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EVALUATING AWARENESS OF CARDIOVASCULAR CONDITIONS IN RURAL KERALA, INDIA: A PROSPECTIVE OBSERVATIONAL ANALYSIS

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ABSTRACT

Background: Cardiovascular disease (CVD) poses distinct challenges in rural settings compared to urban areas. In Kerala, as in many other regions, rural communities frequently suffer higher risks of CVD due to a combination of factors such as Inadequate healthcare access, socioeconomic components, Healthcare Knowledge, Environment-related variables. **Objective**: The purpose of this study was to identify awareness and knowledge of cardiovascular disease among the population in rural areas of Pathanamthitta, Kerala, India. **Materials and methods:** A prospective observational research was conducted in the rural districts of Pathanamthitta District. The study's sample size was 500 participants. The study period spanned six months. Data was obtained utilizing a semi-structured questionnaire and multiple surveys to evaluate knowledge and raise awareness about cardiovascular disease. **Results**: Out of a total population of 500 individuals, a survey conducted before counseling showed that 71% had no knowledge about cardiovascular disease, while 29% did have some understanding of it.Following counseling, a superior outcome was observed, with 95% of the population having information and 5% having no understanding about cardiovascular disease. **Conclusion**: Rural communities have relatively inadequate knowledge and awareness related to cardiovascular disease.

KEYWORDS: Cardiovascular disease, inadequate knowledge, rural, Kerala.

INTRODUCTION

Kerala, a state in southern India, has seen a significant rise in cardiovascular disease (CVD) cases in recent years. This increase is driven by various factors, including changes in lifestyle, dietary habits, and genetic predisposition. To address this growing health issue, it is crucial to raise awareness about CVDs and implement regular screening programs to enable early detection and treatment.

Public health initiatives are vital in mitigating the burden of CVD in Kerala. Promoting a healthy diet, encouraging regular physical activity, and regulating tobacco use are essential strategies that can contribute to lowering the incidence of CVD. These efforts must be complemented by individual-level behavior changes to be truly effective.

Overall, tackling the CVD burden in Kerala requires a comprehensive approach that combines broad public health measures with targeted efforts to change individual behaviors. This multifaceted strategy will help in effectively reducing the prevalence and impact of cardiovascular diseases in the region.

MATERIALS AND METHODS

A prospective observational research was conducted. The study was carried out in the rural portion among the population of Kerala in Pathanamthitta district, which is located in the state's center and southern regions. The study span was six months in length.

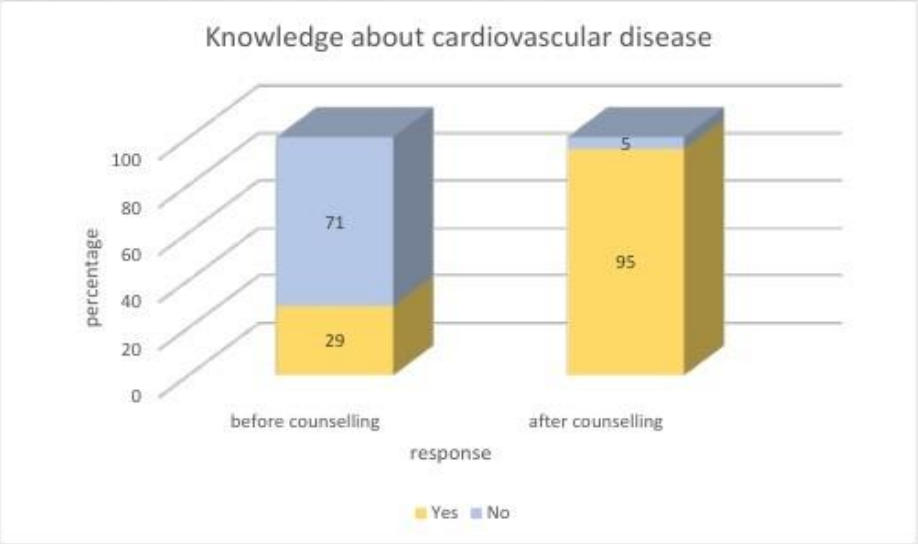
The sample size was derived using Slovin's formula, n=N/1+Ne2. Here, N is the population size, while e represents the margin of error. Pathanamthitta district has a total of 1,000,000 persons in the rural areas, so N = 1,000,000. A margin of error of 5% (0.05) is used. By substituting these values into the formula, the sample size (n) is 399.84. A total of 400 people can be selected but for greater precision and a smaller window of error, 500 individuals are picked. This study includes participants aged 30 to 80 years old. Participants must be willing to participate in the study and have not previously been diagnosed with any sort of cardiovascular illness. Pregnant or lactating mothers, as well as those who decline to participate, are excluded from the study.

Participants who agreed to participate in the study were first asked to fill out a consent form, which was followed by a semi-structured questionnaire to assess the individual's knowledge and risk factors. To assess the knowledge of CVD, various questions were asked related to cardiovascular disease. All the data is carefully entered into Microsoft excel and analyzed with the help of various excel functions. Findings are generated with the help of tables, charts or graphs and results interpreted accurately.

RESULTS

Table showing knowledge about cardiovascular disease

SI. NO	RESPONSE	BEFORE COUNSELING	PERCENTAGE	AFTER COUNSELING	PERCENTAGE
1	Yes	145	29	475	95
2	No	355	71	25	5
	Total	500	100	500	100



Graph showing knowledge about cardiovascular disease

Before the counseling session, 71% of participants were unaware of cardiovascular disease, whereas only 29% possessed some knowledge about it. After the counseling session, the results showed a marked improvement: only 5% still lacked knowledge, and 95% had gained knowledge about cardiovascular disease. This demonstrates a significant enhancement in awareness and understanding as a result of the counseling session.

DISCUSSIONS

Our study reveals that out of 500 subjects, approximately 29% are knowledgeable about cardiovascular disease, while 71% lack awareness. This is comparable to the findings of Abdelmoneim Awad and Hala Al-Nafisi's cross-sectional survey on public knowledge of cardiovascular disease and its risk factors in Kuwait.[2] In our prospective observational study, around 93% of participants showed increased knowledge following patient counseling, indicating that counseling significantly enhances understanding of cardiovascular disease. This outcome is supported by the research conducted by Simpson, Dixon, and Bolli, which demonstrated the effectiveness of multidisciplinary patient counseling in reducing cardiovascular disease risk factors through non pharmacological interventions, as part of the Healthy Heart Program.[3] Additionally, 71% of our subjects have a poor understanding of cardiovascular disease which is in line with the study by Pandey, which examined knowledge about preventive measures for heart disease among the adult population in Kathmandu.[4] This highlights the widespread nature of the knowledge gap regarding cardiovascular health and the necessity of focused educational efforts.

CONCLUSION

To effectively increase awareness among the rural population about cardiovascular disease (CVD) and its associated factors, it is crucial to implement targeted counseling sessions. The study indicates that a lack of knowledge about CVD has left some undiagnosed individuals at high risk for developing the condition. However, patient counseling has led to a notable improvement in the understanding of cardiovascular disease.The study indicates that rural areas generally have limited knowledge and awareness about cardiovascular disease (CVD). To help improve this situation, it is crucial to take several important steps.

Raising Awareness: Launch educational campaigns to inform the rural population about CVD, including risk factors, symptoms, and the importance of early detection.

Promoting a Healthy Lifestyle: Advocate for healthier living practices, such as balanced diets, regular exercise, and avoiding harmful habits like smoking and excessive alcohol consumption.

Conducting Preventive Screening: Implement regular screening programs to identify individuals at risk for CVD early, enabling timely intervention and risk management.

By adopting these measures, it is possible to enhance overall health outcomes in rural areas, reducing the prevalence and severity of cardiovascular disease.

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CONFLICT OF INTEREST
There are no conflicts of interest.

ABBREVIATIONS
CVD- cardiovascular disease

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