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Analyzing Behavioural Determinants for Perceived Risk of Heart Disease

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Abstract - Between and within nations, the burden of cardiovascular disease (CVD) varies substantially. Those in low- and middle-income countries (LMICs) and low- and middle-income groups (HGPCs) bear a disproportionate share of the burden (HIC).Few studies have examined how at-risk individuals view their own and others' knowledge of, and exposure to, cardiovascular disease (CVD).Research on vulnerable people in Antwerp and Nottingham has been the subject of this project, as part of our study, we looked at how much people knew about cardiovascular disease (CVD), their perceptions of risk, and their intentions to become more active and eat healthily.In addition, we focused on Antwerp's widening social divide. So, this research is focused on the viewpoint of patients and the importance of health education for patients. Study's goal was to discover risk factors for CAD, as well as to determine whether patients' lives and habits have changed as a consequence of their illness. Cross-sectional study was conducted on 174 patients at Tertiary Care Hospital, Ashok Nagar utilizing a questionnaire including personal data, BMI, history of risk factors, behaviour change and medical advice. Epi Info examined the data and performed the relevant statistical tests. Preventive measures should be prioritized, and people should be counselled before they get unwell as much as possible.

Keywords - Coronary heart disease, Counselling, Life style modification, Risk factors

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INTRODUCTION

CVDs are the largest cause of death in the world, accounting for more fatalities per year than any other illness category.According to the WHO, around 23.6 million people would die as a result of cardiovascular disease and stroke by 2030.In Iran, cardiovascular disease (CVD) is the leading cause of mortality and illness, in part due to the country's high health care costs. More than 90% of the risk of an acute myocardial infarction was accounted for by nine modifiable risk factors in this international case-control study (AMI). Cardiovascular disease (CVD) morbidity and death are largely influenced by modifiable risk factors and poor lifestyle choices. The average life expectancy would rise by 7 years if all kinds of cardiovascular disease (CVD) were eradicated.

Becoming familiar with a target population's habits can help you build successful treatments. For gaining a deeper insight, qualitative research approaches are essential. As a health educator, you may want to apply qualitative methodologies in order to better understand the health issues, their underlying causes, and their determinants. Qualitative approaches have been employed in a number of research to assess participants' "perceptions, awareness, and attitude" about risk factors for cardiovascular disease. There was a wide range of knowledge and opinions about CVD risk factors among the people who participated in the focus groups. The participants had a solid awareness of the risk factors for cardiovascular disease. People's food preferences, money, stress and uncontrolled cravings, fear of food waste, and a lack of time were among the obstacles to changing one's lifestyle with relation to physical activity and nutrition in this research. No theories of individual health behaviour were used to identify health concerns, behavioural causes and the underlying factors in this research. It is essential to understand the behaviour in issue by studying theories of health behaviour. Their contributions to the development of health-related remedies are also significant.

LITERATURE REVIEW

Hamid Yimam Hassen (2022) - Between and within nations, the burden of cardiovascular disease (CVD) varies substantially. Those in low- and middle-income countries (LMICs) and low- and middle-income groups (HGPCs) bear a disproportionate share of the burden (HIC).At-risk groups' knowledge

and perception of cardiovascular disease (CVD) are understudied. Study participants in Antwerp and Nottingham were asked to rate their knowledge about cardiovascular disease (CVD), as well as their willingness to improve their diet and exercise habits. In addition, we focused on Antwerp's widening social divide. Antwerp and Nottingham residents aged 18 and above were surveyed for 1,424 cross-sectional studies. Multiple deprivation indices were used to determine which districts or counties should be included in the study. Purposive sampling was utilised in Nottingham and a stratified random sample method in Antwerp. In Antwerp and Nottingham, we employed a percentage score out of 100 to gauge people's knowledge about cardiovascular disease (CVD), their assessment of its dangers, and their desire to lead a healthier lifestyle. A healthy diet and physical activity are more important to men than they are to women, and this is true regardless of education level. As a result, people who were born outside of Europe and had a low family income were shown to be less likely to consume a healthy diet than those who were born in Europe. Prevention of cardiovascular disease (CVD) should be a collaborative effort that takes into account the individual's socioeconomic status as well as his or her cultural values and beliefs.

MarleenaVornanen (2020) - Disease risk perception may be a reflection of genuine risk factors or of a desire to alter one's way of life. The link between perceived risk and risk indicators within disease risk categories has received very little long-term investigation, despite this.To see whether there was a causal relationship between physical activity, BMI kg/m2, blood glucose levels, and perceptions of diabetes and cardiovascular disease risk throughout the five-year follow-up period, we looked at both ways. Risk perception, perceived self-efficacy, and outcome beliefs were examined to see whether they predicted changes in indicators of risk."Participants from the FINRISK 2002 trial were re-examined in 2007 and included individuals with high and low/moderate diabetes risk. There were questionnaires and physical exams in both rounds of the research, as well as personalized feedback letters. Structural equation models were used to examine the data. There was no evidence that risk perceptions predicted changes in physical activity, BMI, or 2-hour glucose levels over the course of five years in cross-lagged autoregressive models. Conversely, 5-year increases in perceived dangers were predicted by higher BMI and 2-hour glucose levels. These links were discovered in both high-risk and low/moderate-risk populations. Overall, higher self-efficacy predicted greater physical activity for all populationsin additional structural equation models BMI was lower among low/moderate-risk participants who had more optimistic views of their future health outcomes, according to the study (P-values 0.008–0.011). Rather of predicting long-term lifestyle changes, following risk indicators is the perception of chronic disease risk. Efforts to combine risk information with effective behaviour will need to be examined in future research and modification strategies in order to create long-term lifestyle improvements.

ÅsaGrauman (2022) - These findings will be used to identify people's self-perceived heart attack risk signals (MI). 564 Swedish men and women aged 50–65 years were asked about their relative risk perceptions in comparison to others, as well as their percent ten-year absolute risk. BMI, low stress, high physical activity, hypertension, family history, and poor overall health predicted whether or not respondents estimated their MI risk to be lower than it was. With poor health, family history, and high cholesterol, people are more likely to believe they are at risk for a heart attack. Cholesterol levels were linked to ill health in general. Self-perceived risk of coronary artery disease (MI) was highly linked to overall health. Even while elevated cholesterol predicted perceived risk of MI, BMI and physical activity were the most significant markers of perceived risk.

Dawn M. Aycock (2019) - Perceived risk is critical to understanding people's attitudes about stroke risk as well as their health-care practices. Perceived stroke risk is examined in terms of levels, predictors (accuracy and reliability), and consequences of interventions. There were sixteen research projects covered in this review. Single-item measures have been used to examine the perceived risk of stroke; no multi-item surveys have been discovered. Having risk factors for stroke (hypertension, diabetes) and having a larger number of risk factors were the most prevalent predictors of increased stroke risk perceptions. However, mistakes were widespread; at least half of respondents under- or overestimated their risk. Stroke perception can be improved by therapies, however there have been few research on the subject. Stroke prevention may be made easier if people have a more accurate picture of their risk of having a stroke.

Leila Sabzmakan (2014) - Health issues, their behavioural and environmental causes, and their determinants are all assessed using the PRECEDE model. This study examines the views of patients and healthcare professionals on behavioural risk factors for cardiovascular disease (CVD) and the variables that influence those risk factors. The PRECEDE model was used in this qualitative research to analyze the data. More than six months of study were conducted in Karaj, Iran, by diabetes units associated with the Alborz University of Medical Sciences. A total of 60 patients and 20 health care professionals were interviewed in semi-structured interviews. The content analysis directed technique was used to analyze the data as it was being collected. The risk factors for cardiovascular disease (CVD) were linked to stress, poor diet, and inactivity. Stress was cited as the primary contributing factor by the majority of patients. A total of 110 main codes were divided into seven subcategories based on their location in the PRECEDE model's predisposing category.

Perceived vulnerability and severity were included in these variables as well as knowledge and attitudes. There was a lot of emphasis placed on perceived obstacles and self-efficacy in these factors. Planners may use this information to build future programmes and pick the most effective strategies to address behavioural factors in order to minimize hazardous behaviours.

RESESARCH AND METHODOLOGY

From June through November of last year, a five-month cross-sectional research was undertaken. Tertiary Care Hospital in Ashoknagar was the site of the research. Ashoknagar district in Madhya Pradesh is located 355 kilometers north-east of Indore. Ashoknagar has a population of 605882, of whom 315429 are men and 290453 are women, according to the 2011 census. Ashoknagar has a literacy rate of 85 percent. The study comprised OPD patients with coronary heart disease at Ashoknagar's tertiary care hospital. Exclusion criteria were satisfied by patients who declined to participate in the study.Outpatients at Ashoknagar's cardiac clinic with coronary artery disease, a tertiary care hospital, were used as the sample frame for this investigation. The number of individuals that participated in the study There were 174 participants in this study since the estimated percentage of CHD patients at OPD was 13 percent, according to current hospital records.

Informed permission was obtained from each patient after a thorough explanation of the study's objectives and procedures was provided. Included in the questionnaire are risk factors for coronary heart disease, including attitudes and lifestyle changes. In addition to the aforesaid instrument, a pretested questionnaire was used to gather sociodemographic information about the patient. Age, gender, education, employment, BMI, per capita income, and a history of substance abuse are just a few examples of the data that may be found here. The risk factor's presence or absence was the study's major outcome variable. Patients with coronary artery disease (CAD) were asked to report changes in their lifestyle and habits as a secondary outcome variable. In the third outcome variable, the perception of risk variables was measured. The fourth and last outcome variable was to evaluate the efficacy of the counselling sessions. The calculations were limited to simple ratios.

Modified Prasad's categorization was used to determine socioeconomic level in Indore in October 2016, with the All-India Consumer Price Index for Industrial Workers. An evaluation of the viability of the research's recruiting and data entry processes, as well as any necessary improvements, was conducted using a pilot study. The research employed the 3rd edition of the questionnaire. Errors in data input were avoided by using Epi Info version 7 and doing necessary data checks. It was found that the results of this research, which included patients with coronary heart disease at Ashoknagar's tertiary care hospital, could be applied to all of Madhya Pradesh's heart disease patients as a whole. A single sample was chosen at random from a larger pool of potential candidates.

DATA ANALYSIS

The study comprised 174 individuals with coronary heart disease who visited the outpatient department at Ashoknagar's tertiary care hospital.

Table 1: Patients' socio-demographic information of CHD attending OPD in tertiary care hospital, Ashoknagar.

Variables	Groups	N (%)
Sex	Male	118 (68)
	Female	56 (32)
Education	Primary	84 (48)
	Secondary	35 (20)
	Higher secondary	6 (4)
	Graduate	49 (28)
Modified Prasad socio-economic class	Class I	67 (38)
	Class II	17 (10)
	Class III	27 (14)
	Class IV	52 (30)
	Class V	14 (8)
BMI	≥25	94 (54)
	<25	14 (8)

Table 1 shows that 68% of patients were men. People in this study had a mean age of 56.27 ± 9.33 Most patients (48%) had an elementary education, whereas 28%) had a post-secondary education. Patients from high socio-economic class I (38%) and lower socio-economic class IV (8%) were found in the study. A BMI under 25 was seen in 54% of the patients.

Around half of the patients were addicted to smoking, chewing tobacco, or drinking alcohol. Addiction lasted an average of 22.43 ± 11.99 years. Males had an age range of 21.58 ± 9.85 years, while females had an age range of 18.75 ± 7.71 years.

Table 2: Distribution of patients based on risk factors

Risk factor	N (%)
Tobacco	66 (38)
Alcohol	20 (12)
Family History	55 (32)
Obesity	93 (54)
Diabetes	38 (22)
Hypertension	146 (84)
Sedentary lifestyle	41 (24)
Cholesterol	66 (38)

Following hypertension (84 percent) and obesity (54 percent), cigarettes (38 percent) and high cholesterol (22 percent) were the other significant risk factors, according to Table 2. (38 percent). Diabetes seems to be the most significant risk factor, followed by alcohol use (12%). (22 percent).Stress and a sedentary lifestyle were the

only risk factors that patients did not have a positive opinion on, according to the results of this research.

Table 3: Patients' risk factors might change over time

Risk factors	Modifications	%	Reasons	%
Tobacco	Quit	24	Self-motivation	15
			Family & friends support	5
			Medical advice	4
	Reduce	40	Self-motivation	22
			Family & friends support	3
			Medical advice	15
	Not quite	36	Just they couldn't	36
Alcohol consumption	Quit	35	Self-motivation	35
			Family & friends support	0
			Medical advice	0
	Reduce	15	Self-motivation	10
			Family & friends support	5
			Medical advice	0
	Not quite	50	Just they couldn't	50
Obesity	Reduce	32	Self-motivation	32
			Family & friends support	29
			Medical advice	0
	Non reduce	68	Just they couldn't	68
Salt intake	Reduce	100	Self-motivation	26
			Family & friends support	2
			Medical advice	72
	Non reduce	0	Just they couldn't	0
Risk factors	**Modifications**	**%**	**Reasons**	**%**
Cholesterol level	Reduce	90	Self-motivation	29
			Family & friends support	5
			Medical advice	56
	Non reduce	10	Just they couldn't	10

24 percent of patients who formerly smoked tobacco have now quit, according to Table 3. Thirty-five percent of patients who admitted to drinking were able to completely abstain from it. Most people started their journey to a smoke-free or alcohol-free life on their own. Support from family and friends, as well as medical advice, had a modest part. There were considerably fewer patients who really quiet than there were patients who were aware of this. A total of 100 percent of patients had cut down on their salt consumption, and 90 percent of patients had altered their high-cholesterol diets in some way. 32 percent of the 54 percent obese individuals had lost weight. Reducing salt consumption, a high-cholesterol diet, and weight gain were all influenced by medical counsel (72 percent, 56 percent, 29 percent, respectively). Not being able to stop or decrease was not due to stress, but rather because they couldn't.

164 (94 percent) of the 174 individuals studied received medical advice on disease, risk factors, and lifestyle changes at the time of their illness. This indicates that the area has a well-established health care infrastructure and that the populace is well-informed about their health. Only 7 (4 percent) of the 167 patients who received this illness, risk factor, and lifestyle change counselling required any more follow-up.

There were 68% men and 32% women participants in this research. In a tertiary care hospital study of individuals with coronary artery disease, James discovered that 62% of the patients were men and 38% were women. Eighty-four percent were men, while one-fourth were women in Sekhri's research of metropolitan areas.

The patients in this research had an average age of 56.27 years and 9.33 years. The mean age of participants in Dabbak's research was 20.8 ± 2.07 years.In this study, the most prevalent risk factors were hypertension (84 percent) and obesity (54 percent), closely followed by cigarette smoking (32 percent). A 38 percent increase in cholesterol (38 percent). Only 22% of diabetics were to blame for their condition. According to James' research,the most common causes of coronary heart disease include (24 percent) diabetes or impaired glucose tolerance (79 percent), dyslipidemia (71 percent), and hypertension (39 percent). Dislipidemia was shown to be the primary risk factor in Sekhri's research, followed by hypertension (21 percent) and diabetes (10 percent) (14 percent).

Stress and a sedentary lifestyle were the only risk factors that patients did not have a positive opinion on, according to the results of this research. According to Dabbak's research, most people have a somewhat high degree of concern about danger. In the context of total perception, in a statistical analysis, age and sex were shown to be important determinants. One of the findings from Crouch's research was how little rural Australian women were aware of the risk factors for coronary heart disease, including hypertension, elevated cholesterol levels and tobacco use.

CONCLUSION

Obesity and high blood pressure were associated with a greater belief in one's own vulnerability to coronary artery disease. Patients adjusted their lifestyles once risk factors for coronary artery disease were identified. The most significant dietary changes were a decrease in salt consumption and a rise in cholesterol. Patients believed that their CHD was caused by the risk factors. Behavioral changes were made possible thanks to the help of on-the-spot OPD counselling.

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