

ASSESS THE RISK FACTORS OF HEART DISEASE AND EFFECTIVENESS OF AWARENESS PROGRAM REGARDING HEALTHY HEART BEHAVIOUR ON KNOWLEDGE AND PRACTICE OF ADULTS IN UTTARAKHAND

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Abstract

Background of the study: Heart is one of most important organ in the human body. There are various factors which affects the heart and leads to heart disease. There are several modifiable and non-modifiable factors of heart disease. Modifiable risk factors can be minimized by adoption of healthy lifestyle practices can reduce the risk of heart disease in adults. The purpose of the study was to identify the adults under risk of heart disease and providing them knowledge regarding healthy heart behavior. Result: The study revealed that 72% of the adults were at moderate risk of heart disease, only 19% of the adults were at low risk and 9% were having high risk of heart disease. More than half 55.2% adults had Type B personality. In this study mean knowledge regarding healthy heart behavior of adults was 14.09 ± 3.372 , after the intervention, it was increased by 3.89 units with statistically significant. (p value > 0.05). The mean practice of adults was 24.90 ± 4.749 regarding healthy heart behavior which was increased up to 28.92 ± 4.224 after giving intervention, that is statistically significant (p value 0.001). There was a weak positive co-relation between post-test knowledge and practice score of adults which was insignificant. There was a significant association found between healthy heart behavior knowledge with age and also there was a significant association found in gender and occupation of adults with practice score. Conclusion: The study concluded that the majority of adults were at moderate risk for developing heart disease. Awareness program regarding healthy heart behavior was effective in enhancing the knowledge and practices of adults regarding healthy heart behavior among adults.

Key words: Assess, Risk factors, Effectiveness, Awareness programme, Knowledge, Practice, Healthy heart behaviour, Adults

INTRODUCTION

A highest level of wellbeing can be obtained by an individual of any cast, create, religion, political belief, economical and communal. Sometimes environment affects the social life of individuals and also the environmental considerations of health that are clean air, cleansed drinking water, sufficient food and safe shelter¹ In developing countries, health upgradation and illness prevention would stay the crucial constituents of heart disease control. It is unfortunate that, in India the increasing incidence of heart disease and hardly any schemes have fixed to end its incidence. Nurses play in essential role in assisting the aim of a 24% lower in heart disease mortality and infirmity by 2025 as endorsed by WHO. Healthy heart behaviour teaching program comprising healthy habits, exercise, cessation of smoking and alcohol, dietary pattern, avoiding sedentary lifestyle have been found to increase healthy behaviour focused on inhibition of heart diseases²

A study was done on awareness of cardiovascular disease by Janki Joshi (2019) in which she found that most of the people had lack of knowledge regarding cardiovascular disease.

demonstrating how respondents educational background affects their consciousness of cardiovascular diseases.³

Risk variables which are flexible largely drive CVD globally. Goal of nursing are to enhance, preserve and rehabilitate health to minimize suffering and disease when there is alteration. Many diseases can be prevented by changing life style through intensive education. Planned teaching on healthy heart behavior comprising favorable outcomes on dietary habits, physical activity, lifestyle and therapeutic measures have been found to increase healthy behaviors focused on keeping adults away from the risk of heart disease⁴.

OBJECTIVES

Primary objectives:

1. To assess the risk factors of heart disease among adults.
2. To evaluate the effectiveness of teaching program regarding healthy heartbehaviour on knowledge of adults.
3. To evaluate the effectiveness of teaching program regarding healthy heartbehaviour on practice of adults.

Secondary objectives

4. To find the correlation among the post-test knowledge and practice score of adults regarding healthy heart behavior.

5. To find association between selected demographic variables. With pre-test knowledge score of adults regarding healthy heart behavior.

6. To find association between selected demographic variables with pre-test practice score of adults regarding healthy heart behavior.

METHODOLOGY

In this study Quantitative research approach was used. A Quasi-experimental, one group pre and post-test design adopted, setting of the research study was village Kalluwala, Doiwala, Dehradun Uttarakhand. A total of 105 adults who were not having history of cardiac disease or mental illness diagnosed by physician were enroll in the study.

The tools used for the present study included Sociodemographic Variables, Standardized tool to assess the risk status of coronary artery disease given by sister Nancy, Structured Knowledge questionnaire consists of total 27 questions and Structured Practice questionnaire consist of 24 items and scoring done as always, sometime, never. Data was analysed by descriptive and inferential statistics. Test-retest and split half method was used to check the reliability of the tool. Prior to the administration all subjects were explained about the purpose, nature and outcome of study. Informed consent was taken from participants.

RESULTS:

The data given in **Table 1** shows that according to age 34.3% adults were aged between 31-40 years, more than half 58.1% of them were females, more than one third 41.9% participants had education up to intermediate. Less than half 46.7% adults were housewife and more than half 64.8% belongs to nuclear family. Most of adults 74.3% had a family income between 5-15 thousand per month, all of them heard about heart disease and more than half 52.4% adults become aware of the heart disease via electronic source. Most of the adults were not having any medical illness and only 22.9% adults were taking treatment for medical illness

Table-1 Frequency and percentage distribution of demographic variables of adults. (n=105)

S. No	Demographic Variables	Frequency(f)	Percentage (%)
1	Age (in years)		
a)	20-30 years	21	20%
b)	31-40 years	36	34.3%
c)	41-50 years	23	21.9%
d)	51-60 years	25	23.8%
2	Gender		
a)	Female	61	58.1%
b)	Male	44	49.9%
3	Educational Status		
a)	No formal education	18	17.1%
b)	Primary	22	21%
c)	Intermediate	44	41.9%
d)	Graduation	21	20

4	Occupation		
a)	Housewife	49	46.7%
b)	private job	20	19%
c)	Self employed	26	24.8%
d)	Student	6	5.7%
e)	Government Job	4	3.8%
5	Type of family		
a)	Nuclear	68	64.8%
b)	Joint	37	35.2%
6	Monthly family income (in rupees)		
a)	5000-20000	78	74.2%
b)	20001-35000	22	21%
c)	35001-50000	5	4.8%
7	Heard about heart disease		
a)	Yes	105	100%
b)	No	-	-
8	Source of information		
a)	Electronic source	55	52.4%
b)	Printed source	7	6.7%
c)	Health workers	10	9.5%
d)	Relatives	33	31.4%
9	Present medical illness		
a)	Yes	29	27.7%
b)	No	76	72.3%
10	Taking treatment		
a)	Yes	24	22.9%
b)	No	81	77.1%

Table-2 Level of heart disease risk disease among adults. (n=105)

Sl No.	Risk Status	Score	f	%
1	Low risk	7-25	20	19%
2	Moderate risk	26-45	76	72%
3	High Risk	46-90	9	8.6%
4	Personality Type	A	47	44.8%
		B	58	55.2%

Table No. 2(a): Risk factors of heart disease according to low, moderate and highrisk. (n=105)

S. No	Risk Status	Score	Male		Female	
			F	%	f	%
1.	Low risk	7-25	1	1%	19	18%
2.	Moderate risk	26-45	36	34%	40	38%
3.	High Risk	46-90	7	7%	2	2%
4.	Personality Type	A	27	61.4%	20	32.8%
		B	17	38.6%	41	67.2%

Table .2 shows that majority of 72% of adults are at moderate risk heart disease, 19% of the study adults having low risk of heart disease, 8.6% were having low risk of heart disease and More than half 55.2% adults having Type B personality.

Table- 3 Effectiveness of awareness program on knowledge of adults regarding healthy heart behavior. (n=105)

S. NO.	Knowledge regarding healthy heart behavior Knowledge	Mean ± SD	Mean difference	t value	p value
1.	Pre- test Knowledge	14.09 ± 3.372	4.9	20.19	.001*
2.	Post- test Knowledge	18.98±2.728			

Table 3 depicts that the pre mean knowledge regarding healthy heart behavior of adults was 14.09, after the intervention, it was increased by 3.89 with, statistically significant.

Table no. 4 Effectiveness of awareness program on Practices of adults regarding healthy heart behavior. (n =105)

S. NO.	Practice regarding healthy heart behavior Practices	Mean± SD	Mean difference	t value	p Value
1.	Pre- test Practice	24.90 ± 4.749	4.02	11.330	0.002*
2.	Post- test Practice	28.92 ± 4.224			

Table 4 depicts that the pre-test practice mean of adults was 24.90, which was increased up to 28.92 after giving intervention, that is statistically significant. (p value 0.05)

Level of knowledge regarding healthy heart behaviour among adults

Before intervention 7(6.7%) of the adults had inadequate level of knowledge regarding healthy heart behaviour, most of 86(81.9%) of the adults had moderate level of knowledge ,12(11.4%) had adequate level of knowledge regarding healthy heart behaviour. While in the post –test less than half 42(40%) adults had moderate level knowledge regarding healthy heart behaviour, 63 (60%) of the adults.

Level of Practice regarding healthy heart behaviour among adults.

Before intervention 4.8% of the study adults were having poor level of practice, maximum 91.4% were having an average level of practice score 3.8% were having good level of healthy heart behaviour practices. While in the post-test maximum 79% of the adults were having moderate level of practices, very less 21% were having good level of healthy heart behaviour practices and none of the participants had poor level of healthy heart behaviour practices.

Correlation among the post-test knowledge and practice score of adults regarding healthy heart behaviour

There was a weak positive correlation between post -test knowledge and practice score of adults regarding healthy heart behavior, which is not significant r =0.05

Association

There was a statistically significant association found with age and educational status of the adults with the knowledge score at the level of 0.05 significance.

There was a statistically significant association found with Gender and Occupation of adults with pre- test practice score (p <0.05 level of significance).

DISCUSSION

The present study reveals that only 20 (19%) adults were under low risk, 76 (72%) of adults were at moderate risk of heart disease and 9 (9%) were having low risk of heart disease. And More than half 58 (55.2%) adults had Type B personality. which was supported by similar study done by **Joshi M (2020)** to evaluate the effect of behavioural counselling among administrative staff for healthy lifestyle, result shows that majority 81% of adults were at moderate risk of heart disease, 14% of adults had a high risk of heart disease and minimum 5% of adults are at low risk of heart disease⁵

The study found that before intervention 7(6.7%) of the adults had poor knowledge level regarding healthy heart behavior, 86(81.9%) of the adults had average level of knowledge ,12(11.4%) had good level of knowledge regarding healthy heart behavior. While in the post –test less than half 42(40%) adults had average level knowledge regarding healthy heart behavior, 63 (60%) of the adults had good knowledge level regarding healthy heart behavior. Similar study found in a study done by **Abdo M. N (2019)** that before the intervention 58.29% of the participants had adequate knowledge and after the intervention, 99.19% of the participants attained adequate knowledge about cardiovascular disease .⁶

In the study it was found that before intervention 43% of the study adults had poor level of practice followed by 57% were Good level of practice. While in the post-test only 16% of the adults had poor level of practices and 88 % had good level of healthy heart behavior.

After the awareness program regarding healthy heart behavior, it was found that there was adequate improvement in knowledge and practice as the pre mean knowledge regarding healthy heart behavior of adults was 14.09 ± 3.372, after the intervention it was 18.98 ± 2.728, increased by 3.89 units with, statistically significant. (p value 0.05), which was similar to a study conducted by **Manandhar, T., & Moche, S. (2020)** on the middle age women of Bangalore which shows that the Interventional module is helpful in enhancing the awareness of people regarding heart disease prevention’s as seen in the knowledge score. ⁷

The pre-test practice mean of adults was 24.90, which was increased up to 28.92 after giving intervention that is 28.92, statistically significant. (p value 0.05) . The results of the studies were supported by **Saffi LA M (2014)** a randomized controlled trial on daily life actions lowers cardiac risk among clients having CAD. there is decrease risk in the experimental category which was increase in control category.⁸

The calculated Karl Pearson’s Value of r=.05 shows a weak positive correlation which is not significant among post-test knowledge and practice of adults, which was similar to the findings of a study done by **Dayal B, Singh. N (2018)** on early adults of lucknow to determine the relationship towards heart disease knowledge, practice and attitude which shows less insignificant results. The value r= .107 ⁹

STRENGTH

Standardized tool was used to assess the risk factors of heart disease.

Selection of population was done by randomization.

LIMITATIONS

Invasive tools for clinical variables like lipid profile was not assessed.

Due to time limitation more effectiveness of awareness program was not assessed.

Healthy heart behavior practices was not self-reported.

CONCLUSION

The study concluded that majority of participants were at moderate risk for developing heart disease. Healthy heart behavior awareness program enhanced the knowledge and practice of adults to prevent the risk of heart disease. To reduce the risk of getting coronary artery disease the intervention is beneficial. As a nurse, we should have to aware people regarding adoption of healthy heart behavior practices.

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