

Prevalence of Lifestyle Factors and Lifestyle Diseases Among Working Adult Urban Population in Hyderabad City

By

Bhavika Sheokand

*Dissertation submitted for the partial fulfillment of the
MBA Hospital and Health Management*

Academic year, 2016-2018



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TO WHOMSOEVER MAY CONCERN

This is to certify that **Dr Bhavika Sheokand** student of MBA Hospital and Health Management from The IIHMR University, Jaipur has undergone internship training at **Reliance General Insurance Ltd., Hyderabad** from **5th Feb., 2018** to **4th May, 2018**.

The Candidate has successfully carried out the study designated to her during internship training and her approach to the study has been sincere, scientific and analytical.

The Internship is in fulfillment of the course requirements.

I wish her all success in all her future endeavors.



Col.(Dr.) Ashok Kaushik
Dean, Academics and Student Affairs
The IIHMR University, Jaipur



Dr. Susmit Jain
Assistant Professor
The IIHMR University, Jaipur

May 04, 2018

CERTIFICATE OF INTERNSHIP

This is to certify that Ms. Bhavika Sheokand, of Indian Institute of Health Management Research (IIHMR), Jaipur, has successfully completed her On The Job training with Reliance General Insurance Company Limited under Health Claims department, from 5th Feb 2018 to 4th May 2018.

Project Title - "Prevalence of Lifestyle factors and lifestyle diseases among working adult urban population in Hyderabad city."

During this period of internship, she has displayed dedication to work and excellent logical and analytical ability.

We wish her best of luck in her future endeavors.

For Reliance General Insurance Company Limited



Garima Shukla

(Human Resources)

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This is to certify that dissertation titled ,“ *Prevalence of Lifestyle factors and lifestyle diseases among working adult urban population in Hyderabad city*” and submitted by Dr **BhavikaSheokand** , Enrollment no.IIHMR-U/01/2016-18/0403,under the supervision of Dr Susmit Jain , Assistant Professor , for award of MBA Hospital and Health Management of the University Carried out during the period 5thfeb 2018 to 5th may 2018 embodies my original work and has not formed the basis for the award of any degree, diploma , associate ship ,fellowship, titles in this or any other institute or other similar institution of higher learning.


Dr BhavikaSheokand

ABSTRACT

Prevalence of Lifestyle factors and Lifestyle diseases among working adult urban population in Hyderabad city

AUTHOR- Dr Bhavika

BACKGROUND

Important preventable lifestyle factors or risk factors contributing to NCDs are unhealthy diet, physical inactivity, exposure to tobacco smoke or the harmful use of alcohol. Lifestyle risk factors predict the future of Lifestyle diseases and underlie most non-communicable diseases.. These lifestyle factors are increasing as diets shift to foods high in fats and sugars, while work and living situations become more sedentary. Besides, tempting marketing of alcoholic beverages and tobacco products have also increased risk factors exposure, cumulating in an increased future diseases burden. Lifestyle diseases are becoming major health problems in India, especially working urban population who are supposedly more prone to lifestyle factors due to nature of working environment.

Lifestyle diseases are a major risk in Telangana & Andhra Pradesh, and experts say that the major threats in the two states are cancer, cardio-vascular diseases (CVD), diabetes and chronic respiratory diseases, which account 80 per cent of all known NCD cases and lead to loss of productivity in terms of debilitating the young working population.

OBJECTIVES

1. To assess knowledge of urban working population about lifestyle diseases and their risk factors.
2. To find distribution of lifestyle risk factors among urban population of Hyderabad city.
3. To find the association between lifestyle factors with lifestyle diseases.

METHODOLOGY

STUDY DESIGN

Cross-sectional, Descriptive & Exploratory study

DURATION OF STUDY

3 Months (5th Feb. 2018 TO 5th May 2018)

STUDY AREA

Urban areas of Hyderabad city with Special Reference to Reliance General Insurance Employees.

DATA COLLECTION METHODS

A pretested Structured self-administered questionnaire was asked from 348 respondents, from both male and female population in Hyderabad city.

DATA ANALYSIS PROCEDURE

Data regarding socio-demographic profile, history of tobacco smoking, alcohol consumption, regular physical activity, junk foods and history of hypertension, diabetes mellitus, cardiovascular diseases, Lower backache, asthma/COPD and stroke was collected. Height and weight was measured using the standard techniques. BMI was calculated and classified according to WHO classification. The data was entered in MS Excel spreadsheet and analyzed using mean and proportion. Chi-square test was used as test of significance with the help of advanced excel. The p-value of <0.05 was considered as significant.

RESULTS

Among the study participants 140 out of 348 had knowledge about lifestyle factors and lifestyle diseases.

Among the study subjects 85 subjects had lifestyle diseases making the prevalence of 24.42 percent. Lower back pain was the most common ailment with 10.8 percent of population suffering from the same followed by Hypertension (9.48%), Diabetes (6.03%) and Asthma/COPD (1.7%). Only two out of total study population gave history of stroke.

There was a significant association between lifestyle factors like tobacco and cigarette consumption, alcohol consumption, consumption of junk food and overweight and obesity with presence of lifestyle diseases. Null hypothesis is rejected, and Alternate hypothesis is accepted.

KEYWORDS- Lifestyle factors, diseases, smoking, Tobacco, Alcohol, Obesity, Diabetes, Hypertension, Asthma, Backache

Certificate by scholar

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Dr BhavikaSheokand

ACKNOWLEDGEMENT

Dissertation is a golden opportunity in a student's life for learning and self-development. I consider myself very lucky and honoured to have so many wonderful people lead me through in completion of this project.

I wish to express my gratitude and sincere thanks to **National Head of Reliance health insurance, Dr Mahesh and my Training Coordinator, Mrs Ankita Mittal**, for helping as me to complete my project with such a great learning curve. I'm also extremely thankful to **Dr. Nitin, and**, my teammates, for their immense support and guidance throughout my internship. Despite their busy schedule, all my teammates would regularly take out time to hear, guide and keep me on the correct path.

I also express my deepest thanks to **Dr Fazal, who** made my tenure in the organization easier with their formal and informal advice.

I express my deepest thanks to my guide, **Associate Professor, Dr. Susmit Jain**, IIHMR University, Jaipur for his prompt replies, able guidance and constant words of encouragement.

Last but not the least, I would like to give my sincere thanks to my parents for supporting me throughout this course.

Dr Bhavika Sheokand

Roll No-0403

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About Reliance General Insurance

Reliance General Insurance is an Indian privateinsurance company. It is a part of Reliance Group. Reliance General Insurance was incorporated on 17 August 2000. It received the license to conduct general insurance business in India from the Insurance Regulatory Development Authority of India (IRDAI) on 23 October 2000. Unlike most insurance companies, who have foreign partners, the firm is promoted solely by Reliance Capital.

Reliance General Insurance offers insurance services across the domains of motor, health, travel and home. The commercial insurance services include commercial vehicle, office and marine.

Motor insurance covers four-wheeler, two-wheeler and commercial vehicle. Services such as roadside assistance and cashless facilities through a network of around 2400 garages are provided.

Under Health, there are several plans to choose from. They include Healthgain (can be availed in installments), Wellness, Critical Illness and Personal Accident.

In travel, Reliance General Insurance provides plans for overseas trips such as Schengen, Asia and the US. Travel plans tailored for students and senior citizens are also available. The home insurance portfolio covers house contents against theft and damage. The cover also provides home assistance servicesⁱ

Prevalence of Lifestyle factors and Lifestyle diseases among working adult urban population in Hyderabad city.

CHAPTER-1

INTRODUCTION

Lifestyle, was originally coined by Austrian psychologist Alfred Adler in 1929 which means the way a person lives, A lifestyle is a characteristic bundle of behaviors that makes sense to both others and oneself in a given time and place, including social relations, consumption, entertainment, and dress.

Lifestyle Behaviors, the behaviors and practices within lifestyles are a mixture of habits, conventional ways of doing things, and reasoned actions. Surrounding social and technical systems can constrain the lifestyle choices available to the individual and the symbols she/he is able to project to others and the self. [1]

Lifestyle diseases or Non-communicable diseases (NCDs) also known as chronic diseases, are long duration diseases, like **cardiovascular diseases** (like heart attacks and stroke), **cancers, chronic respiratory diseases** (such as chronic obstructive pulmonary disease and asthma) and **diabetes**. These are because of a combination of genetic, physiological, environmental and behavioral factors. However, important **preventable lifestyle factors** or risk factors contributing to NCDs are **unhealthy diets, physical inactivity, exposure to tobacco smoke** or the **harmful use of alcohol**. [1]

People of all age groups, regions and countries are affected by NCDs. These conditions are often associated with older age groups, but evidence shows that majority of deaths attributed to NCDs occur between the ages of 30 and 69 years. Of these "premature" deaths, over 80% are estimated to occur in low- and middle-income countries. [2]

According to recent WHO report nearly 61% of deaths in India are attributed to non-communicable diseases, including heart disorders, cancer and diabetes. According to published reports it has been observed that **occurrence of NCDs like hypertension and diabetes** are **becoming more common the urban areas, mainly metros, in India**. [3]

World Health Organization (WHO) has estimated that NCDs may cost India approximately US \$3.55 trillion by 2030 in terms of lost economic output. In 2012, WHO had claimed that NCDs contributed to 5.9 million deaths in India. Non-communicable diseases are a major

risk in Telangana&Andhra Pradesh, and experts say that the major threats in the two states are cancer, cardio-vascular diseases (CVD), diabetes and chronic respiratory diseases, which account 80 per cent of all known NCD cases and lead to loss of productivity in terms of debilitating the young working population. [4]

Assessment of burden of Non-Communicable Diseases

STEPS Wise Approach STEP-wise approach is developed by WHO to NCD Surveillance consists of a hierarchy of information which can be collected using standardized instruments and protocols to ensure comparability over time and across locations. It is based on sequential levels of surveillance of different aspects of NCDs, allowing flexibility and integration at each step. STEP 1 consists of collection of information by interview alone. This includes questions on tobacco and alcohol use, dietary and physical activity patterns. STEP 2 adds measurement of blood pressure and anthropometry. STEP 3 requires blood collection for estimation of blood sugar and cholesterol levels. At each level, there are core, expanded and optional questions. While core questions are mandatory for all users, the expanded and optional questions can be used depending upon local requirements. NCD risk factors targeted by STEPS approach have been chosen because they are measurable and modifiable. Also, available evidence indicates that reducing these risk factors is feasible and would have a major impact on the disease outcome. [5]

RATIONALE OF STUDY

Lifestyle risk factors predict the future of Lifestyle diseases and underlie most non-communicable diseases. The most common Lifestyle risk factors for most NCDs are tobacco use, physical inactivity, unhealthy dietary behavior, and the harmful use of alcohol. These lifestyle factors are increasing as diets shift to foods high in fats and sugars, while work and living situations become more sedentary. Besides, tempting marketing of alcoholic beverages and tobacco products have also increased risk factors exposure, cumulating in an increased future diseases burden. Lifestyle diseases are becoming major

health problems in India, especially working urban population who are supposedly more prone to lifestyle factors due to nature of working environment.

Hence there was need to carry out study to assess the lifestyle factors and lifestyle diseases and to know the prevalence of lifestyle diseases among urban working population in metro cities.

AIM OF THE STUDY

1. To assess the awareness about abnormal lifestyle and knowledge about associated lifestyle diseases in Hyderabad city.
2. To find the prevalence of lifestyle factors and lifestyle diseases in Hyderabad city.

RESEARCH QUESTIONS

1. What is the knowledge about lifestyle factors and lifestyle diseases in Hyderabad city?
2. Is there any association between lifestyle factors and lifestyle diseases?
3. What is the prevalence of lifestyle factors among urban population of Hyderabad city?

OBJECTIVES

GENERAL OBJECTIVE

To assess the prevalence of Lifestyle factors and lifestyle diseases among working adult urban population in Hyderabad city.

SPECIFIC OBJECTIVE

1. To assess knowledge of urban working population about lifestyle diseases and their risk factors.
2. To find distribution of lifestyle risk factors among urban population of Hyderabad city.
3. To find the association between lifestyle factors with lifestyle diseases.

HYPOTHESIS

H_0 : that the Lifestyle factors are not associated with lifestyle diseases

H_1 : that the Lifestyle factors are associated with lifestyle diseases

METHODOLOGY

STUDY DESIGN

Cross-sectional, Descriptive & Exploratory study

DURATION OF STUDY

3 Months (5th Feb. 2018 TO 5th May 2018)

SAMPLE SIZE

Sample Size Formula

$$n = \frac{Z^2 p(1 - p)}{d^2}$$

Where n = Sample Size

$Z = 1.96$ for 95 % CI

p = proportion of prevalence of lifestyle diseases [=65 % from previous studies]

$1-p = 0.33$

d = Margin of Error [taken as 5% or 0.05]

$n = 1.96^2 \times 0.65 \times 0.35 / (0.05^2)$

$n = 348$

Hence the Sample size will be taken 348.

STUDY POPULATION

Study population included adult male and female population working in urban areas of Hyderabad age 21-59 Years.

STUDY AREA

Urban areas of Hyderabad city with Special Reference to Reliance General Insurance Employees.

SAMPLING TECHNIQUE

Convenient Sampling

DATA COLLECTION METHODS

A pretested Structured self-administered questionnaire was asked from 348 respondents, from both male and female population in Hyderabad city.

DATA ANALYSIS PROCEDURE

Data regarding socio-demographic profile, history of tobacco smoking, alcohol consumption, regular physical activity, junk foods and history of hypertension, diabetes mellitus, cardiovascular diseases, Lower backache, Asthma/COPD and stroke was collected. Height and weight was measured using the standard techniques. BMI was calculated and classified according to WHO classification. The data was entered in MS Excel spreadsheet and analyzed using mean and proportion. Chi-square test was used as test of significance with the help of advanced excel. The p-value of <0.05 was considered as significant.

ETHICAL CONSIDERATION

Informed consent had been taken from the higher authority and confidentiality, respect and dignity of the data was maintained during the study. Information received during the procedure was not misused in any form.

CHAPTER-2

LITERATURE REVIEW

Rural –urban differences reveal that differences reveal that risk factors obesity, hypertension, high cholesterol low HDL cholesterol and diabetes are more in urban areas. The INTERHEART -South Asia study identified that eight established coronary risk factors-abnormal lipids, smoking, hypertension, diabetes, abdominal obesity, psychosocial factors, low fruit and vegetable consumption, and lack of physical activity-accounted for 89% of the cases of acute myocardial infarction in Indians [6]

Over the past fifty years prevalence of obesity, hypertension, hypercholesterolemia, arthritis and backpain and diabetes have increased significantly in urban (R^2 0.45-0.74) and slowly in rural areas (R^2 0.19-0.29) Prevalence of hypertension has increased in both urban and rural subjects and presently is 25-40% urban and 10-15% among rural adults [7]

Diabetes it has more than quadrupled in the last 20 years from <1 - 3% to 10 - 15% in urban and 3 - 5% in rural areas [8]

Studies have reported increasing obesity as well as truncal obesity, due to sedentary lifestyles and psychosocial stress in the country [9]

Risk factors such as obesity, sedentary lifestyle, stressful working. conditions, consumption of fried food, etc for heart diseases are increasing in urban areas [10]

Deaths due to chronic heart diseases in India will increase to 2.03 million annually by 2010 and 2.58 million by 2020 (it was 1.59 million in 2000). The already high number of people with diabetes — 41 million — is expected to rise by 170 per cent in the next 20 years. One in every three urban Indians has high blood pressure, which is expected to increase by 60 per cent in the next 20 years. [11]

Some Southern Indian studies showed a 40% increase in prevalence over a period of 6 years in diabetes [11]. In a National Urban Diabetes Survey in 2000 it was found that Hyderabad 16.6% of diabetes .In most of metros and cities of India presently 10-15% of population is having diabetes.

National representative data for obesity in India is unavailable, however available studies in Chennai and Delhi has shown prevalence of 6.2% and 7.4% respectively [12]. Diabetes cuts 7.5 years of life in males and 8.2 years of life in females if diagnosed at 50 or more years of age [13]. Mortality data from the Registrar General of India shows that cardiovascular diseases are-a-major cause of death in India now. Current prevalence rates are 10 — 12% in urban and 4 — 5% in rural [9]

In India 47% of male and 14% of the female population use tobacco in some form , resulting in nearly 1 million premature deaths annually. Projections to the year 2020 show that 61 million DALYs are likely to be lost due to cerebrovascular disease each year, with more than four-fifths occurring in the developing countries [14]. Stroke burden in India has been rising in the last few decades, in contrast to developed countries where it has plateaued or decreased. The average annual incidence rate of stroke in India currently is 145 per 100,000 population which is higher than some of the western countries.

Recent studies using revised criteria (BP $\geq$ 140 and/or 90 mmHg) have shown a high prevalence of hypertension among urban adults. Men 30%, Women 33% in Jaipur 1995), men 44%, women 45% in Mumbai (1999), men 31%, women 36% in Thiruvananthapuram_(2000), 14% in Chennai (2001), and men 36%, women_37% in Jaipur_ (2002). Hypertension diagnosed by multiple examinations has been reported in 27% male and 28% female executives in Mumbai (2000) and 4.5% rural subjects in Haryana (1999). There is a strong correlation-between-changing lifestyle factors and increase in hypertension in India. Pooling of epidemiological studies shows that hypertension is present in 25% urban and 10% rural subjects in India. In another study conducted on 4608 women it was found that 39.2% (32% in rural and 48% in urban). The awareness about hypertension was 42.8% (24.6% rural and 56.8% urban). Of these 38.6% of the women were on treatment and of those treated, controlled blood pressure was observed in 21.5%. At an underestimate, there are 31.5 million hypertensives in rural and 34 million in urban populations.[15]

CHAPTER-3

INTERPRETATION OF RESULTS

Out of the 348 study participants ,176 (51%) were male and 172 (49%) were females. There was almost equal distribution of both sex. Mean age of the participants was 31.8 years. Age range of the study participants was 23-57 years.61 percent of population were in the age group of 18-30 years , 35 percent of population was in the age group of 30-50 years while only four percent of population was 50 and above. There was almost equal distribution of both sexes.

Education Status of 59 percent of population was graduate or below, 40 percent of population were post graduate while only one percent of population was post doctorate.

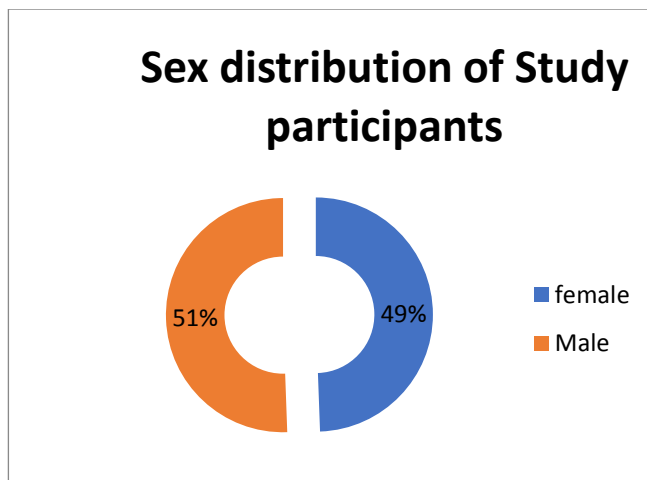


Figure 1-sex distribution

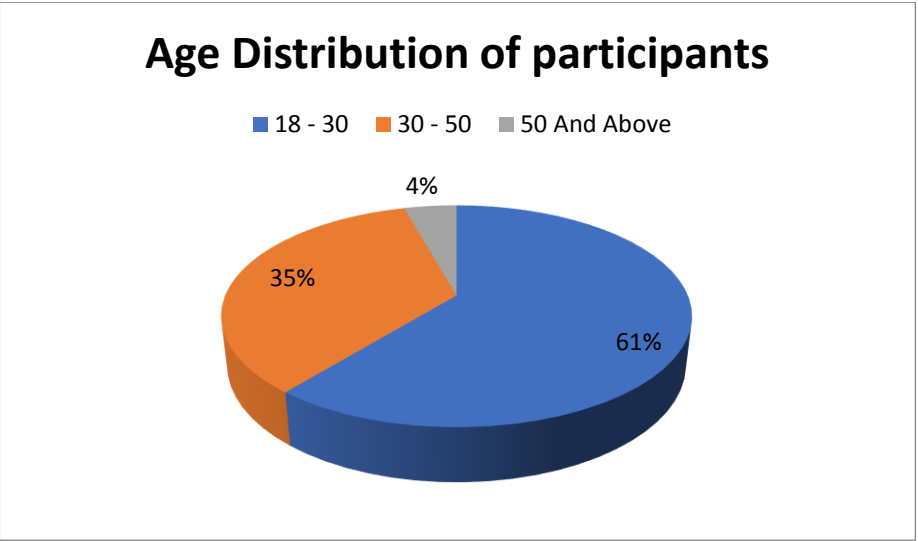


Figure 2- age distribution

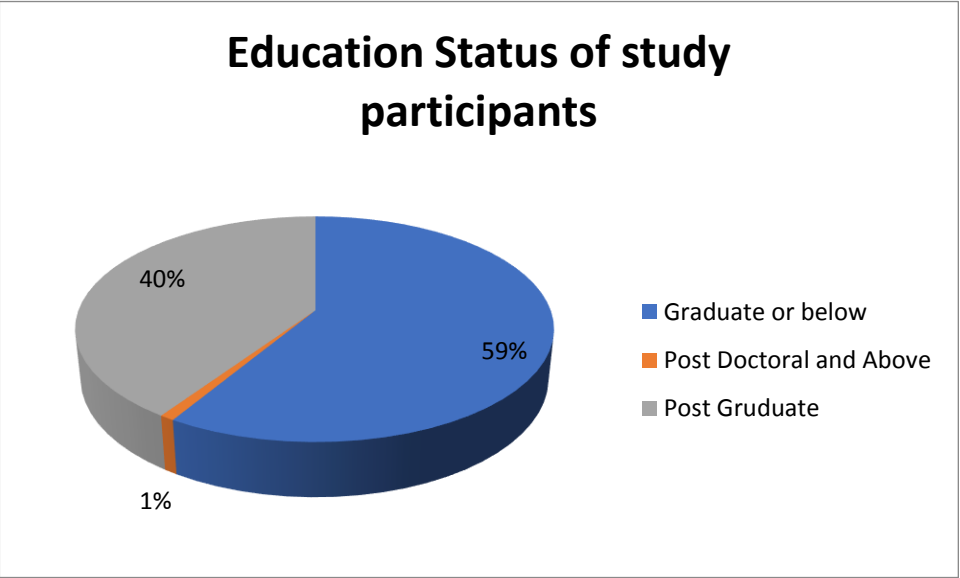


Figure 3-education status

Table 1- Sociodemographic profile

Sex	Subjects
female	172
Male	176
Grand Total	348
Age-group	Subjects
18 - 30	212
30 - 50	121
50 And Above	15
Grand Total	348
Education Status	Subjects
Graduate or below	204
Post Doctoral and Above	3
Post Gruduate	141
Grand Total	348

273 out of 348 study participants (78.4%) had one or more lifestyle risk factors .Regular physical activity was not seen in 75.8 percent of subjects , 41.1 percent of subjects were consuming tobacco or cigarette , 48.3 percent alcohol consumption and 59.4 percent junk food consumption. 24 percent of study participants were overweight or obese according to WHO Classification of BMI. Only 75 out of 348 participants (21.5%) used to have healthy food and exclude high fat content food from their diet.

Table 2-Tobacco consumption status

Smoking Status	Tobacco Use
1.Ex-Smoker	17
female	5
1.<5	5
Male	12
2.5-10	12
2.Current Smoker	126
female	46
1.<5	24
2.5-10	11
4.More than a packet a day	11
Male	80
1.<5	40
2.5-10	17
3.10-20	6
4.More than a packet a day	17
3.Never Smoked	205
female	121
Male	84
Grand Total	348

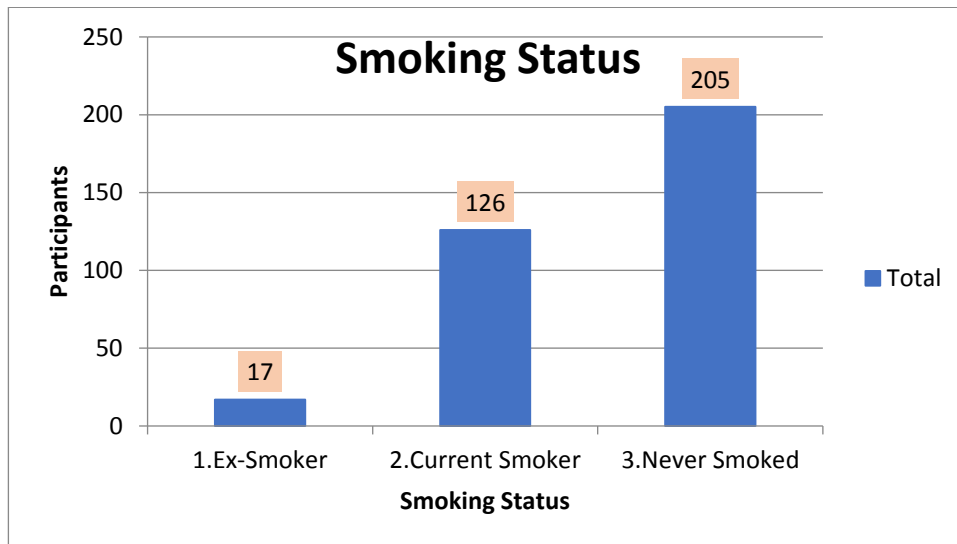


Figure 4-smoking status

Table 3-Alcohol consumption of study participants

Alcohol Status	Subjects
1.Never Consumed	180
female	114
Male	66
2. Moderate/Occasional Consumption	129
female	50
Male	79
3.Frequent Consumption	39
female	8
Male	31
Grand Total	348

Table 4- Regular Physical activity

Variable	1.Never/Almost never	2.Occasional	3.Often	4.Very Often	5.Always	Grand Total
Regular physical activity outside work?	32	152	80	65	19	348

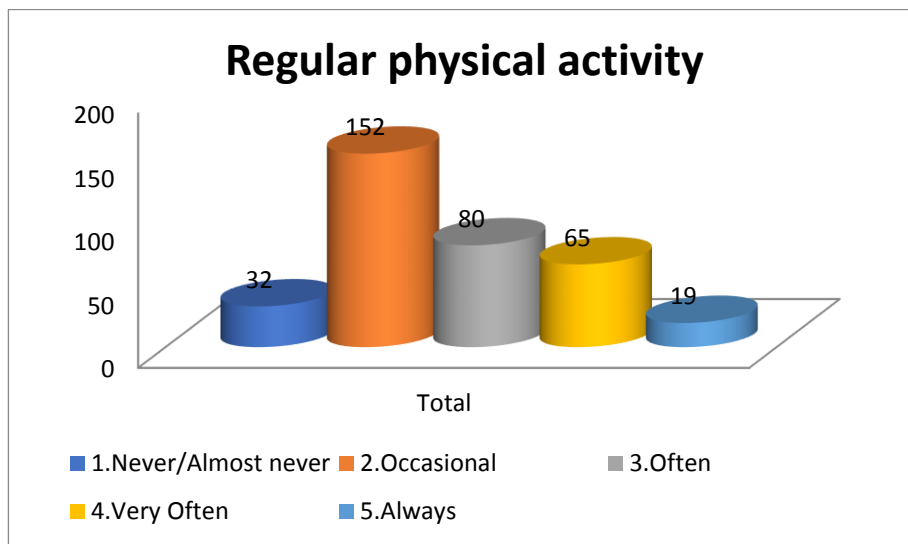


Figure 5- Regular Physical activity

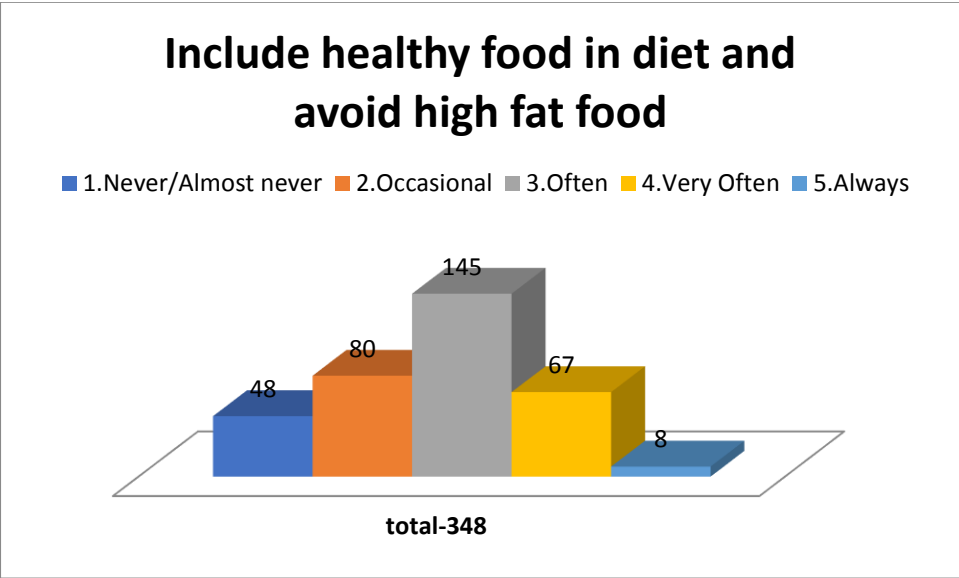


Figure 6-Healthy diet

Table 5-BMI According to WHO formula

BMI Index	Subjects
Normal	265
Obese	13
Overweight	70
Grand Total	348

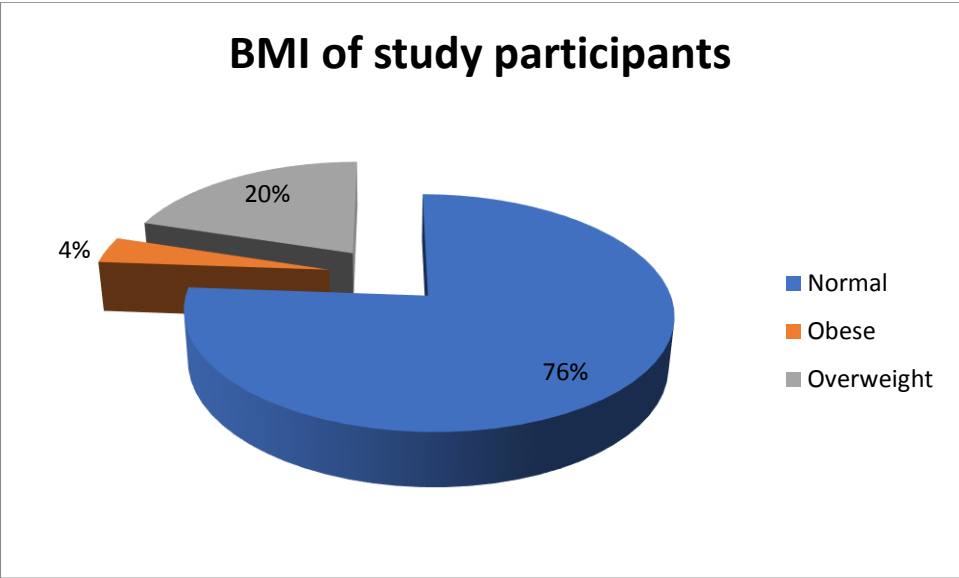


Figure 7-Healthy diet

Table 6-Prevalence of lifestyle factors in participants

Lifestyle factors	Variables
Overweight and Obesity	83
Tobacco and Cigarette Consumption	143
Alcohol consumption	168
No Regular Physical Activity	32
Junk Foods	207

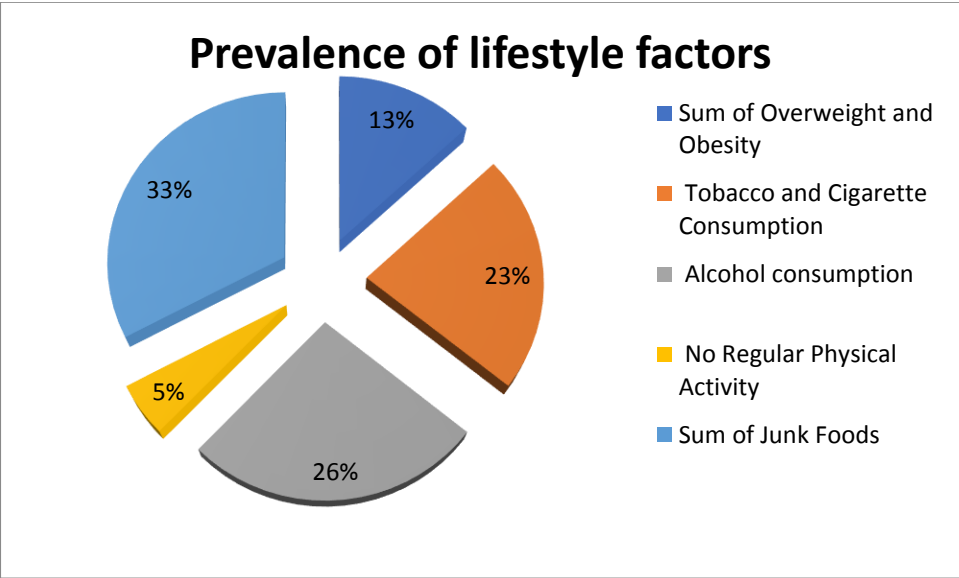


Figure 8-prevalence of lifestyle factors

Among the study participants 140 out of 348 had knowledge about lifestyle factors and lifestyle diseases.

Table 7-Knowledge about lifestyle factors and lifestyle diseases

knowledge about lifestyle factors and lifestyle diseases	Subjects
No	208
Yes	140
(blank)	
Grand Total	348

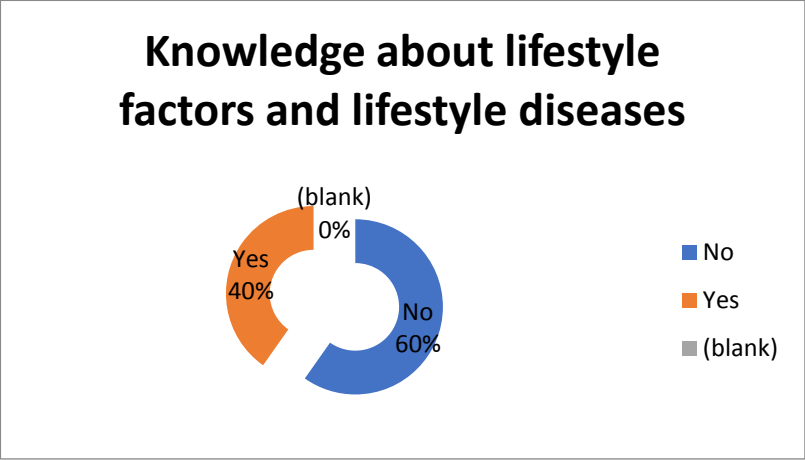


Figure 9-Knowledge about lifestyle factors and lifestyle diseases

Among the study subjects 85 subjects had lifestyle diseases making the prevalence of 24.42 percent. Lower back pain was the most common ailment with 10.8 percentof population suffering from the same followed by Hypertension (9.48%) , Diabetes (6.03%) and Asthma/COPD (1.7%). Only two out of total study population gave history of stroke.

Table 8-: prevalence of lifestyle disease in study population

Lifestyle disease	
Hypertension	33
No lifestyle disease	263
Bronchial Asthma	6
Lower Back Pain	37
Stroke	2
Diabetes	21

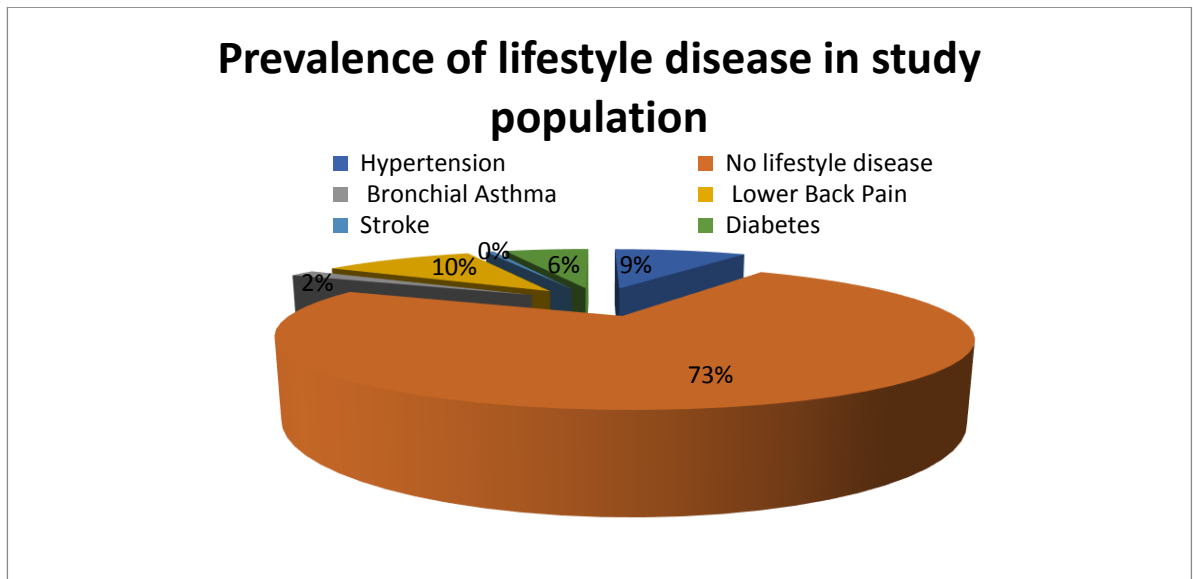


Figure 10-prevalence of lifestyle disease in study population

There was a significant association between lifestyle factors like tobacco and cigarette consumption, alcohol consumption, consumption of junk food and overweight and obesity with presence of lifestyle diseases. Coefficient of multiple determination or R squared is 5%. F value for ANOVA is 4.70 which is higher than Critical f value of 0.001. P value is greater than .05, Hence Null hypothesis is rejected and Alternate hypothesis is accepted.

Table 9- Association of lifestyle disease with lifestyle factors

LIFESTYLE DISEASE YES/NO									
SUMMARY OUTPUT									
Regression Statistics									
Multiple R	0.2281541								
R Square	0.0520543								
Adjusted R Square	0.0409995								
Standard Error	0.4213494								
Observations	348								
ANOVA									
	df	SS	MS	F	Significance F				
Regression	4	3.34389	0.835972418	4.70876668	0.001036				
Residual	343	60.8946	0.177535324						
Total	347	64.2385							
	Coefficients	andard Err.	t Stat	P-value	Lower 95%	Upper 95%	lower 95.0%	pper 95.0%	
Intercept	0.193345852	0.0472	4.095899388	5.251E-05	0.100498656	0.28619	0.1005	0.28619	
Tobacco and Cigarette Consumption	0.101930167	0.05362	1.900937997	0.05815	-0.003537173	0.2074	-0.00354	0.2074	
Alcohol consumption	0.022639164	0.05071	0.44644205	0.65556	-0.077102933	0.12238	-0.0771	0.12238	
Junk Foods	-0.059824145	0.05411	-1.10566366	0.26965	-0.166247433	0.0466	-0.16625	0.0466	
Overweight and Obesity	0.14120299	0.05478	2.577434746	0.01037	0.033447496	0.24896	0.03345	0.24896	

Table 10- ASSOCIATION BETWEEN LIFESTYLE FACTORS AND LIFESTYLE DISEASES

LIFESTYLE			P
FACTORS	LIFESTYLE DISEASES		VALUE
	YES	NO	
Tobacco and cigarette consumption			
YES	48	95	>0.05
NO	37	168	
Alcohol Consumption			
YES	43	125	>0.05
NO	42	138	
Regular Physical Activity			
YES	20	12	<0.001
NO	65	251	
Junk Food Consumption			
YES	43	164	>0.05
NO	42	99	
Overweight and Obesity			
YES	31	52	>0.01
NO	54	211	

CHAPTER-4

CONCLUSION

This study revealed that more than 3/4th of the urban population in Hyderabad city had one or more lifestyle risk factors and also significant 1/4th of population happens to have some type of lifestyle diseases. From the above results it is interpreted that presence of lifestyle factors is associated with lifestyle diseases. Hence there is a need for population based programme at primary level on lifestyle modification in the prevention and intervention of lifestyle diseases. Emphasis should be given on primordial prevention strategies in advocating healthy lifestyle. Early detection and tracking of risk factors can reduce the occurrence of lifestyle diseases. High quality research and development should be promoted for the prevention and control of non-communicable diseases.

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APPENDIX-1

QUESTIONNAIRE

The current research focuses on prevalence of lifestyle factors and lifestyle diseases and to know if there is any association between lifestyle factors and lifestyle diseases. The data collected is purely for academic research purpose and will be kept confidential.

PART A - PERSONAL DETAILS

1) NAME (Optional) : _____

2) AGE (in years): _____

3) SEX- MALE ☐ FEMALE ☐

4) EDUCATION STATUS-

(1) Up to 12th ☐

(2) Graduate ☐

(3) Post Graduate ☐

(4) Post Graduate and above ☐

5) Weight (Kg)of Respondent: _____

6) HEIGHT (FT): _____

PART – B

PREVALENCE PROFILE OF NCDs BEHAVIOURAL RISK FACTORS AS SELF ACKNOWLEDGED BY STUDIED ADULT POPULATION

7) STATUS OF TOBACCO USE

7.1 Do you /have you ever Smoke tobacco products? Yes ☐

No ☐

If Yes then,

What is the frequency of chewing gutkaor smoking tobacco in a day?

7.1.1 Less than 5 cigarettes a day ☐

7.1.2 Up to 10 cigarettes in a day ☐

7.1.3 A packet of cigarette or more in a day ☐

7.2 Do you or have you ever chewed tobacco pan, gutka and supari? Yes ☐

No ☐

7.2.1 How many do you/did you chew?

7.2.1.1 One packet a day ☐

7.2.1.2 Two packet a day ☐

7.2.1.2 More than two packets a day ☐

8) ALCOHOL INTAKE

8.1 What is your frequency of alcohol intake?

8.1.1 Never Used ☐

8.1.2 Moderate/ Occasionally ☐

8.1.3 High ☐

9) For the following questions, please circle the number which best identifies your response to each corresponding statement.

Physical Activity

	Question	Never or Almost Never	Occasionally	Often	Very Often	Always or Almost Always
9.1	Do you engage in moderate physical activity outside of work for at least 20 to 30 minutes at least 5 days of the week. ?	1	2	3	4	5
9.2	Does your physical activity include stretching, aerobic	1	2	3	4	5

	activity, and strength conditioning?					
9.3	Do you use alternative modes of transportation whenever possible to and from various locations (i.e. stairs instead of elevator, biking or walking instead of driving).?	1	2	3	4	5
9.4	Do you consider the health benefits of physical activities and their lasting impact seriously?	1	2	3	4	5
9.5	Do you enjoy sedentary activities more than physical activities?	1	2	3	4	5

Nutrition

	Question	Never or Almost Never	Occasionally	Often	Very Often	Always or Almost Always
9.6	Do you eat fruits and vegetables every day?	1	2	3	4	5
9.7	Do you eat at fast food restaurants less than three times per week?	1	2	3	4	5
9.8	Do you include foods that are high in fiber in your diet on a daily basis (i.e. whole grain breads and cereals, beans, etc.)?	1	2	3	4	5
9.9	Do you maintain a healthy weight within the	1	2	3	4	5

	recommendations specified by a health care professional?					
9.10	Do you avoid eating foods that are high in fat such as whole milk, fried foods, fatty meats, etc.?	1	2	3	4	5

10) Knowledge about lifestyle diseases

	Question	Yes	No
10.1	Do you know heavy tobacco consumption and alcohol abuse are responsible for cardiovascular diseases, stroke and hypertension?	☐	☐
10.2	Are you aware that low physical activity is one reason for high chances of cardiovascular diseases and arthritis ?	☐	☐
10.3	Are you aware that high intake of fast food and soft drinks are responsible for diabetes?	☐	☐

11) Are you having any of the following Non-communicable diseases?

	Question	Yes	No
11.1	Hypertension/ history of cardiovascular diseases like stroke , heart attack, Arteriosclerosis	☐	☐
11.2	Diabetes	☐	☐
11.3	Low Back Pain/Arthritis	☐	☐
11.4	Bronchial Asthma/COPD	☐	☐
11.5	Obesity	☐	☐

ⁱ This information is taken from the company website and is open publically for use.