

Knowledge and practices on prevention of coronary artery diseases in Nepalese community: A cross-sectional from five different cities in Nepal

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Abstract

Background and Aims: The incidence of cardiovascular diseases (CVDs) is rapidly increasing at an alarming rate worldwide. This study aimed to identify the knowledge and practices of coronary artery diseases.

Method: A cross sectional study and a purposive sampling method was used to select the cities and five different cities of Nepal were selected for this study. Literate people, one who can fill the questionnaire, voluntarily participated for this study during the free cardiac health camp organized by Shahid Gangalal National Heart Center. Total 356 participants participated in this study.

Results: This study reveals that one fourth (22.5%) of the participants had excellent knowledge and 32.6% were with poor knowledge regarding the prevention of CAD (coronary artery disease), whereas one fifth had no risk factors of CAD and half of them had 2-3 risk factors. Maximum six risk factors were present only on 0.6%, regarding the practices, 31.7% of them monitored blood pressure at least once, (92.1%) haven't had the blood sugar test yet whereas only 7.9% had lab test to monitor the blood sugar and blood cholesterol was done by 3.9%.

Conclusion: This study concludes with the poor knowledge and practices on CAD. Awareness programs can help people to be aware of risk factors of CAD.

Key words: Coronary Artery Disease, Knowledge, Practices, Prevention.

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Introduction

The incidence of cardiovascular diseases (CVDs) is rapidly increasing at an alarming rate worldwide.¹ Major risk factors for CVDs include obesity, hypertension, Type 2 diabetes mellitus, physical inactivity, increased waist-hip ratio, elevated low-density lipoprotein cholesterol, smoking and excessive alcohol consumption.² A tertiary level hospital Shahid Gangalal National Heart center reported in 2014, 45.5% of patient were admitted diagnosed CAD³. Health Research Council has found that a majority of people indulge in one or more risk-factors — including tobacco use, alcohol consumption, low fruit and vegetable consumption and physical inactivity — that pose a threat for disease contraction. Biological factors such as obesity,

high blood pressure, high blood glucose level and abnormal lipids also contribute to the risk of the disease⁴. As there is an absence of a routine surveillance or registry system, the actual burden and trend of CVDs in Nepal is unknown. But combined data from various sources do indicate that the problem is common, and for many CVDs, particularly coronary heart disease (CHD) and its risk factors, it is perhaps increasing too.⁵

Greater knowledge of CHD risk factors helps individuals to correctly assess their personal risk, motivates them to increase prevention-seeking behaviors and has been associated with increased action to lower risks. Similar, studies reported low knowledge of CHD risk factors was likely to limit the participant's ability to engage in preventive practices.⁶ Estimating knowledge

of traditional CHD risk factors among a population is therefore crucial in the prevention and treatment of this condition and continues to serve as the baseline for most screening programs.⁷

In Nepal, study based on knowledge and practices on prevention of CAD is not covered to these study areas. Most of the studies were covered to urban cities. Therefore, this study aimed to identify the knowledge and practices of Coronary artery diseases in Nepalese community in five different cities.

METHODS

This is a cross-sectional study collected from November 2014-August 2015. This study was conducted in different districts in Nepal. Birgunj, Simara, Jalbiresindupalchowk, Shyanga, Bardiya were selected, as they were in the hospital's priority for free cardiac health camps to this year. Total sample size was 356 participants, a person who can read and write were only included in this study. Participants were randomly selected in the queue, 10% of the participants were included from each camp. Structured questionnaire attached with the consent form were distributed to the participants. After voluntarily completing the questionnaire within 15 minutes, participants submitted it.

RESULTS

Table 1: Demographic Information of Respondent

Age of respondent		
Category	Frequency	Percent
19-29 years	106	29.8
30-39 years	175	49.2
40-49 years	48	13.5
50-59 years	25	7.0
60 or above	2	.6
Sex of respondent		
Male	168	47.2
Female	188	52.8
Educational level of respondents		
Can read and write	175	49.2
Secondary level	47	13.2
SLC pass	56	15.7
PCL Level	33	9.3
Bachelor level	22	6.2
Master level and above	23	6.5
Total	356	100.0

Demographic Information

Table 1 shows the distribution of respondent by age, sex and education. Nearly 50% of the respondents were of 30-39 years of age and the least age groups were of 60 or above age groups.

More than 50% of the respondents were female. Highest percentage of the respondent (49.2%) were literate, 13.2% with secondary level, 15.7 % SLC passed, Bachelor level were at the least parentage with 6.2%.

Table 2: Knowledge regarding coronary artery disease (n=356)

	Frequency	Percent
Excellent 10	80	22.5
Good 8-9	47	13.2
Average 5-7	113	31.7
Poor less than 5	116	32.6
Total	356	100.0

Knowledge regarding the coronary diseases was asked to the respondents. Among the respondents nearly one fourth (22.5%) of them had excellent knowledge, one third (32.6%) of them had poor knowledge. Only 13.2% found with good and 31.7% were found average.

Table 3: Practices regarding the prevention of Coronary Artery Disease

Measurement of Blood Pressure regularly		
	Frequency	Percent
Yes	113	31.7
No	243	68.3
Regular Blood Sugar Test		
Yes	28	7.9
No	328	92.1
Yes	28	7.9
Regular Blood Cholesterol Test		
Yes	14	3.9
No	342	96.1
Total	356	100.0

Practices for prevention of diseases were asked to the respondent. Among the respondents, 31.7% of them had monitored blood pressure before and 68.3% didn't even monitor once. Similarly, majority of them (92.1%) didn't do the blood sugar test whereas, only 7.9% did lab test to monitor the blood sugar. Furthermore, blood cholesterol was done by 3.9% and 96.1% of them didn't check blood cholesterol.

Respondents were asked for presence of number of risk factors of CHD. Among them one fifth them had no risk factors of CAD, half of them had 2-3 risk factors. Maximum risk factors with six were present only on 0.6% whereas, 17.1 % had one, 7.9% had four and 4.2% of them had five risk factors. The presences of risk factors were higher in males than in females. Here, 14.04% of the females had no risk factors of CAD whereas males were 6.46%. In addition, the higher percentages of risk factors were found in males.

Discussion

This study aimed to identify the knowledge and practices of Coronary artery diseases in Nepalese community population. This study shows one third (32.6%) of them had poor knowledge regarding to CHD. Studies from other parts of the world also have similarly reported low levels of knowledge and awareness of CHD risk factors.^{8,9} One study in the US cities findings indicated

that knowledge of established modifiable CVD risk factors was very low.¹⁰ A study conducted in Kuwait to assess public knowledge of cardiovascular disease (CVD) risk factors reported similar findings, while another conducted in Jordan reported higher levels of knowledge among their cohort.^{11,12} The current finding that more educated participants have higher risk factor knowledge than less educated participants this is consistent with previous studies.¹³ One study in Pakistan showed that sixty-eight patients (65.4%) had one/or combination of the four modifiable risk factors and the study had at least one of the modifiable risk factors for CAD¹⁴ whereas this study revealed 20.50% had no risk factors; half of them had 2-3 risk factors. Maximum risk factors with six were present only on 0.6% whereas, 17.1 % had one, 7.9% had four and 4.2% of them had five risk factors.

Primary prevention measures to be taken are to change lifestyles; reducing risk factors of paramount importance are to reduce morbidity and mortality from cardiovascular disease and improve the overall health of the population. Numerous studies and meta-analysis showed that lifestyle modification, risk reduction factors, particularly by changing diet, stopping smoking, increasing physical activity, blood pressure control can be effective in the prevention and reduction of coronary heart disease¹⁵. In this study among the respondents, 31.7% of them monitor blood pressure regularly, (92.1%) didn't do the blood sugar test whereas; only 7.9% had lab test to monitor the blood sugar, blood cholesterol was done by 3.9%. Thus, in Finland, the implementation of prevention programs, reduced incidence of diseases of the circulatory system, close to 70%. From this study, we can conclude that preventive programs can bring momentous change in cardiovascular diseases.

Conclusion

Low level of knowledge and poor practices were reported in this study. Preventive programs should be organized frequently in Nepalese communities. Awareness programs as well as health screening programs can help people to be aware of risk factors of CAD.

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Conflict of interest

The authors do not have any conflict of interest including financial in publication of this article.

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