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PREVALENCE OF UNAWARENESS OF CHOLESTEROL LEVELS AND RISK OF HYPERTENSION

Introduction

High Cholesterol (Hyperlipidaemia) is a significant public health concern that contributes to cardiovascular diseases (CVD), including hypertension [1]. This study aims to assess the prevalence of unnoticed cholesterol levels among different demographic groups and analyse its association with hypertension. Using an online questionnaire, data were collected from a diverse population regarding their cholesterol awareness, health behaviours, and medical history. The results indicate a substantial portion of the population remains unaware of their cholesterol levels, and there is a notable links between unknown cholesterol level and the risk of hypertension. This research underscores the need for increased awareness and regular cholesterol screening to mitigate cardiovascular risks [2].

Cardiovascular diseases are a leading cause of mortality worldwide, with hyperlipidaemia being a significant risk factor. Cholesterol, though essential for various bodily functions, can lead to atherosclerosis when present in excess. The relationship between high cholesterol levels and hypertension is well-documented, as both conditions often coexist and compound the risk of severe health issues. Despite the known risks, many individuals remain unaware of their cholesterol levels, which can lead to unnoticed hyperlipidaemia and its associated complications [3]. This study investigates the prevalence of unaware levels of cholesterol within a diverse population and examines the link between these levels and the risk of hypertension [4].

Goal

The primary objectives of this research are: Evaluate the relationship between unnoticed and lack of awareness of cholesterol levels and risk of hypertension. Identify demographic factors that influence cholesterol awareness and health behaviours. Provide recommendations for improving cholesterol screening and awareness.

Material and methods of research

Research Design: This study was designed as a cross-sectional observational study conducted over a period of 1 months. The questionnaire was distributed online to ensure broad accessibility and diversity in responses. 70 participants were selected from general population (students of Gomel, students in India corporate employees, teachers, parents etc.) from different places (Belarus, India, Sri Lanka, Nigeria etc.) where individuals were asked about their cholesterol levels, cholesterol awareness, underlying health conditions, family history and lifestyle related questions through a survey in Google forms.

Data Collection: The questionnaire comprised sections on: Demographics: Age, gender, nationality, and occupation. Health Behaviours: Frequency of physical activity, dietary habits, smoking, and alcohol consumption. Cholesterol Awareness: Participants' knowledge about cholesterol levels, previous diagnoses, and frequency of cholesterol checks. Health Conditions: Existing medical conditions, particularly focusing on hypertension and related cardiovascular.

The results of the research and their discussion

Demographics: The study included 70 respondents, with a gender distribution of 41.4% male and 58.6% female. The majority of participants (71.4%) identified as Indian, and the age distribution was notable, with 31.4% of respondents aged 18–24, 52.9% aged 25–34, 2.8% aged 35–44 and 12.9% aged 45+. This demographic distribution suggests a younger population, which is significant as lifestyle choices in these age groups can have long-term health implications.

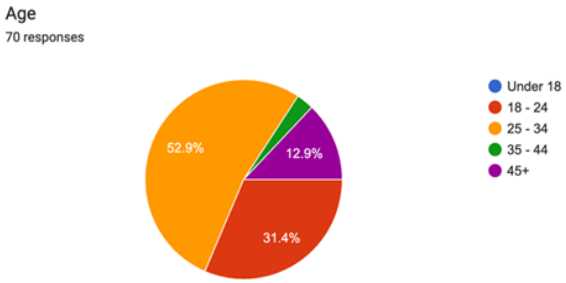

Figure 1 – Age

Cholesterol Awareness: In terms of cholesterol awareness 51.4% of participants had their cholesterol examined, whereas, 48.6% had never had their cholesterol levels checked. 48.6% (34/70 respondents) had never had their cholesterol checked, whereas, 51.4% (36/70 respondents) had it checked, out of which 90% (18/36 respondents) were diagnosed with high cholesterol. This is suggesting that either the prevalence of hyperlipidaemia is underestimated as well as that many individuals remain unaware of their cholesterol levels.

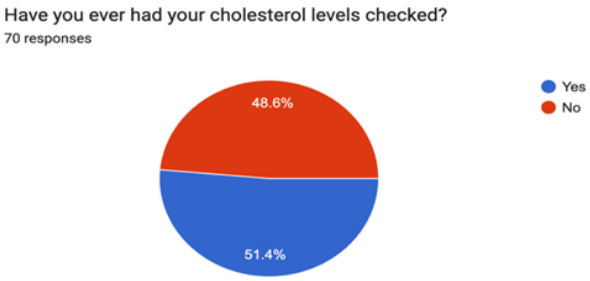

Figure 2 – Cholesterol consultation

Health Conditions: Regarding health conditions, 17 (24.3%) of participants reported having hypertension, 3 (4.3%) about diabetes (DM), 3 (4.3%) about ischemic heart disease (IHD), while 52 (74.3%) indicated they had no known health conditions, 3 (4.3%) – found it difficult to answer. Closer examination revealed that those with hypertension were more likely to have had their cholesterol checked compared to those without hypertension (15 out of 17; 14 out of 52 respectively). As for family history moreover, 50% reported for hypertension, 31.4% for IHD among which many have reported both the conditions coexisting in their family, 27% (38.6%) about DM.

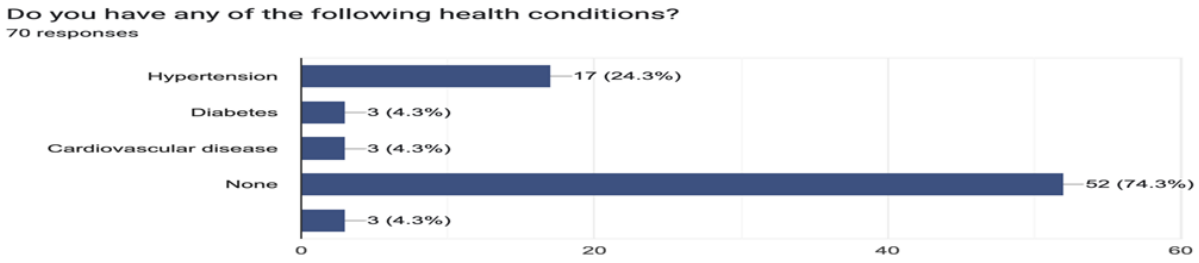

Figure 3 – Underlying Health Condition

Lifestyle Factors: The survey also assessed participants' lifestyle habits. Approximately 20% reported engaging in physical activity rarely or almost never, with 40% exercising once or twice a week and 40% engaging daily in physical activity. Dietary habits varied, with 42.8% indicating a diet high in saturated fats and 50% consuming low processed food, 21.4% with high is sugars and 5.6% with other diet.

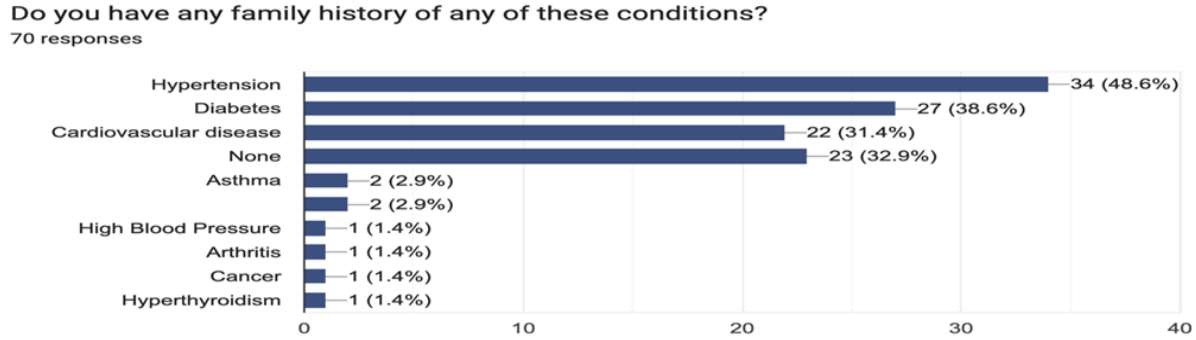

Figure 4 – Family History

Discussion: The results of this study highlight critical issues regarding cholesterol awareness and its association with hypertension. The high percentage of respondents unaware of their cholesterol levels emphasizes an urgent need for public health initiatives aimed at increasing screening and education.

Implications for Public Health:

Education and Awareness: The data indicate a need for educational programs focused on the importance of cholesterol monitoring. Targeted outreach could improve awareness and encourage individuals, especially young adults, to seek regular health check-ups [5,6].

Lifestyle Modifications: The relation between lifestyle factors and health outcomes underscores the importance of promoting healthier behaviours. Public health campaigns should emphasize the benefits of a balanced diet, regular physical activity, and smoking cessation [5].

Family History Considerations: The study also found that individuals with a family history of hypertension or cardiovascular conditions were more likely to be aware of their cholesterol levels.

Conclusion

In conclusion, this study reveals an alarming prevalence of lack of awareness of their cholesterol levels among participants, with a significant connection to the risk of hypertension.

Key results include:

High Unawareness of Cholesterol Rates: 48.6% (34/70 respondents) had never had their cholesterol checked, Notably, among those who had their cholesterol checked, only 18/36 respondents reported a past diagnosis of high cholesterol. Lifestyle Factors: Many respondents

engaged in poor lifestyle choices, with 60% not engaging in physical activities as required and a significant portion consuming diets high in saturated fats and processed food.

These findings underscore the need for enhanced cholesterol screening and health education. Improving awareness and promoting healthy behaviours and utilizing technology, such as mobile apps for tracking health metrics, can encourage ongoing engagement with personal health. Addressing these issues proactively may lead to better health outcomes and a decrease in the prevalence of cardiovascular diseases in the long term.

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INITIAL DIAGNOSIS OF β-THALASSEMIA

Introduction

Thalassemia is a group of inherited blood disorders that result in problems with synthesis of hemoglobin. Symptoms of thalassemia can range from mild to severe they include anemia, fatigue, deformed bones, splenomegaly, jaundice and dark urine. In children, the disease can cause growth retardation. There are two main types of thalassemia: alpha thalassemia and beta thalassemia. The severity of the disease depends on how many of the alpha or beta globin genes are missing. Laboratory tests including complete blood count and genetic tests are used to diagnose thalassemia. Diagnosis can be made before birth through prenatal testing. Thalassemia is most common among people of Greek, Italian, Middle Eastern, South Asian, and African descent. The disease affects approximately 280 million people worldwide, representing about 3.5% of the world's population, of whom about 439,000 have severe thalassemia [1,2]. Thalassemia has the greatest impact on children, as it is an inherited disorder and usually manifests itself early in life. Children with the severe form of thalassemia, known as beta thalassemia (or thalassemia major), begin to show symptoms as early as the first two years of life. These children require intensive medical supervision and regular blood transfusions. Women with thalassemia may also experience certain problems, especially during pregnancy, and require special medical care to minimize the risks to both mother and child. Clinically, the most significant is β-thalassemia, which is characterized by significant clinical, biochemical and genetic polymorphism. Symptoms depend on the form of thalassemia, which can be major