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## Lifestyle And The Prevalence Of Non-Communicable Diseases Risk Factors In Women Aged 30 To 60 Years In Tehran, Iran.

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### ABSTRACT

Non-communicable diseases are major cause of female mortality. Among the most important non-communicable diseases in both sexes we can mention cardiovascular disease, cancer, diabetes and respiratory diseases and these diseases are influenced by lifestyle. Among the most important risk factors associated with obesity we can mention excess weight, insufficient physical activity, unhealthy nutrition, smoking, high blood pressure, high blood sugar and blood fat disorder. This cross-sectional analytical study was conducted on 4384 women aged from 30 to 60 Years in city, suburban (margin area) and rural areas in Tehran in 2015. This study was done with the aim to determine the problems of lifestyle and risk factors in Iranian women. Measuring anthropometric index showed that 1.6% are slim, 32.1% are natural, 36.6% are overweight, 29.5% are obese and 37.3 had abdominal obesity. Nutrition survey showed that 21.3% had inadequate intake of dairy product, 14% had inadequate intake of fruit, 20% had inadequate intake of vegetables, 31.4 had poor dietary habits, 40.1% had inadequate physical activity and 6.3% had tobacco use or were exposed to indirect cigarette smoke. The high prevalence of overweight and obesity in women requires effective intervention programs.

**Keywords:** women, Lifestyle, Nutrition, Tehran, physical activity.

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## INTRODUCTION

Middle-age stage is a phase that connects youth to old age and is the biggest period of adult life. Middle-aged people have a productive role in society and the rest of society age groups are dependent to them. The middle-age accompanies with psychological, social, biological, physical and emotional changes(1, 2).

The broad base of the population age pyramid in young countries will belong to the older age groups in next coming years and Iran is not an exception. In 2005, the median age of the Iranian population was 24.2, and in 2015 it reached to 29.8 years. After a short time, the median age of the Iranian population will be in adulthood range(3).

Women are considered as the main axis of family health and are responsible to promote model of education and healthy lifestyles to the next generation. Since women have the responsibility to take care of the rest of the family, their health is a central subject to family (4-6).

Non-communicable diseases are common in women as in men. These diseases are also a major cause of female mortality. Among the most important non-communicable diseases in both sexes we can mention cardiovascular disease, cancer, diabetes and respiratory diseases and these diseases are influenced by lifestyle. Among the most important risk factors associated with obesity we can mention excess weight, insufficient physical activity, unhealthy nutrition, smoking, high blood pressure, high blood sugar and high blood fat(7).

Obesity is an important risk factor for non-communicable diseases. Diseases such as diabetes, cardiovascular disease and cancer are attributable to obesity. In 2014, about 1.9 milliard of 18 years people and older aged people were overweight and of these, 600 million were obese. 39 percent of 18 year adults and older are overweight and 13 percent are obese(8).

Abdominal obesity in women aged 40 to 60 years is significantly high. Overweight and obesity are associated with the consumption of fatty foods, adoption of the motionless lifestyle and the improvement of socio- economic situation. Abdominal obesity increases the motionless times. Obesity will become a major world problem in the near future(9).

Lack of adequate physical activity is one of ten non-communicable diseases risk factors. One out of 4 people do not get enough physical activity in the world. Near to 2.3 million deaths each year are attributed to insufficient physical activity(7).

Among other health problems and causes of non-communicable diseases is smoking. The death rate in all smokers' age groups is 2-3 times more than non-smokers deaths in the same age groups(5). Cigarette reduces 10 years of life expectancy in smokers compared with non-smokers(4).

According to the World Health Organization report in 2011, tobacco causes 6 million deaths annually in the world and if current trend continues, it is expected to rise to 8 million per year in 2030(7).

In 2012, about 17.5 million deaths were created due to cardiovascular disease in the world. Cardiovascular diseases (CVD) can be prevented by the management of behavioral risk factors such as smoking, unhealthy diet, obesity, low physical activity and alcohol consumption. Population-based interventions can be so effective in reducing deaths from heart diseases(10).

According to the World Health Organization aim to reduce 25 percent of non-communicable diseases deaths in 30 to 70 years age group till 2020, recognition of the status of non-communicable disease risk factors in this age group is needed (11).

This study was done with the aim to determine the problems of lifestyle and risk factors in Iranian women. In this study it is tried to investigate the difference between the urban, rural and suburban areas regarding the risk factors of non-communicable diseases and lifestyle problems

## METHOD

This cross-sectional analytical study was conducted on 4384 women aged between 30 to 60 years in city, suburban (margin area) and rural areas in Tehran in 2015 with systematic sampling. Non-Iranian women, pregnant and lactating women and women who had special diet were excluded from the study. In this study, women who visited health centers to receive health services were entered into our study after oral informed consent. 312 people were not willing to participate in the study.

After selecting people for inclusion, an explanation about the project was given to them and people entered the study with consent and knowledge about the project specifications. Pregnant women were excluded due to changes in anthropometric indicators and lifestyle. Data were received by the questionnaire. Anthropometric measurements were performed by a trained person with certain conditions. Fixed gauge was used to determine the height and it was measured without shoes and a standard scale was used to determine weight.

The weight was measured with minimal clothing with a tape meter, contour between the latest gear and the hip bone, the lumbar region and the ambit of umbilicus were also measured.

Also for checking the desired amount of food groups, questions were asked from the person in this regard. Information about his/her daily food group reception were evaluated and registered in order to share.

Poor dietary habits including the consumption of hydrogenated vegetable oil for cooking, routine use of prepared and salted foods (fast food) and extra salt (adding salt to food while you are in table and eating) were questioned.

To determine the optimal amount of physical activity, the World Health Organization definition was considered. People with moderate to severe physical activity, 150 minutes per week, at least 5 days a week were considered as desirable physical activity group. For checking the intensity of the activity, speaking Test (talk test) was used. For tobacco use (cigarette and hubble-bubble) or continuous indirect exposure to cigarette smoke, questions were asked from people and were recorded in the questionnaire.

Totally 4384 people were examined. According to the high urban population in Tehran, most of the subjects were selected from the city. The number of 3110 people in the city, 464 people in suburb and 810 people were examined in the village.

We used Stata version 11 software for data analysis. In this study the prevalence of risk factors was examined also the information was compared in three levels of urban, rural and suburban areas.

## RESULTS

Slimming was 2.3% in the city that has a significant difference with weight loss in village and suburb. But there was no significant difference between slimming in suburban and rural areas. The Percentage of people with a normal body mass index in village is more than the city and suburb. The Lowest normal amount of body mass index is seen in suburban people. Only about a quarter of them have normal body mass index.

In city, 35.5% of people have body mass index equal to or higher than 25 and are overweight. This ratio is 32.2% in rural areas that has a significant difference with overweight in the city ( $p < 0.001$ ). More than 34 percent of people living in suburb, use less than 2 servings of dairy a day and some of them do not have the dairy in their diet and compared with urban and rural areas it is significantly higher.

But in Comparison of urban and rural areas, inadequate intake of dairy products in village was lower than in Cities. Also in suburb, lack of adequate fruit consumption is significantly higher. Sometimes, these people have less than 2 servings of fruit in most days of the week. Fruit consumption in urban and rural areas also is announced different.

Compared to other food groups, fruit consumption had the least problem. Inadequate intake of vegetables in suburb was very concerning so that some people did not use any kind of vegetables during the day.

Vegetable consumption in village had better condition than suburb and city. People living in suburb have bad eating habits such as the use of hydrogenated fats and salt and this is more than people living in village and city. Also these habits in rural people were more than citizens. People living in suburb have inadequate physical activity more than people living in urban and rural Areas. Also insufficient physical activity is more common in rural areas than in cities.

Smoking or exposure to second hand smoke in rural women is estimated more than residents of city and suburban areas.

More than 9 percent of rural women had tobacco use or were exposed to indirect cigarette smoke. It is necessary to teach about tobacco cessation in addition of the indirect effects of cigarette smoke on people.

**Table1: Comparison of Risk Factors in urban, rural and suburb (margin area) areas**

Variable/Recidence	Urban	Rural	Margin Erea	Total
<b>Number</b>	<b>3110(70.9%)</b>	<b>810(18.4%)</b>	<b>464(10.5%)</b>	<b>4384(100%)</b>
<b>Anthropometric index</b>				
Slim	2.3±0.52	1.1±0.6	1.02±0.42	1.6±0.33
Natural	34.2±3.4	39.6±3.1	25.8±2.8	32.1±3.5
Over weight	35.5±3.2	32.2±3.5	40±2.6	36.6±1.97
Obese	28±3.6	27.1±7.3	33.1±1.6	29.5±2.2
Abdominal obesity	30.6±4.5	36.3±5.6	47.3±4.3	37.3±3.2
<b>Life style index</b>				
Inadequate intake of dairy product	15.4±2.9	12.8±3.8	34.7±6.7	21.3±3.6
Inadequate intake of fruit	12.3±1.5	13.5±2.3	17.8±0.5	14.4±1
Inadequate intake of vegetables	16.8±2.1	15.9±2.9	29.7±5.4	20.9±2.5
Poor dietary habit	26.3±5	33.3±7.5	37.5±8	31.4±3.8
Inadequate physical activity	33.6±3.7	43.1±5.6	47.6±8.2	40.1±3.6
tobacco use or were exposed to indirect cigarette smoke	4.4±1.09	9.03±4.9	7.44±1.6	6.3±1.1

### DISCUSSION

The World Health Organization has reported that in 2008 about 26.5% of Iranian women were obese(8). In Tehran lipid and glucose study, women's average body mass index was  $25.2 \pm 3$  kg per square meter and obesity in women living in Tehran province was found as a main problem requiring serious intervention(12). Do to this point that among goals of WHO to achieve the aim of reducing premature death of non-communicable diseases before the age of 70 years is fixing obesity and diabetes, there is a need for serious intervention so that not to convert people with overweight to obese ones(11)

In this study it was found that obesity as one of the most important non-communicable risk factors in women of Tehran province has an average of 29.56 percent. This problem exists in urban, rural and suburban areas and with an existing food pattern and the lack of serious intervention on it, it has the possibility of increasing. Mohammadi et al. study among women who visited health centers in Hamedan province, showed that the prevalence of overweight was 33.7% and prevalence of obesity was 15.8% (13). In a meta-analysis study of the prevalence of obesity in Iran, it was found that 21.7 percent of people over 18 years are obese in Iran and obesity was mentioned as an increasing important health issue(14). In Jafari Adli et al. study the prevalence of overweight among Iranian people over 18 years old was 27 to 38.5 percent and the prevalence of obesity was 12.6 to 25.9 percent. In Naghashpour et al. study in Khuzestan the prevalence of obesity in women 18 to 80 years was 17.9%(15). In Steps 2011 study that factors associated with obesity in 15 provinces of Iran were studied, the prevalence of obesity in city adults was estimated more than villagers. 22.5% in the city and 18.4% were obese in the village(16).

Now, according to the World Health Organization, about 46 percent of countries' women do not get enough physical activity(11). Also in present study the prevalence of physical inactivity among women in Tehran is clear. Low awareness, lack of sport facilities and hygiene problems for women in rural and suburban areas can be among the lack of women physical activity(17).

Smoking and tobacco use is low in Iranian women and less than 1 percent of all women use tobacco(8). But due to the increasing usage prevalence of hubble-bubble in recent years in country, it can be worrying(18).

The highest prevalence of smoking in Iran is in 35 to 44 year ages. Well-designed program to promote the consumption of fruit and vegetables can be effective in increasing consumption of them and improving the nutritional status (19). Studies also show that by raising awareness and developing health education programs we can increase vegetable consumption.

### CONCLUSION

The high prevalence of overweight and obesity in women requires effective intake of intervention programs.(20)The high prevalence of inappropriate eating habits of women can have a significant impact on eating habits of families and children. Among the limitations of this study it can be pointed out that people may not have enough precision in remembering their food intake.

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