

EATING PATTERN, COMORBIDITIES AND DEGREE OF OBESITY IN WOMEN IN A MULTIDISCIPLINARY OUTPATIENT FOLLOW-UP

PADRÃO ALIMENTAR, COMORBIDADES E GRAU DE OBESIDADE DE MULHERES EM SEGUIMENTO AMBULATORIAL MULTIPROFISSIONAL

PATRÓN ALIMENTARIO, COMORBILIDADES Y GRADO DE OBESIDAD DE MUJERES EN SEGUIMIENTO AMBULATORIO MULTIPROFESIONAL

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Objective: to describe the eating pattern of women with excess weight and to characterize the body mass index and the associated comorbidities. **Method:** quantitative, descriptive study conducted in an outpatient clinic reference in obesity with 101 women with excess weight. The data were assessed by specific questionnaires and analyzed through descriptive statistics. **Results:** there was prevalence of women with class III obesity (31.7%) and hypertension (61.4%). The consumption of foods with a frequency equal to or greater than five days per week was: beans/legumes (45.0%), stewed (54.0%) and raw (47.0%) vegetables/pulses/salad, red meat (45.5%), chicken (35.0%) and fish (3.0%). The majority removed the visible fat of red meat (89.7%) and chicken (85.9%) and adopted the stewed, baked or broiled way as preparation (93.9%). Sugary drinks were consumed by 18.0% of interviewees. **Conclusion:** the pattern of food consumption in women with excess weight was below the recommended levels.

Descriptors: Obesity. Diet. Feeding Behavior. Comorbidity. Women.

Objetivo: descrever o padrão alimentar de mulheres com excesso de peso e caracterizar o índice de massa corpórea e as comorbidades associadas. *Método:* estudo descritivo quantitativo realizado em ambulatório de referência em obesidade com 101 mulheres com excesso de peso. Os dados foram avaliados por questionários específicos e analisados por meio da estatística descritiva. *Resultados:* predominaram mulheres com obesidade grau III (31,7%) e com hipertensão arterial (61,4%). O consumo de alimentos com frequência igual ou superior a cinco dias por semana foi: feijão/leguminosas (45,0%), verduras/legumes/salada cozidos (54,0%) e cru (47,0%), carnes vermelhas (45,5%), frango (35,0%) e peixes (3,0%). A maioria retirava a gordura visível das carnes vermelhas (89,7%) e do

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frango (85,9%) e adotava a forma cozida, assada ou grelhada como preparo (93,9%). Bebidas açucaradas eram consumidas por 18,0% das entrevistadas. Conclusão: o padrão de consumo alimentar de mulheres com excesso de peso apresentou-se abaixo do recomendado.

Descritores: Obesidade. Alimentação. Comportamento alimentar. Comorbidade. Mulheres.

Objetivo: describir el patrón alimentario de mujeres con sobrepeso y caracterizar el índice de masa corporal y las comorbilidades asociadas. Método: estudio descriptivo cuantitativo, en clínica de obesidad de referencia, con 101 mujeres con sobrepeso. Datos se evaluaron mediante cuestionarios específicos y se analizaron a través de estadística descriptiva. Resultados: predominaron mujeres con obesidad de grado III (31,7%) e hipertensión arterial (61,4%). El consumo de alimentos con frecuencia igual o mayor a cinco días a la semana fue: frijoles/legumbres (45,0%), verduras/ensaladas cocidas (54,0%) y crudas (47,0%), carnes rojas (45,5%), pollo (35,0%) y pescado (3,0%). La mayoría eliminó la grasa visible de las carnes rojas (89,7%) y del pollo (85,9%) y adoptó la forma cocida, asada o a la parrilla como preparación (93,9%). Las bebidas azucaradas fueron consumidas por 18,0% de las entrevistadas. Conclusión: el patrón de consumo de alimentos de mujeres con exceso de peso fue inferior al recomendado.

Descriptores: Obesidad. Alimentación. Conducta Alimentaria. Comorbilidad. Mujeres.

Introduction

Obesity, complex and multifactorial disease, is considered one of the main current health problems, due to the significant numbers around the world and affecting people of all ages and socioeconomic groups^(1,2).

According to the data of the research Surveillance of Risk and Protective Factors for Chronic Diseases by Phone Survey (Vigitel), in 2018, the frequency of excess weight in the adult population was 55.7%; of these, 19.8% are already with obesity. Women have a slightly greater frequency of obesity (20.7%) compared to men (18.7%). In Salvador, more than half of the adult population (54.2%) is above the ideal weight⁽²⁾.

This panorama is worrying and its modification has become a challenge for health services and professionals. Their aim is to minimize the panorama of a series of non-communicable diseases and their economic and social impact. The current obesity epidemic has coincided with social changes and involves unsatisfactory physical activity levels and patterns of food consumption, as well as cultural changes that differently interfere in people's behavior⁽¹⁾.

Due to the positive energy balance, which favors the accumulation of fat, obesity is often accompanied by comorbidities that affect people's life expectancy and quality of life⁽¹⁾.

Its association with other inter-related diseases is frequent, which are caused or aggravated by obesity and improve with weight reduction and control. Among the main comorbidities, type 2 diabetes mellitus, hypertension and dyslipidemias stand out, as they constitute a set of risk factors for cardiovascular disease related especially to the deposition of visceral fat and insulin resistance⁽³⁾. Among other obesity-related comorbidities, musculoskeletal problems, several types of cancer and sleep apnea stand out^(2,4).

A greater degree of obesity (BMI \geq 35) has a statistically significant association with higher mortality from all causes, differing from what occurs with normal weight. A smaller degree of obesity (BMI from 30 to 35) was not associated with increased mortality. Overweight was significantly associated with lower mortality from all causes⁽⁵⁾. People with obesity die more from circulatory diseases, especially Cerebrovascular Accident and Acute Myocardial Infarction, than those with adequate weight⁽⁴⁾. The body mass index (BMI) allows classifying overweight and obesity in classes I, II, III (severe or morbid obesity), being considered the reference standard for assessing obesity. This occurs due to its practicality, simplicity and high degree of reliability in the indication of body fat, at both individual as population levels⁽⁴⁾.

The origin, development and maintenance of health are related to genetic, environmental, historical, economic, political, social, cultural, emotional and behavioral factors, which interact between themselves⁽⁴⁾. Among the economic and political factors, there are taxes, subsidies, direct prices, adjustment of the size of the portion, nutritional labelling and situation of unemployment. In relation to social factors, the family, the school, the community, the workplace, social norms, the mass media, the marketing of food, education, urban design, the existence of space for physical activity (such as sidewalks and parks), have been considered crucial for the origin and maintenance of excess weight⁽⁶⁾.

In recent decades, there were big changes in the overall population's eating patterns, an event known as nutritional transition, leading individuals to the rapid incorporation of western habits and to eat most meals out of home, privileging ultra-processed products, with high levels of sodium, sugar and saturated fats and poor in fiber, vitamins and minerals, to the detriment of homemade and whole or minimally processed food⁽⁷⁾. The choice of food involves different meanings in different social strata. In general, the habits may be unsuitable for three reasons: people do not know, do not want to or do not have access to healthy foods⁽⁸⁾. Thus, the choice of food to be consumed also involves, in addition to the knowledge, availability, price and convenience. This is usually represented by easy-to-prepare and easy-to-consume food⁽⁹⁾.

Despite the important political achievements towards gender equality and the inclusion of women in various scenarios of our society, mainly in the labor market, these changes were not significant in the domestic environment concerning the divisions of tasks. Women are, in general, responsible for managing the food demands of family, such as doing the shopping and organizing the menu, as well as the cleaning of kitchen utensils, being often directly linked to the personal and family eating pattern⁽¹⁰⁾.

People without the proper knowledge may not realize that their eating habit is unhealthy. Although the knowledge promotes the

development and maintenance of new eating attitudes, its influence is not unconditional and, many times, does not guarantee compliance with the recommendations⁽¹¹⁾.

The degree of excess weight, the presence of comorbidities associated with obesity, in addition to inadequate eating, potentiate the cardiovascular risk and need to be known to guide the practices of health promotion, prevention and control of those diseases. Furthermore, the characterization of eating pattern, the degree of excess weight and the associated comorbidities reflect the condition of women's health, providing important information for the (re)targeting of actions and guidelines for health professionals and public authorities, aimed at the control and regain of lost weight. This knowledge enables the health professionals, especially nurses, create assistance strategies based on the reality and life style of women met by them.

Considering the above, the present study aims to describe the eating pattern of women with excess weight and to characterize the body mass index and the associated comorbidities.

Method

This is a descriptive study with a quantitative approach. This is a cutout of a matrix project entitled "Remote Nursing Follow-up with Women with Excess Weight".

The original research of the matrix project was developed in a service reference in obesity of a private Higher Education Institution in the city of Salvador, Bahia, Brazil. For eight year, this outpatient service has developed the research project "Study of Excess Weight and Cardiometabolic Syndrome", named PEPE. This project aims to monitor people with excess weight through a multidisciplinary team composed of a doctor, endocrinologist, nurse, psychologist, nutritionist, dentist and undergraduate and post-graduate students in the health area.

The participants were women with excess weight that met the inclusion criteria for the project matrix: $BMI \geq 25 \text{ kg/m}^2$, aged over 18 years and under 60 years, and who attended

the medical consultation within the 12 months prior to the selection of eligible people (March 2016 to March 2017). The exclusion criteria were: absence of physical conditions for anthropometric measurements, mental confusion and cognitive conditions that prevented answering the survey instruments and reading written messages, in addition to severe psychiatric disorders diagnosed. During the collection period, there were 317 women enrolled in the service, but only 117 met the inclusion and exclusion criteria. Thus, the study included virtually all the eligible population, except 16 women who did not attend data collection, finalizing with 101 women.

The data collection was carried out by the researcher, doctoral student of the matrix project, one master's student and four undergraduate student from the scientific initiation program, trained and supervised by the researcher in the period from May to July 2017.

To meet the objective of this study, data collected by two instruments of the matrix project were used: sociodemographic data, presence of comorbidities and BMI; data characterization of eating pattern.

The instrument to characterize the eating pattern was composed of closed questions, adapted from the Program Surveillance of Risk and Protective Factors for Chronic Diseases by Phone Survey (Vigitel), proposed by the Ministry of Health (MOH).

The weight, in kilograms, was measured using a digital scale with the participant barefooted, with minimum clothes and without adornments. The height (in meters) was measured using a portable stadiometer (graduate at each 0.5 cm) with the participant standing, with the head and torso touching the ruler of the stadiometer, below

the horizontal rod, keeping the arms stretched along the body, shoulders, shoulder blades, buttocks, heels touching the wall and feet resting on the floor. BMI was calculated by dividing weight (in kilograms) by the squared height (in meters) with the following classification⁽⁴⁾: BMI 25 to 29.9 kg/m² = overweight; BMI 30.0 to 34.9 kg/m² = class I obesity; BMI 35.0 to 39.9 kg/m² = class II obesity; BMI greater than or equal to 40.0 kg/m² = class III obesity.

The data were processed using the Statistical Package for the Social Sciences (IBM SPSS version 18.0). The categorical variables were analyzed in absolute and relative frequencies and the continuous variables as mean and standard deviation. Data normality was assessed by the Shapiro-Wilk test, which showed a result of normality for the numerical variables used.

The matrix project was approved by the Research Ethics Committee of the Nursing School of the Universidade Federal da Bahia, under opinion n. 1.152.259. Women who agreed to participate in the research received information about the study and signed the Informed Consent Form (ICF).

Results

The participants were 101 women with excess weight. The mean age was approximately 47.8 (SD=9.0), minimum age of 23 and a maximum of 59 years. As described in Table 1, there was a predominance of age ≥ 50 years (47.5%), black race/color (93.1%), secondary education (62.4%), without a partner (51.5%), with paid labor activity (54.5%), daily working hours of 8.3 hours (SD=2.7), monthly family income ≤ 3 minimum wages (87.1%), residence with family members (86.1%) and without a housemaid (95.0%).

Table 1 – Number and percentage of women with excess weight, by sociodemographic characteristics. Salvador, Bahia, Brazil – 2017. (N = 101) (continued)

Variable	n	%
Age group		
20-29	5	4.9
30-39	14	13.9
40-49	34	33.7
50-59	48	47.5

Table 1 – Number and percentage of women with excess weight, by sociodemographic characteristics. Salvador, Bahia, Brazil – 2017. (N = 101) (conclusion)

Variable	n	%
Race/color		
Black (black/ <i>pardo</i>)	94	93.1
White	7	6.9
Education		
Up to complete primary education	30	29.7
Complete or incomplete secondary education	63	62.4
Complete or incomplete higher education	8	7.9
Marital situation		
Without partner	52	51.5
Married/with partner	49	48.5
Paid labor activity		
Yes	55	54.5
No	46	45.5
Monthly family income*		
≤ 3 minimum wages	88	87.1
> 3 minimum wages	13	12.9
Living alone		
Yes	14	13.9
No	87	86.1
Housemaid		
Yes	5	5.0
No	96	95.0

Source: Created by the authors.

* Minimum wage on 11/01/2017: 937.00 R\$.

There is a greater percentage of women with BMI compatible with class III obesity (31.7%). The mean BMI was 36.5 kg/m² (SD=5.9). Among

the 101 interviewees, hypertension was the most frequent comorbidities (61.4%), followed by type 2 diabetes mellitus (32.1%) (Table 2).

Table 2 – Number and percentage of women with excess weight, by body mass index and comorbidities. Salvador, Bahia, Brazil – 2017. (N = 101)

Variables	n	%
Body Mass Index		
Overweight	15	14.9
Class I obesity	31	30.7
Class II obesity	23	22.8
Class III obesity	32	31.7
Presence of comorbidities		
Arterial hypertension	62	61.4
Type 2 diabetes mellitus	33	32.7
Dyslipidemia	39	38.6
Arthrosis	33	32.7

Source: Created by the authors.

In relation to the women's eating pattern, the consumption on five or more days of the week, beans/pulses (45.0%), vegetables/cooked vegetables (54.0%), lettuce and tomato salad or salad with any other vegetable or raw legume

(47.0%), fruits (63.6%), red meat (45.5%), chicken/hen (35.0%) and fish (3.0%). The consumption of cakes, biscuits or sweets in over three days of the week was reported by 10.1% and of pizza, pasta and breads, by 50.5% (Table 3).

Table 3 – Number and percentage of women with excess weight, according to the eating pattern related to the consumption of beans, fruits, meats and pastas. Salvador, Bahia, Brazil – 2017

Variable	n	%
Beans/pulses(n = 100)		
≥ 5 days of the week	45	45.0
< 5 days of the week	55	55.0
Vegetable/cooked legumes (n = 100)		
≥ 5 days of the week	54	54.0
< 5 days of the week	46	46.0
Lettuce and tomato salad or salad with any other vegetable or raw legume (n = 100)		
≥ 5 days of the week	47	47.0
< 5 days of the week	53	53.0
Fruits (n = 99)		
≥ 5 days of the week	63	63.6
< 5 days of the week	36	36.4
Red Meat = 99)		
≥ 5 days of the week	45	45.5
< 5 days of the week	54	54.5
Chicken/hen (n = 100)		
≥ 5 days of the week	35	35.0
< 5 days of the week	65	65.0
Fish (n = 100)		
≥ 5 days of the week	3	3.0
< 5 days of the week	97	97.0
Cakes, biscuits or sweets (n = 99)		
0 - 2 days of the week	89	89.9
≥ 3 days of the week	10	10.1
Pizza, pasta and breads (n = 99)		
0 - 2 days of the week	49	49.5
≥ 3 days of the week	50	50.5

Source: Created by the authors.

Note: The divergence in the total number is due to incomplete information.

Regarding the consumption of artificial juice or soft drinks, 18.0% of women consumed them, at a frequency equal to or greater than 3 days a week. Concerning the type of artificial juice or soft drinks consumed by 64 women, there was prevalence of normal (not diet/light) 81.2%. Of

the interviewees, 93.9% reported consumption of milk, with 47.8% of semi-skimmed or skimmed milk. The consumption of 6 or more glasses of water per day was reported by 67.7% of the interviewees (Table 4).

Table 4 – Number and percentage of women with excess weight, according to the type of liquid consumed. Salvador, Bahia, Brazil – 2017 (continued)

Variables	n	%
Soft drink or artificial juice (n = 100)		
None	36	36.0
1 - 2 days of the week	46	46.0
≥ 3 days of the week	18	18.0
Type of soft drink or artificial juice (n = 64)		
Predominantly <i>light/diet</i>	12	18.8
Predominantly normal	52	81.2

Table 4 – Number and percentage of women with excess weight, according to the type of liquid consumed. Salvador, Bahia, Brazil – 2017 (conclusion)

Variables	n	%
Milk (n = 98)		
None	6	6.1
1 - 2 days of the week	27	27.6
≥ 3 days of the week	65	66.3
Type of milk (n = 92)		
Semi-skimmed or skimmed	44	47.8
Whole	40	43.5
Both types	8	8.7
Water intake (glass of 200 ml) (n = 99)		
≥ 6 glasses	67	67.7
< 6 glasses	32	32.3

Source: Created by the authors.

Note: The divergence in the total number is due to incomplete information.

Table 5 shows the method of food preparation. Of the participants, 89.7% always remove the excess fat from meat, 85.9% remove the skin of chicken and 57.9% remove the skin of fish; 93.9% adopt the stewed, baked or grilled form. There is still a predominance of women who performed

less than six meals per day (82.7%). Only 49.0% of the sample always had snacks in the intervals between mains meals and 57.9% ate quickly. The eating pattern classified as excellent by women was reported by 9.1% of them (Table 5).

Table 5 – Number and percentage of women with excess weight, according to the food, mode of preparation, number of meals and snacks, form of preparation and evaluation of weight control. Salvador, Bahia, Brazil – 2017 (continued)

Variables	n	%
Read Meat (n = 97)		
Always removes the excess fat/does not eat fat	87	89.7
Eats with fat	7	7.2
Does not eat red meat	3	3.1
Chicken/hen (n = 99*)		
Always removes the skin	85	85.9
Eats with skin	14	14.1
Fish (n = 95)		
Always removes the skin	55	57.9
Eats with skin	36	37.9
Does not eat fish	4	4.2
Form of preparation of food (n = 99*)		
Stewed, baked, grilled	93	93.9
Fried	6	6.1
Number of meals a day (n = 98)		
≥ 6 meals a day	17	17.3
< 6 meals a day	81	82.7
Snacks between main meals (n = 98*)		
Daily	48	49.0
Sometimes	29	29.6
Rarely	7	7.1
Does not eat snacks	14	14.3

Table 5 – Number and percentage of women with excess weight, according to the food, mode of preparation, number of meals and snacks, form of preparation and evaluation of weight control. Salvador, Bahia, Brazil – 2017 (conclusion)

Variables	n	%
Form of eating the meal (n = 99)		
Eats quickly	52	57.9
Eats slowly, chewing well	45	37.9
Could not report	2	4.2
Evaluation of the eating performed for weight control (n = 99)		
Excellent	9	9.1
Good	63	63.6
Bad	27	27.3

Source: Created by the authors.

Note: The divergence in the total number is due to incomplete information.

Discussion

Considering the obesity a disease resulting from social, economic, genetic and cultural factors, it is important to know the demographic profile of the population. The women in this study were characterized predominantly as adult in the age range of greater maturity, black, with low schooling and low purchasing power. This fact deserves to be highlighted, because there is evidence in the literature regarding the close relationship between food, schooling and socioeconomic conditions, justifying that people with higher income are less likely to have difficulties to adopt a healthy eating⁽¹¹⁾.

It is important to emphasize that the high percentage of women who worked outside and had no housemaid found in this study can constitute a barrier to adopting healthy life habits, especially when thinking of the social constructions of gender, which put women as the main responsible for house chores. Furthermore, factors related to the lack of time, due to the demands of the day-to-day and the lack of information (insufficient knowledge) are reasons that hinder the adoption of a healthy eating pattern⁽¹¹⁾.

Another prominent aspect of the present study was the presence of concomitant diseases with excess weight, especially hypertension, type 2 diabetes mellitus and dyslipidemia, main

comorbidities associated with excess weight. The greater the aggregation of risk factors for cardiovascular disease, the greater the risk for the occurrence of cardiovascular event. A study⁽¹²⁾ showed that obesity and its comorbidities have an adverse effect on vascular structure and function, create conditions that favor the cardiovascular and metabolic disease that contribute to increased mortality. In this way, assessing the concomitant presence of other health changes is essential for the proper clinical management by health professionals, especially in relation to habits, aiming to establish preventive approaches.

Moreover, the fact that a third of women present arthrosis as a comorbidity is in agreement with the literature, which suggests an association of obesity with the presence of other chronic diseases. In addition, it associates the sedentary lifestyle with articular diseases, which can result in health problems that include mobility and impairment of quality of life⁽¹³⁾. This knowledge implies that this aspect should be considered during the care with the person with excess weight, as well as the guidelines on the activities that can and must be carried out by that person.

A study⁽⁵⁾ showed that the expressive number of women with obesity (85.2%) and the high percentage of women with classes II (22.8%) and III (31.7%) is a worrying datum, especially because the major classifications are more associated with cardiovascular complications,

requiring greater attention regarding the adoption of compatible healthy eating habits and the practice of physical activity with weight control and prevention of comorbidities. This fact shows the difficulty of weight control, even with the follow-up of women in the health service of reference, bringing the challenge of analysis of the main reasons associated with those behaviors.

In another study⁽¹⁴⁾, the consumption of beans/pulses with frequency equal to or greater than five days a week was reported by less than half of the interviewees. The beans, classified as pulses, are the main source of vegetable protein in the Brazilian diet. Their composition contains complex carbohydrates, fiber, vitamins and minerals. The daily consumption of a portion of those pulses is found in the recommendations for a healthy eating for the Brazilian population.

In addition to the low family income of the population of this study, which could determine the options on the acquisition of food, data found in the literature indicate that the costs are not always the main responsible for access⁽¹⁵⁾. This aspect should be considered while guiding individuals, for the rearrangement of budget, adapting it to the purchases of food. In the specific case of women, as they often have less secure employment and lower wages than men, they may also have less control over access to nutritious foods⁽¹⁶⁾.

The results of this study showed that the consumption of vegetables/cooked legumes was also not satisfactory. Even without investigating the reasons, a study carried out with the Brazilian population⁽¹⁷⁾ points as major barriers the high cost, lack of time, the unpleasant taste, lack of habit, high perishability of those foods, "laziness", forgetfulness, lack of satiability, difficulty of transporting to the work, little availability in trade and form of preparation. Whole foods, such as vegetables, legumes, greens and fruits are sources of micronutrients, fibers and other components with functional properties of a healthy eating, as demonstrated by a study⁽¹⁸⁾, and their adequate consumption contributes to increasing satiety, represents a protection

factor for chronic non-communicable diseases and contributes to the reduction and control of body weight.

In relation to the consumption of meat, the predominance of red meat found in this study deserves to be highlighted. Despite being important sources of proteins of high biological value, iron, vitamin B complex, the consumption of meat in excess can provide significant amounts of fats, because of the type of animal, type of animal breeding and the location of the meat cut. In a study conducted in Belo Horizonte⁽¹⁴⁾, the authors pointed out that the consumption of white meats, such as chicken and, especially, fish, considered to be healthier by their lower fat content, was done at a frequency lower than recommended.

The results found in this study, with 10.1% and 50.5% of women with consumption of cakes/biscuits/sweets and pizza/pasta/bread, respectively, with a frequency greater than or equal to three times per week, depict a population group still with eating patterns of risk for weight control and its comorbidities. The scientific evidence prove that, between the processed or ultra-processed foods, those that provide more calories are breads and sandwiches, processed cakes, sweet biscuits and sweets in general⁽¹⁴⁾.

Even though the consumption of soft drinks and artificial juices in this study greater than three times per week had been reported by a small percentage of women (18.0%), the fact that these values can be considered high deserves attention, mainly because of the prevalence of the consumption of those beverages not light or diet. Considering that this is a population that attends a clinic to control obesity with multidisciplinary care, therefore, aware of the deleterious effects of the consumption of beverages sweetened with sugar, this consumption was expected to be lower. This value was higher than that found in a study conducted with people with obesity in a nutrition outpatient clinic (7.0%)⁽¹⁹⁾.

The consumption of soft drinks and other beverages with free sugar is worrying, not only because of their extremely low nutritional value, their reduced ability to promote satiety, but also

because they are related to increased weight and other diseases, such as metabolic syndrome, insulin resistance, type II diabetes mellitus and abdominal obesity⁽²⁰⁾.

Most of the women in this study consumed milk three or more days of the week, with similarity between the percentages of whole or semi-skimmed/skimmed milk powder. A research⁽²¹⁾ found that six to ten people drank whole milk, however, the recommendation is that adults should choose milk and derivatives with smaller quantities of fat. The consumption of whole milk, sweetened drinks and foods with fat can be related to cultural factors, but are not recommended for people with excess weight and obesity⁽²¹⁾.

Most women reached a daily water consumption (six to eight glasses) as recommended by the Ministry of Health, in the Dietary Guide for the Brazilian population⁽¹⁴⁾. According to this document, the water is considered a vital ingredient and its adequate intake is essential for the body, since it helps in the process of digestion, absorption, circulation, lubrication and excretion that occur in the human body. The amount of water that should be ingested per day varies for each person and depends on several factors, such as weight, age, physical activity practice, climate and temperature of the environment. Its consumption is advisable preferably between meals.

The results of this study showed a high percentage of women who always removed the excess of visible fat of red meat and chicken skin. The aforementioned Dietary Guide⁽¹⁴⁾ clarifies that not eating excess fats is an indicator of consumption of foods considered markers of healthy standards.

Regarding the number of meals per day, the vast majority of survey participants had the habit of having less than six meals and less than half consumed snacks between meals. Although three meals per day are considered sufficient to meet the nutritional needs⁽¹⁴⁾, a study⁽²²⁾ stated that the increased eating frequency, the number of meals throughout the day, adding snacks between main meals, promotes an increase in

metabolism and satiety, improvement in glucose and reduction of fat tissue, and may be important in maintaining weight loss.

More than half of women reported having the habit of eating quickly. This, however, is not recommended, since the increased number of masticatory cycles before swallowing, that is, eating slowly, reduces the amount of food ingested, increases satiety and, in turn, helps control body weight⁽²³⁾.

A significant percentage of the participants in the study mentioned considering their eating pattern as good, followed by bad. A small number of women classified it as excellent. This shows that many of them are aware that their eating habit is not as healthy as it should be, being worth investing in strategies to improve it.

It is necessary to know the main barriers faced by women for the adoption of a healthier eating habit and find strategies to encourage the improvement of food consumption, especially in what concerns the increased of whole food (vegetables and fruits). It is important, in the therapeutic approach of people with excess weight, to have always in mind the need to stimulate a change of life style, through modifications of choices, preparation and consumption of food. This change will contribute to the better weight control and prevention of other risk factors, always considering the obstacles associated.

The data obtained in this study revealed the importance of thinking strategies together with women and other populations for better weight control and associated comorbidities. These strategies need to consider that the dietary practices are influenced by the production, supply, access and distribution of food, as well as by cultural and ideological factors relating to ideas about the food, to beliefs in their properties and effects that accompany them. They also involve social values, notions of morality, behaviors among different age groups and gender, besides being permeated by social identity, relations with the body and the taste⁽²⁴⁾. This should lead nurses and their work team, in association with other health professionals, to conduct a comprehensive and important work

in primary health care, interacting with a great demand of people with excess weight.

There is a challenge for professionals who need to develop a project of care shared with women, since the restrictive measures of pleasures are related to the need for dieting and, therefore, weight control. There is also a need to think, along with the women, their life and self-care project, so that the control measures of weight and comorbidities are not absorbed as a burden of the disease, but as ways of preserving life and giving meaning to life. The changes in attitude may occur if a person is motivated and count with essential support from economic and social structure⁽²⁵⁾.

The main limitation of the present study is the use of instruments not validated with self-reported information.

Conclusion

A higher percentage of women had classed II and III obesity and the most frequent comorbidities were hypertension, type 2 diabetes mellitus and dyslipidemia, revealing the aggregation of risk factors for cardiovascular disease in the studied group. A significant number of women did not have an adequate eating pattern for weight control and for the prevention and control of other associated risk factors. The consumption of whole food (cooked and raw beans/pulses, vegetables/legumes/salad) and white meat (chicken and fish) was below recommended levels, as well as the consumption of sugary drinks and whole milk was still frequent.

As a positive point of the eating adequacy, there stood out the preparation of meat with the removal of excess of visible fat and the choice of cooked/baked/grilled forms by most interviewees. Women showed a pattern of food consumption that needs to be improved, increasing the consumption of fruits and vegetables, as well as reducing the foods rich in carbohydrates and fats, with special attention to saturated fats.

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2 – writing of the article and relevant critical review of the intellectual content: Cátia Suely Palmeira, Juliana Santos Mota, Natália de Azevedo Correia Passos e Fernanda Carneiro Mussi;

3 – final approval of the version to be published: Cátia Suely Palmeira e Fernanda Carneiro Mussi.

References

1. World Health Organization. Obesity and overweight. Fact Sheets [Internet]. Geneva (CHE); 2018 [cited 2020 Jan 20]. Available from: <https://www.who.int/news-room/fact-sheets/detail/obesity-and-overweight>
2. Brasil. Ministério da Saúde. Secretaria de Vigilância em Saúde. *Vigitel Brasil 2018: Vigilância de Fatores de Risco e Proteção para Doenças Crônicas por Inquérito Telefônico*. Brasília (DF); 2018. [cited 2020 Nov 12]. Available from: <https://www.saude.gov.br/images/pdf/2019/julho/25/vigitel-brasil-2018.pdf>
3. Klauk CM, Zenatti GAG, Pappen DRHP, Berto NRT. Comorbidades associadas a obesidade em pacientes candidatos a cirurgia bariátrica. *Rev Bras Obesidade, Nutrição Emagrecimento* [Internet]. 2019 [cited 2019 Nov 28];13(79):351-6. Available from: <https://dialnet.unirioja.es/servlet/articulo?codigo=7067572>
4. Associação Brasileira para o Estudo da Obesidade e da Síndrome Metabólica. *Diretrizes Brasileiras de Obesidade 2016*. 4a ed. São Paulo; 2016.
5. Flegal KM, Kit BK, Orpana H, Graubard BI. Association of all-cause mortality with overweight and obesity using standard body mass index

- categories: a systematic review and meta-analysis. *JAMA* 2013;309(1):71-82. DOI: 10.1001/jama.2012.113905
6. Sturm R, An R. Obesity and economic environments. *CA Cancer J Clin*. 2014;64(5):337-50. DOI: 10.3322/caac.21237
 7. Popkin BM. Relationship between shifts in food system dynamics and acceleration of the global nutrition transition. *Nutr Rev*. 2017 Feb;75(2):73-82. DOI: 10.1093/nutrit/nuw064
 8. Serra-Majem L, Bautista-Castaño I. Etiology of obesity: two “key issues” and other emerging factors. *Nutr Hosp*. 2013 Sep;28(Suppl 5):32-43. DOI: 10.3305/nh.2013.28.sup5.6916
 9. Oliveira APSV, Silva MM. Fatores que dificultam a perda de peso em mulheres obesas de graus I e II. *Rev Psicol Saúde [Internet]*. 2014 [cited 2020 Jan 21];6(1):74-82. Available from: http://pepsic.bvsalud.org/scielo.php?script=sci_arttext&pid=S2177-093X2014000100010&lng=pt.
 10. Bernardes AFM, Silva CG, Frutuoso MFP. Alimentação saudável, cuidado e gênero: percepções de homens e mulheres da Zona Noroeste de Santos-SP. *Demetra*. 2016;11(3):559-73. DOI: 10.12957/demetra.2016.22334
 11. Lindemann IL, Oliveira RR, Mendoza-Sassi RA. Dificuldades para alimentação saudável entre usuários da atenção básica em saúde e fatores associados. *Ciênc saúde colet*. 2016;21(2):599-610. DOI: 10.1590/1413-81232015212.04262015
 12. Burgos PFM, Costa W, Bombig MTN, Bianco HT. A obesidade como fator de risco para a hipertensão. *Rev bras hipertens [Internet]*. 2014 abr-jun [cited 2019 Nov 21];21(2):68-74. Available from: http://docs.bvsalud.org/biblioref/2018/03/881409/rbh-v21n2_68-74.pdf
 13. Christensen R, Henriksen M, Leeds AR, Gudbergson H, Christensen P, Sorensen TJ, et al. Effect of weight maintenance on symptoms of knee osteoarthritis in obese patients: a twelvemonth randomized controlled trial. *Arthritis Care Res (Hoboken)*. 2015 May;67(5):640-50. DOI: 10.1002/acr.22504
 14. Brasil. Ministério da Saúde. Secretaria de Atenção à Saúde. Departamento de Atenção Básica. Guia alimentar para a população brasileira. 2a ed. Brasília (DF); 2014 [cited 2020 Jan 10]. Available from: https://bvsms.saude.gov.br/bvs/publicacoes/guia_alimentar_populacao_brasileira_2ed.pdf
 15. Figueira TR, Lopes ACS, Modena CM. Barreiras e fatores promotores do consumo de frutas e hortaliças entre usuários do Programa Academia da Saúde. *Rev Nutr*. 2016;29(1):85-95. DOI: <https://doi.org/10.1590/1678-98652016000100009>
 16. Wells JC, Marphatia AA, Cole TJ, McCoy D. Associations of economic and gender inequality with global obesity prevalence: understanding the female excess. *Soc Sci Med*. 2012;75(3):482-90. DOI: 10.1016/j.socscimed.2012.03.029
 17. Santos GMGC, Silva AMR, Carvalho WO, Rech CR, Loch MR. Barreiras percebidas para o consumo de frutas e de verduras ou legumes em adultos brasileiros. *Ciênc saúde coletiva*. 2019;24(7):2461-70. DOI: <https://doi.org/10.1590/1413-81232018247.19992017>
 18. Wang PY, Fang JC, Gao ZH, Zhang C, Xie SY. Higher intake of fruits, vegetables or their fiber reduces the risk of type 2 diabetes: A meta-analysis. *J Diabetes Investig*. 2016;7(1):56-69. DOI: 10.1111/jdi.12376
 19. Souza AC, Oliveira JE, Caritá E, Nogueira-de-Almeida CA. Perfil dos pacientes obesos no primeiro atendimento em Ambulatório de Nutrologia Municipal de Ribeirão Preto (SP). *Medicina (Ribeirão Preto Online)*. 2017;50(4):207-15. DOI: <https://doi.org/10.11606/issn.2176-7262.v50i4p207-215>
 20. Figueiredo N, Maia EG, Silva LESD, Granado FS, Claro RM. Trends in sweetened beverages consumption among adults in the Brazilian capitals, 2007-2016. *Public Health Nutr*. 2018;12:1-11. DOI: 10.1017/S1368980018002161
 21. Claro RM, Santos MAS, Oliveira TP, Pereira CA, Szwarcwald CL, Malta DC. Consumo de alimentos não saudáveis relacionados a doenças crônicas não transmissíveis no Brasil: Pesquisa Nacional de Saúde, 2013. *Epidemiol Serv Saúde*. 2015;24(2):257-65. DOI: 10.1017/S1368980018002161
 22. Bachman JL, Phelan S, Wing RR, Raynor HA. Eating frequency is higher in weight loss maintainers and normal-weight individuals than in overweight individuals. *J Am Diet Assoc*. 2011;111(11):1730-4. DOI: 10.1016/j.jada.2011.08.006
 23. Serafim JL, Ribeiro JÁ, Rosa SSRF, Rosa MFF. Associação entre a velocidade de alimentação e sobrepeso/obesidade: uma revisão integrativa. *Rev Bras Obesidade, Nutrição Emagrecimento [Internet]*. 2016 [cited 2019 Nov 21];10(58):199-204.

- Available from: <http://www.rbone.com.br/index.php/rbone/article/view/444>
24. Canesqui AM, Garcia RWD. Uma Introdução à reflexão sobre a abordagem sociocultural da alimentação. In: Canesqui AM, Garcia RWD, organizadoras. *Antropologia e nutrição: um diálogo possível*. Rio de Janeiro: FIOCRUZ; 2005. p.9-22. DOI: <https://doi.org/10.7476/9788575413876>
25. Mussi FC. O infarto e a ruptura com o cotidiano: possível atuação da enfermagem na prevenção. *Rev Latino-Am Enfermagem*. 2004 Sept/Oct;12(5):751-9. DOI: <http://dx.doi.org/10.1590/S0104-11692004000500008>

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