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Research Article

NURSES' KNOWLEDGE REGARDING ACUTE CORONARY SYNDROME

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ABSTRACT

Nurses need to possess the knowledge regarding the care aspects of Acute coronary syndrome (ACS) to have necessary competencies in patient education as they prepare the patients and caregivers to take care after the discharge from hospital. Thus, the present descriptive study was carried out to assess the existing knowledge of the nurses regarding ACS. A structured questionnaire was administered to 100 nurses using a non-probability purposive sampling technique to assess the knowledge regarding ACS. The maximum nurses demonstrated good level of knowledge scores regarding aspects of acute coronary syndrome (ACS). 57% of the nurses had good knowledge, 31% had very good knowledge whereas 12% had below average level of knowledge. However, there needs to be an improvement in the important aspects like action of aspirin, diagnostic tests and complications of ACS. This research highlights the need for continuing education related to in-depth knowledge regarding care of ACS patients which would enhance the outcomes for ACS patients and secondary prevention of further complications by strengthening the competencies of nurses.

INTRODUCTION

There is seen an increasing burden of cardiovascular diseases which is rising day by day in India. These lifestyle diseases are highly prevalent in the urban areas (Reddy KS, Shah B *et al*, 2005). As per the prospective analysis of data provided by CREATE Registry, India is bearing the highest burden of Acute coronary syndromes in the world (Xavier D, Pais P, 2008). The changes in the life style of Indians may be one of the risk factors leading to Acute Coronary Syndrome (ACS) like smoking, obesity, unhealthy diet along with hypertension and diabetes. (Gupta R, Mohan I, 2016) There is a need for appropriate preventive strategies which will help to combat the epidemic. This demands equipping the health care facilities along with the enhancement of skills of the health care providers to improve the delivery of the services in context of health promotion, detection and reduction of risk (Reddy KS, Shah B *et al*, 2005). An article in Nursing Times highlights that nurses play an epic role in various aspects of patient care by utilizing the suitable knowledge into their practices. Nurses are the task force who do perform the activities related to health promotion and prevention of complications which is however, not done in a systematic manner and the professional practices differ by context (Freire RMA, Lumini MJ *et al* 2016) There is an evidence of improvement in the knowledge of their illness and also get more awareness regarding the benefits of the correct lifestyles in order to prevent the complications of ACS (Amodeo R, De Ponti A *et al*, 2009) (Tawalbeh LI, Ahmad MM, 2013). Thus, the nurses should possess up-to-date knowledge regarding ACS and its related care. A few studies have been done to assess the knowledge of nurses on various aspects of ACS which emphasized a need for updation of the knowledge of nurses (Al-Ftlawy DMH, 2011). This study aims to assess the knowledge regarding Acute coronary syndrome (ACS) and its care aspects among the nurses in a multispecialty hospital in Navi Mumbai and to find the association between the knowledge and the demographic characteristics of the nurses.

MATERIAL AND METHODS

A total of 100 registered nurses working in the wards, ICUs and other care units from a multi-specialty teaching hospital participated in the study. A descriptive study design was used and sampling technique being non probability purposive sampling. A structured Questionnaire was used to collect the data. It comprised of two sections viz., demographic data (age,

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gender, professional qualification and years of experience) and knowledge related to Acute Coronary Syndrome. The validity of the questionnaire was carried out by seeking opinion from experts. Reliability of the tool was calculated by using Kuder Richardson formula and it was found to be reliable. (r=7.78). Institutional Ethical committee approval was sought and appropriate permission was obtained from the hospital authority. An informed consent was obtained from the participants. The responses to the questionnaire were analyzed after scoring them. The correct answer was given one score including those with a multiple answers and then the scores were graded according to the percentage. The data was analyzed using the SPSS (version 20.0) and was interpreted using descriptive and inferential statistics. Chi-square test was used to determine the association of the knowledge grades with the nurses' demographic characteristics.

RESULTS

The demographic data as in table 1 below showed that the majority (47%) of the nurses were from 20 to 25 years of age of which 76% were females and 24% were males. 57% had B.Sc. Nursing qualification, 39 % had Diploma in Nursing and 4% had completed Post Basic B.Sc. Nursing. 47% of these nurses had 1.1.to 3 years of experience, 35% had 6 months to 1 year experience, 10% had 5.1 years and above experience.

Table 1 Demographic characteristics of the sample (nurses)

Variable	Freq	Percentage %
Age (Years)		
20-25	47	47.0
26-30	46	46.0
31-35	7	7.0
Gender		
Male	24	24.0
Female	76	76.0
Professional Qualification		
GNM	39	39.0
PBBSc. Nursing	4	4.0
B.Sc.Nursing	57	57.0
Experience		
6 mo. – 1 year	35	35.0
1.1- 3 years	47	47.0
3.1 – 5 years	8	8.0
5.1 years & above	10	10.0

Table 2 Overall knowledge of the sample (nurses) regarding Acute Coronary syndrome

Level of knowledge	Grading of Score in %	Frequency	Percentage (%)
Poor	0-20	2	2.0
Average	21-40	10	10.0
Good	41-60	57	57.0
Very good	61-80	31	31.0
Excellent	81-100	0	0
Total		100	100.0

The overall level of knowledge of the nurses regarding ACS as in Table 2 indicates that 57% of the nurses had good knowledge and 31% had very good level of knowledge. The mean score was 30.32 and standard deviation was 5.843.

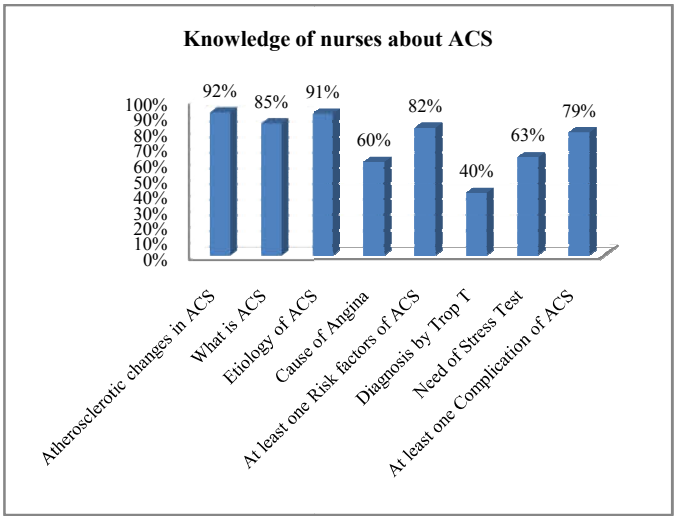

Figure 1 Distribution of sample (nurses) according to their correct responses regarding knowledge of ACS

As seen in figure 1, it was seen that 85% of the nurses identified that ACS includes Unstable angina and STEMI (ST-elevation myocardial infarction) and NSTEMI (Non ST-elevation myocardial infarction). Maximum nurses (91%) knew the etiology of ACS but only 60% knew the cause of Angina. 40% could respond correctly to Troponin-T as the diagnostic test for MI.

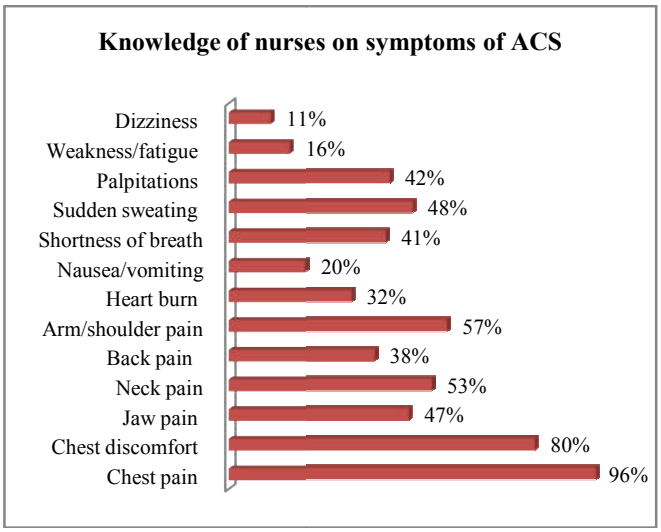

Figure 2 Distribution of sample (nurses) according to their correct responses regarding knowledge of symptoms of ACS

As seen in figure 2, the nurses identified the typical symptoms of ACS of chest pain and chest discomfort more frequently. However, the atypical symptoms like jaw pain, neck pain or backache were less frequently identified by them.

Table 3 Distribution of sample (nurses) according to their correct responses regarding knowledge of management aspects of ACS

Management of ACS	(n = 100)
Aspects	**% Correct Responses**
1. Medication	
i. Action of aspirin	49%
ii. Helps minimize future attacks	77%
2. Monitoring of parameters	
- like renal function, risk of bleeding & blood pressure	28%
3. Diet	

i. Avoid red meat	90%
ii. Low salt diet	70%
4. Modification of lifestyle	
i. Regular exercise	89%
ii. Avoid alcohol consumption	79%
iii. Avoid heavy work	93%

As depicted in table 3, the nurses lacked knowledge on the aspects of action of aspirin (49%) and monitoring of physiological parameters (28%). However, maximum of the nurses responded correctly to the responses for regarding diet and lifestyle modification.

Table 4 Association of Knowledge of nurses regarding ACS in relation to their demographic characteristics

Demographic Variables	Knowledge Score Grading				Df	p - value	Chi Square
	Poor	Average	Good	Very good			
Age (in years)							
20-25	0	5 (10.6%)	28 (60%)	14(29.7%)			
26-30	2(4.34%)	4 (8.70%)	24(52.17%)	16(34.79%)			
31-35	0	1(14.28%)	5(71.42%)	1(14.28%)	6	0.685	3.938
Total	2	10	57	31			
Gender							
Male	1(4.2%)	1(4.2%)	15(62.6%)	7(29%)			
Female	1(1.3%)	9(11.8%)	42(55.3%)	24(31.6%)	3	0.569	2.018
Total	2	10	57	31			
Professional Education							
GNM	2 (5%)	5 (13%)	21 (54%)	11 (28%)			
B.Sc. Nursing	0	5 (8.4%)	34 (60%)	18 (31.6%)	6	0.587	4.667
PBBSc Nsg	0	0	2 (50%)	2 (50%)			
Total	2	10	57	31			
Years of Experience							
6 months to 1 year	1 (3%)	6 (17%)	20 (57%)	8 (23%)			
1.1 to 3 years	1 (2%)	2 (4%)	26 (55.5%)	18 (38.5%)			
3.1 to 5 years	0	0	5 (62.5%)	3 (37.5%)	9	0.558	7.766
5.1 years and above	0	2 (20%)	6 (40%)	2 (20%)			
Total	2	10	57	31			

There was no association found between the knowledge of nurses regarding ACS in relation to their demographic characteristics of age, gender, educational background and years of experience as interpreted from the chi square values; $p<0.05$ level of significance shown in the table 4 above.

DISCUSSION

This descriptive study was carried out to with an aim to assess the knowledge of the nurses regarding Acute coronary syndrome (ACS) and its care aspects. The maximum nurses were from 20 to 25 years of age group, majority of which were females and 47% of these nurses had 1.1.to 3 years of experience. In this current study, 31% had very good knowledge, more than half of the nurses i.e. 57% had good knowledge and 12% had below average level of knowledge. The majority of the nurses had a better knowledge levels which are analogical to that in a study (Mohammed W.S., 2016). Even if the overall knowledge scores were found to be good however, the knowledge of important aspects regarding ACS needed to be improved.

Maximum nurses i.e. 96% identified chest pain as the typical symptom of ACS. In a study, 70% of sample could assess the site of chest pain of ACS patient on sub-sternal site, and 60% had a good knowledge regarding nature of ACS pain described as stabbing pain and 40% knew the nature of ACS pain as heaviness in the chest. (Mohammed W.S., 2016)

Only 38% identified all the complications of ACS, 49% knew the action of aspirin and 40% could identify the specific diagnostic test for ACS. In a study, 30% of the nurses had poor knowledge of common medication to treat ACS but 50% had good knowledge about the complications of the ACS (Mohammed W.S., 2016).

There was no significant association between their knowledge and demographic variables of age, gender, professional education and years of experience. These findings were similar to that in a study among nurses in selected hospital of Mysore, India (Lakshmi KN). However, some studies show a significant association between the knowledge level and the years of experience. (Al- Ftlawy DMH, 2011).

CONCLUSION

This research highlights that nurses had good knowledge regarding symptomatology and certain management aspects of ACS. However, with advances in medicine, there are many new management of ACS. Therefore, there is a need for continuing nursing education regarding the ACS and its related care. Such an effort will help in updating the in-depth knowledge regarding ACS which would strengthen the patient education content imparted by the nurses. This would enhance the outcomes for ACS patients and secondary prevention of further complications.

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