



Self-Treatment with anti-Obesity medications in Overweight and Obese Women in Tehran-Iran

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Abstract

Following the failure of long-term weight loss diet and media advertisements about anti-obesity medications, taking anti-obesity drugs are increasing. The aims of present study were to determine the prevalence of self-medication, correlations between self-medication and general characteristic and ways to obtain information about anti-obesity drugs in overweight and obese women. A cross-sectional study was carried on 200 overweight and obese women (Body Mass Index=28.36±3.73 kg/m²) aged 20-50 years from April to December 2012. A questionnaire which contained socio-demographic, life styles, self diet management and self medication items was filled out and anthropometric indices were measured. SPSS software version 16 was applied for Statistical analysis. $P < 0.05$ was considered significant. 54.45% of participants had self-diet management during the last six months. 12.87% of women reported self-medication without weight loss diet. Self-medication in younger was significantly more than older women ($P = 0.01$). No significant correlation was observed between income, education and BMI with self medication ($P < 0.05$). However a significant correlation was observed between age and self medication ($r = 0.23$, $P = 0.01$). Most of the subjects, especially younger women mentioned self-medication for faster losing weight and fitness (64.35%). Herbal supplements were the most commonly used medications in subjects (32.35%). About 60% of women reported that friends and relatives were the main sources of receiving information about anti-obesity drugs. Self-treatment among women in Tehran-Iran is of concern, due to the high prevalence of self-diet management and tendency of younger women to self-medication for getting body image satisfaction.

Keywords: Self medication, treatment, obesity, weight loss, women.

Introduction

Obesity is one of the most important epidemic health problems that is increasing in the world¹. World Health Organization (WHO) has predicted that 2.3 billion of people in the world will be overweight and almost 700 million of them will be obese by 2015². Obesity can increase risk of cardiovascular disease, diabetes type 2, stroke, hypertension and some types of cancer^{3,4}. So, obesity treatment can prevent from developing some chronic diseases.

Common treatments of obesity include low-calorie diets, increased physical activity level, strategies to modify lifestyle and using anti-obesity drugs^{3,4}. Following the failure of long-term weight loss diet, fashion and media advertisements, using anti-obesity drugs are increasing⁵. Anti-Obesity medications can help to weight management by decreasing appetite or intestinal absorption and enhancing basal metabolic rate⁶. Green tea, Sibutramine and Orlistat are commonly used anti-obesity drugs. These medications should be prescribed with dietitians by considering individual characteristics⁷, but nowadays self medication is common especially in developing countries⁸. Self medication is a type of self-care which can be defined as using drugs by patients without prescription of doctors. Over the Counter (OTC) and complementary medications are commonly

used for non-doctor prescribing of drugs especially in women⁸. Studies indicated that obese people have tendency to take drugs for faster losing weight and decreasing dietary restrictions. However, it can associate with some side effects such as food-drug interaction and inadequate micronutrient absorption. Sushama et al reported that 82 and 78% of younger and older women, respectively do not take dietary advice from dietician and self medication is common among women⁹. Klemenc-Ketis et al studied on self-medication among students in Slovenia, they concluded that 92.3% of student used non-doctor prescription drugs and female more than male used OTC medications¹⁰. It seems that there are limited studies on self-medication in overweight and obese women despite of increasing rate in taking anti-obesity medications. So the main goal of present study was to determine the prevalence of Self-medication in overweight and obese women. The secondary end point was correlations between self-medication and general characteristic and anthropometric indices and the third end point was determining patient's opinions and ways to get information about anti-obesity drugs.

Methodology

A randomized, cross-sectional study was carried on 200 overweight and obese women that referred to dietitians from

April to December 2012. Inclusion criteria were women aged 20-50 yrs with Body Mass Index (BMI)>25 Kg/m² that referred to the dietitians for the first time. From 350 eligible women, finally 200 subjects agreed to participate in the study. Protocols of the present study were approved by the ethics committee of University of Medical Sciences. At the beginning of the study, procedures were explained to the participants and they signed an informed consent.

A questionnaire which consist of: socio-demographic factors (such as age, education, income, marital status and educational level), life styles (physical activity, dietary habits and sleep), self diet management and self medication (sources of drug information, reasons of using, duration of consumption, side effects) was filled with face to face interview with participants. Anthropometric indices (weight, height) was measured. Weight was measured with Seca scale with minimum cloths and without shoes nearest 0.1 kg. Height was measured with Seca stadiometer in standard status nearest 0.1 cm. BMI was calculated from divided weight in kg into square of height in meter. The present study was approved by the Ethnic committee of Tehran University of Medical Sciences.

Data Analysis: Participates were classified into two groups by cut-off age less or more than 30 years. Descriptive statistics were used to summarize subject's characteristics. Chi-square and Independent t-test were used to compare two groups. Correlation between self medication and characteristics of subject were determined by Spearman. SPSS software version 15.0 (SPSS Inc., Chicago, Illinois) was applied for statistical analysis. P<0.05 was considered significant.

Results and Discussion

Socio-Demographic characteristics of 200 participates were shown in table-1. The Mean±SD age of women was 31.66±7.32 (range 20-50). Frequency of Participants in two age groups (cut off 30) showed no significant differences (P<0.05). Most of subjects had university education (57.43%) and moderate income (67.31%). Comparison of two study groups showed no significant differences in education levels (P=0.67). According to WHO classification, 75.24 and 24.76% of women were overweight and obese, respectively. Comparison of BMI showed no significant differences between two age groups (P=0.27). 24.75% of participants had obesity complications (diabetes, cardiovascular disease or dyslipidemia) (table-1) and all of subjects with obesity complications were older than 30 years old.

Most of participants (54.45%) had self-diet management during six months ago. 12.87% of women reported self-medication without weight loss diet. Comparisons of self management diet showed no significant differences between two age groups (P=0.45), but self medication in younger was significantly more than older women (P=0.01), (figure 1). The most of younger women mentioned the self medication for faster weight

loss diet and fitness (64.35%). Also, 32% of subjects with obesity complications reported self medication.

Table-1
General characteristics and anthropometrics indexes of participants (n=200)

Variable	Age ≤30 (n=103)	Age>30 (n=97)	P-value
Education (%)			
Primary/high School	9.63	8.16	0.67‡
Diploma	32.69	32.69	
Bachelor	53.84	50.99	
MSc /PhD	3.84	8.16	
Income (%)			
Low	17.30	26.53	0.31‡
Moderate	75.1	59.19	
High	7.69	14.28	
Weight(kg)	75.39±12.18**	71.78±7.81	0.08†
Height(cm)	161.36±6.78	160.96±6.63	0.76†
BMI(kg/m ²)	28.95±4.24	27.74±3.02	0.10†
BMI Classifications(%)			
Overweight	67.32	83.67	0.19‡
Obese I	19.23	12.24	
Obese II	9.61	4.09	
Obese III	3.8	0	

‡:Chi-Square, **:Mean± SD, †:Independent t-test

Figure-2 shows frequency of anti-obesity drugs used by subjects. Medications were classified into six groups: i. Herbal supplement such as green tea, carvil, Slim Quick, ii. CNS stimulates such as Fluoxetine and Sibutramine iii. decreased absorption (venostate, Fat Stop,...) iv. L-carnitin, v. other drugs (Fiber,..) vi. multi-drugs. Herbal supplements were the most common medications used among participants with self medications (32.35%) and 17.67 % of subjects used more than one drug concurrently by self medication.

About 60% of women reported that friends and relatives were the main sources of receiving information about anti-obesity drugs and about 9% of them get information from internet (figure-3). Knowledge about adverse effect of self-diet management or medication was observed in 33% of women. 68% of referred women had no information about individual energy requirement.

Table-2 showed correlation between self medication and general characteristics. No significant correlation was observed between income, education and BMI with self medication (P<0.05). But significant correlation was seen between age and self medication (r=0.23, P=0.01).

Table-2
Correlation Coefficients between Self medications and general characteristics of participants

General Characteristics	r	†p-value
Age(yrs)	0.23	0.01
BMI(Kg/m2)	-0.05	0.60
Education	-0.12	0.22
Income	0.09	0.35

†:Spearman

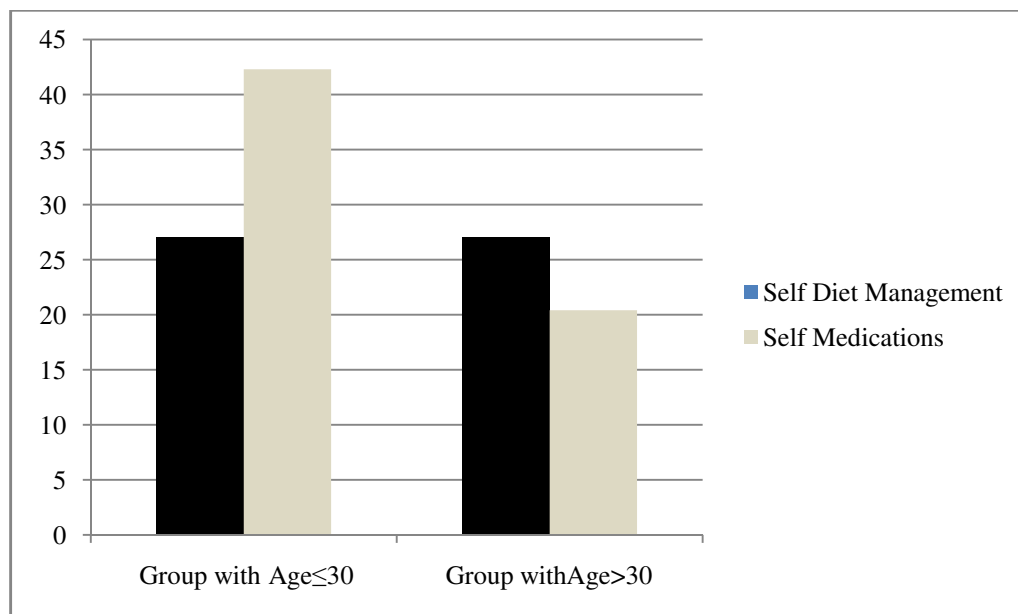


Figure-1
Prevalence of self diet management and self medications in two age groups

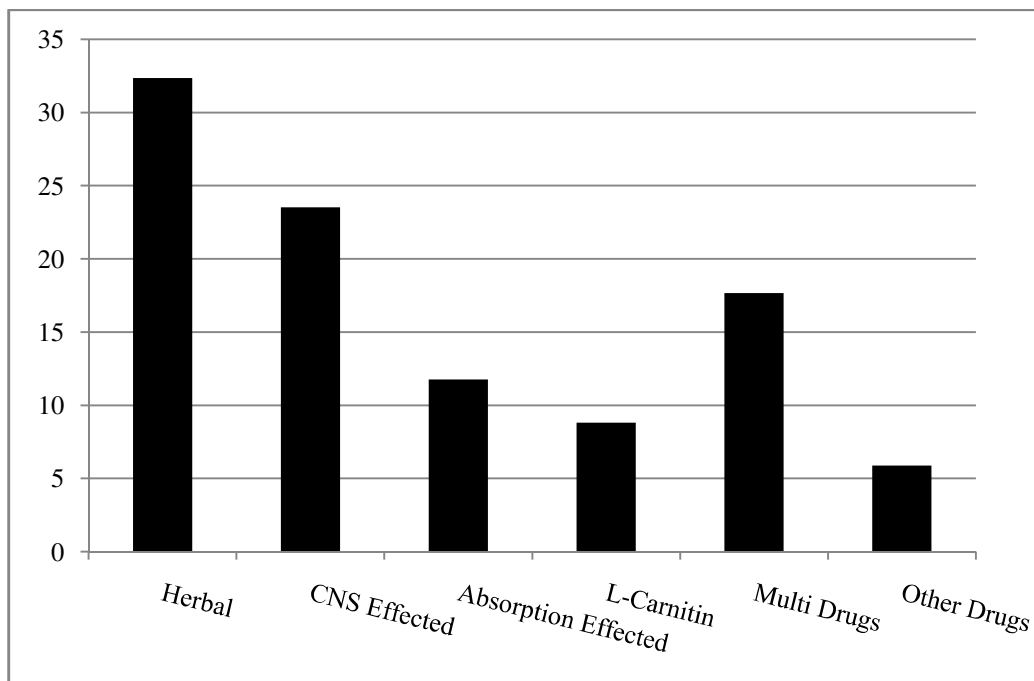


Figure-2
Frequency of common types of used anti-obesity drugs

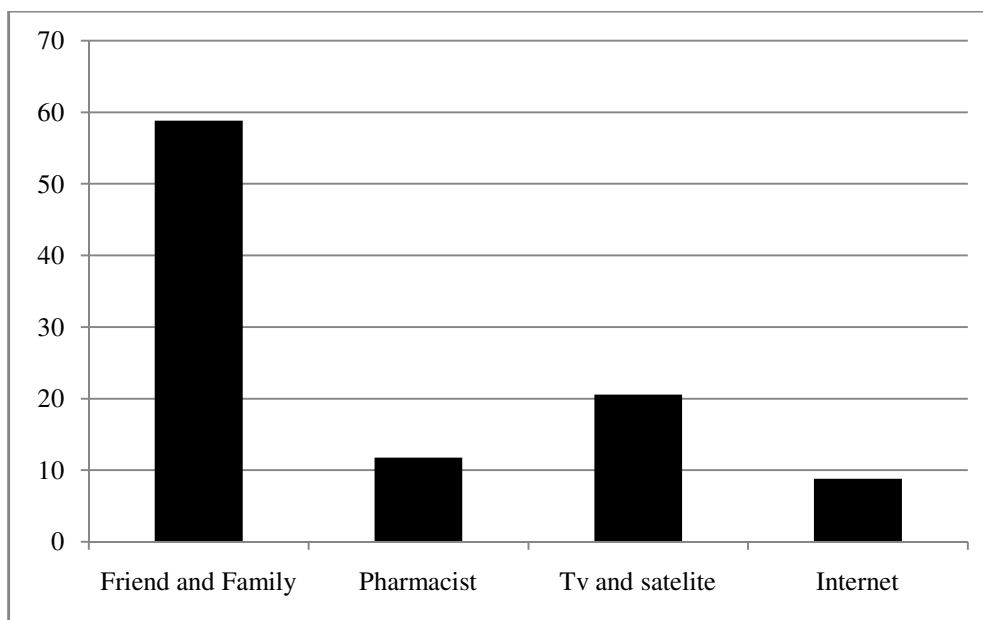


Figure-3
Frequency of main sources of receiving information about anti-obesity drugs

Discussion: Nowadays, self medication among overweight and obesity are increasing. Fashion and media advertisement persuade people to lose weight, on the other hands more obese subjects want to lose weight in short time with the least diet restrictions, so they take various anti-obesity drugs with or without prescription of doctors. Since there are no studies about self-medication of overweight and obese women in our country, so in this study prevalence of self-medication among overweight and obese women were studied. Findings of the present study indicated that self medication was observed in younger more than older women, independently of age, BMI, education and income. Also herbal drugs were the most commonly used medication by self medication overweight and obese females.

Sushma et al studied on self medication in 30-50 years old Indian females, they reported that 40% of subjects had metabolic disorders and self medication or self diet management was observed in 80% of subjects⁹. In the present study, self treatment was observed in 67.32% of subjects. In contrast with Sushma et al study, younger more than older women had tendency to take anti-obesity medications. Differences in social and cultural factors, percents of subjects with metabolic disorders, awareness of people and availability to the dietitian may cause different results.

Martins et al studied on 664 college student in Brazil, they concluded that 6.8% of students used anti-obesity drugs and Self medication was observed in 69% of students. They reported that Amphetamine and sympathomimetic amines were the most commonly used medications¹¹. In the present study, self medication was reported in about 33% of patients and CNS stimulated drugs were the most used medications among biochemical drugs.

Recently, using herbal medications for treatment of diseases are increasing. General people suppose that herbal drugs have no side effects, so they prefer to use these types of medications¹²⁻¹⁴. In line with these studies, in the present study herbal anti-obesity drugs are more than chemical drugs. It seems that no studies assessed self medication in obese subjects so comparison the results of present study with previous studies is impossible.

Amariles et al concluded that in Colombia, self treatment was observed in 52.1% of overweight and obese subjects to lose weight and most of them especially obese women with higher educational level and single (42.6%) used complementary products¹⁵. In contrarily to Amariles et al, there were no correlation between educational level and marital status.

In the similar research, Liou et al studied on obese Taiwanese subjects, the most commonly used anti-obesity drugs was Chinese herbal supplement and sibutramine. It correlated with younger age and higher BMI¹⁶. But in the present study, taking anti-obesity drug only correlate with younger age.

Previous studies indicated that younger women pay more attention to their fitness and body image; Social and psychological factors can motivate young obese individuals to lose weight. On the other hands, transition from traditional to western culture in developing countries is another reason to get ideal body weight. So it seems reasonable that in the present study, self medication correlated with age and the reason of using medication and weight loss diets in 64.35% of subjects was fitness. Women older than 30 years had tendency to lose weight for health instead of fitness. Obesity complications in women older than 30 can justified this result.

More studies are needed to determine prevalence of self medication and self diet management in larger sample size in our country. Studies in both genders by considering cultural factors in various cities of each country is suggested.

Conclusion

In conclusion, Findings of the present study suggested that a large number of overweight and obese subjects had self diet management and in younger female tendency to taking anti-obesity drugs to lose weight faster was more than older ones. Friends and relatives were the most source of information about medications. Also, they prefer to take herbal medications. Therefore, it is important to inform people about risks of self medication and self diet management.

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