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Effectiveness Of Behavioural Counselling for A Healthy Lifestyle Among Administrative Staff to Prevent Coronary Artery Disease

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Abstract

Background& Aims: Coronary artery disease is a blood vessel disorder that consists of a common form of atherosclerosis. In Coronary heart disease, arteries become narrowed or blocked due to atherosclerosis develops in the blood vessel of the heart. With the Objective to assess the effectiveness of behavioural counselling for a healthy lifestyle among administrative staff to prevent coronary artery disease and to find out the association between demographic variables, awareness, and practice score was carried out.

Materials and Methods: A pre-experimental design with one group pre-test and the post-test method was selected for the study. A total of 110 administrative staff were selected by using a consecutive sampling technique. Self-administered coronary risk status assessment of normal adults, Self-structured Awareness Questionnaire Regarding the Healthy Lifestyle, Self-reported health behavior practice checklist was used for data collection. Counselling is given to the participants to adopt a healthy lifestyle for the prevention of coronary artery disease.

Result: The study revealed that the majority 81% of participants were at moderate risk of coronary artery disease, the mean awareness of healthy lifestyle score of administrative staff was 10.6 ± 2.3 , after intervention it was increased by 2.2 units. The effectiveness of behavioural counselling regarding healthy lifestyle practice of administrative staff for prevention of coronary artery disease was 18.9 ± 3.3 , after intervention it was increased by 1.5 units, therefore, it could be inferred that behavioural counselling was beneficial in healthy lifestyle practice on study participants.

Conclusion: The study concluded that the majority of participants were at moderate risk for developing coronary artery disease. Healthy lifestyle counselling enhanced awareness of the people who are having a sedentary lifestyle for the prevention of coronary artery disease.

Keywords: Risk Factors, Coronary Artery Disease, Behavioural Counselling, Administrative staff.

INTRODUCTION

The term atherosclerosis arises from dual Greek words ather means “fatty mush”, as well as sclerosis, denotes “hard”. They both mean that atherosclerosis begins as a firm accumulation of lipids that stiffens as people grow older. Therefore ‘hardening’ of the blood vessel commonly mentioned as atherosclerosis. It can occur in any of the blood vessels of the body,

but it mainly occurs in the coronary artery. In Coronary heart disease, arteries become narrowed or blocked due to Atherosclerosis develops in the blood vessel of the heart, and the flow of blood to that part of the heart becomes very less, and if the left oversupply is insufficient for fulfilling the Oxygen needs of heart, affected part might be ischemic and damaged next to this myocardial infarction may result.[1]

WHO recorded that 18 million people passed away every year from CVDs, approximately 31% of altogether deaths universally. According to the statistical data mortality rate because of cardiac issues is higher in developing countries like India. CAD and MI are the two chief causes of death i.e. 80% [2]

The factors which lead to Atherosclerosis can modifiable such as addiction of alcohol and cigarette, inadequate physical movement, unhealthy dietary pattern. Some factors are non-modifiable such as gender, heredity. Daily lifestyle modifications, for example, quit smoking, improve body workout, or variations in eating habits can reduce the risk of CAD. Hence vulnerable group of people are instructed to modify their daily lifestyle to reduce the chance of occurring CAD.

Behavioural counselling interventions comprising positive outcomes on fruits and vegetable intake, total calorie consumption, and physical exercise have been found to increase healthy behaviours focused on the inhibition of cardiac diseases. [3,4,5]

MATERIAL AND METHODS

Study Design: A quantitative research approach with one group pre-test and post-test design was selected to carry out the study.

Study Duration: This study was conducted in swami Rama Himalayan University (it's all constituents' educational institutes) for one month. Consecutive sampling technique was used for selection of 110 administrative staffs.

The inclusion criteria were administrative staff

- 1) who Can read & understand Hindi /English.
- 2) Were present at the time of the data collection procedure.
- 3) The administrative staff belongs to 20-60 yrs.

The exclusion criteria were administrative staff who don't want to participate in the study and those already having coronary artery disease, and underwent angiography and CABG. Verbally reported informed written consent was obtained from all the study participants

Data Collection

Data were collected by using structured interview schedule on questionnaire regarding coronary artery disease. Counselling about a healthy lifestyle given to the participants in a group to prevent coronary artery disease on day one. The post-test was taken after the seventh day of intervention with the help of healthy lifestyle awareness, healthy lifestyle practice questionnaire. The data collection process was terminated after thanking each participant for their participation and Cooperation.

Data Analysis

The data were entered in Microsoft Excel, and further analysis was done using the software SPSS, and for explaining demographic variable and risk factor assessment frequency, percentage was used. For testing the effectiveness of behavioural counselling ‘‘paired t test’’ was used and for testing association, chi square test used. The p- value for level of significance was < 0.05 .

RESULTS

Description of sample characteristics

Study illustrates that out of 110 samples around half (48.9%) of the subjects belongs to the age of 31-40 yrs. The majority 80% were male. A maximum of 82% of the study participant was married. More than half 54% of the study participant belonging to the joint family. Half 50% of them had a family income of about 10-25 thousand per month, Maximum 38% of the participant belonging to rural areas. Most of 77% of the study subjects were not having a family history of other illnesses. The majority of 85% of the study participants were not having any illness. Maximum (91%) the study participants have not attended any educational health program on CAD/heart disease prevention. More than half 66% of the study participant was having Source of health-related information from electronic media. Most

(60%) of the study participant had a type-A personality. Type A personality is having added chance of having C.A.D

Table 1. Level of risk of coronary artery disease among administrative staff N=110

S. No	Risk Status	Score	No Of Participants (Frequency)	Percentage (%)
1	Low risk of coronary artery disease	7-25	06	5
2	Moderate risk of coronary artery disease	26-45	89	81
3	High risk of coronary artery disease	46-90	15	14

Table No. 1 shows that the majority of 81% of participants were at moderate risk of coronary artery disease, 14% of participants were having a high risk of coronary artery disease and the Minimum 5% of participants are at low-risk of coronary artery disease

Table 2. Effectiveness of behavior counselling regarding awareness of a healthy lifestyle to prevent coronary artery disease N=110

S. N	Awareness Regarding Healthy Lifestyle	Range	Max Score	Mean \pm Sd	Mean Difference	Degree Of Freedom	T Value
1	Pretest	4-14	15	10.6 \pm 2.32	2.28	109	12.39
2	Post test	9-15		12.8 \pm 1.48			
t tab 1.98, p<0.05							

Table No. 2 shows that in our study the pre mean awareness regarding healthy lifestyle for prevention of coronary artery disease score of administrative staff was 10.6 \pm 2.3, after the intervention, it was increased by 2.2 units with, statistically significant (p-value less than 0.001). So, the null hypothesis was rejected.

Table 3. Effectiveness of behavior counseling's regarding healthy lifestyle practices for the prevention of coronary artery disease. N=110

S. N	Healthy Lifestyle Practice	Range	Max Score	Mean \pm Sd	Mean Difference	Degree Of Freedom	T Value
1	Pre-Test	10-25	31	18.9 \pm 3.3	1.5	109	9.4
2	Post Test	14-26		20.4 \pm 2.4			
T Tab 1.98, P<0.05							

Table No. 3 shows that in our study the effectiveness of behavioral counseling regarding a healthy lifestyle for prevention of coronary artery disease of administrative staff was 18.9 \pm

3.3, after the intervention, it was increased by 1.5 units with, i.e. Statistically significant (p-value 0.001).

Therefore, it could be inferred that behavioural counselling was beneficial in improving the healthy lifestyle practice of study participants to prevent C.A.D. Thus, the null hypothesis was rejected.

Table 4. Association between Pretest healthy lifestyle practice score and selected demographic variable **N=110**

S. N	Demographic Variable		Below Median < 19	At And Above Median > 19	X ² Or Fisher Exact	P Value
1	Age In Years	20, -30	9	8	3.22 \$	0.37
		31-40	32	22		
		41-50	14	15		
		51-60	3	7		
2	Gender	Male	42	46	4.41	0.036
		Female	16	6		
3	Education	Graduate	32	25	0.55	0.45
		Post Graduate	26	27		
4	Marital Status	Married	46	44	0.51	0.47
		Unmarried	12	8		
5	Family Type	Joint	27	21	0.42	0.51
		Nuclear	31	31		
6	Family History of Cad	Yes	13	12	0.0069	0.93
		No	45	40		
7	Any Disease	Yes	50	43	0.25	0.61
		No	8	9		
8	Any Education Of Cad	Yes			0.76	0.49
		No	52	49		
9	Monthly Family Income (Inr)	10,000-25,000	28	27	3.39 \$	0.47
		26,000-40,000	20	12		
		41,000-55,000	6	5		
		56,000-70,000	3	7		
		71,000-85,000	1	1		

10	Area Of Living	Rural	25	17	1.47	0.47
		Urban	17	20		
		Semi Urban	16	15		
11	Source Of Education	Print Media	17	13	3.91	0.146
		Electronic Media	35	38		
		Other	6	1		

Table no. 4 illustrates a significant association found with male gender & healthy lifestyle practice score at the level of 0.05 significance. It means that males have better healthy lifestyle practices.

DISCUSSION

The current study revealed that the majority of 81% of participants were at moderate risk of coronary artery disease, 14% of applicants remained elevated in danger of cardiovascular illness as well as the Minimum 5% of participants were having low in danger for developing cardiovascular disease.

Results were supported by a systematic review carried out by Nag T, (2013) [5], risk factors of CAD in the Asian people of India evaluated, finding of the study shows that hypertension and diabetes are additional main risk factors between Asian Indian Residents.

The result is sustained by the study carried out by Wong ND 2014 [6], to assess the cardiac risk factors amongst people joining presentation on the heart in a particular clinic, finding shows that 72% had a minor risk, 23% had a modest risk, and 5 % in major risk for developing heart disorders.

In our study, the pre mean awareness regarding the healthy lifestyle score of administrative staff was 10.6 ± 2.3 , after the intervention, it was increased by 2.2 units with, statistically significant (p-value less than 0.001)

The result was supported by an RCT conducted by Griffin k D (2016) [7], a comparison on the cardiac Disorder information questions before and after the intervention, revealed a major variation with means of 08 and 9.04 an intensification of information from the starting to the completion of the collected education

The result was further supported by Ray M (2016) [8] the mean pre-test sum of CAD knowledge was 41.09 as well as the mean post-test was 48.09, the study determined that lifestyle adaptation methods for coronary artery disease patients are effective and useful for boosting their health status.

The present study showed that the effectiveness of behavioural counselling regarding the healthy lifestyle practice of administrative staff was 18.9 ± 3.3 , after the intervention, it was increased by 1.5 units with, i.e. statistically significant (p-value 0.001). Therefore, it could be inferred that behavioural counselling was beneficial in healthy lifestyle practice on study participants.

The result was supported by Saffi LA M (2014) [9] a randomized controlled trial on Daily life actions lowers cardiac risk among clients having C.A.D. 1.7 points (-13.59%) decrease risk in the experimental Category 1.19 rise in risk (+10.9%) of control category

Association between healthy lifestyle practice score and selected demographic variable

There was a statistically significant association between male gender & healthy lifestyle practice score at the level of 0.05 significance. It means that males have better healthy lifestyle practices. Findings are contradictory. Effect of Gender Variations on Healthy way of life, results show that male's mean of healthy lifestyle scores was 19.19 ± 4.19 and for females 18.79 ± 3.19 . Amongst both genders, no important changes in total healthy lifestyle scores were found [10,11,12]

CONCLUSION

The study concluded that the majority of participants were at moderate risk for developing coronary artery disease. Healthy lifestyle counselling enhanced awareness of the people who are having a sedentary lifestyle aimed at the prevention of coronary heart disease. To reduce the risk of getting coronary artery disease healthy lifestyle counselling is beneficial. As a nurse, we have to counsel the people for adopting healthy lifestyle practices.

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