

Measuring the Level of Knowledge About the Herbal Supplements Used for Losing Weight Among the Patients With Metabolic Syndrome

Hüdanur Aydın¹, Aclan Özder²



¹Bezmialem Vakıf University, School of Medicine, Istanbul, Turkey
²Bezmialem Vakıf University, Faculty of Medicine, Department of Family Medicine, İstanbul, Turkey



Introduction

Metabolic syndrome (MetS) represents a series of metabolic abnormality including hypertension, insulin resistance, atherogenic dyslipidemia and central obesity. When conventional medicine fails to treat obesity, patients with MetS turn to non-traditional treatments such as herbal medicines. In our country, herbal products or direct plants are frequently used due to their protective and therapeutic properties. Herbal treatments and associated side effects are increasing due to wide availability and easy access. While using herbal supplement preparations for weight loss, patients should be informed by health professionals. The aim of this study is to measure the prevalence of using herbal supplements for weight loss in patients with metabolic syndrome and their level of knowledge about the supplements according to education levels, gender and age.

Method

The study was conducted with patients who were applied to Bezmialem Vakıf University Medical Faculty Family Medicine outpatient clinic. Patients were diagnosed with metabolic syndrome according to Diabetes Foundation (IDF)- 2005 Metabolic Syndrome Diagnostic Criteria, they were 18-65 year old males (n=50) and females (n=50). Their level of knowledge about the supplements were measured according to their gender, age, educational status and income level. A face-to-face questionnaire with 15 questions were applied to patients who were agreed to participate.

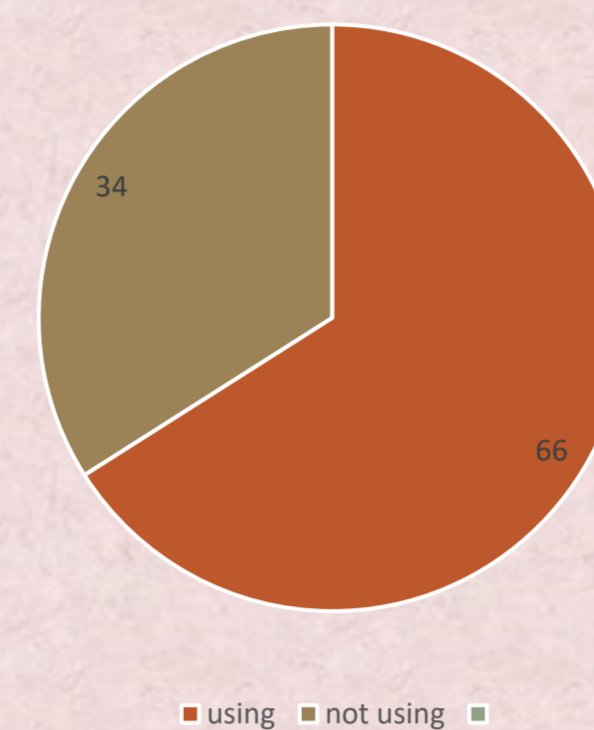
Measure (elevated waist circumference plus any 2 of the other 4 criteria constitute diagnosis of metabolic syndrome)	Defining level
Waist circumference*	≥94 cm for European men ≥80 cm for European women*
Triglycerides	≥150 mg/dl (≥1.7 mmol/l) Or drug treatment for elevated triglycerides
HDL Cholesterol	<40 mg/dl (<1.03 mmol/l) in men <50 mg/dl (<1.3 mmol/l) in women Or drug treatment for reduced HDL-C
Blood pressure	≥ 130 mm Hg systolic blood pressure Or ≥ 85 mm Hg diastolic blood pressure Or Drug treatment for hypertension
Fasting glucose	Fasting plasma glucose ≥ 100 mg/dL or previously diagnosed type 2 diabetes



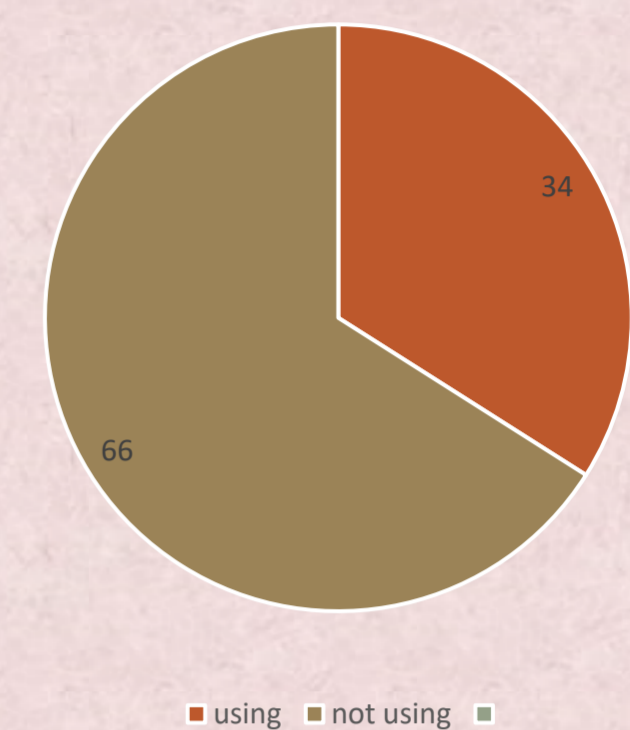
Results

The majority of the patients were between the ages of 30-49 with 54 people. When the educational status of the patients was questioned, %77 were primary and secondary school graduates. The income level of the patients was mainly at the level of 6000 Turkish lira /month (%64). There was no statistically meaningful difference between men and women when they were questioned about the definition of herbal supplements. 17 of male patients (%34) were using herbal supplements while this number was 33 in females (%66) (p=0,001). 17 of male patients (%34) knew that herbal supplements could have side effects and this number was 32 in females (%64) (p=0,01). When the level of knowledge about side effects was compared between the age groups, there was no statistically meaningful difference (p=0,45). The level of knowledge about the herbal supplements increases with education level (p=0,002).

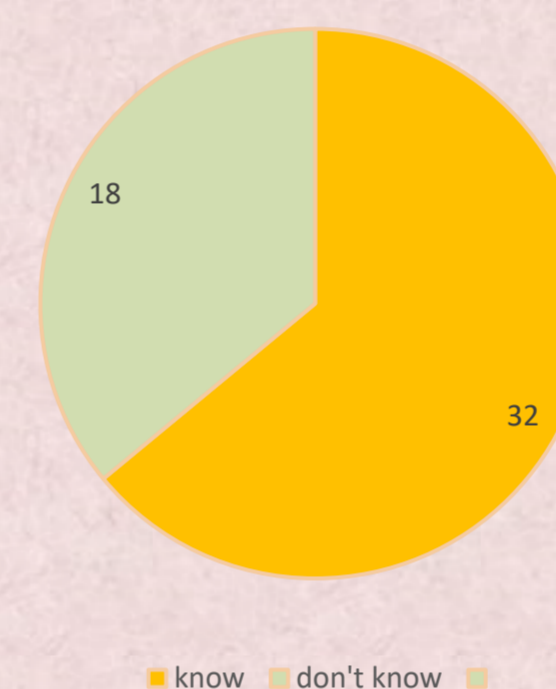
PERCENTAGE OF WOMEN USING SUPPLEMENTS



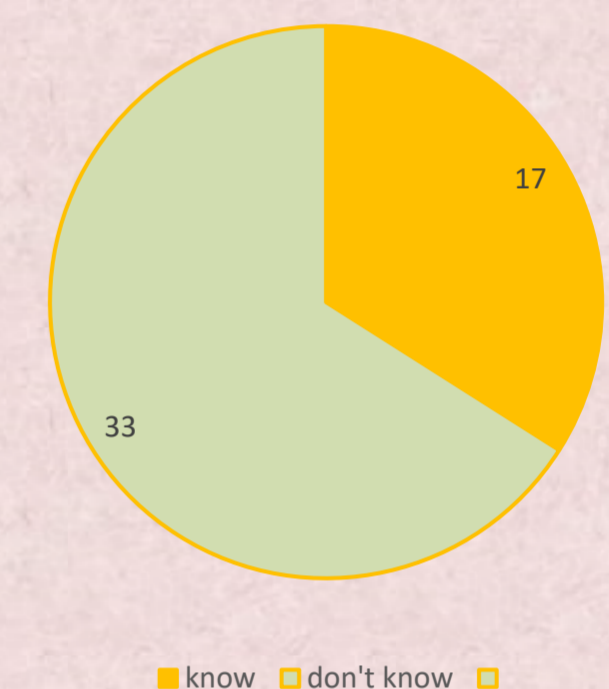
PERCENTAGE OF MEN USING SUPPLEMENTS



KNOWLEDGE ABOUT SIDE EFFECTS AMONG WOMEN



KNOWLEDGE ABOUT SIDE EFFECTS AMONG MEN



Conclusion

In conclusion, the number of women using herbal supplements for losing weight and the knowledge level of women about these supplements are higher than men. The level of knowledge about the herbal supplements also increases with education level.

Keywords:

Metabolic syndrome, herbal supplements, losing weight

References

- 1)Rochlani Y, Pothineni NV, Kovelamudi S, Mehta JL. Metabolic syndrome: pathophysiology, management, and modulation by natural compounds. Ther Adv Cardiovasc Dis. 2017 Aug;11(8):215-225. doi: 10.1177/1753944717711379. Epub 2017 Jun 22. PMID: 28639538; PMCID: PMC5933580.
- (2)Dastjerdi AG, Akhgari M, Kamali A, Mousavi Z. Principal component analysis of synthetic adulterants in herbal supplements advertised as weight loss drugs. Complement Ther Clin Pract. 2018 May;31:236-241. doi: 10.1016/j.ctcp.2018.03.007. Epub 2018 Mar 15. PMID: 29705461.
- 3) Crighton E, Coghlan ML, Farrington R, Hoban CL, Power MWP, Nash C, Mullaney I, Byard RW, Trengove R, Musgrave IF, Bunce M, Maker G. Toxicological screening and DNA sequencing detects contamination and adulteration in regulated herbal medicines and supplements for diet, weight loss and cardiovascular health. J Pharm Biomed Anal. 2019 Nov 30;176:112834. doi: 10.1016/j.jpba.2019.112834. Epub 2019 Aug 23. PMID: 31472365.
- 4) McCarthy RE, Bowen DG, Strasser SI, McKenzie C. The dangers of herbal weight loss supplements: a case report of drug-induced liver injury secondary to Garcinia cambogia ingestion. Pathology. 2021 Jun;53(4):545-547. doi: 10.1016/j.pathol.2020.08.021. Epub 2020 Nov 27. PMID: 33250192.
- 5)Najafian J, Abdar-Esfahani M, Arab-Momeni M, Akhavan-Tabib A. Safety of herbal medicine in treatment of weight loss. ARYA Atheroscler. 2014 Jan;10(1):55-8. PMID: 24963315; PMCID: PMC4063522.