurses' knowledge and their total years of experience. This indicated that nurses with more experience had good knowledge regarding the hospital emergency codes. results also revealed that there was no significant association between the knowledge and other selected demographic variables of nurses, viz, age and qualifications.

CONCLUSION

The study concludes that the overall knowledge of staff nurses regarding hospital emergency codes at Padmini Care Hospital, Tangi, is inadequate, with only 11.6% demonstrating good knowledge. The findings highlight a significant association between the level of knowledge and the nurses' total years of experience. This emphasizes the need for regular in-service training and awareness programs to enhance the preparedness of nursing staff in handling hospital emergencies effectively.

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