To assess the Effectiveness of Planned Teaching on Knowledge Regarding the Risk of Metabolic Syndrome among General Population

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Abstract

Abstract: Metabolic syndrome is a grouping of cardiac risk factors that result from insulin resistance. A person with metabolic syndrome has a greatly increased risk of cardiovascular disease and premature death. While the mortality and morbidity from coronary artery disease has been falling in the western world, it has been climbing to epidemic proportion among the Indian population. **Objectives:** 1) To assess the existence knowledge regarding the risk of metabolic syndrome among general population. 2) To evaluate the effectiveness of planned teaching on knowledge regarding the risk of metabolic syndrome among general population. 3) To associate the post-test knowledge score with selected demographic variable. **Material and Methods**: Non experimental design **Research approach**: Interventional evaluatory approach **Sampling techniques**: Non probability convenience sampling and **Sample size**: 60 people. **Result:** The study shows that 8(13.33%) had good level of knowledge score, 34(56.67%) have very good level of knowledge 18(30%) had excellent level of knowledge score. Hence planned teaching was effective, calculated 't' value is more than tabulated value and calculated 'p' value was less than accepted level of P=0.05 thus H_1 is statistically accepted. There is significant association of knowledge score associated with family history of hypertension and diabetic. **Conclusion:** The study showed that the planned teaching on the risk of metabolic syndrome among general population was effective in improving the knowledge of general population and thus helps them to understand the meaning.

Keywords*: Metabolic syndrome, knowledge, effectiveness and planned teaching.*

Introduction

Metabolic syndrome is a metabolic disorder that involves not one, but a combination of three or more of the following health issues: abdominal obesity, high blood sugar, high triglyceride levels, high blood pressure or low HDL ("good") cholesterol.[1]

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Metabolic syndrome is a grouping of cardiac risk factors that result from insulin resistance. A person with metabolic syndrome has a greatly increased risk of cardiovascular disease and premature death. While the mortality and morbidity from coronary artery disease has been falling in the western world, it has been climbing to epidemic proportion among the Indian population.[2]

Metabolic syndrome is a complex web of metabolic factors that are associated with a 2-fold risk of cardiovascular diseases and a 5-fold risk of diabetes. Metabolic syndrome is a constellation of multiple cardiometabolic abnormalities including truncal (central) obesity, borderline and high blood pressure, high fasting glucose, high triglycerides, and low high-density lipoprotein cholesterol. Studies performed

in India have reported the prevalence of metabolic syndrome among adults as to be from 11% to 56%, depending on the definition used. NCEP, ATP-III defines it with the presence of three out of five clinical and/or biochemical abnormalities also the International Diabetes Federation recommends abdominal obesity as an obligatory criterion and the presence of at least two other abnormal criteria.[3]

Worldwide prevalence of metabolic syndrome ranges from <10% to as much as 84%, depending on the region, urban-rural environment, composition (sex, age, race, and ethnicity) of the patient, and the definition used. The prevalence of metabolic syndrome in India has been documented to be from 11% to 41% across this vast country with numerous socio-cultural varieties. The present study was undertaken to find out the demographic profile of the metabolic syndrome in Kanpur region of northern India. The prevalence of Metabolic syndrome was more than 40% and its prevalence in <40 years age group is rapidly increasing. It's high time to be more active physically, before fatal cardiovascular events.[4]

The aim of study was to determine the prevalence of metabolic syndrome (MetS) in people with type 2 diabetes mellitus. National Cholesterol Education Program (NCEP) ATPIII Criteria, International Diabetes Federation (IDF) and the World Health Organization (WHO) definitions were used in quantifying the metabolic syndrome and also the concordance between these three criteria's used for identifying metabolic syndrome. The Prevalence of metabolic syndrome was found to be 45.8%, 57.7% and 28% following NCEP-ATPIII Criteria, IDF and WHO definitions, respectively.[5]

Problem statement

To assess the effectiveness of planned teaching on knowledge regarding the risk of metabolic syndrome among general population.

Objective

1. To assess the existence knowledge regarding the risk of metabolic syndrome among general population.

2. To evaluate the effectiveness of planned teaching on knowledge regarding the risk of metabolic syndrome among general population

3. To associate the post- test knowledge score with demographic variable

Assumption

1. General population may have some knowledge regarding the risk of metabolic syndrome.

2. Knowledge may vary from one another.

Hypothesis:

H_1:- There is significant increase in post-test knowledge score.

Methodology

Research approach: Interventional Evaluatory approach.

Research design: Non experimental one group pre test post test design

Setting of the study: This study was conducted in Wardha

Sample: General population

Sample size: The sample of the study consists of 60.

Sampling technique: Non probability convenient sampling

Tool- structured knowledge questionnaire including demographic variables will be used for the study.

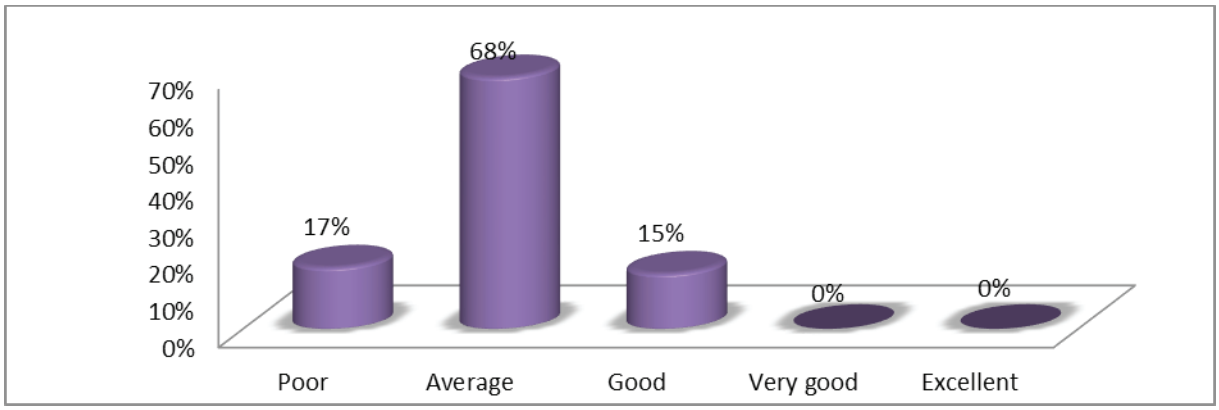
Independent variable: planned teaching regarding the risk of metabolic syndrome.

Dependent variable: knowledge of people regarding the risk of metabolic syndrome.

Result

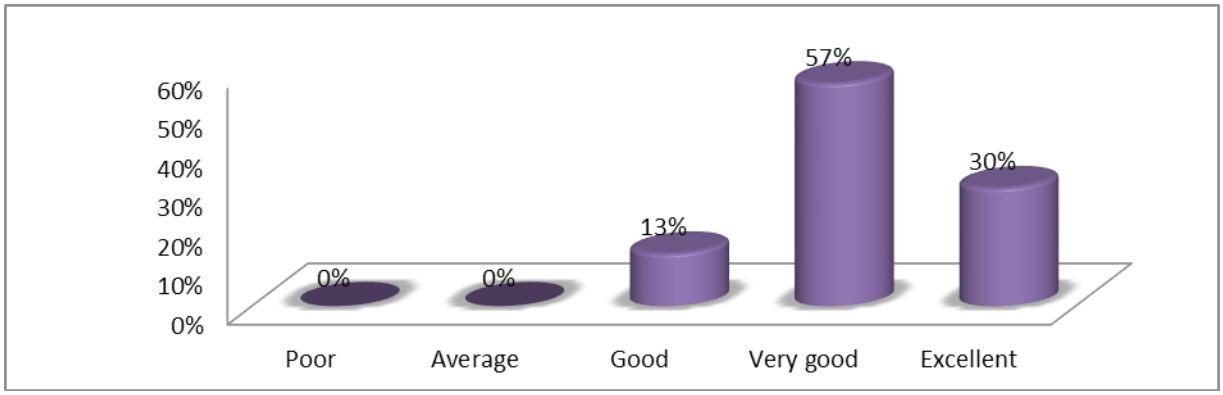
Graph No.1 Assessment of existing knowledge score regarding the risk of metabolic syndrome among general population.

The finding of the study shows that pretest 41(68.33%) having average level of knowledge, 10(16.67%) having poor level of knowledge, 9(15%) having good level of knowledge.



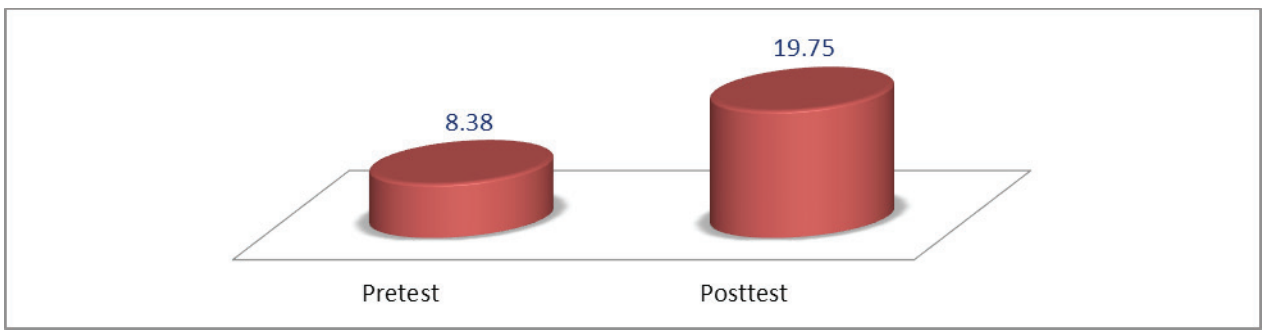
Graph No.2 Assessment of posttest knowledge grading the risk of metabolic syndrome among general population

The finding of the study show that post test 34(56.67%) having very good level of knowledge, 18(30%) having excellent level of knowledge. 8(13.33%) having good level of knowledge.



Graph No.3 Percentage wise distribution of Effectiveness of planned teaching on knowledge regarding the risk of metabolic syndrome among general population.

The overall mean knowledge scores of pre test and post test of general population which reveals that post test mean knowledge score was higher 19.75% with SD of ± 2.678 when compared with pre test mean knowledge score value which was 8.38% with SD of ±2.552. The statistical Student's paired t test implies that the difference in the pre test and post test knowledge score found to be 30.067 which is statistically significant at 5% level of significance($p<0.05$). Hence it is statistically interpreted that planned teaching on knowledge regarding the risk of metabolic syndrome among general population was effective. Thus H_1 is accepted.



Association of knowledge score with selected demographic variables

There is significant association of knowledge score associated with family history of hypertension and diabetic.

Analysis of data showed that there was significant difference between pre test and post test knowledge scores. Hence it is concluded that the planned teaching significantly brought improvement in the knowledge regarding the risk of metabolic syndrome among general population.

Discussion

In this study it is indicated that post test show that 34(56.67%) very good level of knowledge, 18 (30%) having excellent level of knowledge and 8(13.33%) having good level of knowledge. The overall mean knowledge scores of pre test and post test of general population which reveals that post test mean knowledge score was higher 19.75 % with SD of ± 2.678 when compared with pre test mean knowledge score value which was 8.38 % with SD of ± 2.552. the calculated t-value is 30.067 and tabulated t-value is 2.02, which is statistically significant at 5% level of significance($p<0.05$). Hence it is statistically interpreted that planned teaching on knowledge regarding the risk of metabolic syndrome was effective. There is significant association of knowledge score associated with family history of hypertension and diabetic.

Yadav D et al in their study the Prevalence of metabolic syndrome was found to be 45.8%, 57.7% and 28% following NCEP-ATPIII Criteria, IDF and WHO definitions, respectively. Using all the three definitions the prevalence was higher in women in all age groups. ATP III and IDF criteria showed good agreement (k 0.68) compared to ATP III with WHO (k 0.54) and IDF with WHO (k 0.34) criteria. Highest prevalence was observed following IDF definition.[6]

KwabenaNsiah et al in their study the prevalence of Metabolic syndrome was 58% in the studied Ghanaian population. Hypertension was the commonest risk factor (60%), followed by central obesity (48.67%) and dyslipidemia (37%). Female type 2 diabetics had a higher prevalence of metabolic syndrome, and carried more components than their male counterparts. Regression analysis showed three factors; femininity, high body mass index and low educational status were the most critical predictive risk factors of metabolic syndrome, according to this study.[7]

Puepet FH et al in there study the prevalence of Metabolic syndrome was 63.6% (74.5% in males and 54.9% in females, $p<0.05$). The mean (SD) age of patients with was Metabolic syndrome 54.7(9.5) years. About 80% of the patients were centrally obese, 63% had hypertension, 62% had high triglycerides and 70% with low high density lipoprotein cholesterol. Among patients with, 79% had metabolic syndrome dyslipidemia, 41% had body mass index 30, and 36% had microalbuminuria.[8]

Conclusion

The researcher as a part of her post graduate programmed, conducted an intervention research on the topic "To assess the effectiveness of planned teaching on knowledge regarding the risk of metabolic syndrome among general population".

The researcher aimed to improve the level of knowledge of risk of metabolic syndrome. She predetermined certain objectives, to precede the study. The objectives were adequate to reach into the findings. A particular time period has been allocated for each step. Investigator had presented her hypothetical views about the study in its beginning. The study had done by separating the topic into 5 chapters. And finally the researcher reached into her findings. The result of this study shows that 34(56.67%) having very good level of knowledge, 18(30%) having excellent level of knowledge 8(13.33%) having good level of knowledge, to find the effectiveness of planned teaching's' test was applied and t value was calculated, post test score was significantly higher at 0.05 level than that of pre test score. Thus it was concluded that planned teaching on the risk of metabolic syndrome was found effective as a teaching strategy.

Ethical Clearance- It has been Obtained by Datta Meghe Ethical Committee, Dmims, Sawangi Meghe Wardha.

Conflict of Interest: NIL.

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