Effectiveness of Video-Assisted Teaching Program Regarding Risk Factors of Cardiovascular Diseases on Knowledge, Attitude, and Practice among IT Professionals

Kiran E. Jadhav[1], Seeta Devi[2]

[1]MSc Nursing, [2]Asst. Professor, Symbiosis College of Nursing, Symbiosis International (Deemed University), Pune

Abstract

Background: Hypertension is one of the primarily responsible factions for causing cardiovascular diseases, significantly, which results in heart diseases such as stroke, myocardial infarction, and finally leads to death.

Objective: To assess the effectiveness of video-assisted intervention regarding risk factors of cardiovascular diseases on knowledge, attitude and practice among IT professionals

Methodology: A quantitative research approach was executed in the current study. The preexperimental, one group pretest posttest design was used in the study. Experts of medical surgical nursing and physician's opinion were obtained for the content validity of the tool and interventions. The effectiveness was evaluated by a self-structured questionnaire for knowledge, attitude, and practice before and after the intervention. Data was compiled and analysis was done by using inferential and descriptive statistics.

Results: In the pretest, no participant had good knowledge, whereas 92 % of the participants had gained well in posttest regarding risk factors of cardiovascular diseases. In the pretest, 88% of participants had a poor attitude and it stooped down to 12 % in posttest regarding CVD. In the pretest, none of the participants had good practices in view to prevent cardiovascular diseases.

Conclusion: The results show that educational interventions with video were significantly effective in refining the awareness, attitude, and practices about risk factors of cardiovascular diseases.

Keywords: *Video-assisted teaching, risk factors of cardiovascular diseases, knowledge, attitude, practice, IT professionals.*

Introduction

Hypertension is one of the most responsible factors for causing a stroke, heart diseases, and other coronary artery diseases. The diseases related to renal system and cerebrovascular system also, caused by hypertension. [1]

In the case of uncontrolled blood pressure, development of the conditions such as encephalopathy, eye complications, acute cardiac problems, aortic dismemberment, and acute renal injuries are common. Worldwide, approximately, 13% of patients are dying with coronary artery diseases. Around 15 % of deaths from stroke, 45 % of the deaths from heart diseases, and 4% of patients become disabled due to hypertension and CVD. Thus the awareness on prevention and control of hypertension and CVD among the population is very important.[3] About 151,377 million people are disabled due to CVD.[4]

The number of cases with CVD raising day by within the past 20 years. India stands in the first position by possessing a high number of CVD cases. Approximately 25 % of cases are affected by myocardial infarction

Corresponding author:
Dr. Seeta Devi,
Asst. Professor, Address: Symbiosis College of Nursing, Symbiosis International (Deemed University),SB road, Pune-411004
Email address: sitadevi@scon.edu.in
Phone No: 9665539533

(MI) [5]. Men are at high risk at the development of CVD comparing with women.

52 % of men and 28% of women are at risk for heart diseases due to sedentary work. Daily exercise and the physical activities keep the arteries, patent, softens the joints, and helps the individual feel healthy. [6].

The unhealthy food habits had a great impact on causing coronary artery diseases.[7] Present researcher has mainly focussed to educate the sedentary workers especially working in IT companies about risk factors that may cause coronary artery diseases.

Materials and Methods

The research approach of this was quantitative research. The research design was pre-experimental, one group pretest-posttest. Experts of medical surgical nursing and physician's opinion were obtained for the content validity of the tool and interventions. The tool reliability was 0.8. The sample size was 100 IT professionals who work in IT departments. The 25 subjects were randomly divided into four groups. Each experimental group has received a video-assisted teaching program twice a week for 2 weeks. The effectiveness was evaluated by a self-structured questionnaire for knowledge, attitude, and practice before and after the intervention. Data was compiled and analysis was done by using inferential and descriptive statistics.

Results

Table - 1: Distribution of participants based knowledge in pre-test and post-test

n=100

Knowledge	Pretest		Posttest	
	f	%	f	%
Poor (0-4)	22	22	0.0	0
Average (5-9)	78	78	8	8
Good (10-14)	0	0%	92	92

In the post-test majority of the participants (92%) had gained good knowledge from 0 % to 92%.

Table 2: Overall Mean knowledge score before and after the intervention

n=100

	Mean	SD	t	Df	p-value
Pretest	5.6	1.2	31.9	99	0.000
Posttest	11.1	1.2			

The mean score also improved from 5.6 to 11.1 from pre-test to post-test. Since the p-value represents the chances of rejection of the null hypothesis as observed based on given data, we can be fairly sure that the data supports the alternative hypothesis. In other words, in all three educations, it proves to be efficient in refining the attitude scores of participants, and the improvement is statistically significant.

Table 3: Distribution of participants based attitude in pre-test and post-test

n=100

Score	Pretest		Posttest	
	Freq	%	Freq	%
Poor (score 16-28)	88	88%	0	0%
Average (score 29-40)	12	12%	0	0%
Good (score 41-52)	0	0%	53	53%
Very Good (score 53-64)	0	0%	47	47%

In the post-test majority of the participants (53%) had gained good knowledge from 0 % to 53%.

Fig 1: Overall Mean attitude score before and after the intervention

n=100

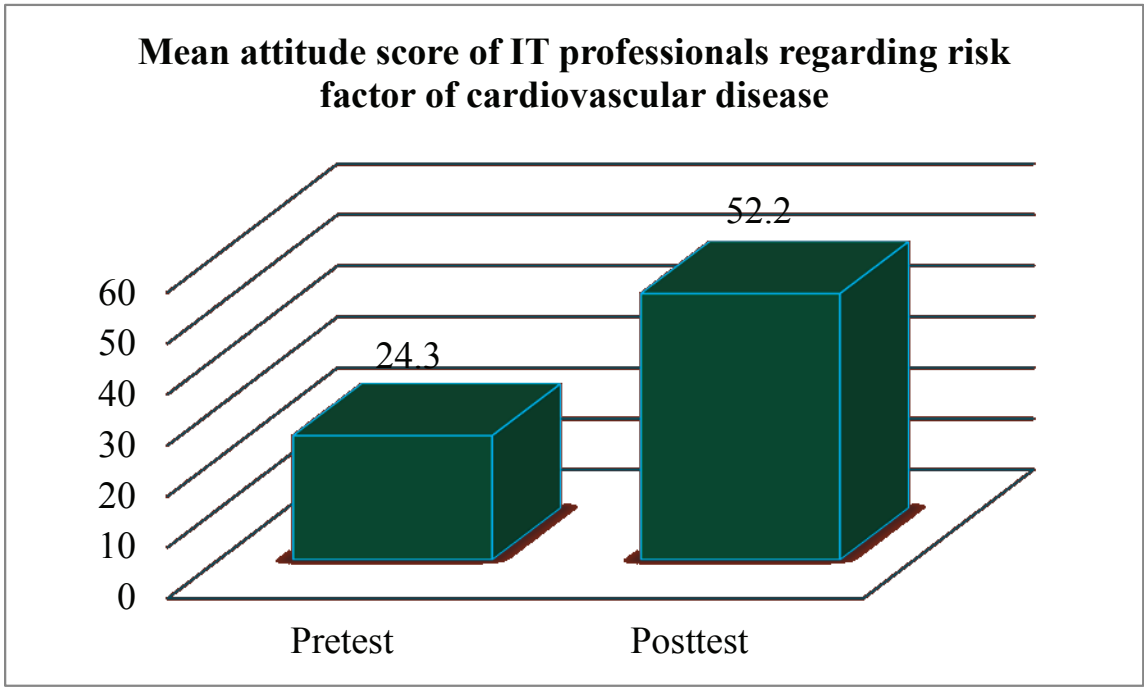

Fig. 2: Distribution of participants based on mean of the practice before and after intervention

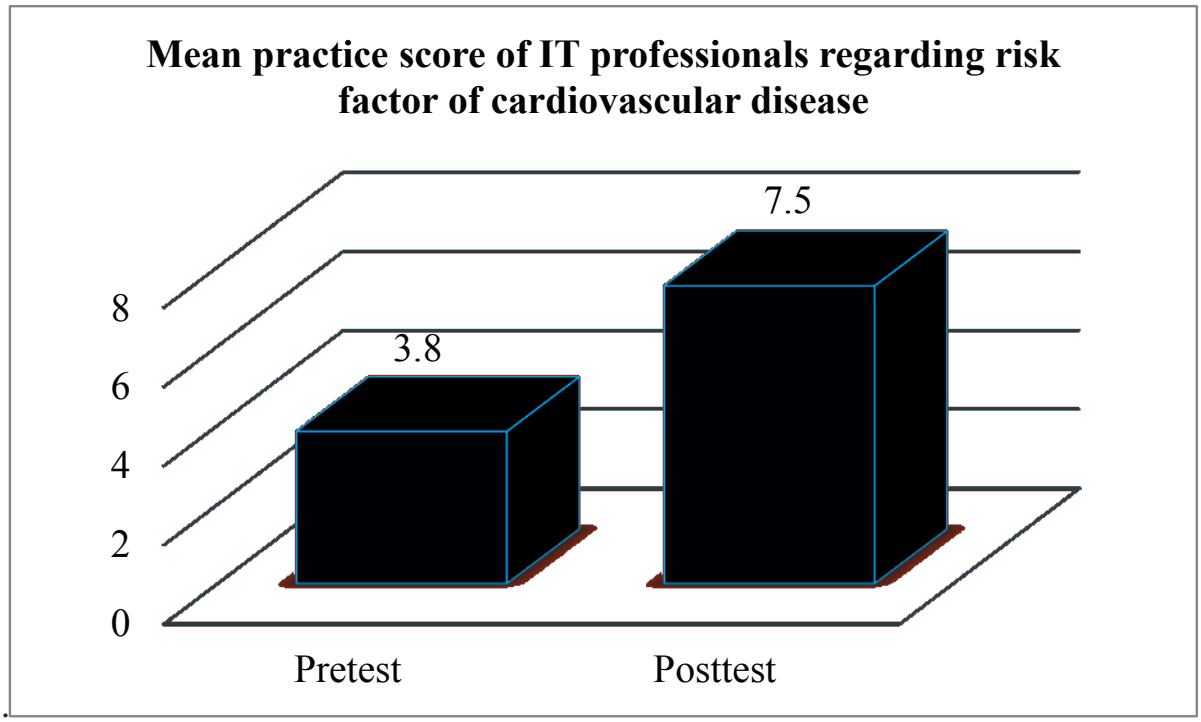

Table 4: Impact of Video Assisted Teaching education regarding risk factors of Cardio Vascular Diseases on practices among IT professionals

n=100

	Mean	SD	T	df	p-value
Pretest	3.8	0.6	35.3	99	0.000
Posttest	7.5	0.9			

The investigator has applied the t-test to check the sigcance of Video Assisted Teaching education The average practice score in the pretest was 3.8 which was improved to 7.5 after intervention. The the result t values was 35.3 at 99 degrees of freedom. The p value is matching to t value was 0.000, which is lesser than less than 0.05. It shows that the educational intervention has improved the practice of IT employees to reduce the risk of CAD.

Table 5: Association of knowledge with personal characteristics of subjects.

n=100

personal characteristics		Awareness		p-value
		Average	Poor	
	41-45 years	14	5	

Cont... **Table 5: Association of knowledge with personal characteristics of subjects.**

n=100

Gender	Male	51	14	1.000
	Female	27	8	
	Never	16	3	
Diet/Nutrition	Sodium rich diet	0	3	0.005
	Fiber-rich diet	2	0	
	Lots of fruits & vegetables	37	5	
	Non- vegetarian	39	14	
BMI	<18.5	3	3	0.023
	>=30	0	1	
	18-5-24.99	59	17	
	25-29.99	16	1	

Discussion

In the present study, the sample size was 100. Video-assisted teaching was given 45 min to each group. The knowledge, attitude, and practice regarding risk factors of CVD were assessed by a self-structured questionnaire. The mean knowledge score by self-structured questionnaires in the group was 5.6 + 11.1 followed by 24.3 +52.2 and 3.8 +7.5 which is significant as $p < 0.05$. So the study is concluded that video-assisted teaching program is effective among IT professionals. This shows that eduvational intervention had good impact in improving knowledge, practice, and attitude regarding risk factors of cardiovascular disease among IT professionals.

Jaana Keto et al executed a study to assess the awareness and who were at high risk of developing cardiovascular diseases. The sample size was 5038, they belonged to the age group between 31 to 46 years ago. The majority of the subjects were at high risk of developing CAD.

Conclusion

Video-assisted teaching, risk factors of cardiovascular diseases, knowledge, attitude, practice, IT professionals.

Ethical Clearance: The Symbiosis College of Nursing, has given ethical clearance for the conduct of this study.

Conflict of Interest: Nil

Source of Funding: Self

References

1. Mahmood SS, Levy D, Vasan RS, Wang TJ. The Framingham heart study and the epidemiology of cardiovascular disease: A historical perspective. Lancet. 2014;383:999–1008.
2. Grundy SM, Cleeman JI, Merz CN, Brewer HB,

Jr, Clark LT, Hunninghake DB, et al. Implications of recent clinical trials for the national cholesterol education program adult treatment panel III guidelines. Circulation. 2004;110:227–39

3. Dawber TR, Meadors GF, Moore FE., Jr Epidemiological approaches to heart disease: The Framingham study. Am J Public Health Nations Health. 1951;41:279–81.
4. Kannel WB. Fifty years of Framingham study contributions to understanding hypertension. J Hum Hypertens. 2000;14:83–90.
5. Mickerson JN. Heart failure in hypertensive patients. Am Heart J. 1963;65:267–74.
6. Caird FI. Heart disease in old age. Postgrad Med J. 1963;39:408–20.
7. Kannel WB, Gordon T, Schwartz MJ. Systolic versus diastolic blood pressure and the risk of coronary heart disease. The Framingham study. Am J Cardiol. 1971;27:335–46.