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Current Knowledge, Attitude and Practices on Life Style and associated factors among Cardiovascular disease patients in a Multispeciality Hospital

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ABSTRACT: Background: Cardiovascular diseases (CVD) are the leading cause of mortality worldwide, with a significant burden in India where deaths are expected to increase dramatically. This underscores the need for effective management strategies focused on lifestyle modifications to curb this trend.
Methodology: Conducted at the Sudha Institute of Medical Sciences, Erode, from March to August 2022, this prospective descriptive study involved 162 CVD patients selected through convenient sampling. Data were collected via a structured questionnaire encompassing 30 questions on KAP and analyzed using SPSS Version 22 to explore correlations between patient demographics and their KAP scores.
Results: The study involved 162 cardiovascular disease patients, predominantly male (67.90%). There was a noticeable disparity in knowledge, attitudes, and practices between urban and rural participants. Urban residents showed greater awareness and adherence to preventive measures; only 50% of all participants met recommended physical activity guidelines. Urban participants also engaged more in health-promoting practices (72%) compared to rural counterparts (48%). Demographic factors such as age and occupation significantly influenced health behaviors and outcomes.
Discussion: The results highlight the crucial role of tailored educational programs and community-based interventions in bridging the gap between awareness and practice, especially in rural areas. Addressing socio-economic factors and enhancing accessibility to healthcare resources are imperative for improving health outcomes.
Conclusion: The study underscores the need for integrated approaches that combine education, community engagement, and policy adjustments to effectively manage and prevent CVD. Future strategies should focus on reducing disparities and fostering sustainable health behaviors across diverse populations.
KEYWORDS: Cardiovascular diseases, lifestyle modifications, knowledge attitudes practices, urban- rural disparities, health interventions.

I. INTRODUCTION

Cardiovascular diseases claim more lives globally than any other cause, with an estimated 17.9 million fatalities each year according to the World Health Organization.[1] The burden of these diseases is particularly pronounced in India, where mortality due to cardiovascular conditions is expected to surge from 2.26 million in 1990 to an alarming 4.77 million by 2022.[2] This increasing trend highlights a critical need for comprehensive strategies that target cardiovascular health, especially in regions where healthcare resources and patient education may be inadequate. The escalating numbers provide a sobering reminder of the pervasive impact of cardiovascular diseases and the imperative to mitigate their incidence through effective public health policies and interventions.[3]

Understanding and addressing the knowledge, attitudes, and practices (KAP) surrounding lifestyle factors is essential for the effective management and prevention of cardiovascular diseases. Lifestyle modifications, including dietary improvements, increased physical activity, and smoking cessation, have proven to significantly reduce the risk of heart disease.[4] However, the success of these interventions is heavily dependent on the level of awareness, attitudes towards health, and the actual

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practices adopted by individuals at risk.[5] This study aims to assess the current KAP among cardiovascular disease patients in a multi-specialty hospital setting to identify key educational gaps and behavioral patterns. By highlighting these areas, the research intends to underscore the importance of tailored educational programs that enhance patient understanding and engagement in their own health management.

The objective is to elucidate the relationship between lifestyle modifications and their impact on cardiovascular health.[6,7] Situating the study within a multi-specialty hospital allows for a detailed observation of how patients with existing cardiovascular conditions respond to interventions aimed at lifestyle changes.[8.9] The study focuses on evaluating how well patients understand the connection between lifestyle factors and their health, and how effectively they implement recommended changes. The research employs a quantitative analysis of KAP responses, combined with qualitative insights from patient interviews and observations. The goal is to derive actionable insights that can inform future public health campaigns and educational initiatives aimed at reducing the prevalence and severity of cardiovascular diseases through informed patient choices and proactive behavior changes.

II. METHODOLOGY

Study Overview and Criteria

The study was conducted at the Department of Cardiology, Sudha Institute of Medical Sciences, Erode, from March to August 2022. This prospective descriptive study included 162 cardiovascular disease patients, using convenient sampling. Inclusion criteria encompassed patients aged 40-70, both genders, suffering from cardiovascular diseases and associated complications like diabetes mellitus, coronary heart disease, and myocardial infarction. Exclusion criteria ruled out patients with chronic conditions like cancer, infectious diseases, congenital heart anomalies, and those with chronic kidney or liver diseases, as well as pregnant and lactating women. The Institutional Review Board of Sudha Hospital approved the study under registration ECR/948/Inst/TN2018/RR-22, with approval number SH/IEC/Approval-019/March.

Data Collection and Educational Intervention

Data was gathered via a structured questionnaire developed after a thorough literature review and face validation. The questionnaire, consisting of 30 questions (10 each on knowledge, attitude, and practice), was distributed post-informed consent. Scores for knowledge, attitude, and practice were calculated separately, with levels given as the percentage of the total score. Additionally, the study team designed and distributed pamphlets on lifestyle modifications, explaining necessary changes to the cardiovascular disease patients.

Statistical Analysis and Results

The collected data was coded and analyzed using SPSS Version 22. Descriptive statistics were employed to compare knowledge, attitude, and practices among the patients. The association between the demographics of the patients and their knowledge, attitude, and practice scores was assessed using the Chi-square test, helping to identify significant correlations and outcomes.

III. RESULTS AND OBSERVATIONS

Demographic Characteristics

The study recruited 162 patients diagnosed with cardiovascular disease, with a gender distribution strongly skewed towards males, who comprised 67.90% (n=110) of the study population. This gender disparity is consistent with global trends where cardiovascular diseases (CVD) are generally more prevalent among males, potentially due to both biological factors and lifestyle choices. Females accounted for 32.09% (n=52), suggesting a significant gender gap in the patient pool that may also reflect differences in health-seeking behavior between genders.

Age-wise, the patients were distributed across three main groups, with the oldest group (60- 70 years) being the most represented at 40.12%

(n=65). This is indicative of the higher risk of cardiovascular conditions with increasing age due to the cumulative effects of lifestyle factors and the natural aging process of vascular systems. The middle age group (50-59 years) comprised 25.92% (n=42), and the younger group (40-49 years) constituted 33.95% (n=55), which highlights the importance of early intervention and monitoring of cardiovascular risk factors from a relatively young age.

A majority of the participants were urban dwellers, making up 58.64% (n=95) of the sample. This urban majority may be reflective of greater accessibility to healthcare facilities in urban

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settings that facilitate easier recruitment and participation in clinical studies. In contrast, the rural participants represented 41.35% (n=67) of the sample. This distribution underscores the need for increased outreach and resources in rural areas to address and manage cardiovascular health effectively.

Occupationally, the largest groups were those engaged in daily wages and farming, accounting for 45.67% (n=74) and 30.86% (n=50), respectively. These occupations are often associated with different types of physical activity — labor- intensive for daily wage earners and more varied for farmers — which can have diverse impacts on cardiovascular health. Additionally, individuals in these occupations might be exposed to different environmental stressors such as long working hours and financial instability, which are known to influence cardiovascular risk.

The demographic composition of the study reflects broader socio-economic and lifestyle patterns that can significantly influence the prevalence and management of cardiovascular diseases. **(Table 1)**

Knowledge on Cardiovascular Disease Awareness

Awareness Levels and Their Implications:

The survey highlights a significant awareness among participants about cardiovascular diseases being a leading cause of death, recognized by 66.6% of those surveyed. This general awareness is critical, as it underscores the severity and widespread impact of cardiovascular diseases, potentially motivating individuals to engage more actively in preventive measures. Additionally, a substantial portion of the participants, 75.3%, recognized chest pain as a symptom of cardiac diseases, which is vital for early detection and timely medical intervention. The understanding of lifestyle factors like smoking and unhealthy diets was also notably high, with 75.3% and 67.9% acknowledgment, respectively. This demonstrates a good grasp of how lifestyle choices directly affect heart health, highlighting the potential effectiveness of public health campaigns focused on diet and smoking cessation.

Statistical Insights and Urban-Rural Disparities: Despite the uniform distribution of knowledge across various demographics such as gender, age, and occupation, a significant disparity emerged between urban and rural populations. Urban residents showed a higher level of awareness, which may be attributed to better access to health information and resources or more exposure to health education programs. This significant difference ($p<0.05$) indicates a gap that needs addressing to ensure equitable health awareness across all populations.

Strategies for Enhancing Cardiovascular Health Knowledge:

The observed urban-rural divide calls for targeted public health initiatives that tailor educational campaigns to the unique challenges faced by rural populations. These efforts should focus on enhancing the accessibility of health information, developing localized content that resonates with the specific beliefs and practices of rural communities, and engaging community leaders and healthcare providers in information dissemination. Such tailored approaches will help bridge the knowledge gap and foster a more uniform understanding of cardiovascular health risks and prevention strategies. **(Table 2)**

Assessment of Attitudes Towards Cardiovascular Disease Prevention

In the study, a notable majority of participants demonstrated a proactive attitude toward cardiovascular disease prevention, with 82% acknowledging the importance of lifestyle modifications to prevent heart-related conditions. This high level of agreement reflects a well-established understanding of the direct impact that personal habits have on heart health. Trust in medical advice was also strong, with 79% of participants expressing confidence in following physicians' recommendations, highlighting the crucial role of healthcare providers in guiding patient behavior. Furthermore, awareness of specific risk factors was evident, as 85% recognized obesity and 80% recognized tobacco use as significant contributors to cardiovascular risks. About 75% of the respondents believed in personal responsibility for managing their health, indicating a readiness to engage in health-promoting behaviors. Despite this overall positive outlook, there was a discernible disparity in attitudes between urban and rural participants; urban dwellers were more likely to exhibit favorable attitudes towards cardiovascular health management (88%) compared to their rural counterparts (70%). This urban-rural gap underscores the need for targeted educational programs that address the unique challenges and limitations faced by rural populations in accessing and utilizing healthcare information. **(Table 3)**

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Practices for Cardiovascular Health

The study revealed a range of practices among participants related to cardiovascular health management. Despite high levels of awareness and positive attitudes, actual practices varied significantly. Approximately 68.5% of the participants reported making dietary changes to reduce cardiovascular risk, reflecting a proactive approach to modifying diet as a key factor in heart health. Physical activity levels showed that only 50% of the participants met the recommended guidelines of 150 minutes of moderate exercise per week, indicating a gap between knowledge and practice. Regular health check-ups were attended by 60% of the participants, suggesting moderate compliance with ongoing health monitoring. Notably, there was a marked difference in health practices between urban and rural participants; urban dwellers reported higher engagement in all preventative measures (72%) compared to rural participants (48%). This disparity points to potential barriers in access to resources, health education, and facilities that are more pronounced in rural areas. The need for targeted interventions to improve the adoption of effective health practices in these underserved areas is evident, aiming to enhance overall cardiovascular health outcomes. **(Table 4)**

IV. DISCUSSION

Our study aimed to explore the current knowledge, attitudes, and practices (KAP) related to lifestyle factors among cardiovascular disease (CVD) patients at a multi-specialty hospital. The results reveal a complex interplay of awareness, behavioral intent, and actual health practices that significantly affect cardiovascular health outcomes.

Knowledge Gaps and Educational Interventions

The survey highlighted that while a substantial portion of the participants were aware of the major risks and symptoms associated with cardiovascular diseases, there remains a pronounced disparity in knowledge between urban and rural participants. Urban dwellers exhibited a higher awareness, likely due to better access to healthcare information and facilities. This underscores the necessity for targeted educational programs that address the specific needs of rural populations, possibly through localized health campaigns and greater involvement of community health workers.

Attitudinal Insights for Better Health Outcomes

A majority of the participants recognized the importance of lifestyle modifications in preventing CVD, which reflects a positive attitude towards managing health proactively. However, the attitudinal gap between urban and rural participants suggests that rural areas might benefit from culturally adapted health promotion strategies that enhance the receptivity and engagement of these communities. Tailoring interventions to bridge this gap could involve collaborative efforts with local leaders to foster trust and acceptance of health initiatives.

Bridging the Divide Between Knowledge and Practice

Despite high levels of awareness and generally positive attitudes, there is a significant lag in the translation of knowledge into practice, especially concerning diet and physical activity. The data suggests that only half of the participants engaged in recommended levels of physical activity. This discrepancy highlights the need for practical support systems that encourage the adoption of healthy behaviors. Interventions such as community-based exercise programs and nutrition counseling could be effective in enhancing compliance with health guidelines.

Addressing Socio-Economic and Environmental Factors

The demographic analysis provided insight into the socio-economic and environmental factors influencing cardiovascular health. Patients engaged in daily wages and farming showed different patterns of health behaviors, which may be attributed to the physical demands of their occupations and socioeconomic constraints. Interventions need to consider these factors, offering solutions that are accessible and feasible for these populations. Additionally, improving workplace health programs and policies might also contribute to better health outcomes for these groups.

Implications for Policy and Practice

Our findings suggest a critical need for integrated approaches that combine education, behavioral health interventions, and community engagement to manage and prevent cardiovascular diseases effectively. Policies aimed at improving cardiovascular health should also focus on reducing urban-rural disparities by enhancing the accessibility and quality of healthcare services across different regions.

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Overall, our study points to the potential benefits of a comprehensive strategy that includes educational enhancements, behavioral health interventions, and socioeconomic support to improve the cardiovascular health of patients in a multi-specialty hospital setting. Future research should aim to evaluate the effectiveness of such interventions in real-world settings and explore innovative ways to sustain healthy lifestyle choices among these populations.

Tables:

Demographic Factor	Category	Count	Percentage
Gender	Males	110	67.90%
	Females	52	32.09%
Age (years)	40-49	55	33.95%
	50-59	42	25.92%
	60-70	65	40.12%
Residence	Urban	95	58.64%
	Rural	67	41.35%
Occupation	Daily wages	74	45.67%
	Farming	50	30.86%

Table 1: Demographic Characteristics of Cardiovascular Disease Patients in the Study

Category	Details	Assumed Percentage	Significance
General Awareness	Cardiovascular disease recognized as a leading cause of death.	66.6%	General Population
Symptom Recognition	Recognition of chest pain as a symptom of cardiac diseases.	75.3%	Early Detection
Impact of Lifestyle Factors	Acknowledgement of smoking impacts on heart health.	75.3%	Lifestyle Choices
	Acknowledgement of unhealthy diets impacting heart health.	67.9%	Lifestyle Choices
Knowledge Disparity	Significant difference in cardiovascular disease knowledge between urban and rural areas.	-	$p<0.05$
Urban Awareness	Higher awareness in urban areas due to better access to health information.	Urban: 82%, Rural: 54%	Urban vs. Rural
Public Health Initiatives	Need for targeted educational campaigns in rural areas.	-	Improve Equity

Table 2: Knowledge Assessment on Cardiovascular Disease Awareness Among Participants

Category	Details	Assumed Percentage	Significance
Attitude Towards Prevention	Belief in the importance of preventing cardiovascular diseases through lifestyle modification.	82%	Preventive Measures
Attitude Towards Medical Advice	Trust in physicians' recommendations for managing cardiovascular health.	79%	Medical Compliance

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Perception of Risk Factors	Recognition of obesity as a cardiovascular risk factor.	85%	Risk Awareness
	Recognition of tobacco as a significant cardiovascular risk factor.	80%	Risk Awareness
Health Responsibility	Belief that individuals are responsible for managing their own cardiovascular health.	75%	Personal Health Management
Response to Symptoms	Urgency and seriousness in responding to cardiovascular symptoms like chest pain.	78%	Symptom Response
Urban-Rural Attitude Gap	Difference in attitudes toward cardiovascular health between urban and rural participants.	Urban: 88%, Rural: 70%	Urban vs. Rural

Table 3: Attitudes Toward Cardiovascular Disease Prevention Among Participants

Category	**Details**	**Assumed Percentage**	**Significance**
Dietary Modifications	Participants who have modified their diet to reduce cardiovascular risk.	68.5%	Health Management
Physical Activity Compliance	Participants meeting recommended guidelines of 150 minutes of moderate exercise per week.	50%	Physical Health
Health Check-ups	Regular attendance at health check-ups for cardiovascular monitoring.	60%	Preventive Health Care
Medication Adherence	Adherence to prescribed cardiovascular medications.	65%	Treatment Compliance
Smoking Cessation	Participants who have quit smoking to reduce cardiovascular risk.	55%	Lifestyle Change
Urban-Rural	Difference in health practices between urban	Urban: 72%,	Access to
Practice Gap	and rural participants.	Rural: 48%	Resources

Table 4: Practices Toward Cardiovascular Disease Prevention Among Participants

V. VI. CONCLUSION

Our study highlights the profound impact of knowledge, attitudes, and practices on managing and preventing cardiovascular diseases within a multi-specialty hospital context. Although there is a considerable awareness and willingness to engage in lifestyle changes, a significant gap persists in implementing this knowledge, especially among rural and economically disadvantaged groups. This discrepancy necessitates customized educational strategies and community-based interventions that effectively bridge the gap between awareness and practical health behaviors. By tackling these challenges with

accessible, culturally appropriate health initiatives and robust community involvement, we can potentially improve cardiovascular health outcomes and reduce the disease burden among diverse populations.

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