A study to assess effectiveness of structured teaching programme on knowledge regarding coronary artery disease among clerical employees working in selected government offices of North Goa

1.Gajanan K.Kalangutkar ,RN, MSN,*GMCH, Goa*

2. Flosy Menezes RN,MSN,*Institution of nursing education,Goa*

INTRODUCTION

Rapid Urbanization and Industrialization has brought in epidemiological changes in lifestyle behaviour of human being around the globe resulting in increased rate of noncommunicable diseases. Coronary Artery Disease is a most common type of Heart Disease that is considered as non-communicable and accounts for most of the death worldwide. It has been suggested that India will have the largest cardiovascular disease burden in the world.

Heart is considered as vital organ in our body that does not get rest even when we are sleeping, and does the function of pumping blood, working as the engine of human life. Beating almost 100,000 times a day or more than 35 million times each year, pushing liquid of life (blood) in an endless course to deliver oxygen to each and every cell of the human body. (Falk E. , 2003)

Coronary Artery Disease will be the largest cause of disability and death in India by 2020 and most of these deaths are likely to occur in middle aged group which will have massive effect on its economy. The contributing factors will include modifiable risk factors such as increased blood pressure, altered lipid levels, increased blood sugar level, unhealthy lifestyle habits, and physical inactivity. Health achievements can be made by adopting primary care intervention like diet & lifestyle modification. (WHO, 2002)

Most of the death in developed and developing countries attributed to noncommunicable disease, half of these deaths are due to coronary artery disease and one third of these deaths occur among middle age adults among developing countries. (WHO, 2003)

As estimated 17.5 million people died from cardiovascular disease in 2012, out of that 7.4% million deaths were due to coronary artery disease, and most of this death occurred in low and middle income countries. Out of the 16 million death under the age of 70 years due to non-communicable disease 82% death were in low and middle income countries and 37% are caused by coronary artery disease. (WHO, 2014)

Researcher was of the strong opinion that increasing the level of knowledge and education about CAD may play a major role in creating both awareness and prevention of this devastating problem. In this study the researcher tried to shed some light, focusing on knowledge related to coronary artery disease using a structured teaching programme which will be useful to the clerical employees to understand the risk factors and prevention of developing coronary artery disease and help them to bring about needed modification in their lifestyle.

Objectives of the study

1.   To assess level of knowledge regarding coronary artery disease as measured by structured knowledge questionnaire.

2.   To develop, validate and implement structured teaching program on coronary artery disease.

3.   To evaluate effectiveness of structured teaching program on coronary artery disease in terms of improvement in post test knowledge scores.

4.   To find association between level of knowledge on coronary artery disease and selected demographic variables.

METHODS AND MATERIALS

As per objectives of the study a Quasi-experimental one group pre-test post-test research design was selected for the present study. Quasi-experimental one group pre-test post-test research design For the present study population were clerical employees working in selected Government offices of North Goa. The target population of this study was Clerical employees working in Government offices of north Goa. The accessible population in this study was Clerical employees working in Registrar of co-operative Panjim north Goa. In present study sample or participants were clerical employees working in the   Selected offices of North Goa . Sample size for the research study was 30 clerical employees

working in selected office of North Goa within age group of 21 to 60 years. Non-probability purposive sampling technique was used to select the sample or participants based on Inclusion criteria and Exclusion criteria. research study was conducted among clerical employees working in selected Government offices of North Goa

RESULTS

Level of knowledge of participant's on pre-test.

Table: 1 *percentage distribution of participants in pre test.*   **n = 30**

Level of Knowledge	Knowledge Score (%)	Pre-test Frequency	Percentage (%)
Poor score	1 to 33%	07	23.3%
Moderate core	34 to 66%	21	70.0%
Good score	67 to 100%	02	6.7%
Total	100%	30	100%

Pre-test Total	mild	moderate	Good
Series1	7	21	2
Series2	23.30%	70.00%	6.70%
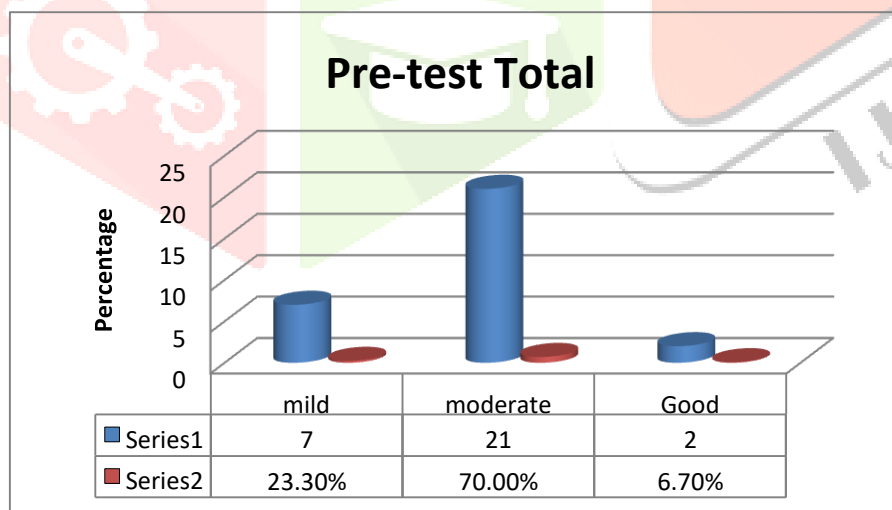
percentage distribution of participants in pre test.

Table 1 Shows that the majority 21 (70.0%) of Clerical Government employees had moderate level of knowledge, whose score range between 34to 66% in the pre-test.

Table 2: *Percentage distribution of participants in post test*   **n = 30**

Level of Knowledge	Knowledge Score	Post test	
		Frequency	**Percentage %**
Poor score	01 to 33%	0	0%
Moderate score	34 to 66%	8	26.7%
Good score	67 to 100%	22	73.3%
Total	100%	30	100%

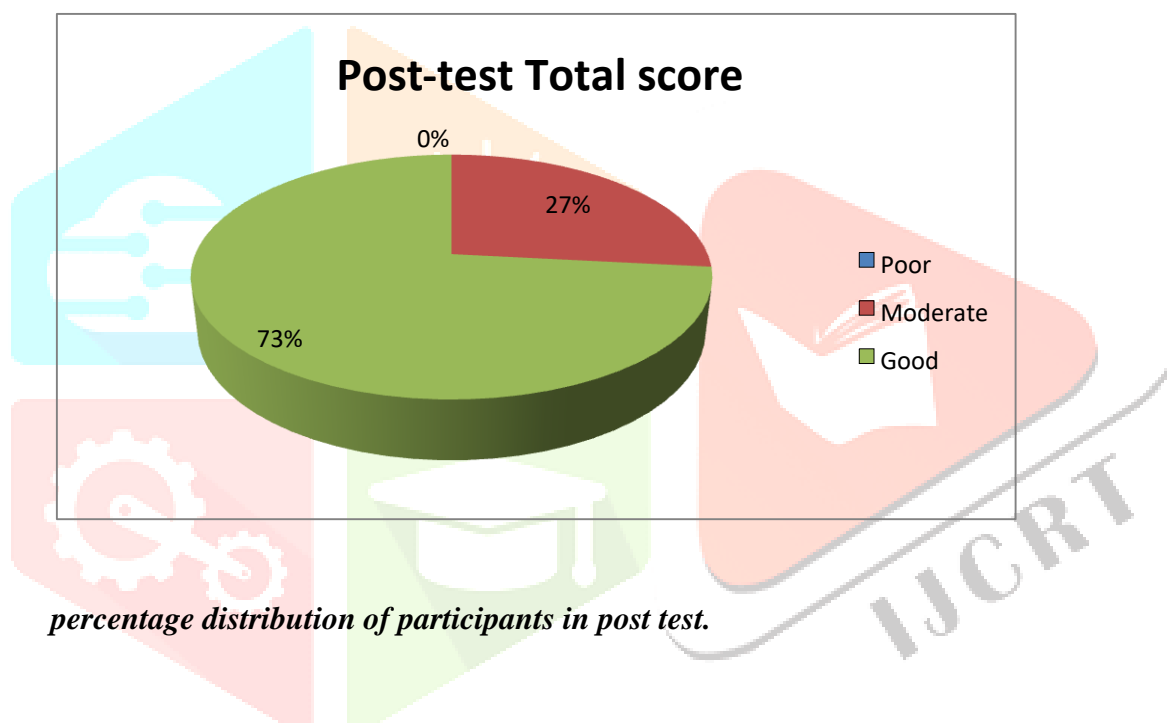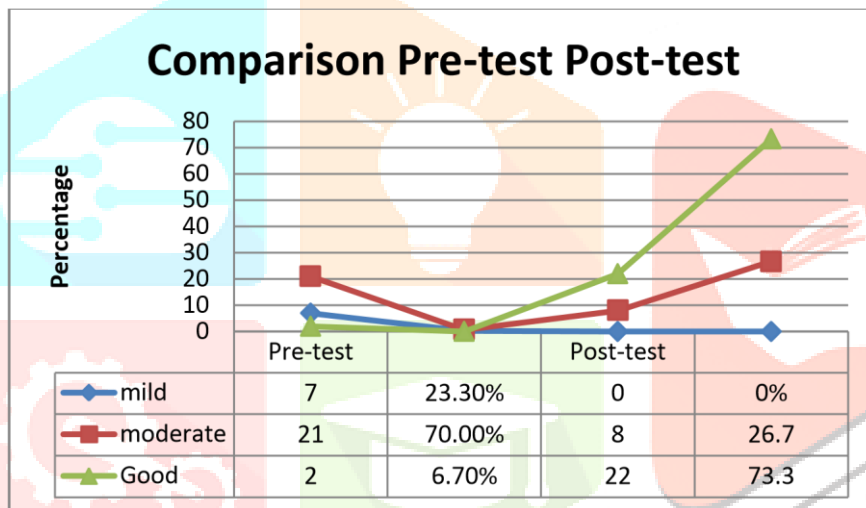*percentage distribution of participants in post test.*

Table 2 Shows that the majority 22 (73.3%) of participant's had good level of knowledge in post-test and 26.7% participants had moderate level of knowledge score in post-

test.

Table 3: *Comparison of Pre and Post test level of knowledge of participant* **n=30**

Domain	Level of Knowledge					
	Poor score (0 to 33%)		Moderate score (34 to 66%)		Good score (67 to 100%)	
Pre test	7	23.3%	21	70.0%	02	6.7%
Post test	0	0%	08	26.7%	22	73.3%

Comparison of Pre and Post test level of knowledge of participants.

Table 3   Shows that the majority 22 (73.3%) of Clerical employees working in selected Government offices of North Goa had good level of knowledge and 8(26.7%) had moderate knowledge score in post-test. and there was a significant increase in the knowledge level of Participants in post test when compared to pre- test.

Improvement Mean score of the overall level of knowledge between pre and post test

| | Pre test | | Post test | | Enhancement | | N=30 |
Aspects of Knowledge	Mean	SD	Mean	SD	Mean	SD	Paired 't' test
General statement on CAD	1.5000	0.77682	1.9667	0.18257		0.73030	3.500
Non-modifiable risk factors	1.2333	0.97143	2.5000	1.19626	1.26667	1.43679	4.829
Modifiable risk factors	4.0	1.762	5.4000	1.10172	1.40000	2.29843	3.336
Symptoms of CAD	0.7667	1.35655	1.3667	0.66868	0.60000	1.54474	2.127
Diagnostic measures of CAD	0.5667	0.56832	1.4333	0.67891	0.86667	0.77608	6.117
Preventive measures of CAD	2.9000	1.70900	5.4667	1.40770	2.56667	2.07918	6.761
Total	10.8000	4.83093	18.2000	3.40790	7.40000	6.06630	6.681

Significant p>0.001 level

Table 4, revealed enhanced Mean score of knowledge variables between pre and post test.

General statement on CAD, the obtained mean in the pre and post test, SD and Paired 't' value was 0.46667 (SD 0.73030) and 3.500 respectively.

Non-modifiable risk factor of CAD, the obtained mean in the pre and post test, SD and Paired 't' value was 1.26667 (SD 1.43679) and 4.829 and in relation to modifiable risk factors of CAD, the obtained mean in the pre and post test, SD and Paired 't' value was 1.40000 (SD 2.29843) and 3.336 respectively.

In relation to symptoms of CAD, and diagnostic measures the obtained mean in the pre and post test, with SD and Paired 't' value was 0.60000 (SD 1.54474) 2.127 and 0.86667 (SD 0.77608) 6.117 respectively.

Improvement in relation to preventive measures of CAD, the obtained mean in the pre and post test, SD and Paired 't' value was 2.56667 (SD 2.07918) and 6.761 respectively.

Significant difference was observed between pre-test and post-test Knowledge score among clerical employees working in selected offices of north Goa with paired 't' test value of 6.681and level of significance $P < 0.001$.The obtained Paired 't' value on Knowledge improvement was higher than table value. Hence it is inferred that there was statistical significant difference between pre test and post-test level of knowledge

Table 5: *Association between pre test knowledge level and selected demographic variables* **n=30**

Sr. No	Variables	P value	Chi-square Value
1	Age	0.657	4.152
2	Gender	0.294	2.449
3	Religion	0.659	0.833
4	Education	0.120	10.102
5	Marital Status	0.632	2.571
6	Dietary Pattern	0.216	3.065
7	Area of Residence	0.240	2.851
8	Family Income	0.102	10.597
9	Habit	0.181	3.420
10	Exercise Pattern	0.526	1.286

Significant at $P > 0.05$ level

Table 5 revealed that the pre test knowledge with P values for Age (0.656), Gender (0.294), Religion (0.659), Educational qualification (0.120), marital status (0.632), Dietary pattern (0.216), Area of Residence (0.240), Family income (0.102), Habits (0.181) Exercise pattern (0.526) was not significant at < 0.05 level. The obtained chi- square (χ^2) value for the same were 4.152, 2.449, 0.833, 10.102, 2.571, 3.065, 2.851, 10.597, 3,420, and 1.286 respectively. Hence it is inferred that there is no statistical

significant between pre test level of knowledge and selected socio-demographic variables and Knowledge score is independent of selected socio-demographic variables.

CONCLUSION

The findings of the study revealed that there was a marked increase in overall knowledge score of post-test 18.23 than the pre-test score 10.80 which represent the effectiveness (t = 6.681, P<0.001) of structured teaching programme. Thus, Structured teaching programme was effective in improving the Knowledge of participant's on Coronary Artery Disease .On the basis of the findings the researcher concluded that the prepared structured teaching programme on coronary artery disease was very effective

ABOUT AUTHOR

Mr.Gajanan .K(M.Sc(N),RN,MSN having 25 years of experience of clinical setup,clinical teaching,presently working for Goa Medical College and Hospital,Goa,India.

REFERENCES

1. (2013, July-Aug). *IOSR Journal of Nursing and Health Science, 1*(6), 17-21. Retrieved from www.iosrjournals.org
2. Affra. (2009). Health care delivery in India. *Nightingale Nursing Times.5(2):*, 5-7.
3. Akila, P. (2007). Effectiveness of Structured teaching programme on Cardiac Rehabilitation . *Asian Journal of Cardio-vascular Nursing*, Jan;(1):14-18.
4. Bhattacharya, P., Marimuthu, ,. P., Chowdhari, ,. R., Sarkar, ,. A., Adak, ,. S., & Banargi, ,. K. (1999). Risk assessment of Cardiovascular disease among bank employees,. *Journal of occupational medicine;49(5):*, 313-84.
5. Camila, S., Hansling, F., Fridlund, B., & Mastensoon, J. (2012). Lifestyle changes in Coronary Artery Disease effect of cardiac rehabilitation programme with focus on intensity, duration, and content. *Open Journal of Nursing*, 420-430. doi:10.4236/OJN 2012.24060
6. Deaton, C., Sivaraja, E., Wuc, L. H., Hod, C., Shishanie, K., & Jaarsmaf, T. (2011). The Global Burden of Cardiovascular Disease. *European Journal of Cardiovascular Nursing*, 10:S5-S13. doi:10.1016/S1474-5151(11)00111-3
7. Dorairaj, P. R. (2011). Societal influence on Cardiovascular diseas;time to assess and act. *International journal of epedimiology;*, 38:1595-1598. doi:10.1093/ije/dyp295

8. Dylewicz, p., & Brychcy, A. (2008). A knowledge of Cardiovascular risk factors and recommended lifestyle modifications inpatients after an acute Coronary SYNDROME. *Pubmed*, 230-232. Retrieved from http://www.ncbi.nlm.nihgov/pubmed/18344166