

“A descriptive study to assess the knowledge regarding heart failure among GNM 1st year students”

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Abstract-

The current study has been undertaken to assess the knowledge score regarding heart failure among GNM 1st year 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 heart failure among GNM 1st year 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% GNM 1st year students were having good knowledge score.

Keyword- Heart failure and GNM 1st year students.

I. Introduction

Heart failure is a lifelong condition in which the heart muscle can't pump enough blood to meet the body's needs for blood and oxygen. Basically, the heart can't keep up with its workload. Heart failure (HF) is a clinical syndrome and not a stand-alone diagnosis – identification of the aetiology of the underlying cardiac abnormality and the whole body's response to it is key to providing optimal management of the individual patient. The classic triad of clinical features – breathlessness, fatigue and fluid retention – can be the result of any disorder (genetic or acquired) affecting the structure or function of the heart in a manner that impairs its ability to act as an efficient pump. Despite improved understanding of the pathophysiology, and a wider range of therapeutic options, HF remains a serious condition with considerable morbidity and mortality. It is a global problem, though the relative importance of different aetiologies differs between the developed world – where the syndrome is most commonly a consequence of ischaemic heart disease – and the developing world, where rheumatic fever remains an important cause.

II. Need of the study

Given the size of both the country and the population, and the fact that roughly 10% of the population lives below the international poverty line, it's not surprising that the burden of noncommunicable diseases (NCDs), including cardiovascular diseases, is high in India. In fact, mortality from NCDs accounted for 65% of total deaths in India in 2019, of which more than 25% could be attributed to cardiovascular diseases and related risk factors like diabetes.

More recently, updated findings from the Global Burden of Diseases Collaboration, published in the Journal of the American College of Cardiology, showed age-standardized mortality rates from cardiovascular diseases in South Asia, including India, on the rise and ranging from 248.6 to 350.9 per 100,000-persons in 2021. Among all risks for cardiovascular diseases, high systolic blood pressure accounted for the largest proportion of disability-adjusted life years, while air pollution and dietary risks were the leading environmental and behavioural risks, respectively. These challenges led the ACC to convene a roundtable earlier this year made up of leading cardiovascular clinicians from the ACC and the ACC India Chapter, as well as stakeholders from local nonprofits, government agencies and industry related to cardiovascular disease in India. The goal: to identify potential collaborative solutions to some of the specific cardiovascular challenges in India, ranging from patient access to prevention and screening services and chronic disease management.

III. Objective of the study

1. To assess the pre-test knowledge scores regarding heart failure among GNM 1st year students.
2. To find out association between knowledge score regarding heart failure among GNM 1st year students with their selected demographic variables.

IV. Hypotheses:

RH₀: There will be no significant association between knowledge score on heart failure among GNM 1st year students with their selected demographic variables.

RH₁: There will be significant association between knowledge score on heart failure among GNM 1st year students with their selected demographic variables.

V. Methodology

A descriptive research design was used to assess the knowledge score regarding heart failure among GNM 1st year students residing in Index Nursing College, Indore. The study was carried out on 30 GNM 1st year students selected by convenience sampling technique. Demographical variable and self-structured 30 knowledge questionnaire were used to assess the knowledge score regarding heart failure by survey method.

VI. Analysis and interpretation

SECTION-I 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 20	21	70.0
b.	Greater than 20	9	30.0
2	Living area		
a.	Rural	19	63.3
b	Urban	11	36.7
3	Family income		
a.	<15000/-	1	3.3
b.	15001-20000/-	21	70.0
c.	>20000/-	8	26.7
4.	Sources of information regarding heart failure		
a.	Internet	5	16.7
b	TV	9	30.0
c	News paper	5	16.7
d.	Conference/workshop	11	36.7

SECTION-II- Table- 2.1.1- 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 2.1.1 concerned with the existing knowledge regarding heart failure among GNM 1st year students were shown by knowledge score and it is observed that most of the GNM 1st year students 22 (73.3%) were poor (01-10) knowledge, 8 (26.7%) were have average (11-20) knowledge score and rest of the GNM 1st year students have 0 (0.0%) were from good (21-30) category.

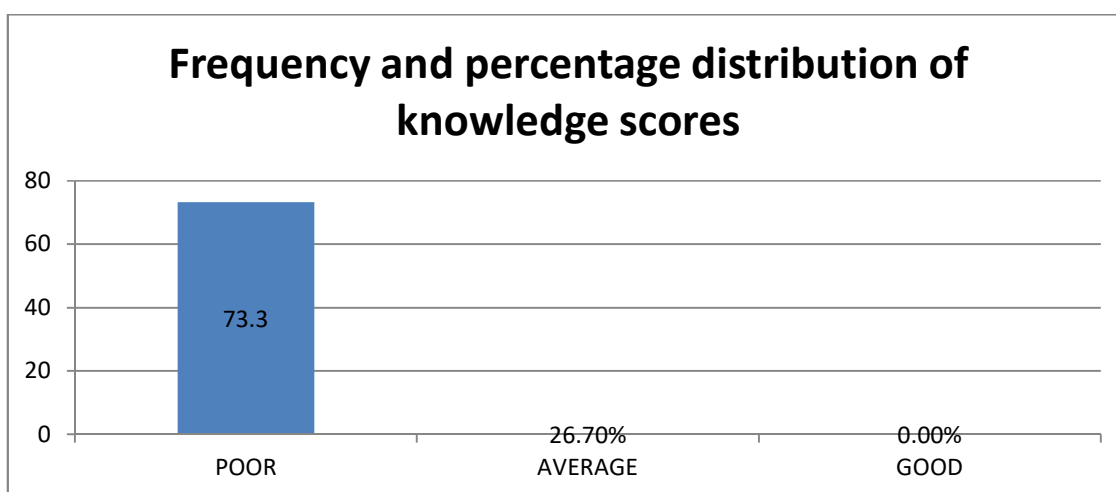


FIG.-2.1.1- Frequency and percentage distribution of Knowledge score of studied subjects

Table-2.1.2. - Mean (\bar{X}) and standard Deviation (s) of knowledge scores:

Knowledge	Mean	Std Dev
Pre -test	(\bar{X})	(S)
Knowledge score	9.00	2.22

The information regarding mean, percentage of mean and standard deviation of test scores in shown in table 2.1.2 knowledge in mean knowledge score was $9. \pm 2.22$ while in knowledge regarding heart failure among GNM 1st year students in Index nursing college.

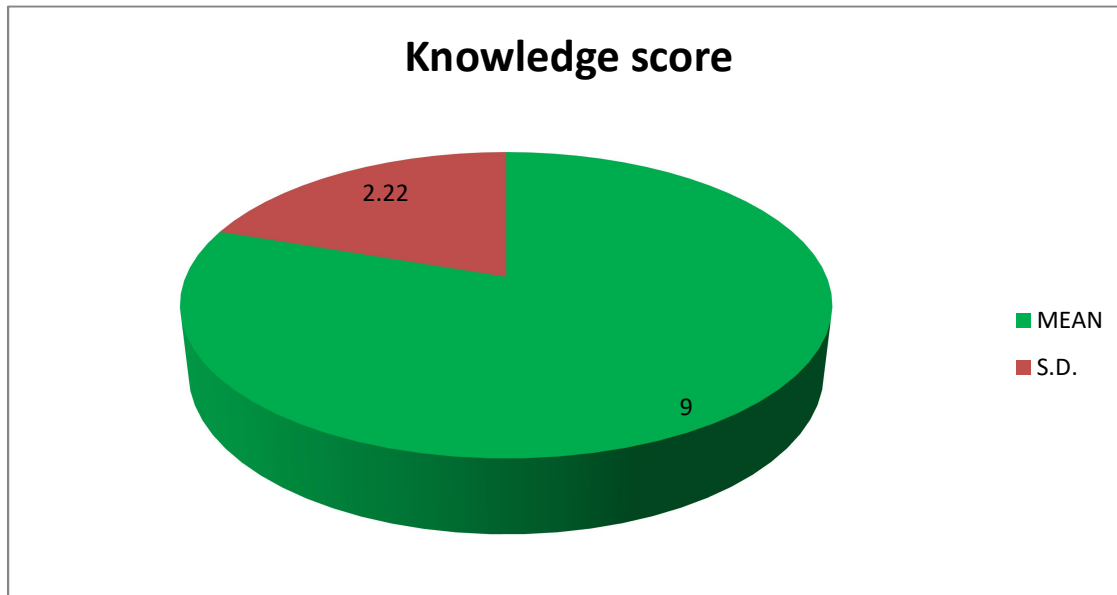


Figure no.-1 Mean and SD of knowledge score of GNM 1st year students.

SECTION-III Association of knowledge scores between test and selected demographic variables:

Table- 3.1 Association of age of GNM 1st year students with knowledge score:

Age (In years)	Test scores			Total
	POOR (1-10)	AVERAGE (11-20)	GOOD (21-30)	
Less than 20	14	7	0	21
Greater than 20	8	1	0	9
Total	22	8	0	30
X= 1.59 p>0.05 (Insignificant)				

The association of age & test scores is shown in present table 3.1. The probability value for Chi-Square test is 1.59 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- 3.2 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= 0.003		p>0.05 (significant)		

The association of living area & test scores is shown in present table 3.2. 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 influenced with current problem.

Table- 3.3 Association of Family income with knowledge score:

Family income	Test scores			Total
	POOR (1-10)	AVERAGE (11-20)	GOOD (21-30)	
<15000/-	1	0	0	1
15001-20000/-	15	6	0	21
>20000/-	6	2	0	8
Total	22	8	0	30
X= 0.41		p>0.05 (Insignificant)		

The association of Family income & test score is shown in present table 3.3. The probability value for Chi-Square test is 0.41 for 2 degrees of freedom which indicated Family income and test scores. Moreover, it is reflected that Family income isn't influenced with present problem.

Table- 3.4 Association of sources of knowledge with knowledge score:

Sources of knowledge	Test scores			Total
	POOR (1-10)	AVERAGE (11-20)	GOOD (21-30)	
Internet	4	1	0	5
TV	7	2	0	9
News paper	3	2	0	5
Conference	8	3	0	11
Total	22	8	0	30
X= 0.66		p>0.05 (Insignificant)		

The association of sources of knowledge & test scores is shown in present table 3.4. The probability value for Chi-Square test is 0.66 for 3 degrees of freedom which indicated sources of knowledge & test scores. Moreover, it is reflected that source of knowledge isn't influenced with current problem.

VII. Results

The findings of the study revealed that 73.3% subjects have poor knowledge, 26.7% have average knowledge score while 0.0% GNM 1st year students were having good knowledge score towards heart failure. The mean knowledge score of subjects was 9.00 ± 2.22 .

VIII. Conclusion

It was concluded that majority of GNM 1st year students had poor knowledge score regarding heart failure. GNM 1st year students should also educate regarding heart failure to control disease.

IX. Limitations

- This was limited to Index Nursing College, Indore.
- This was limited to 30 GNM 1st year students.

X. Reference

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