

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

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INTRODUCTION

- 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 diseases are because of a combination of genetic, physiological, environmental and behavioral factors.
- 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.
- 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.

- According to recent WHO report nearly 61% of deaths in India are attributed to non-communicable diseases, including heart disorders, cancer and diabetes
- 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.

Assessment of burden of Non-Communicable Diseases

- STEPS Wise Approach is developed by WHO to NCD Surveillance ,
- STEP 1 consists of collection of information by interview
- includes questions on tobacco and alcohol use, dietary and physical activity patterns.
- NCD risk factors targeted indicates that reducing risk factors is feasible and have major impact on disease outcome.

RATIONALE OF STUDY

- *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.*
- *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.*

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.

OBJECTIVES

GENERAL OBJECTIVE

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

SPECIFIC OBJECTIVE

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

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?

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)
 - Hence the Sample size will be taken 348.

• SAMPLE SIZE

- Sample Size Formula
- Where $n = \text{Sample Size}$
- $Z = 1.96$ for 95 % CI
- $p = \text{proportion of prevalence of lifestyle diseases [}=65 \% \text{ from previous studies]}$
- $1-p = 0.35$
- $d = \text{Margin of Error [taken as 5\% or 0.05]}$
- $n = 1.96 * 1.96 * 0.65 * 0.35 / (0.05 * 0.05)$
- $n = 348$

STUDY POPULATION

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

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

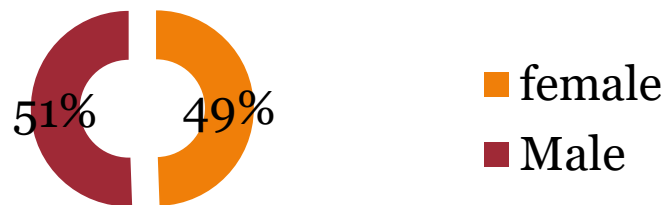
- Data regarding socio-demographic profile, history of tobacco smoking, alcohol consumption, regular physical activity, junk foods and history of hypertension, diabetes mellitus, cardiovascular diseases, Lower backache , asthma/COPD and stroke was collected. Height and weight was measured using the standard 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.



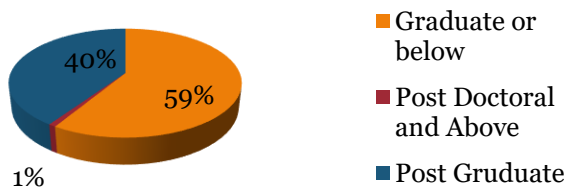
INTERPRETATION OF RESULTS

Socio-demographic status

Sex distribution of Study participants



Education Status of study participants



Age Distribution of participants

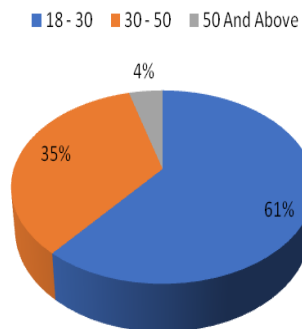


Table - Sociodemographic profile

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

Table -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
0	121
Male	84
0	84
Grand Total	348

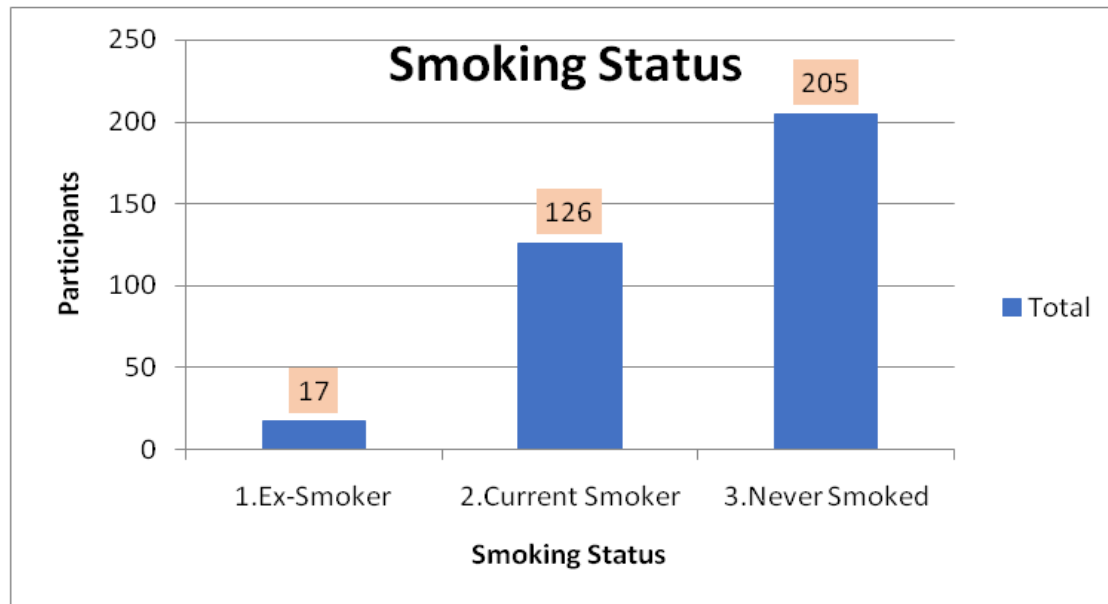


Table -Alcohol consumption of study participants

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 - 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

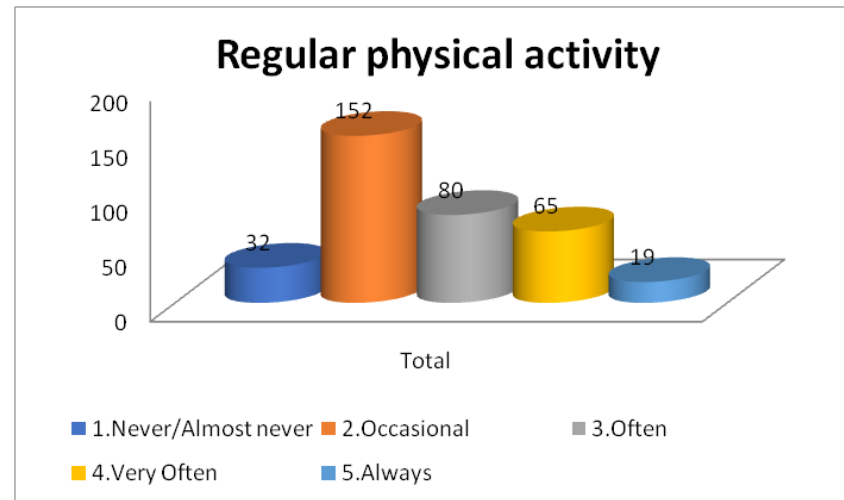


Figure -Healthy diet

Include healthy food in diet and avoid high fat food

1.Never/Almost never 2.Occasional 3.Often 4.Very Often 5.Always

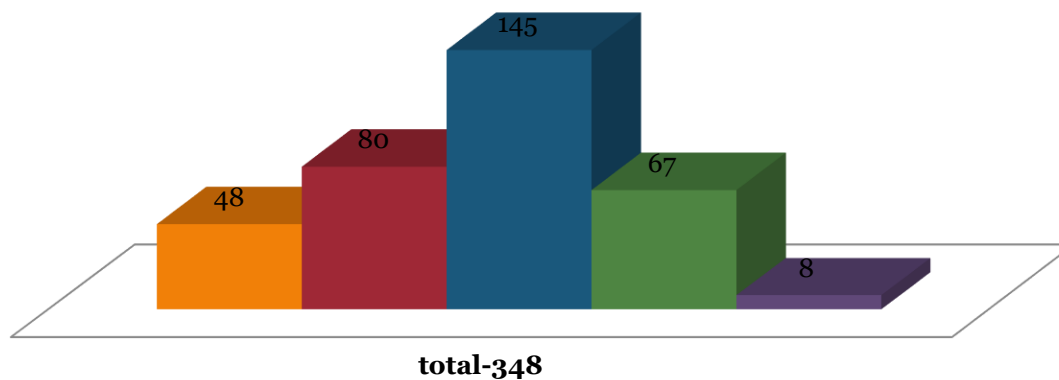


Table -BMI According to WHO formula

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

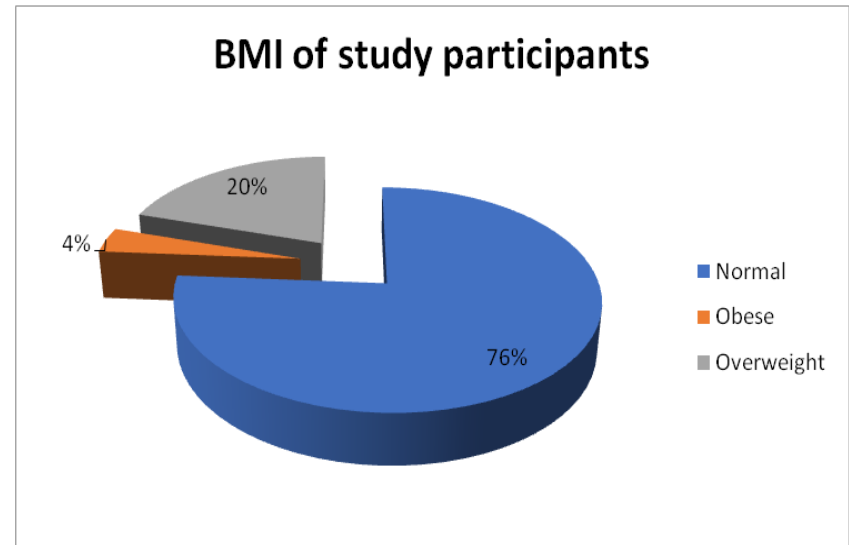


Table -Prevalence of lifestyle factors in participants

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

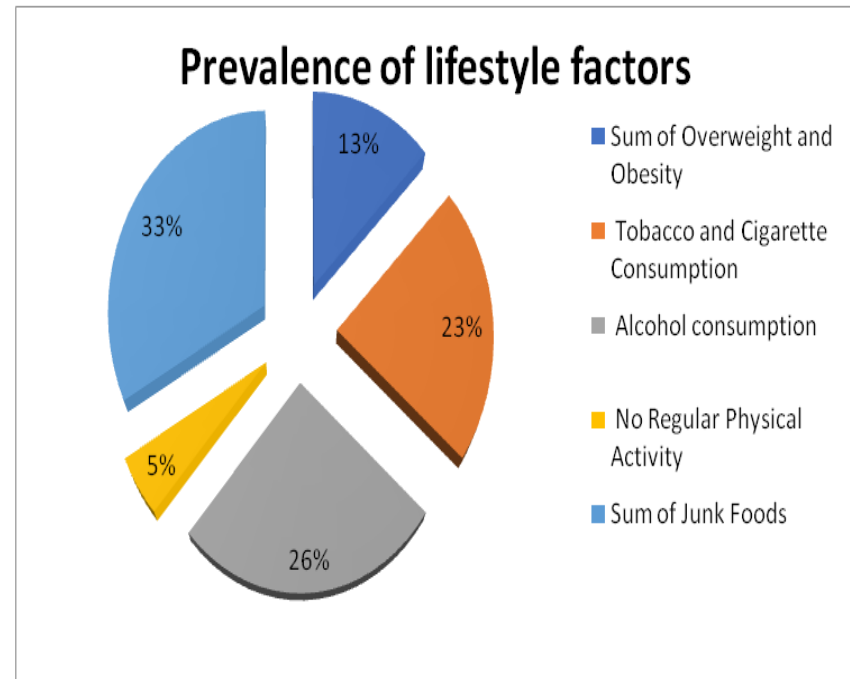


Table -Knowledge about lifestyle factors and lifestyle diseases

<u>knowledge about lifestyle factors and lifestyle diseases</u>	<u>Subjects</u>
<u>No</u>	<u>208</u>
<u>Yes</u>	<u>140</u>
<u>Grand Total</u>	<u>348</u>

Knowledge about lifestyle factors and lifestyle diseases

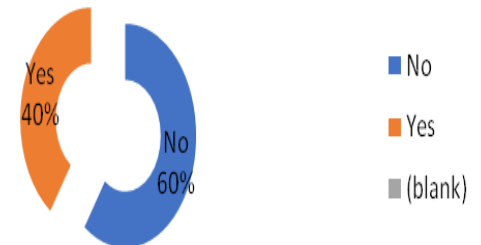
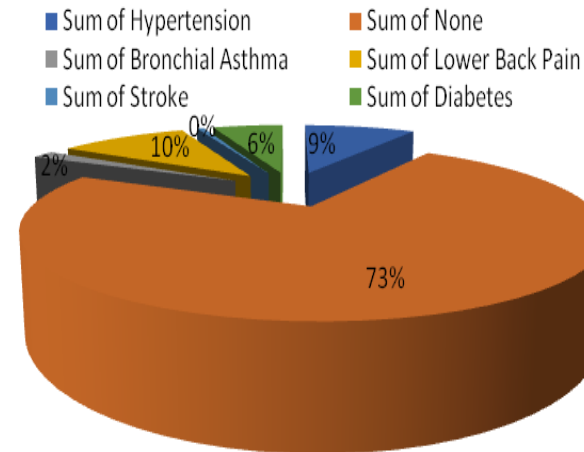


Table -: prevalence of lifestyle disease in study population

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

Prevalence of lifestyle disease in study population



- 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 followed by Hypertension (9.48%) , Diabetes (6.03%) and Asthma/COPD (1.7%).
- Only two out of total study population gave history of stroke.

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	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 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

- 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**
- **Null hypothesis is rejected** and Alternate hypothesis is accepted.

ASSOCIATION BETWEEN LIFESTYLE FACTORS AND LIFESTYLE DISEASES

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

CONCLUSION

- More than $3/4^{\text{th}}$ of the urban population in Hyderabad city had one or more lifestyle risk factors
- $1/4^{\text{th}}$ of population happens to have some type of lifestyle diseases.
- Presence of lifestyle factors is associated with lifestyle diseases .

- 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.



**THANK
YOU**