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Knowledge on Risk Factors for Heart Attack Among Adults Attending Gym

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Abstract

Background: Heart attack is one of the most common cardiovascular emergencies and a major global health concern. Many of its risk factors—such as obesity, sedentary lifestyle, poor dietary habits, stress, smoking, and hypertension—are preventable through lifestyle modifications. The adults attending gyms are generally health-oriented, their level of knowledge regarding specific risk factors for heart attack may is essential to ensure effective prevention.

Objective: To assess the knowledge regarding risk factors for heart attack among adults attending a gym, with the aim of developing an information pamphlet to enhance awareness and promote preventive health practices.

Materials and Methods: A descriptive research design was adopted for the study. Adults aged 18 years and above attending a selected gym was included. Structured questionnaire was used to assess the demographic variables and knowledge related to heart attack risk factors.

Results: Result of this study showed that 40% of adult had moderate knowledge regarding risk factors of heart attack; 30% had adequate knowledge and 30% had mild knowledge regarding heart attack. The mean score of knowledge regarding heart attack among adults is 13.05 with the standard deviation of 3.76.

Conclusion: Insufficient knowledge regarding heart attack among adults highlights the need for implementing structured educational and awareness programs within gym settings. These programs should emphasize lifestyle-based preventive behaviours as well as the recognition of warning signs and the importance of prompt and appropriate responses to potential cardiac events.

Keywords: Knowledge, Risk Factors, Heart Attack, Adults, Gym

Introduction

A heart attack, or myocardial infarction, is a clinical condition characterized by the interruption of blood flow to a portion of the heart muscle, most commonly due to obstruction in one or more coronary arteries. These arteries are essential for supplying oxygenated blood to the myocardium. The primary underlying mechanism is atherosclerosis, a progressive process involving the accumulation of lipid-rich plaques composed of cholesterol, fat, and other substances within the arterial walls [1]. Over time, these plaques lead to narrowing and hardening of the arteries. The acute event is typically triggered by plaque rupture, which promotes thrombus formation and results in complete arterial occlusion [1, 2].

Myocardial infarction remains one of the leading causes of morbidity and mortality worldwide. Clinical presentation may vary from silent, asymptomatic episodes to severe manifestations causing hemodynamic instability and sudden cardiac death [2]. Patients commonly report chest pain or pressure that may radiate to the neck, jaw, shoulders, or arms. Diagnosis is based on clinical history, physical examination, electrocardiographic changes, and elevated cardiac biomarkers, particularly cardiac troponins [3]. Despite advancements in diagnostic and therapeutic approaches, prevention continues to be the most effective strategy for reducing the global burden of cardiovascular disease.

Regular physical activity and structured exercise programs are well-established preventive measures against non-communicable diseases, including cardiovascular and metabolic disorders. However, vigorous physical exertion may, in certain circumstances, precipitate acute cardiovascular events such as sudden cardiac death (SCD), either during or shortly after exercise. With the global expansion of the fitness industry, gyms and fitness centers have become increasingly popular. A study by Frisk *et al*. reported that 61.2% of workout-related out-of-hospital cardiac arrests (OHCA) occurred in gym settings [4]. Given this concerning association, it is important to assess the knowledge, attitudes, and preventive practices of individuals engaging in gym-based physical activities regarding acute cardiovascular events.

Although exercise is widely promoted as a protective factor against heart disease, a misconception persists among gym attendees that regular workouts alone are sufficient to eliminate cardiovascular risk. In reality, both modifiable and non-modifiable risk factors—including smoking, unhealthy diet, psychological stress, genetic predisposition, hypertension, and sedentary behavior—play a significant role in the development of heart disease. Many individuals remain unaware of these risk factors or underestimate their cumulative impact.

According to the World Health Organization (WHO), cardiovascular diseases account for approximately 17.9 million deaths annually, representing nearly 32% of all global deaths [5]. The burden is particularly severe in developing countries such as India, where the incidence of myocardial infarction has increased markedly over the past decade. Notably, this rise is occurring at younger ages, driven by rapid urbanization, lifestyle transitions, increased occupational and social stress, and unhealthy dietary patterns. This epidemiological shift challenges the traditional perception of heart disease as a condition predominantly affecting the elderly and underscores the urgency of targeted preventive interventions.

The present study highlights the critical need to evaluate the level of knowledge regarding heart attack risk factors among adults attending gyms. Assessing their current awareness, prevailing misconceptions, and lifestyle practices is essential for identifying gaps that require targeted intervention. Based on these findings, an informational pamphlet can be designed to provide clear, accurate, and accessible health education tailored specifically to this population. Such targeted educational strategies have the potential to enhance preventive behaviours, promote heart-healthy lifestyle choices, and ultimately contribute to reducing the incidence of myocardial infarction among gym-going adults [5].

Materials and Methods

Descriptive Survey Design was conducted to assess the knowledge on risk factors among adults attending Gym.

Around 60 adults between 20-40 years of age were selected as the samples using purposive sampling method.

A structured Questionnaire was used to collect the data. The tool had items on General information of heart attack, early warning signs, signs and symptoms, risk factors and precautions to prevent heart attacks. The content validity of the tool was obtained from the experts. The reliability of the tool was established using split half method (r=0.9). The data was interpreted using descriptive and inferential statistics [6, 7].

Results and Discussion

Socio-Demographic and Lifestyle Characteristics

The study included 60 gym-goers, predominantly young adults aged 18–22 years (71.6%), unmarried (93.3%), and male (78.3%). Most participants were students (78.3%) with graduate-level education (66.6%) and low monthly income (<₹10,000, 53.3%). A family history of heart disease was reported by 20% of participants.

Health Behaviors and Lifestyle

Gym attendance was high, with 58.3% attending daily. Dietary patterns varied: 41.6% were vegetarian, 35% mixed diet, and 23.3% non-vegetarian. Daily fruit and vegetable intake was reported by 41.6%. Mustard oil was the most commonly used cooking oil (71.6%). Tobacco and alcohol use were relatively low, at 11.6% and 13.3% daily, respectively. Hypertension was reported by 16.6%, while 43.3% reported no morbidity. (Table 1)

Awareness of Heart Attack

Awareness of heart attacks was limited, with only 38.3% having prior knowledge. Main sources of information were family (35%), healthcare personnel (33.3%), and media (31.6%).

Table 1: Frequency Distribution of Adults on Health behaviors and Lifestyle

Health and Lifestyle variables	Responses	Frequency (f)	Percentage (%)
Family History of Heart Disease	Yes	12	20.0%
	No	48	80.0%
Gym Visit	Daily	35	58.3%
	3-4 Times a Week	21	35.0%
	1-2 Times a Week	4	6.6%
Diet Pattern	Vegetarian	25	41.6%
	Non-Vegetarian	14	23.3%
	Mixed	21	35.0%
Consumption of fruits & vegetables per week	Daily	25	41.6%
	1-2 Times per week	12	20.0%
	3-5 times per week	16	26.6%
	Rarely	7	11.6%
Cooking Oil Used at Home	Sunflower Oil	10	16.6%
	Mustard Oil	43	71.6%
	Palm Oil	5	8.3%
	Olive Oil	2	3.3%
Consumption of Tobacco, Cigarettes	Yes	7	11.6%
	No	50	83.3%
	Rarely	3	5%
Diagnosed with High Blood Pressure (Hypertension)	Yes	10	16.6%
	No	45	75%
	Not sure	5	8.3%
Consumption of Alcoholic Beverage	Daily	8	13.3%
	1-4 times a week	10	16.6%
	Occasionally	13	21.6%
	Never	29	48.3%

The assessment of participants' knowledge revealed that 40% demonstrated moderate understanding of heart attack risk factors, 30% had adequate knowledge, and the remaining 30% exhibited only mild awareness. (Fig.1) These findings indicate that a substantial proportion of gym-going adults possess limited knowledge, underscoring the need for targeted educational interventions to enhance awareness of cardiovascular risk factors.

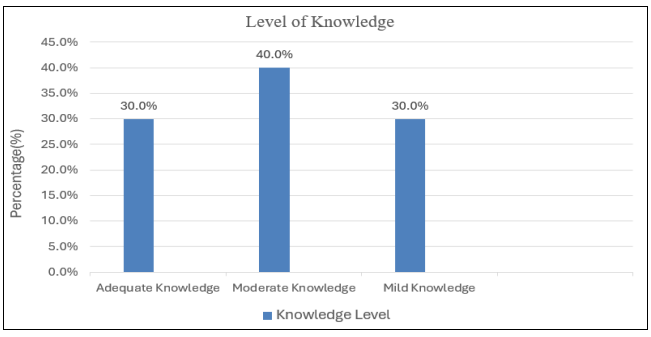

Fig 2: Bar graph showing percentage distribution of Gym Adults knowledge on risk factors for Heart Attack

Conclusion

Although gym-going adults are generally health-conscious, notable gaps remain in their knowledge of heart attack risk factors. Targeted educational interventions, such as information pamphlets, can improve awareness, promote preventive behaviors, and help reduce the burden of cardiovascular disease. The findings underscore the critical role of nurses in delivering health education in community and fitness settings.

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