

Prevalance of Lifestyle Associated Risk Factor for Non-Communicable Diseases among Young Male Population in Urban Slum Area At Mayapuri, New Delhi

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Abstract

Aim: The purpose of study was to estimate the prevalence of selected risk factors of non-communicable diseases (NCDs), smoking, alcohol consumption, physical inactivity, fruit and vegetable consumption, overweight and obesity, hypertension and to investigate the association with selected socio demographic factors among 20 -40-year-old male population of urban slum area of Mayapuri New Delhi. As risk factor are started at very early year of age and should be intervened in the early age. Slum community are at major risk of NCD due to constrains.

Materials and methods: A household based cross-sectional study conducted with random cluster sampling. 200 participants were selected for the study who were 20 – 40-year-old males. The WHO STEP wise approach was adapted to risk factor survey. Only Step 1 and step 2 were take due to lake of manpower and funding.

STEP (1) SOCIO-DEMOGRAPHIC characteristics and NCD risk factors were undertaken by questionnaire.

STEP (2): physical anthropometric measurements and blood pressure were measured.

Result: The main findings of the present study is high prevalence of NCDs risk factors, smoking (39%), alcohol consumption (60%), low intake of fruits and vegetable (78%), lake of physical activity (52%), overweight (7%), hypertension (19%) and Framingham risk scores are high in selected population. In multivariable analysis, high age, low education, were associated with tobacco and alcohol consumption and more than (60%) of total respondent lived with three or more risk factors of NCDs among the study population.

Conclusion: The present study that the prevalence's of NCD risk factors in the urban slum population of the Mayapuri area was generally high. Almost 60 % adult have more than one risk factor present, and one third has 3 – 5 risk factors present based on the Framingham risk estimates, more than one – fourth of the population have moderate to high risk of developing CHD within next 10 years. The present study indicates increasing trend in of NCDs risk factors will lead to increase in NCDs. It will put an enormous pressure on Indian health system and economy. Prevention strategies should be given high priority.

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I. Introduction:

Globally, deaths from non-communicable diseases are expected to climb to 49.7 million in 2020, an increase of 77% in absolute numbers and increase in their share of the total from 55% in 1990 to 73% in 2020⁽¹⁾.

NCDs burden can be reduced by controlling common modifiable risk factors. In slums, the prevention and control of NCDs has been set up second to third priority. In this regard, the estimation of the burden of NCDs and their risk factors is essential in order to effectively implement public health policies »Among adults over 20 years of age, the estimated prevalence of CHD is around 3-4 per cent in rural areas and 8-10 per cent in urban areas, representing a two-fold rise in rural areas and a six-fold rise in urban areas between the years 1960 and 2000.⁽²⁾

»Today, the health of young people is critically linked to the health-related behaviours they choose to adopt. Although morbidity and mortality from non-communicable diseases mainly occur in adulthood, exposure to risk factors begins in early years. Early intervention will be critical to reduce the occurrence of lifestyle

diseases and associated complications in the vulnerable population. Hence, I took up this study to create awareness on risk factors and measures to combat these diseases among the study subjects (young population).

AIMS AND OBJECTIVES. To Investigate the prevalence of lifestyle-associated risk factors for non-communicable diseases among young male population in urban slum area.

METHODS: Geography Mayapuri is a locality in West Delhi. It used to be a major hub of small scale industries, Demography :the total population of Mayapuri slum area is estimated to be 20000 people **Study design** A household based crosssectional study design was adapted to assess the prevalence, levels of risk and the major risk factors for developing non communicable disease(hypertension and diabetes)among a representative sample in urban slum area Mayapuri New Delhi with the use of structured questionnaire on formal interview basis as well as direct physical measurement. The study took place in Mayapuri urban slum area of New Delhi from 2nd April 17 to 28th April. 17 The study will be conducted among young males of 20 to 40yrs in urban slum area .Primary data was collected with reference to WHO STEPS approach for non-communicable diseases risk factor assessment with particular emphasis on steps 1 and 2.

Step (1) Questionnaire survey was based on socio-demographic characteristics, smoking, alcohol consumption, physical inactivity, fruits and vegetables consumption, history of hypertension and diabetics.

Step (2) Physical measurement included blood pressure, body height, weight, waist, blood pressure and pulse rate. Sample of 200 people was taken.

II. Results

In total of 120 out of 200 participants under study replies they consume alcohol a total of 60%. The main findings of the present study is high prevalence of NCDs risk factors, smoking (39%), alcohol consumption (60%), low intake of fruits and vegetable (78%), lake of physical activity (52%), overweight (7%), hypertension (19%) and Framingham risk scores are high in selected population. In multivariable analysis, high age, low education, were associated with tobacco and alcohol consumption and more than (60%) of total respondent lived with three or more risk factors of NCDs among the study population.

prevalence of risk factor is statically significant in the study population. Association of young age with more habits was also significant (p <.01). association of risk factor with less education is also statically significant (p <.001).In multivariable analysis, high age, low education, were associated with tobacco and alcohol consumption and more than (60%) of total respondent lived with three or more risk factors of NCDs among the study population.

Table of risk factors with demographic characteristics

S.no	Variable	Habits				P Value
		No habit	alcohol	tobacco	Alcohol and tobacco	
1.	Age					0.016*
	20-25 -----	35(58.3)	11(44.0)	13(54.2)	27(29.3)	
	26-30-----	14(23.3)	6(24.0)	5(20.8)	23(25.3)	
	31-35-----	8(13.3)	5(20.0)	1(4.2)	19(20.9)	
	36-40-----	3(5.0)	3(12.0)	5(20.8)	22(24.0)	
2.	Level of education					0.001*
	No formal schooling-----	1(1.7)	3(12)	2(8.3)	16(17.6)	
	Less than primary school -----	8(13.3)	4(16.0)	4(16.7)	26(28.6)	
	Primary school completed-----	14(31.7)	0(0.0)	4(16.7)	20(22.0)	
	Secondary school completed-----	19(31.7)	13(52.0)	9(37.5)	26(28.6)	
	Collage/University completed-----	17(28.3)	5(20.0)	5(20.8)	3(3.3)	
Post graduate degree----	1(0)	0(0)	0(0)	0(0)		
3.	BMI					0.648
	underweight	15(25.0)	4(16.0)	2(8.3)	12(13.2)	
	normal	35(58.3)	18(72.0)	19(79.2)	67(73.6)	
	overweight	2(3.3)	1(4.0)	1(4.2)	2(2.2)	
	obese	8(13.3)	2(8.0)	2(8.3)	10(11.0)	
4.	Blood pressure					0.48*
	low	22(36.7)	3(12.0)	6(25.0)	23(25.3)	
	normaL	33(55.0)	16(64.0)	15(62.5)	44(48.4)	
	high	5(8.3)	6(24.0)	3(12.5)	24(26.4)	

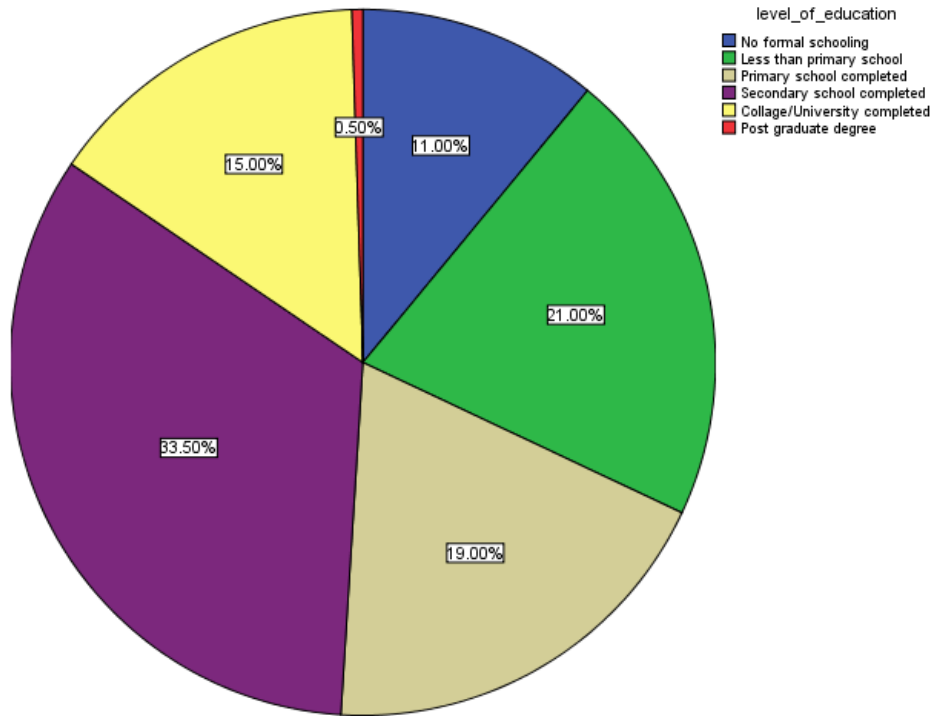


Figure-1: levels of education (n=200)

As study was taken place in the slum area education of the population was very less. More than 50% of the population was not completed secondary school. It was scenario of urban slum of Delhi where ,many initiations from the side of government and many NGO’s were available .we could not imagine the situation of rural slums and urban slums of less developed areas.

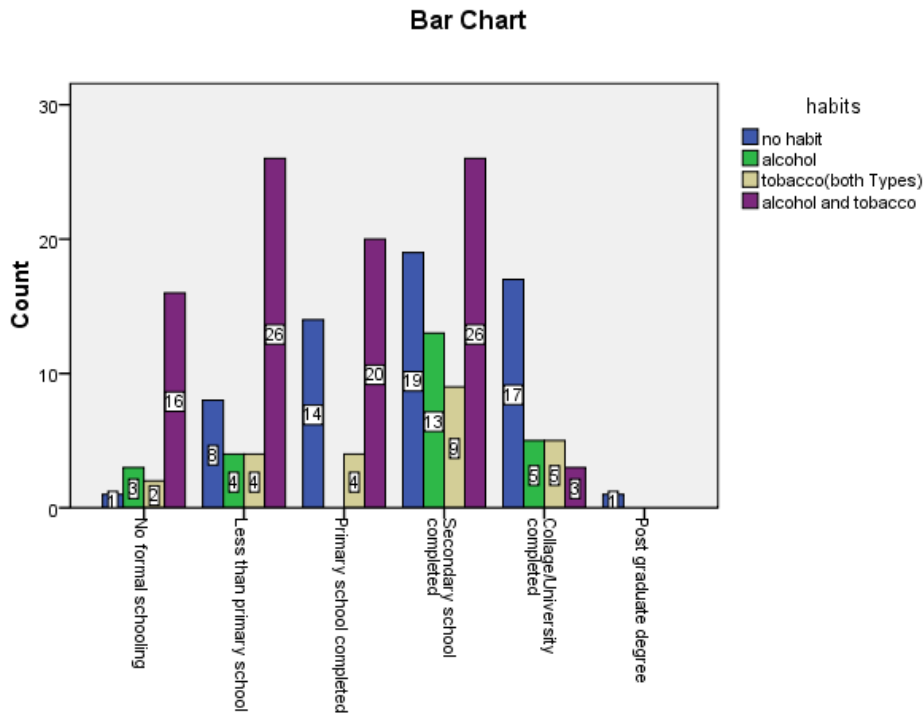


Figure 2: shows that 60 participant shad no habit like alcohol intake or tobacco use. Whereas 91 participants use to have alcohol and tobacco both. Only 25 participants only consumed alcohol and 24 participants consumed any form of tobacco.

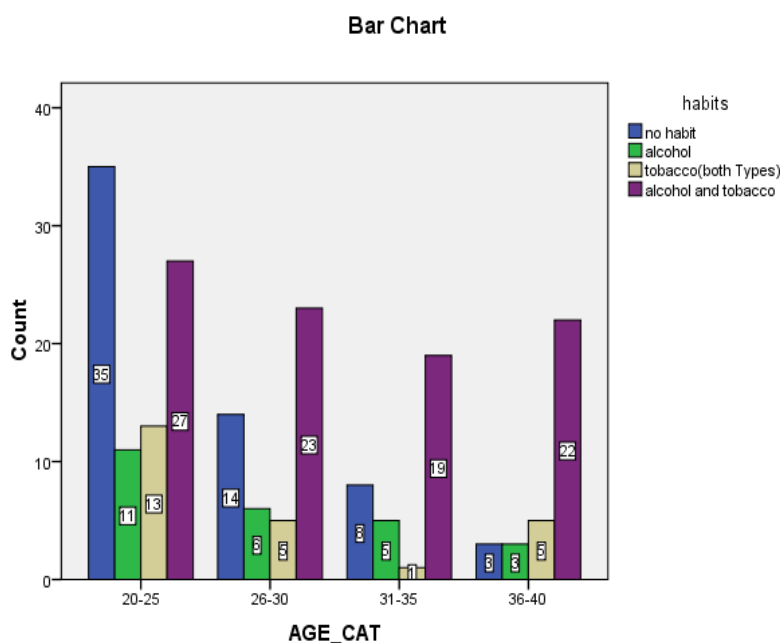


Figure 3: figure showing the association between age categories of participants under study and habits taken up by them (n=200)

III. Discussion

This research study attempted to provide information on Mayapurislum population aged 20- 40 years and their knowledge and practices of two NCD risk factors, and reported their knowledge and practices towards physical activity and fruit and vegetable consumption.

The most common life style disease in developing nations like India is Diabetes and Hypertension.³ The common risk factors for both were obesity, decreased physical activity, stress, hereditary, alcohol, and smoking. Identifying these risk factors will help to reduce the incidence of the lifestyle diseases and effective implementation of lifestyle modifications at primary care level also can reduce the mortality and morbidity rates.⁴

The mean age of participants was 28.4 years. 67(33.5%) had completed secondary school. As the study was conducted in slums only one participant had completed his post graduate degree and around 30 had completed college or have a degree. About 84% of population had not completed senior secondary school. Only 16 % participants had completed graduation. 54% of participants are using tobacco in various forms. Out of these 39.5% are currently smoking cigarettes, bidis and hukkah and 18% are tobacco chewers. Maximum number of participants using tobacco in any form belonged to the age group of 25 to 30.

60% of total study population are consuming alcohol. When questioned about the frequency, 7.5% are consuming alcohol regularly.

78% of study population are not consuming adequate amount of fruits and vegetables, Lack of physical activity was found in around 39%. 7% were obese and hypertension was detected. NCD risk factor globally is raised blood pressure (to which 13% of global deaths are attributed), followed by tobacco use (9%), raised blood glucose (6%), physical inactivity (6%), and overweight and obesity (5%) (13). Prevalence of these factors is found more in urban slums Delhi. this study show high prevalence of smoking than National family health survey III (NFHS III) reported slightly prevalence of smoking in men (33.1%) in urban areas.³ However prevalence of smoking is slightly low 39.5% in this study compared to the findings of study by Gupta et al in Haryana (men-40.8%)⁷.10 More prevalence of daily smokeless tobacco users (men-18.%) when compared to study done by Gupta et al (men-10.5%) and less than found in NFHS III (men-31.1%).^{39,40}

Though a mean age of initiation of tobacco was between 20 and 22 years with standard deviation of 6-7 years, few starts using tobacco especially smokeless tobacco as early as 10-12 years of age.

Early initiation of tobacco use causes serious public health problem. It shows Poor implementation of tobacco control act and easy availability of pan masala, areca nut and Gutkha resulted in increased the use of smokeless tobacco.

Among the older age groups had a higher blood pressure. Study done by Gaurav et al in urban slum of Mumbai in >35 years age group showed similar trend.⁴ Different trend of mean systolic blood pressure 116.6 mmHg in the 25-64 years of age group was noted in study done by Chadha et al in Delhi.⁵

In current study, obesity was present in 7% of participants. It showed a significantly higher prevalence as compared to their socioeconomic status. NFHS II and III showed an increasing prevalence of obesity in Indian men from 10.6% in 1998-99 to 12.6% in 2005-06.³ This is less than that seen in the current study. In present study prevalence of obesity increased as socio economic status improved from poorest to richest.

A study done by Gupta R et al in eleven cities across India reported that 38.8% of men were physically inactive. Different trend and findings noted in our study (men-39%) which may be due to lower socioeconomic status and sociocultural factors among urban slum.⁷

Consumption of fruits and vegetables was very low(78%) among study participants which probably could be due to the low per capita income and lack of awareness.

The majority of male (39%) youth are not receiving the recommended amounts of daily vigorous physical activity which implies low levels of physical activity, to meet the recommendations of at least 3 days of vigorous physical activity at a minimum of 30 minutes per day. In summary the main findings of the present study are high prevalence of NCDs risk factors, smoking and tobacco chewing (54%), alcohol consumption (60%), low intake of fruits and vegetable (78%), lake of physical activity (39%), overweight (7%), hypertension (19%) were high in selected population.

In multivariable analysis, high age, low education, were associated with tobacco and alcohol consumption and more than (60%) of total respondent lived with three or more risk factors of NCDs among the study population.

IV. Conclusion

The prevalence of risk factors for life style diseases is high. The impact of health education on risk factors of lifestyle disease was statistically significant. Targeting groups who are at risk will help to reduce the burden arising due to lifestyle disease. More than 60% population of slum have more than one the risk factor present and one third has 3-5 factors present. Implementation of relevant health polices and health promotional activity are advised for people who are at risk.

From finding from our study we conclude that the epidemiological transition is occurring in urban slum. The urban slum population already has a high burden of risk factors for NCDs, especially smoking, smokelesstobacco, alcohol and inadequate fruits and vegetable consumption. Urban slum population is facing an increasing burden from raised blood pressure. Finding a way against NCDs requires action at national, local and community levels.

Recommendations:

Recommendation for slum population are that preventive strategies to be put forward should target **younger population.**

- 1: There is a need to increase the level of education and provide health information to increase the awareness of diseases.
- 2: Programs for the raising the awareness regarding side effect of smokeless tobacco consumption, particularly betel quid chewing and harmful consumption of alcohol should be developed.
- 3: Establishment of a health facility-based screening programs in area.
- 4: Formulation of polices to control the incidence of tobacco use in work place and other public places.
- 5: Embarking on community-based health education programme on the risk factors for NCDs and preventive strategies.
- 6: Strengthening action to promote healthy diet and physical activity in schools.
- 7: At national level, forming appropriate policies for tobacco and alcohol control, promotion of adequate physical activity and healthy diet is required.
- 8: At local level, health system needs to be reoriented to address the challenge of NCDs. We have to create an environment that helps adoption of healthy lifestyle.

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