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Prevalence of Life Style Factors and Life Style Diseases among Urban Population in Palakkad

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Abstract

Lifestyle diseases, also known as non-communicable diseases (NCDs), have become a major health concern in India. They are largely influenced by poor dietary habits, physical inactivity, sedentary lifestyles, smoking, alcohol consumption, stress, and environmental factors. These conditions—such as diabetes, heart disease, and obesity—are often preventable through healthier lifestyle choices, regular physical activity, and effective stress management. Despite government and healthcare efforts to promote awareness and prevention, challenges like urbanization, changing diets, and limited awareness persist. This study aimed to assess the awareness of urban residents in Palakkad district regarding lifestyle diseases and their associated risk factors. Using a cross-sectional, descriptive, and exploratory design, a structured questionnaire was administered to 100 respondents from Palakkad city. Data on socio-demographics, smoking, alcohol use, junk food consumption, physical activity, and history of lifestyle diseases were collected. Statistical analysis was conducted using the Chi-square test, with a significance level of $p < 0.05$. Results showed that 80% of respondents were aware of lifestyle-related risk factors, and 85% had been affected by such diseases for over five years. Diabetes, hypertension, and high cholesterol were most common. Significant correlations were found between tobacco use, alcohol intake, junk food consumption, and obesity with lifestyle diseases.

Keywords: Lifestyle Diseases, Non-Communicable Diseases, Physical Inactivity, Dietary Habits

Introduction

Health is crucial for overall wellbeing, impacting physical and social aspects of life Good health is fundamental for vibrant and fulfilling life goals and enjoying relationships. Prioritizing and maintaining good health contributes to overall happiness and well-being. Diseases can significantly impact health, ranging from minor illnesses to chronic conditions, prevention through healthy lifestyle choices, regular checkups diagnosis, etc. is important. Prevention, Early detection, and proper management are vital in maintaining optimal health and minimizing the impact of diseases.

Diseases are often categorized into communicable (infectious) and non-communicable (chronic). Infectious or communicable diseases like flu or tuberculosis can be transmitted from person to person. Non-communicable diseases (NCDs) such as heart disease and diabetes, stroke, diabetes, chronic obstructive pulmonary diseases, etc. generally, result from a combination of genetic, environmental, and lifestyle factors and are not transmitted between individuals. NCDs are often known as lifestyle diseases, as it is associated with unhealthy lifestyle choices like poor diet, physical inactivity, smoking, excessive alcohol consumption, tobacco use, etc. Today these diseases are a major health problem worldwide and also are the leading causes of death worldwide. The health expenditure for NCDs carries a huge cost and instead of good health, it leads to people in a poverty trap, denying them a life of dignity, undermining workforce productivity, and threatening economic

prosperity. According to the estimates of WHO, each year due to Non-communicable diseases (NCDs) 41 million people die and this is equivalent to 74% of all deaths globally. 17 million people in the world die from NCD before the age of 70. Of all NCD deaths, 77% of deaths are reported in low and middle-income countries. Out of total NCD deaths, cardiovascular diseases constitute the high (17.9 million people annually) followed by cancers (9.3 million) chronic respiratory diseases (4.1 million), and diabetes and kidney disease deaths (2.0 million). These four non-communicable diseases accounted for more than 80% of all premature NCD deaths [1]

Rationale of Study

Lifestyle risk factors are habits or behaviors that contribute to the development of lifestyle diseases. These factors can predict the likelihood of non-communicable diseases (NCDs), which are linked to long-term patterns of living and can be prevented or managed through lifestyle changes. The most common lifestyle risk factors associated with NCDs include smoking and tobacco use, physical inactivity, and unhealthy dietary habits. These unhealthy habits often involve poor nutrition, high consumption of processed and fast foods, excessive intake of saturated fats, sugars, and salt, as well as the overuse of alcohol. Additionally, the marketing of alcoholic beverages and tobacco products has been linked to an increased risk of NCDs. Urban populations are often at a higher risk of lifestyle diseases due to factors related to urbanization, sedentary lifestyles, and the nature of their working environments. Therefore, this study aims to assess lifestyle factors and lifestyle diseases, as well as to determine the prevalence of lifestyle diseases among the urban working population in Palakkad city.

Objectives of the Study

1. To assess the awareness about abnormal lifestyle and knowledge about associated lifestyle diseases among Urban population in Palakkad town.
2. To find the prevalence of lifestyle factors and lifestyle diseases in Palakkad town.

Methodology

The study was conducted in Palakkad Town. The study was conducted using a well-prepared interview schedule after doing pretesting in a sample of 120 households. The study type was a cross-sectional descriptive and exploratory study that lasted for 3 months. A pre-tested structured interview schedule was administered to 100 respondents from both male and female residing in Palakkad town. The Data collected included the information on their socio-economic profile, history of smoking, alcohol consumption, use of junk foods, regular physical activity and history of hypertension, cholesterol, cardiovascular diseases, stroke etc., The respondents BMI was calculated using standard techniques. The data was entered in MS excel spreadsheet and analysed using mean and proportion. Households were selected using random sampling. The list of households in each block was obtained with the help of Asha workers and anganwadi workers.

Statistical Analysis

The data collected were entered in Microsoft excel and analysed using SPSS

Determinants and Risk Factors of Lifestyle Diseases in India

Public policies within the health care system play a vital role in preventing premature deaths caused by non-communicable diseases (NCDs). Strengthening health systems to ensure equitable distribution of healthcare facilities and responsiveness to population needs can substantially reduce the burden of NCDs. Moreover, policies outside the health sector—addressing major risk factors such as tobacco use, excessive alcohol consumption, unhealthy diet, and physical inactivity—also have a significant impact on the prevention and control of these diseases [2]. Lifestyle factors, including excessive use of tobacco and alcohol, and frequent consumption of junk foods, are significantly associated with lifestyle diseases [3]. Sedentary habits and lack of physical activity further exacerbate health risks, often leading to life-threatening consequences of NCDs [4]. Physically inactive individuals are at a notably higher risk, as a sedentary lifestyle is closely linked to a progressive decline in overall health [5].

Rapid economic growth and increasing westernization of lifestyles in recent years have contributed to an alarming rise in NCD prevalence in India [6]. Urbanization has led to dietary transitions characterized by reduced intake of coarse cereals, pulses, fruits, and vegetables, and increased consumption of meat products and salt. This shift, combined with decreased physical activity, has resulted in growing incidences of obesity, atherogenic dyslipidaemia, subclinical inflammation, metabolic syndrome, type 2 diabetes mellitus, and coronary heart disease [7]. Hypertension and diabetes show a linear relationship with obesity, making these conditions more prevalent among overweight individuals [8]. Evidence also suggests that lifestyle interventions or metformin therapy can effectively reduce the incidence of type 2 diabetes [9]. Individuals with prehypertension are at greater risk of developing further health complications, often associated with overweight, dyslipidemia, and unhealthy dietary practices such as high intake of saturated fats and salt [10]. A high-salt diet and diabetes mellitus are significantly correlated with hypertension in Indian communities. Despite the high prevalence of hypertension, public awareness remains low, highlighting the urgent need for control measures and community-based education programs [11]. Obesity, a major public health issue, is closely linked to chronic diseases such as type 2 diabetes, hypertension, and cardiovascular disorders. As obesity rates continue to rise, the prevalence of these associated conditions will also increase. The World Health Organization (WHO) emphasizes obesity management as a key strategy for preventing and controlling non-communicable diseases globally [12].

Results and Findings

Table 1: Characteristics of respondents

Age	Men	Women	Total
Socio Economic class			
APL	23(1.91)	33(27.5)	56(47)
BPL	28(23)	36(30)	64(53)
Total	51(42)	69(58)	120
Education			
Below SSLC	14	22	36(30)
SSLC	18	28	47(39)

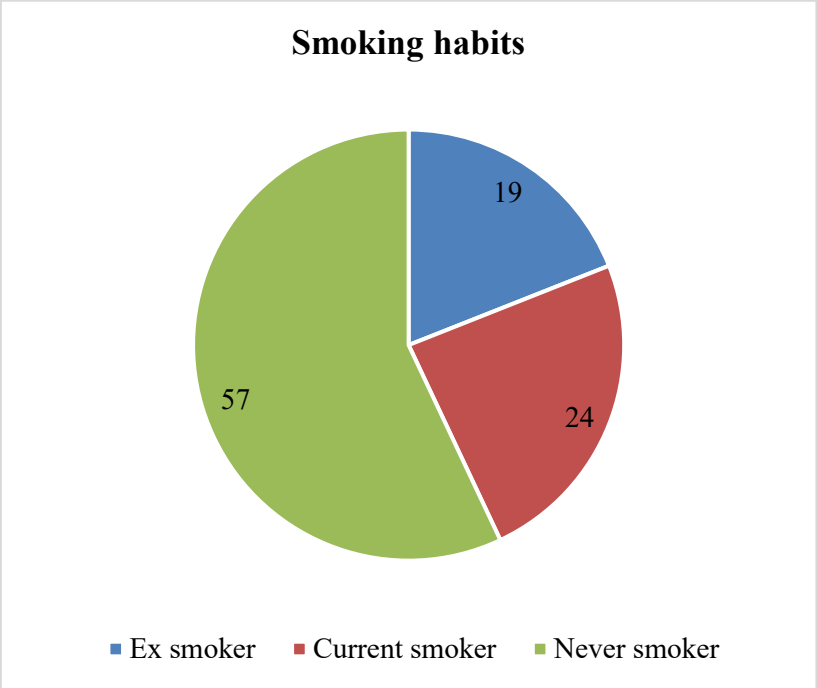
Plustwo	14	10	23(19)
Degree	5	9	14(12)
Total	51	69	120
Age Distribution			
30-40	1(0.83)	1(0.83)	2(1)
40-50	3(2.5)	4(3)	7(6)
50-60	15(12.5)	15(13)	30(25)
60-70	17(14.1)	31(26)	44(37)
70-80	12(10)	16(13)	28(23)
80-90	3(2.5)	2(2)	9(8)
Total	51(42)	69(58)	120
Caste			
General	11	25	36(30%)
OBC	28	33	61(51%)
SC/ST	12	11	23(19%)
Total	51	69	120

Out of the 120 respondents, 51(42%) were male and 69 (58%) were females.. Females are more than males in the study population. Mean age of the participants was 31.8 years. Age range of the study participants was 38-88years.Majority i.e., 37 percent of the population were in the age group of 60-70 years , only Eight percent of population was30-50. Education Status of 39 percent of population was SSLC, Majority of women are educated than men.

Table 2: Smoking status

Sl.No	**Smoking status**	**Subjects**
1. Ex-smoker		
	Male	**10(19%)**
	Female	**0**
2. Current smoker		
	Male	
	<5 a day	**10**
	5-10 a day	**2**
	Female	**0**

	Total	**12(24%)**
3. Never smoker		
	Male	**29(57%)**
	Total	



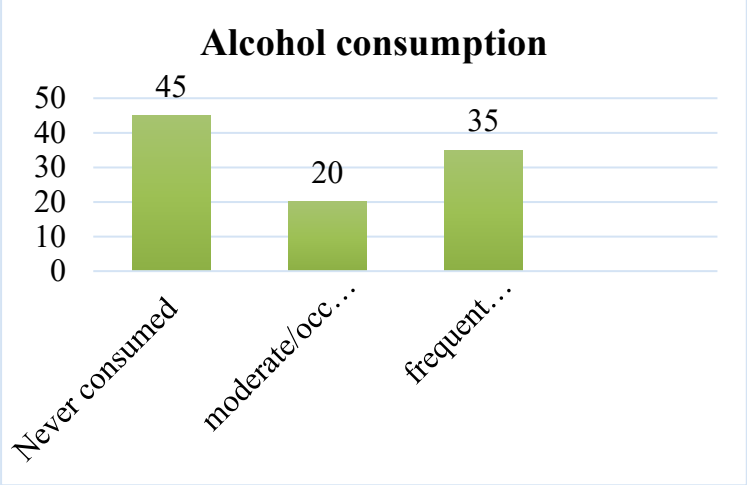
Among the study population only males have smoking habits. 24% of the respondents have smoking habits.

TABLE 2

Alcohol consumption

Sl.No	**Alcohol status**	**Subjects**
Never consumed		
	Female	**0**
	Male	**23(45%)**
Moderate/Occasional		
	Female	**0**
	Male	**10(20%)**
Frequent consumption		
	Female	**0**

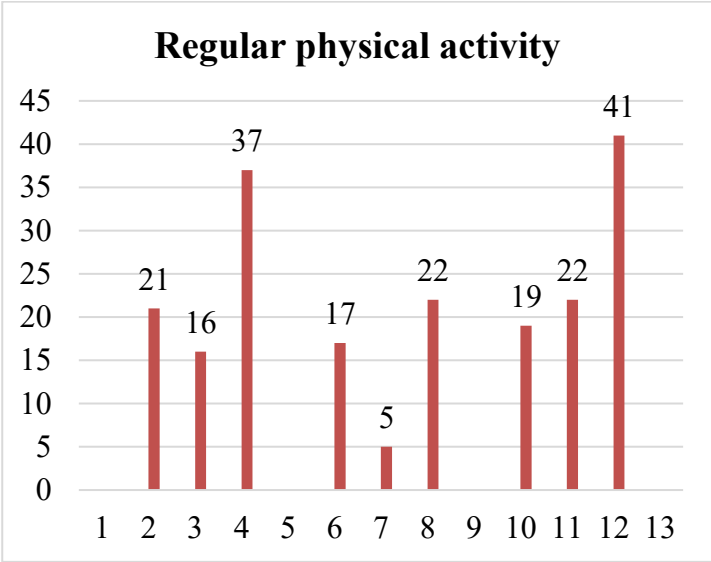
	Male	**18(35%)**
	Total	



55% of respondents have a habit of alcohol consumption

Table 3. Regular physical activity

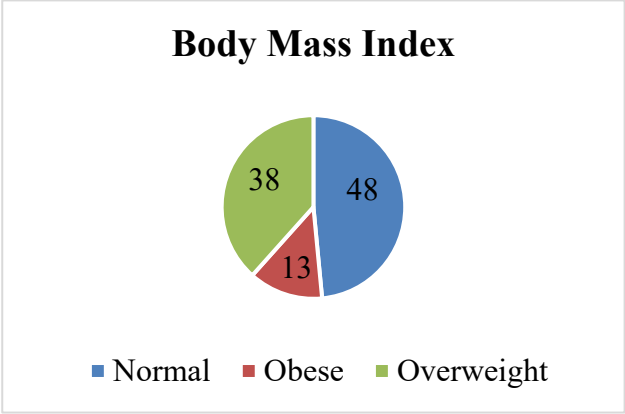
	Regular physical activity	Number (Percentage)
1. Never		
	Female	**26**
	Male	**19**
	Total	**45(37%)**
2. Occasionally		
	Female	**20**
	Male	**6**
	Total	**26 (22%)**
3. Always		
	Female	**23**
	Male	**26**
	Total	**49(41%)**



From the study, it was found that only 41% of the respondents have regular physical activity as a part of their lifestyle. This highlights the need for promoting regular exercise and physical activity as a crucial aspect of a healthy lifestyle to prevent and manage lifestyle diseases.

Table 4; Body mass index

BMI	Male	Female	Total
Normal	30	28	58(48%)
Obese	**6**	**10**	**16(13%)**
Overweight	**11**	**35**	**46(38%**
Total	**51**	**69**	**120**



38% of the population is overweight, with 16% being obese. This is high among females due to a lack of physical activity.

Table 5: Prevalence of lifestyle factors

	Prevalence of lifestyle factors	Men		women		Percentage
		Yes	No	Yes	No	
1	Tobacco and cigarette consumption	**22**	**29**	**0**	**69**	**43(out of men)**
2	Alcohol consumption	**28**	**23**	**0**	**69**	**54(out of men)**
3.	Both Tobacco and Alcohol	**31**	**20**	**0**	**69**	**(61% out of men**
4	Regular physical activity	**26**	**25**	**23**	**46**	**59%(No)**
5	Junk food consumption	**32**	**19**	**16**	**53**	**40%(Yes)**
6	**Overweight and obesity**	17	31	45	39	**(52% Yes)**
	Total					

43% of men consume alcohol and 54% of men use tobacco. It's important to be aware of these statistics and take steps towards a healthier lifestyle. It is important to note that lack of physical exercise, Overweight and obesity are more prevalent among women while junk food consumption is more among men

Among the various lifestyle diseases, cholesterol and diabetes were found to be the highest among both men and women. It's important to prioritize a healthy lifestyle to prevent such diseases.

The χ2 (Chi-square) test of independence was performed for each lifestyle factor to determine if there is a statistically significant association between the factor's prevalence (Yes/No) and **Gender (Men vs. Women)**.

The null hypothesis (H0) for the χ2 test is that **no association exists** between the lifestyle factor and gender, meaning they are independent. The alternative hypothesis (HA) is that a **significant association exists**.

Here is a summary of the results, with a conclusion based on a standard significance level of α=0.05:

χ2 Test Results for Lifestyle Factors

Lifestyle Factor	χ2 Statistic	p-value	Conclusion (at α=0.05)
Tobacco and cigarette consumption	33.6224	0	Reject H0 (Significant Association)
Alcohol consumption	46.3904	0	Reject H0 (Significant Association)
Both Tobacco and Alcohol	53.4219	0	Reject H0 (Significant Association)
Regular physical activity	3.0848	0.079	Fail to Reject H0 (No Significant Association)
Junk food consumption	17.5064	0	Reject H0 (Significant Association)
Overweight and obesity	3.3459	0.0674	Fail to Reject H0 (No Significant Association)

Significant Association (p<0.05)

The Chi-square test results revealed that for certain lifestyle factors—such as tobacco and cigarette use, alcohol consumption, and junk food consumption—the p-value was less than 0.05, leading to the rejection of the null hypothesis. This indicates a statistically significant association between these behaviors and gender. In simpler terms, the proportion of individuals engaging in such habits differed significantly between men and women, suggesting that gender plays an influential role in the prevalence of these lifestyle risk factors.

Conversely, for factors such as regular physical activity (p = 0.0790) and overweight or obesity (p = 0.0674), the p-value exceeded 0.05, resulting in the failure to reject the null hypothesis. This suggests that there is no statistically significant association between these factors and gender. Although minor variations were observed in the data, these differences are likely due to random chance rather than gender-based disparities. Notably, the p-values for these variables are close to the 0.05 threshold, which some researchers might interpret as marginally significant; however, they do not meet the conventional level of statistical significance (α = 0.05).

Table 6: Prevalence of lifestyle diseases

Prevalence of lifestyle disease in study population	**Men Number/percentage**	**Women Number/Percentage**	**Total percentage**
Hypertension	4(7.8)	8(11.5)	12
Backpain	8(15.6)	17(24)	21
Heart diseases	5(9.80)	2(2.8)	6
Diabetes	14(27)	19(27.5)	28
Cholesterol	15(29)	18(26)	28
Cancer	3(5.8)	2(2.8)	4

Respiratory diseases	2(3.9)	3(4.3)	4
Both 4 and 5	10(19.6)	11(15.9)	18
Both 3 and 4	4(7.8)	6(8.6)	8
Both 4 and 7	5(9.8)	3(4.3)	7
Total	51(Number)	69(number)	120(Number)

Diabetes and cholesterol-related disorders emerged as the most prevalent health conditions, each affecting approximately 27.5% of the total population. Cholesterol levels were notably higher among men (29%), and men were found to be over three times more likely to report a diagnosis of heart disease compared to women. Conversely, conditions such as back pain and hypertension were more prevalent among women. While heart diseases were significantly higher in men, the incidence of diabetes was nearly equivalent across both genders (27%). Overall, diabetes and cholesterol disorders represented the most common comorbidities among the study population, highlighting the growing burden of metabolic and cardiovascular risk factors within the community.

Conclusion

More than half of the urban population in Palakkad has lifestyle risk factors which are associated with lifestyle diseases. There is a need for population-based programs at the primary level that focus on lifestyle modifications to prevent or intervene in the occurrence of such diseases. Emphasis should be given to early detection, tracking of risk factors and promotion of high-quality research and development for the prevention and control of non-communicable diseases. Targeted interventions and awareness campaigns may be necessary to address specific lifestyle factors that contribute to lifestyle diseases in different segments of the population. This can help prevent or intervene in the occurrence of such diseases and promote a healthier lifestyle.

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