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A descriptive study to assess the cognizance regarding CAD risk factors among Post B.Sc. nursing students

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Abstract
The current study has been undertaken to assess the knowledge score regarding CAD risk factors among Post B.Sc. Nursing Students in Index Nursing College, Indore. The research design used for study was descriptive in nature. The tool for study was self-structured knowledge questionnaire which consists of 2 parts-PART- I consisted questions related to Socio-demographic data; PART-II consisted of self -structured knowledge questionnaire to assess the knowledge score regarding CAD risk factors among Post B.Sc. Nursing Students. The data was analyzed by using descriptive & inferential statistical methods. The most significant finding was that 73.3% subjects have poor knowledge, 26.7% have average knowledge score while 0.0% Post B.Sc. Nursing Students were having good knowledge score.

Keywords: CAD risk factors and Post B.Sc. Nursing Students.

Introduction

Coronary Artery Disease (CAD), sometimes referred to as ischaemic heart disease, is a disorder in which plaque (atherosclerosis) builds up in the coronary arteries, narrowing or blocking them and reducing the amount of blood that reaches the heart. Over the years, there has been a tremendous evolution in the understanding and management of CAD.

Discovery of Circulation (17th–19th Century)

William Harvey, an English physician, was the first to explain blood circulation in 1628. He demonstrated that the heart pumps blood through a closed system of veins and arteries. In the 18th century, doctors like John Hunter and William Heberden identified angina pectoris, or CAD-related chest discomfort. In 1768, Heberden provided the first detailed description of angina. Atherosclerosis, a condition of the arteries brought on by fatty buildup and inflammation, was discovered by Rudolf Virchow in the 19th century.

20th Century – Rise of Modern Cardiology

American doctor James B. Herrick gave the first thorough description of how atherosclerosis causes heart attacks in 1912. Electrocardiogram (ECG): Willem Einthoven's creation of the ECG in the 1920s aided in the diagnosis of cardiac disorders. The historic Framingham Heart Study of 1948 found that smoking, high blood pressure, and high cholesterol are risk factors for coronary artery disease (CAD). Dr. Mason Sones created coronary angiography in 1958, which made it possible to image the heart arteries in real time.

Advancements in Treatment (Mid-20th Century – Present)

Coronary Artery Bypass Grafting (CABG): René Favaloro invented bypass surgery in the 1960s by utilising leg veins to get around clogged arteries. The first balloon angioplasty, a minimally invasive procedure to clear clogged arteries, was carried out by Dr. Andreas Gruentzig in 1977. Introduced in the 1980s, metal stents were created to maintain artery opening following angioplasty. Drug-Eluting Stents: These were coated with medication in the 1990s to stop arteries from narrowing again. The 2000s saw the introduction of new medications and the widespread use of cholesterol-lowering medications, such as statins, to stop the progression of CAD. 2010s: Developments in Imaging and Genetics: AI-powered diagnostics, high-resolution CT scans, and genetic research enhanced early detection.

I. Objective of the study

1. To assess the knowledge scores regarding CAD risk factors among Post B.Sc. Nursing Students.
2. To find out association between knowledge score regarding CAD risk factors among Post B.Sc. Nursing Students with their selected demographic variables.

Hypotheses

RH_0: There will be no significant association between pre-test score on CAD risk factors among Post B.Sc. Nursing Students with their selected demographic variables.

RH_1: There will be significant association between pre-test score on CAD risk factors among Post B.Sc. Nursing Students with their selected demographic variables.

Methodology

A descriptive research design was used to assess the knowledge score regarding CAD risk factors among Post B.Sc. Nursing Students residing in Index Nursing College, Indore. The study was carried out on 30 Post B.Sc. Nursing Students selected by convenience sampling technique. Demographical variable and self-structured 30 knowledge questionnaire were used to assess the knowledge score regarding CAD risk factors by survey method.

Analysis and interpretation

Section 2

Table 1: Frequency & percentage distribution of samples according to their demographic variables. n = 30

S. No	Demographic Variables	Frequency	Percentage
1	**Age in Years**		
a.	Less than 22	11	36.7
b.	Greater than 22	19	63.3
2	**Living area**		
a.	Rural	19	63.3
b	Urban	11	36.7
3	**Year of the study**		
a.	1st year	16	53.3
b.	Final year	14	46.7
4.	**Previous knowledge regarding CAD risk factors**		
a.	Yes	7	23.3
b.	No	23	76.7

Section 2

Table 2: Frequency and percentage distribution of knowledge score of studied subjects:

Category and test Score	Frequency (N=30)	Frequency Percentage (%)
Poor (1-10)	22	73.3
Average (11-20)	8	26.7
Good (21-30)	0	0.0
Total	30	100.0

The present table 2 concerned with the existing knowledge regarding CAD risk factors among Post B.Sc. Nursing Students were shown by pre-test score and it is observed that most of the Post B.Sc. Nursing Students 22 (76.3%) were poor (01-10) knowledge, 8 (26.7%) were have average (11-20) knowledge score and rest of the Post B.Sc. Nursing Students have 0 (0.0%) were from good (21-30) category.

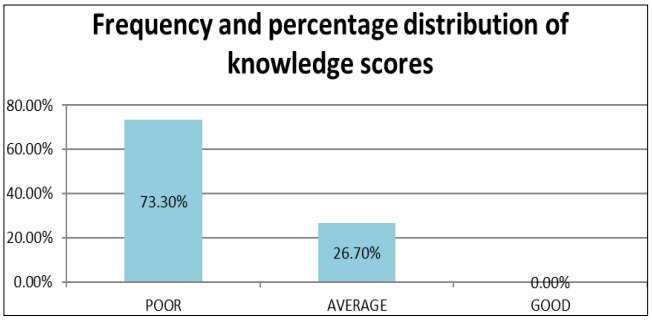

Fig 1: Frequency and percentage distribution of Knowledge score of studied subjects

Table 3: Mean ($\bar{X}$) and standard Deviation (s) of knowledge scores

Knowledge Pre –test	Mean ($\bar{X}$)	Std Dev (S)
Pre-test score	9.33	2.85

The information regarding mean, percentage of mean and standard deviation of test scores in shown in table 3 knowledge in mean pre-test score was 9.33 ± 2.85 while in knowledge regarding CAD risk factors among Post B.Sc. Nursing Students in Index Nursing College.

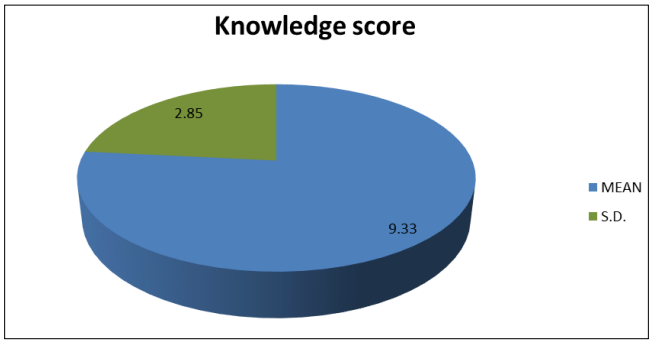

Fig 1: Mean and SD of knowledge score of Post B.Sc. Nursing Students.

Section 3

Association of knowledge scores between test and selected demographic variables:

Table 4: Association of age of Post B.Sc. Nursing Students with knowledge score:

Age	Test scores			Total
(In years)	Poor (1-10)	Average (11-20)	Good (21-30)	
Less than 22	8	3	0	11
Greater than 22	14	5	0	19
Total	22	8	0	30
X^2= 0.003 p>0.05 (Insignificant)				

The association of age & test scores is shown in present table 4 The probability value for Chi-Square test is 0.003 for 1 DF which indicated insignificant value (p>0.05). Hence, it is identified that there is insignificant association between age & test scores. Moreover, it is reflected that age isn't influenced with current problem.

Table 5: Association of living area with knowledge score

Living area	Test scores			Total
	Poor (1-10)	Average (11-20)	Good (21-30)	
Rural	14	5	0	19
Urban	8	3	0	11
Total	22	8	0	30
X^2= 0.003 p>0.05 (insignificant)				

The association of living area & test scores is shown in present table 5 The probability value for Chi-Square test is 0.003 for 1 df which indicated living area & test scores. Moreover, it is reflected that living area is not influenced with current problem.

Table 6: Association of year of the study with knowledge score:

Year of the study	Test scores			Total
	Poor (1-10)	Average (11-20)	Good (21-30)	
1st year	12	4	0	16
Final year	10	4	0	14
Total	22	8	0	30
X^2= 0.04 p>0.05 (Insignificant)				

The association of year of the study & test score is shown in present table 6 The probability value for Chi-Square test is 0.04 for 1 degrees of freedom which indicated year of the study and test scores. Moreover, it is reflected that year of the study isn't influenced with present problem.

Table 7: Association of previous knowledge with knowledge score:

Previous knowledge	Test scores			Total
	Poor (1-10)	Average (11-20)	Good (21-30)	
Yes	4	3	0	7
No	18	5	0	23
Total	22	8	0	30
X^2= 1.22 p>0.05 (Insignificant)				

The association of previous knowledge & test scores is shown in present table 7 The probability value for Chi-Square test is 1.22 for 1 degrees of freedom which indicated previous knowledge & test scores. Moreover, it is reflected that previous knowledge isn't influenced with current problem.

Results

The findings of the study revealed that 73.3% subjects have poor knowledge, 26.7% have average knowledge score while 0.0% Post B.Sc. Nursing Students were having good knowledge score towards CAD risk factors. The mean knowledge score of subjects was 9.33 ± 2.85.

Conclusion

It was concluded that majority of Post B.Sc. Nursing students had poor knowledge score regarding CAD risk factors. Post B.Sc. Nursing students should also educate regarding CAD risk factors.

Limitations

- This was limited to Index Nursing College, Indore.
- This was limited to 30 Post B.Sc. Nursing Students.

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