

Assessment of the Prevalence of Lifestyle Related Risk Factors of Cardiovascular Diseases and the Effectiveness of Awareness Package on Knowledge and Attitude Regarding Healthy Lifestyle Practices for the Prevention of Cardiovascular Diseases among Male Adults in Kengeri Upanagar Urban Community, Bangalore

Samjhana Shrestha¹, Kala. Suneetha², Shanti Bogati³

¹Department of Community Health Nursing, Padmashree Institute of Nursing, Bangalore-60, India

***Corresponding Author**

Padmashree Institute of Nursing, Kengeri, Bangalore, Karnataka, India
E-mail: samjush22@gmail.com, Telephone: 00918197736938

Abstract: Cardiovascular disease (CVD) is one of the major public health problems in India. The study attempts to assess the prevalence of lifestyle related risk factors of cardiovascular diseases and the effectiveness of awareness package on healthy lifestyle practices for the prevention of cardiovascular diseases among male adults in selected urban community, Bangalore. The research approach adopted for the study was quasi experimental one group pre test post test design. Among the total 396 male adults of age group 25-45 years, 26.01 % had high risk, 35.86% had moderate risk and 38.13% have low risk of cardiovascular disease. Among the male adults having high risk of cardiovascular disease, 60 samples were selected using simple random sampling technique. Pre-test level of knowledge and attitude was assessed using structured questionnaire and likert scale respectively. After administration of awareness package on healthy lifestyle practices, post-test level of knowledge and attitude was assessed. The collected data was analyzed using descriptive and inferential statistics. The 't' value ($t=34.87$) was computed between mean pre test and post test knowledge scores. Also 't' value ($t=27.14$) was computed between mean pre test and post test attitude scores. The results revealed that 't' value was higher than the table value which shows that it was statistically significant ($p<0.05$), so the intervention was effective. The obtained correlation coefficient 'r' value was 0.580 which showed there was positive correlation knowledge and practices regarding healthy lifestyle practices for the prevention of cardiovascular diseases. Thus, the study concluded that awareness package was effective in improving knowledge and attitude regarding healthy lifestyle practices for the prevention of cardiovascular disease.

Keywords: Healthy lifestyle practices, Knowledge, Attitude, Awareness package.

1. Introduction

With the advancement in the society along with scientific and technological progress, there has been a dramatic shift in the way today humans beings are leading their lives which is sometimes referred as modern way of living. With modern medical science and technological progress, there has been improvement in sanitation and hygiene, prevention of diseases with vaccination and treatment of infections with antibiotics. However, in these changes of living and with progress in modern science and technology human beings have eliminated certain forms of diseases but in this transition of improvement in living and increase in life expectancy they brought in others, the so-called lifestyle diseases which are also known as non-communicable diseases. WHO has recognized diabetes, cardiovascular diseases and stroke, cancer and chronic lung disease as major non-communicable diseases. Among these, Cardiovascular disease is the most common disease, attributable to 52% of Non-communicable disease associated deaths and 29% of total deaths.¹

Cardiovascular disease (CVD) is a class of disease that involve the heart or blood vessels. It include: ischemic heart disease (IHD), stroke, hypertensive heart disease, rheumatic heart disease, aortic aneurysms, cardiomyopathy, atrial fibrillation, coronary heart disease (CHD), endocarditis, and peripheral artery disease (PAD). Among others IHD, stroke, and PAD involve atherosclerosis. This may be caused by high blood pressure, smoking, diabetes, lack of exercise, obesity, high blood cholesterol, poor diet, and excessive alcohol, among others. High blood pressure results in 13% of CVD deaths, while tobacco results in 9%, diabetes 6%, lack of exercise 6% and obesity 5%.²

According to recent statistics, an estimated 17.5 million people died from cardiovascular disease in 2012, representing 31% of all global deaths. Of these deaths, an estimated 7.4 million were due to coronary heart disease and 6.7 million were due to stroke. Over three quarters of CVD deaths take place in low- and middle-income countries. Out of the 16 million deaths under the age of 70 due to non-

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communicable diseases, 82% are in low and middle income countries and 37% are caused by CVD. Presently, the greatest public health challenge to developing countries is to control epidemics of chronic NCD, specifically CVD, CHD, diabetes and stroke which have caused almost doubled mortality rates than other communicable diseases in India.³

CVD is strongly connected to lifestyle, especially the use of tobacco, unhealthy diet habits, physical inactivity, and psychosocial stress. The WHO has stated that over three-quarters of all CVD mortality may be prevented with adequate changes in lifestyle.⁴ Knowledge about CVD and its modifiable risk factors is a vital pre-requisite to change the individuals' health attitudes, behaviors and lifestyle practices. Good knowledge about CVD risk factors among individuals will aid them to be proactive in decreasing their risk since the majority of the risk factors are modifiable.⁵

Thus, the researcher decided to undergo a study on creating awareness regarding healthy lifestyle practices for the prevention of cardiovascular diseases among adults in the urban areas.

2. Material and Methods

A quasi experimental one group pretest posttest design was adopted for the study. The sample consists of 60 male adults having high risk of cardiovascular disease. The simple random sampling technique was used. The conceptual framework adopted for the study was based on Rosenstoch's (1974)Beckers (1978) Health Belief Model. Data collection was done by using modified metagenics cardiovascular risk assessment questionnaire, demographic data, structured knowledge questionnaire and likert scale. Reliability of the knowledge questionnaire tool was found to be 0.88 and attitude scale was found to be 0.96. The researcher obtained official permission from respective authority and ethical clearance from ethics committee. Informed consent was obtained from the participants. Prevalence of lifestyle related risk factors of cardiovascular disease was assessed using modified metagenics cardiovascular risk assessment questionnaire. Then, pretest knowledge and attitude was assessed. Awareness package on healthy lifestyle practices for the prevention of cardiovascular disease was given through pamphlets and flash cards to the male adults having high risk of Cardiovascular disease. After the intervention posttest knowledge and attitude was assessed. The data were analyzed by using both descriptive and inferential statistics.

Inclusion Criteria

Male adults

- 1) Between 25-45 years of age, residing in Kengeri Upanagar urban community.
- 2) Who are identified as having high risk of CVD through Cardiovascular risk assessment questionnaire.
- 3) Who are able to understand Kannada or Hindi or English.

Exclusion Criteria

Male adults

- 1) Who have chronic illness like cancer, cardiovascular diseases and respiratory diseases.
- 2) Who are not willing to participate in the study.

3. Results

Prevalence of lifestyle related risk factors

The findings of the study revealed that 38.13% (151) of the male adults had low risk of cardiovascular diseases, 35.86% (142) had moderate risk of cardiovascular diseases and 26.01% (103) had high risk of cardiovascular diseases.

Demographic data of male adults

The study revealed that the majority of the male adults, 33.3% were in the age group of 36-40 years. 95% of them were Muslim. 96.7% of male adults were married. 53.3% had pre degree education. 66.7% did daily wages/business. 70% of their family income was Rs 10001-15000. 98.3% male adults were non vegetarian. All 60 male adults had habit of smoking. 88.3% of them had habit of drinking alcohol. 11.7% had history of cardiovascular diseases in their family and 88.3% had no history of cardiovascular diseases in their family. 93.3% of male adults got information from Mass media.

Level of knowledge and attitude scores

Table 1: Frequency and percentage distribution according to pre-test and post-test level of knowledge regarding healthy lifestyle practices for the prevention of Cardiovascular diseases, n=60

SI. No.	Level of knowledge	Pre-test		Post-test	
		No. (60)	%	No. (60)	%
1	Inadequate knowledge (<50%)	46	76.7	-	-
2	Moderate knowledge (50-75%)	14	23.3	20	33.3
3	Adequate knowledge (>75%)	-	-	40	66.7
Total		60	100	60	100

The table 1 depicts that majority 76.7 % of the male adults had inadequate knowledge and rest of 23.3% had moderate knowledge before the awareness package. But, after the awareness package, the majority 66.7% of the male adults had adequate knowledge and 33.3% had moderate knowledge.

Table 2: Frequency and percentage distribution according to pre and post-test level of attitude regarding healthy lifestyle practices for the prevention of cardiovascular diseases, n=60

SI. No.	Level of attitude	Pre-test		Post-test	
		No. (60)	%	No. (60)	%
1	Unfavorable attitude (<50%)	19	31.7	-	-
2	Moderately favorable attitude (50-75%)	41	68.3	13	21.7
3	Favorable attitude (>75%)	-	-	47	78.3
Total		60	100	60	100

The table 2 depicts that a majority 68.3% of the male adults had moderately favorable attitude and rest of 31.7% had unfavorable attitude before the awareness package. But, after the awareness package, the majority 78.3% of the male adults had favorable attitude and 21.7% had moderately favorable attitude.

Table 3: Comparison of pre and post-test knowledge regarding healthy lifestyle practices for the prevention of cardiovascular diseases among male adults, n=60

Knowledge	Max. Score	Mean difference	SD of difference	% of mean difference	Paired t-value	p-value
Over all	28	9.73	2.16	34.7	34.87*	p<0.05

Note: *- denotes significant at 0.05 level (i.e., p<0.05).

The table 3 depicts that the paired t-test value was 34.87 which was highly significant at 5% level. It evidenced that there was a significant difference in knowledge after the intervention of awareness package.

Table 4: Comparison of pre and post-test attitude regarding healthy lifestyle practices for the prevention of cardiovascular diseases among male adults, n=60

Attitude	Max. Score	Mean difference	SD of difference	% of mean difference	Paired t-value	p-value
Over all	48	12.3	3.5	25.6	27.14*	p<0.05

Note: *- denotes significant at 0.05 level (i.e., p<0.05)

The table 4 depicts that the paired t-test value was 27.14 which was highly significant to overall attitude regarding healthy lifestyle practices for the prevention of cardiovascular diseases. It evidenced that there was a significant difference in attitude after the intervention of awareness package.

Table 5: Correlation between knowledge and attitude regarding healthy lifestyle practices for the prevention of cardiovascular diseases among male adults, n=60

Variables	Mean	SD	R	p-value
Knowledge	12.13	2.57	0.580*	p<0.05
Attitude	26.55	3.43		

Note: *- Significant at 5% level (i.e., p<0.05).

The table 5 depicts that the correlation coefficient 'r' value was 0.580* which shows positive correlation between knowledge and attitude regarding healthy lifestyle practices for the prevention of cardiovascular diseases among male adults. Hence, there is significant correlation between knowledge and attitude regarding healthy lifestyle practices for the prevention of cardiovascular diseases among male adults.

The findings of the study was supported by a study conducted among 30 cardiac patients to assess the effectiveness of structured teaching programme on knowledge regarding the risk factors of cardiovascular diseases among adults in India. A structured teaching programme was given to the patients about the risk factors of cardiovascular diseases which were followed by a post test. The result of the study showed that the post test knowledge scores about the risk factors of the condition were from 38% of pre test knowledge scores to 76.8% among the study group. The study concluded that structured teaching programme was effective in improving the

knowledge about risk factors of cardiovascular diseases among adults.⁶

4. Conclusion

The study concluded that the awareness package was effective to improve the knowledge and attitude regarding healthy lifestyle practices for the prevention of cardiovascular disease among the male adults. Adults should be aware of the lifestyle related risk factors of cardiovascular disease and they should be encouraged to adopt healthy lifestyle practices for the prevention of cardiovascular disease. Nurses can conduct awareness programmes and develop awareness among the adults regarding healthy lifestyle practices for the prevention of cardiovascular disease.

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