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Prevalence of Lifestyle Associated Risk Factors for NCDs among Young Male Population in Urban Slum at Mayapuri, New Delhi

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Abstract: ***Non communicable diseases are considering as major public health issue among adults mostly attributed by unhealthy lifestyle and poor diet. The study aims to estimate the prevalence of selected risk factors of non-communicable diseases (NCDs) like smoking, high alcohol consumption, physical inactivity, low fruit and vegetable consumption, having condition like overweight and obesity, hypertension, and investigate the association of such factors with selected socio demographic factors among 20 -40-year-old male population of urban slum area of Mayapuri New Delhi. A household cross-sectional study was conducted during 2nd April 2017-28th April 201 with random cluster sampling and with WHO STEP approach where 200 male participants with age range of 20-40 were selected for the study. High prevalence of NCDs risk factors were found as a result in which, smoking (39%), alcohol consumption (60%), low intake of fruits and vegetable (78%), lake of physical activity (52%) also Framingham risk scores were found high in the selected population. In multivariable analysis, ageing and 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. Such factors can be prevented with proper prevention steps.***

Keywords: Non Communicable Disease, Young population, Risk factors, Health awareness, Lifestyle related risks

1. Introduction

Deaths from non-communicable diseases are expected to climb to 49.7 million in 2020 globally, an increase of 77% in absolute numbers 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 considered as second to third priority. In this regard, the estimate 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 Coronary Heart Disease is around 3-4% in rural areas and 8-10% in urban areas, representing a significant rise in rural areas and in urban areas between the years 1960 and 2000[2]. Today, health of young people is critically linked to the health-related behaviors 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, the study was conducted to create awareness on risk factors and measures to combat these diseases among the study subjects (young population).

2. Problem Definition

This study was to estimate the prevalence of selected risk factors of major two non-communicable diseases (NCDs), Diabetes and Hypertension and investigate the association of such factors with selected socio demographic factors among 20 -40-year-old male population of urban slum area of Mayapuri New Delhi.

3. Method/ Approach

A household based cross-sectional study was conducted with random cluster sampling during 2nd April to 28th April, 2017 at Mayapuri- a locality in West Delhi. Mayapuri is a major hub of small scale industries, where nearby 2000 people live in slum area. 200 male participants with age range of 20-40 were selected for the study. A structured questionnaire was used for formal interviews; also they undergo direct physical examination.

WHO STEPS approach was used for primary data collection procedure for non-communicable diseases risk factor assessment. Steps 1 and 2 are as mentioned below;
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.

4. Result / Discussion

4.1. Result

The mean age of participants was 28.4 years. 67(33.5%) participants 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.

High prevalence of NCDs risk factors were found as a results in which smoking (39%), alcohol consumption (60%), low intake of fruits and vegetable (78%), lake of physical activity (52%), overweight (7%), hypertension (19%) were the major factors, also Framingham risk scores were found 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 such habits was also significant (p <.01) (Table 1).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 1: Table of risk factors with demographic characteristic

Sr. No	Variable	Habits				P value
		No Habit	Alcohol	Tobacco	Both	
1	**Age**					
	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)	0.016*
	36-40	3(5.0)	3(12.0)	5(20.8)	22(24.0)	

-Number (Percentage)

Association of risk factor with less education is also statically significant (p <.001)

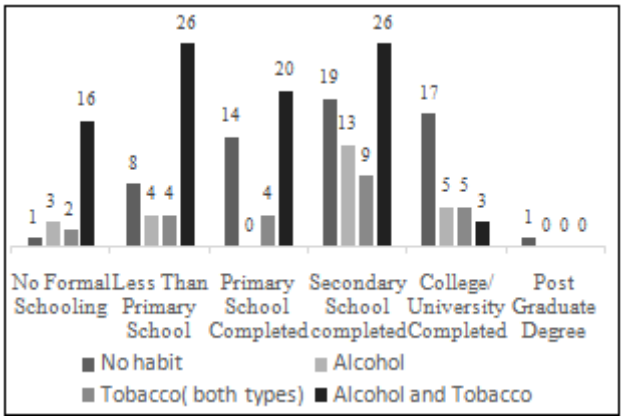

Figure 1: Association of Education with Habits

Along with this, following table is the result of physical examination

Table 2: Table of risk factors with Physical condition

Sr. No	Variable	Habits				P value
		No Habit	Alcohol	Tobacco	Both	
1	**BMI**					
	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)	0.648
	Obese	8(13.3)	2(8.0)	2(8.3)	10(11.0)	
2.	**Blood Pressure**					
	Low					
	Normal	22(36.7)	3(12.0)	6(25.0)	23(25.3)	
	High	33(55.0)	16(64.0)	15(62.5)	44(48.4)	
		5(8.3)	6(24.0)	3(12.5)	24(26.4)	0.48*

-Number (Percentage)

4.2. Discussion

This research study attempted to provide information on Mayapuri slum 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 nutrition 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]
54% of participants were using tobacco in various forms. Out of these 39.5% were smoking cigarettes, bidis and hukkah on daily basis and 18% of them were 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 was consuming alcohol. When questioned about the frequency, 7.5% were consuming alcohol regularly.78% of study population were not consuming adequate amount of fruits and vegetables, Lack of physical activity was found in around 39% of the participant. Around 7% participants were obese and detected with hypertension.

The study shows 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]. The prevalence of smokeless tobacco is found high (18%) than the results of study done by Gupta et al (10.5%), while it was less than results of NFHS III(31.1%)[3][7].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 were found with 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 the study done by Chadha et al in Delhi [5].

In this 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 this study indicates 39% of physical inactivity which may be due to lower socioeconomic status and sociocultural factors among urban slum [7]. Consumption of fruits and vegetables was very low as 78% of participants were not having frequent fruits and vegetables which may attributed to their low per capita income and lack of awareness. The majority of male 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.

5. 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. More than 60% population of slum have more than one risk factor present and one third has 3 to 5 factors present. Implementation of relevant health polices and health promotional activity are advised for people who are at risk. Study also 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, smokeless tobacco, alcohol. 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

6. Future Scope/ Recommendation

Based on the study and results following are the recommendation for slum population those preventive strategies to be put forward to 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) Required a health facility-based screening programs in area.
4) High need of policy formulation to control the incidence of tobacco use in work place and other public places.
5) Strengthening action to promote healthy diet and physical activity in schools. 6. At local level, health system needs to be reoriented to address the challenge of NCDs along with Communicable Diseases.

References

[1] US Centers for Disease Control and Prevention. Targeting Tobacco Use at a Glance 2008. Atlanta, GA: US Centers for Disease Control and Prevention; 2008.
[2] World Health Organization. Cardiovascular diseases. 2011; http://www.who.int/cardiovascular_diseases/en/.
[3] International Institute for Population Sciences. Ministry of Health and Family Welfare, Government of India. National family Health Survey (NFHS-3) 2005-06, India. V. 1. Mumbai: International Institute for Population Sciences 2007; 426-34.
[4] Gaurav RB, Kartikeyan S. Levels of blood pressure in an urban community. Bombay Hospital Journal 2001. Available at:http://www.bhj.org.in/journal/2001_4301_jan/ original_148.htm (accessed on 25th October 2015)
[5] Chadha SL, Radhakrishnan S, Ramchandran K. Prevalence, awareness & treatment status of hypertension in urban population of Delhi. Indian J Med Res 1990;92:233-40.
[6] Vamadevan AS, Prabhakaran D. Coronary heart disease in Indians: Implications of the INTERHEART study. Indian J Medical Research. 2010;132(5):561.
[7] Gupta R, Joshi P, Mohan V, Reddy KS, Yusuf S. Epidemiology and causation of coronary heart disease and stroke in India. Heart. 2008;94(1):1626
[8] Park K. Epidemiology of chronic non-communicable diseases and conditions. In: Textbook of Preventive and Social Medicine, 20th edn. Park K (Ed.). Jabalpur: Bhanot Publishers, 2009. pp. 335–6.

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