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Observational-Epidemiological study on the use of drugs to treat obesity: A Brazilian profile of 520 answers

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Abstract: In a modern world, where day-to-day worry and stress prevails, along with an ever-increasing workday, care with diet is often overlooked and, combined with a sedentary lifestyle, increases obesity rates in all the world. The purpose of this work is to analyze society's view about the treatment of obesity with medications, comparing it with the treatment of other diseases, such as high blood pressure and diabetes. Through a questionnaire, on the internet, carried out from July to September 2020, with 14 multiple-choice questions answered by 520 people, 91.7% of the participants answered that obesity is a disease, however, 47.3% of people still think that the use of drugs for their treatment is not necessary and only 37.7% believe in the effectiveness of such a method. In addition, 26.2% believe that all obese people eat a high amount of food and practice little physical activity. As for the comparison with other diseases, 33.3% of the respondents believe that diabetes should be treated with medication and obesity should not, and 32.3% believe that hypertension should use this method and obesity should not. With such results, it was concluded that the society's view is still quite stigmatized regarding the treatment of obesity by drugs, which implies prejudice and the difficulty in adhering to this method by obese people and, with this, is the difficulty in reducing the rates obesity and all comorbidities related to it.

Keywords: Diet, Obesity, Drugs.

1. Introduction

Obesity, by definition of the Obesity Medicine Association, is a chronic, relapsing, multifactorial neurobehavioral disease, in which an increase in body fat promotes dysfunction of adipose tissue and abnormal physical forces of fat mass, resulting in adverse metabolic, biomechanical, and psychosocial consequences to health [1,2]. It is noteworthy that obesity affects more than 20 million Brazilians. In the adult population, 12.5% of men and 16.9% of women are obese and about 50% are overweight. In the United States, 64.5% of the adult population is overweight [2,3].

Thus, the American Medical Association (AMA) decided to classify obesity as a disease in 2013 to help the medical community to deal with this comorbidity [4,5]. Over the years, other entities, including the World Health Organization (WHO), have recognized the condition as a chronic disease, which needs specific and long-term treatment [6-8].

Still, it is highlighted that obesity has its place in the International Disease Code (ICD), with E66-0 Obesity due to excess calories, E66-1 Drug-induced obesity, E66-2 Extreme obesity with alveolar hypoventilation, E66- 8 Other Obesity and E66-9 Obesity, unspecified [9]. This fact corroborates the AMA classification.

It is known that this comorbidity is multifactorial, not always being associated with excessive calorie consumption or lack of physical activities. There are also causes genetic factors, impaired metabolic pathways, disordered signaling of hunger and satiety, stress-induced obesity or menopause, dysregulation of the nutroneurometabolic

system [10]. Thus, it is noted that obesity is related to genetic, psychological, physical, metabolic, neurological, and hormonal factors, being complex pathogenesis [7].

Thus, obesity is a multifactorial and chronic evolution syndrome, which requires chronic treatment 5. The best form of treatment is with lifestyle changes, with fewer caloric diets combined with physical exercises, under the supervision of professionals. If only that is not effective, there must be a cognitive-behavioral change. Still, it is worth mentioning the use of pharmacotherapy, accompanied by a nutrologist or endocrinologist, who is effective and very valid in the anti-obesity treatment, and for more severe cases, bariatric surgery is recommended [8].

Treatment should reduce weight to the point that conditions associated with obesity, such as hyperglycemia, dyslipidemia, arterial hypertension, heart failure, sleep apnea, and others, are attenuated or absent [11].

Drugs aimed at the treatment of obesity have several functions in the body and in helping weight loss. Some examples are Sibutramine, Catecholaminergic (diethylpropion, fenproporex, phentermine, and mazindol, are anorexigenic), Orlistat (decreases the absorption of triglycerides and encourages long-term adherence to food consumption with less fat content), Fluoxetine, and Sertraline (they are not efficient anti-obesity drugs, but they can be useful for the treatment of obese depressants as they reduce food intake), Thermogenic (such as caffeine, theophylline, aminophylline and aspirins cause the increased duration of noradrenaline activity), Topiramate (anticonvulsant with weight loss effects, prescribed for binge eating) [11].

Therefore, the present study aimed to identify and analyze the population's view of the treatment of obesity by drugs. Through targeted questions, observe the stigma of pharmacotherapy for the treatment of obesity compared to other chronic diseases, such as hypertension and diabetes.

2. Methods

2.1 Study Design

The present study followed an observational/epidemiological descriptive model on the view of Brazilian society on the use of medications for the treatment of obesity through 14 questions organized in a digital form on the Internet from July to September 2020, following the STROBE rules (Strengthening the Reporting of Observational Studies in Epidemiology - https://www.strobe-statement.org/index.php?id=strobe-home) [12].

2.2 Approach Criteria

The opinions of a random audience were analyzed, including medical students (27.6%), doctors (3.1%), and people working in other categories (69.4%), totaling 520 participants. The questions asked were personal opinions as to the motivations that lead to obesity, the classification of the condition as a disease or not, the use of medications as treatments and their implications, whether obese suffer or not prejudices, the influence of genetic factors and lifestyle styles. Overweight life, if there are only unique patterns with specific results regarding body aesthetics and the importance of the doctor in the treatment of obesity, in addition to issues comparing the treatment of obesity with that of hypertension and diabetes.

3. Results

From the questionnaire (composed of 14 questions) answered by 520 participants, it was possible to access some results that are important for the conclusion and purpose of the work (Table 1). Therefore, it was observed that the majority of people who answered the questionnaire were not doctors (only 3.1% were doctors) or medical students (27.6%), but had other occupations (69.4%), according to Figure 1.

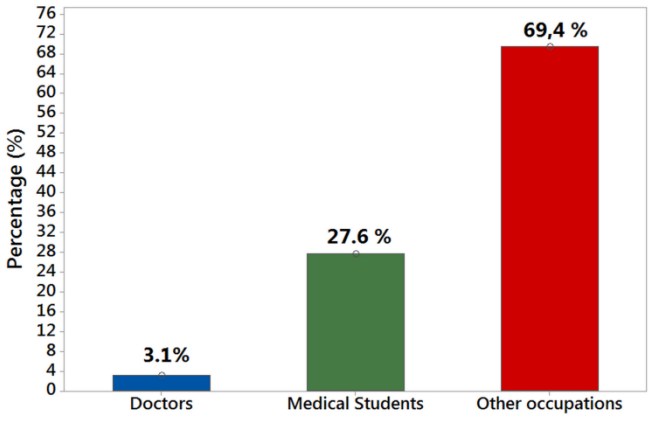

Figure 1 Results of the types of participants in relation to professional involvement.

Table 1 Results of questions and answers - Questionnaire on the use of medications for the treatment of obesity at the Brazilian national level

Is obesity a disease?
Yes: 91.7% and No: 8.3%.
Is there prejudice against obesity?
Yes: 91.5%; No: 8.5%
Is there a need for medications to aid treatment for obesity?
Yes: 52.7%; No: 47.3%
Does every obese person eat a large amount of food and practice little physical activity?
Yes: 26.2%
Does every excessively thin individual eat little and do a lot of physical activity?
Yes: 4.4%
Does obesity stem only from lifestyle and dietary patterns?
No: 91%
Is obesity influenced by genetic factors?
Yes: 97.1%
Is the use of medications effective?
Yes: 62.3%
As for effectiveness?
41.5% in the long run
22.5% in the short term
36% do not believe in the effectiveness
Should the purchase of medicines depend on medical prescription?
Yes: 1.2%
Should hypertension be treated with medication and obesity not?
Yes: 32.3%
Should diabetes be treated with medications and obesity not?
Yes: 33.3%
Is the use of drugs for the treatment of obesity important?
No: 4.8% High importance: 29.4% Average importance: 48.3% Low importance: 17.5%

4. Discussion

As previously mentioned, 91.7% of the participants answered "yes" to the question that asked whether obesity is a disease, however, regarding the question of the need for medications to help treat obesity, the number was much lower (52.7 %) of the participants replied believing that these drugs are necessary, and of these, only 29.4% rated their importance as high. In addition, 36% of participants responded that they did not believe in the effectiveness of drugs in the treatment of obesity.

These numbers show the misinformation of a large part of the population on the subject, making obesity a disease that is often neglected and treated incorrectly and ineffectively. One of the factors that corroborate this situation is the recent recognition of obesity as a disease.

It is worth mentioning that only in 2013 did the American Medical Association (AMA) classify obesity as a disease in order to help the medical community to deal with this comorbidity. After that, some entities such as the World Health Organization (WHO), started to recognize the condition as a chronic disease, which needs long-term treatment [2]. Still, it should be noted that obesity has its place in the International Disease

Code (ICD), with E66-0 obesity due to excess calories, E66-1 Drug-induced obesity, E66-2 extreme obesity with alveolar hypoventilation, E66 -8 other obesity, and E66-9 unspecified obesity [9].

Analyzing the ICD itself and the definitions of obesity, it is possible to contemplate another point addressed by the questionnaire used in the research, where 23% of the participants answered that they believe that every obese individual consumes a high amount of calories and practices little physical activity. However, this is only one of the 5 types of obesity specified in the ICD [9].

According to the International Obesity Task Force (IOTF), as well as the I and II Latin American Consensus on Obesity (1998 and 2002, respectively), pharmacological treatment is indicated when the patient has a body mass index (BMI) greater than 30 kg / m², the patient has one or more diseases associated with overweight (comorbidities) with a BMI greater than 25 kg / m², treatment with diet, cognitive-behavioral changes, exercise and/or increased physical activity have already been proven tried, without success (FAO) [11].

Since obesity is a chronic disease, so must its treatment, and its objective must be to reach a weight in which conditions associated with obesity, such as hyperglycemia, dyslipidemia, arterial hypertension, heart failure, sleep apnea, among others, are absent or attenuated. In view of this purpose, the opinion of experts and the medical literature is unanimous that 5 to 10% of body weight loss is often sufficient [2,5].

The most used criteria for assessing the effectiveness of anti-obesity treatments are those of the Food and Drug Administration (FDA) and the Committee of the European Agency for the Evaluation of Medicinal Products (CPMP). The FDA cites as a criterion a weight loss greater than 5% compared to placebo and that is statistically significant, while the CPMP suggests a loss greater than 10% compared to placebo [5].

In this context, a systematic review study followed by a meta-analysis of randomized clinical trials in the last five years explored the efficacy and safety of anorexigenic drugs for weight reduction and consequent treatment of obesity, with the use of sibutramine, phentermine, fenproporex, mazindol, amfepramone, orlistat. It was observed that in the last five years of randomized studies there were no significant general complications, with only 5.7%. The average global weight loss was 6.18 (± 2.8) kg in the meantime of 12 months. The overall success rate among these drugs was 80.18%. Thus, the scientific findings of randomized studies on the use of anorexigenic drugs in the treatment of obesity have shown safety and efficacy in the past five years, with reasonable weight loss and without significant complications [6].

5. Conclusion

According to the questionnaire and the answers obtained, it was concluded that the view of Brazilian society regarding the treatment of obesity with drugs prevails as a stigma, due to the high number of people who consider it as a disease (91.7%) and the discrepant number of people who believe that the use of drugs is not necessary for treatment (47.3%). Furthermore, it is likely that the late classification of obesity as a disease by health organizations, such as the World Health Organization, the American Medical Association, and the Brazilian Ministry of Health, corroborate for people to think that the use of drugs in the treatment of obesity unnecessary.

Still, compared to other diseases, the stigmatization of drugs in the treatment of obesity in relation to other chronic diseases is clear. Bearing in mind that 33.3% of the research participants believe that diabetes should be treated with medication and obesity should not, and 32.3% believe that systemic arterial hypertension should be treated with medication and obesity should not. Finally, it is worth mentioning that the stigmatization of medications for obesity implies prejudice and the difficulty of adhering to this method by obese people, and thus, the difficulty in decreasing the rates of obesity and the comorbidities associated with it.

References

[1] E.A. Finkelstein, O.A. Khavjou, H. Thompson, J.G. Trogdon, L. Pan, B. Sherry, W. Dietz, Obesity and severe obesity forecasts through 2030, American Journal of Preventive Medicine, 42 (2012) 563–570. DOI | PubMed

[2] OMS- Organização Mundial de Saúde. Disponível em: https://www.sbcbm.org.br/endoscopia-e-obesidade/ Acesso em: 16 de abril de 2020.

[3] Instituto Brasileiro de Geografia e Estatística (IBGE). Acessado em 15 de maio de 2020. Disponível em: http://www.ibge.gov.br.

[4] A. Karamitri, R. Jockers, Melatonin in type 2 diabetes mellitus and obesity, Nature Reviews

Endocrinology, 15(2) (2019) 105-125. DOI | PubMed

[5] M. Schetz, A. De Jong, A.M. Deane, W. Druml, P. Hemelaar , P. Pelosi, P. Pickkers, A. Reintam-Blaser, J. Roberts, Y. Sakr, S. Jaber, Obesity in the critically ill: a narrative review, Intensive Care Medicine, 45(6) (2019) 757-769. DOI | PubMed

[6] A.V. Garcia Ramirez, D.R. Filho, I.J. Zotarelli Filho, Meta-analysis and Approach of the Real Impact of Anorexigenic Drugs in the Obesity in Humans: The Last Five Years of the Randomized Studies. Current Diabetes Reviews, 16(7) (2020) 750-758. DOI | PubMed

[7] Why is obesity a disease? Obesity Medicine Association, 2017. Disponível em: <https://obesitymedicine.org/2017/02/08/why-is-obesity-a-disease/>. Acesso em: 01 de set. de 2020.

[8] Rosenbaum P. Obesity. Einstein, 2020. Available at: <https://www.einstein.br/doencas-sintomas/obesidade>. Accessed on: September 1st. 2020.

[9] CID 10. Company, 2013. Disponível em: <https://www.cid10.com.br/buscadescr?query=obesidade>. Acesso em: 01 de set. de 2020.

[10] Study points out that obesity is wrongly condemned by society. Associação Brasileira de Nutrologia, 2009. Available at: <https://abran.org.br/2018/06/08/estudo-aponta-que-a-obesidade-e-erronamente-condenada-pela-sociedade/>. Accessed on: September 1st. 2020.

[11] Ribas Filho D, SUEN VMM. Tratado de Nutrologia. 1. ed. p. 273-278. São Paulo: Manole, 2013.

[12] E.V. Elm, D.G. Altman, M. Egger, S.J Pocock, P.C. Gøtzsche, J.P. Vandenbroucke, STROBE Initiative, The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) Statement: Guidelines for Reporting Observational Studies, Journal of Clinical Epidemiology, 61(4) (2008) 344-349. DOI | PubMed

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Not Applicable

Informed consent
Informed written consent obtained from the participant

Conflict of interest
The authors declare no conflict of interest.

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