

QUALITY OF LIFE OF OVERWEIGHT WOMEN

QUALIDADE DE VIDA DE MULHERES COM EXCESSO DE PESO

CALIDAD DE VIDA DE LAS MUJERES CON SOBREPESO

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Objectives: To identify overweight women's sociodemographic and clinical characteristics and describe the association between quality of life and nutritional status. **Method:** a cross-sectional study with 82 women from a public outpatient clinic in Bahia. We used sociodemographic and clinical forms, the SF-36, descriptive statistics, the Kruskal Wallis test, and a statistical significance of 5%. **Results:** The majority were black (92.7%), had 40 to 59 years (85.4%), had a partner (51.2%), up to high school (61.0%), paid work (52.4%) and had monthly income 3 minimum wages (86.6%). She had obesity grade I 34.1%, III 31.7%, and two comorbidities 32.9%. The domains of pain, general health status, and vitality were more compromised, with medians of 51, 52, and 55, respectively. Women with obesity III had worse quality of life in the functional capacity, physical aspects and pain domains ($p < 0.05$). **Conclusion:** Overweight affects quality of life, especially in women with obesity III.

Descriptors: Quality of Life. Overweight. Obesity. Women. Women's Health.

Objetivos: Identificar características sociodemográficas e clínicas de mulheres com excesso de peso e descrever a associação entre qualidade de vida e estado nutricional. **Método:** estudo transversal, com 82 mulheres de ambulatório público, na Bahia. Utilizou-se formulários sociodemográfico e clínico, o SF-36, a estatística descritiva, o teste de Kruskal Wallis e significância estatística de 5%. **Resultados:** A maioria era negra (92,7%), tinha de 40 a 59 anos (85,4%), companheiro (51,2%), até o ensino médio (61,0%), trabalho remunerado (52,4%) e renda mensal ≤ 3 salários-mínimos (86,6%). Tinha obesidade grau I 34,1% e III 31,7% e duas comorbidades 32,9%. Os domínios dor, estado geral de saúde e vitalidade foram mais comprometidos, com medianas de 51, 52, e 55, respectivamente. Mulheres com obesidade III apresentaram pior qualidade de vida nos domínios capacidade funcional, aspectos físicos e dor ($p \leq 0,05$). **Conclusão:** O excesso de peso afeta a qualidade de vida, especialmente, em mulheres com obesidade III.

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Descritores: Qualidade de Vida. Sobrepeso. Obesidade. Mulheres. Saúde da Mulher.

Objetivos: Identificar características sociodemográficas y clínicas de mujeres con sobrepeso y describir la asociación entre calidad de vida y estado nutricional Método: estudio transversal, con 82 mujeres de ambulatorio público, en Babía. Se utilizó formularios sociodemográfico y clínico, el SF-36, la estadística descriptiva, el test de Kruskal Wallis y significación estadística del 5%. Resultados: La mayoría era negra (92,7%), tenía de 40 a 59 años (85,4%), compañero (51,2%), hasta la enseñanza media (61,0%), trabajo remunerado (52,4%) e ingreso mensual 3 salarios-mínimos (86,6%). Tenía obesidad grado I 34,1% y III 31,7% y dos comorbilidades 32,9%. Los dominios dolor, estado general de salud y vitalidad fueron más comprometidos, con medianas de 51, 52, y 55, respectivamente. Mujeres con obesidad III presentaron peor calidad de vida en los dominios capacidad funcional, aspectos físicos y dolor (p 0,05). Conclusión: El sobrepeso afecta la calidad de vida, especialmente en mujeres con obesidad III.

Descritores: Calidad de Vida. Sobrepeso. Obesidad. Mujeres. Salud de la Mujer.

Introduction

Currently, overweight and obesity are significant public health problems due to the rapid evolution and global reach of the disease⁽¹⁾. Worldwide, in 2016, more than 1.9 billion adults were overweight, of which more than 650 million were obese⁽¹⁾. In Brazil, in 2019, more than 55.4% of the population was overweight or obese⁽²⁾.

Overweight, defined as an accumulation of abnormal or excessive fat, causes damage to health and results, in most cases, from the energy imbalance between consumed and spent calories⁽¹⁾. It represents a complex condition associated with chronic diseases and a series of socioeconomic and psychosocial problems that compromise health. It can generate functional disabilities leading people to experience worse results in physical functioning and engagement in social life, reduced life expectancy, and increased mortality⁽³⁾. Thus, it can impair the perception of health, affect well-being and quality of life⁽⁴⁻⁵⁾.

Quality of life deals with a subjective and multidimensional conception that human beings attribute to their existence and live experiences, which involves psychosocial, cultural, environmental, spiritual, and health conditions⁽⁸⁾. Quality of life when related to health (HRQoL) refers to the perception that the person has associated with their physical, functional, emotional, and social well-being⁽⁹⁾ and can be affected by excess weight.

Some studies have focused on the impact of overweight on health and quality of life (QoL). For example, an investigation of outpatients of obesity in Turkey showed improved QoL with decreased weight. Moreover, the stigma of low self-esteem and body dissatisfaction caused by obesity decreased with weight reduction⁽⁶⁾. Another study showed that being overweight and obese was negatively associated with worse quality of life outcomes⁽⁷⁾.

Although interest in the relationship between overweight and quality of life is becoming more common, studies on this relationship in adult women are scarce. This relationship can retain specificities due to the social constructions of gender and being obese women in Brazilian society in the face of current beauty standards.

The measurement of quality of life has been considered an important health indicator. It provides information related to physical health, social, mental, beliefs, and behaviors of the individual that can contribute to specific healthcare interventions and also help in the decision making of health professionals, managers and resource allocation⁽¹⁰⁾. The importance of this evaluation has increased significantly in the last 50 years, given the evidence that it is a valid, reliable, and sensitive measure to clinical changes⁽¹¹⁾. One of the instruments widely used worldwide to assess the quality of life and measure self-reported physical and mental health status is the Medical

Outcomes Study 36-Item - Short-Form Health Survey (SF-36)⁽¹²⁾.

Thus, knowing the relationship between quality of life in health and the issue of overweight women will guide a better therapeutic approach, aiming to help them make decisions related to health care and promote better satisfaction with life. In addition, it will give visibility to this relevant public health problem and its impact on women's lives, strengthening public policies to support the prevention and control of overweight.

In this context, the present study aimed to identify sociodemographic and clinical characteristics of overweight women and to describe the association between quality of life and nutritional status.

Method

It is a cross-sectional study of a matrix project developed in an outpatient clinic of reference in obesity in the city of Salvador, Bahia. This outpatient service created the project "Study of Overweight and Cardiometabolic Disease" called PEPE, in which overweight people are accompanied by a multi-professional team composed of endocrinologists, nurses, psychologists, and undergraduate and graduate students in the health area.

One hundred and one women were recruited for the matrix project whose inclusion criteria were: women with body mass index (BMI) ≥ 25 kg/m², aged over 18 and under 60 years, and who attended at least one appointment in the last 12 months. The exclusion criteria were: women with conditions that prevent them from answering questionnaires and performing anthropometric measurements, using drugs for weight loss, and undergoing bariatric surgery.

Two instruments were used to collect data. One was composed of closed questions related to sociodemographic and clinical variables such as age, self-declared race/color, schooling, labor activity, monthly family income, and comorbidities.

To assess the quality of life, the SF-36 was used, which is a multidimensional psychometric

instrument used in various health conditions and validated for use in the Brazilian population⁽¹³⁾. It constitutes an additional parameter in the evaluation of several diseases, better directing health professionals in the integral assessment of the patient, as well as in the determination of more individualized treatment strategies⁽¹⁴⁾. The SF-36 allows assessing the quality of life of people undergoing specific treatments and care programs directed to groups with various health problems⁽¹⁴⁻¹⁵⁾.

The SF-36 consists of 36 questions, and of these, one measures the transition of health status in one year and is not used in the calculation of scales. The others are grouped into eight domains (functional capacity, physical aspects, pain, general health status, vitality, emotional aspects, social aspects, and mental health)⁽¹²⁾. The highest scores indicate better quality of life in health. The final score ranges from 0 to 100; zero corresponds to the worst overall quality of life and 100 to the best.

Data collection was performed by the researchers, previously trained, between March to May 2017. Participants received clarification about the objectives and procedures of the study and the risks arising from their participation. Subsequently, they signed an Informed Consent Form voluntarily.

Data were collected in outpatient clinics and individual care to ensure greater privacy for the participant. Sociodemographic forms and SF-36 were applied by interview. The anthropometric data were measured, being the weight calculated in kilograms, with the aid of a digital scale with the participant barefoot, wearing light clothes, and with the arms parallel to the body. The height measurement was calculated in meters. The measurements were done using a portable stadiometer (graduated every 0.5 cm). The participants were standing, head and back leaning against the ruler of the stadiometer, below the horizontal rod, arms parallel to the body, shoulders, shoulder blades, buttocks, heels leaning against the wall, and feet resting on the floor.

Weight and height were used to determine BMI, whose formula is the weight ratio in kilograms to the square of height in meters. BMI was classified as: overweight (BMI=25 to 29.9 kg/m²), obesity I (BMI = 30 and 34.9 kg/m²), obesity II (35 and 39.9 kg/m²), and obesity III (40 kg/m²)⁽¹⁶⁾.

A database was built in the Statistical Package for the Social Sciences (BM SPSS version 18.0) for data analysis. Categorical variables were analyzed in absolute and relative frequencies, with a 95% confidence interval, and continuous variables were analyzed through mean, standard deviation, medians, and interquartile intervals. The Kolmogorov-Smirnov test was used to verify the distribution of continuous variables, and it was found that the domains of SF-36 had no normal distribution. Thus, the Kruskal Wallis test was used to compare the scores of the domains of SF-36 with overweight and obesity grades I, II, and III. The Dull post-test and the statistical significance level of 5% were adopted.

The project was approved by the Research Ethics Committee of the Nursing School of the *Universidade Federal da Bahia*, opinion n. 1,152,259, following the requirements of resolution 466/2012 of the National Health Council.

Results

Of the 101 women recruited for the matrix project, 82 answered the SF-36 constituting the study sample. The mean age was 48.6 (sd=8.6), with a minimum age of 27 and a maximum age of 59 years, with a higher frequency in the 50-year age group (50.0%). The majority were of black self-declared race/color (92.7%), had complete or incomplete high school education (61.0%), lived with a partner (51.2%), had paid work activity (52.4%), and had a family monthly income of 3 minimum wages (86.6%) (Table 1).

Table 1 – Sociodemographic characterization of overweight women. Salvador, BA, Brazil – 2017.

Sociodemographic characteristics	n	%	95% CI*
Age group			
20-29	4	4.9	1.8 - 11.3
30-39	8	9.8	4.6 - 17.7
40-49	29	35.4	25.6 - 46.1
50-59	41	50.0	39.3 - 60.7
Self-declared race/color			
Black (black/brown)	76	92.7	85.4 – 97.0
White	6	7.3	3.0 – 14.0
Education			
Up to elementary school	26	31.7	22.3 - 42.3
Complete or incomplete high school	50	61.0	50.1 - 71.1
Complete or incomplete college	6	7.3	3.0 – 14.0
Marital status			
No partner	40	48.8	38.1 -59.5
Married/ with a partner	42	51.2	40.4 - 61.9
Paid work activity			
Yes	43	52.4	41.6 - 63.1
No	39	47.6	36.9 - 58.4
Monthly family income (minimum wage)			
≤ 3	71	86.6	77.9 – 92.7
> 3	11	13.4	07.3 - 22.1

* 95% CI: 95% confidence interval.

Source: Created by the authors.

The mean BMI was 36.5 kg/m² (sd=5.7). A higher percentage of women had a BMI compatible with grade I obesity (34.1%), followed by grade III obesity (31.7%). The mean morbidities were 1.7 (sd=1.1), with 32.9% having

two comorbidities, whose most frequent was systemic arterial hypertension (61.0%). Regarding perceived health status, most considered it regular (58.5%) (Table 2).

Table 2 – Characterization of overweight women according to anthropometric variables, comorbidities, and perceived health status. Salvador, BA, Brazil – 2017.

Variable	n	%	95% CI*
BMI			
Overweight	9	11.0	5.5 - 19.2
Obesity I	28	34.1	24.5 - 44.9
Obesity II	19	23.2	15.0 - 33.2
Obesity III	26	31.7	22.3 - 42.3
Comorbidities			
Systemic arterial hypertension	50	61.0	50.1 - 71.1
Type 2 Diabetes Mellitus	29	35.4	25.6 - 46.1
Dyslipidemia	32	39.0	28.9 - 49.9
Osteoarthritis	29	35.4	25.6 - 46.1
Number of comorbidities			
None	12	14.6	8.2 - 23.5
One	24	29.3	20.2 - 39.8
Two	27	32.9	23.4 - 43.6
Three	14	17.1	10.1 - 26.4
Four	5	6.1	2.3 - 13.0
Perceived health status			
Very good	1	1.2	0.1 - 5.9
Good	21	25.6	17.1 - 35.9
Regular	48	58.5	47.7 - 68.8
Bad	8	9.8	4.6 - 17.7
Very bad	4	4.9	1.8 - 11.3

* 95% CI: 95% confidence interval.

Source: Created by the authors

Table 3 shows the medians obtained for the quality of life domains, according to SF 36, for the sample of women studied. A greater median was identified for the domain: physical aspects, followed by functional capacity and social aspects.

When comparing the SF-36 domains with the degree of obesity, a lower median was observed in all domains for women with grade III obesity. There was a dependence on functional

capacity, physical aspects with pain, and overweight domains.

The Dull post-test showed a statistically significant difference in the functional capacity domain, with a lower median for women with obesity III compared to those with obesity I. Furthermore, physical aspects were observed in the domain for women with obesity III compared to those with obesity II, with a statistically significant difference.

Table 3 – Medians obtained for SF-36 domains according to the sample and comparison of the medians obtained by SF-36 domains with overweight and degree of obesity of women. Salvador, BA, Brazil – 2017.

SF 36 Domains	Sample	Overweight	Obesity I	Obesity II	Obesity III	<i>p-value</i> †	<i>p-value</i> ††
Functional capacity	75 (40-90)	75 (70-90)	77 (52-93)	80 (55-90)	45 (25-80)	0.018	0,031
Physical aspects	100(25-100)	100 (50-100)	100 (25-100)	100 (87-100)	25 (0-100)	0.011	0,012
Pain	51 (39-62)	61(41-61)	51(41-72)	61 (41-62)	40 (20-61)	0.053	
Overall health status	52 (39-67)	50 (47-67)	57(42-67)	52 (42-67)	48 (30-67)	0.660	
Vitality	55 (30-80)	45 (30-70)	52(32-73)	60 (50-80)	50 (20-80)	0.801	
Social aspects	75 (50-87)	87 (87-87)	75 (50-87)	75 (50-93)	62 (50-75)	0.369	
Emotional aspects	67 (0-100)	100 (100-100)	66 (33-100)	100 (16-100)	33 (0-100)	0.097	
Mental health	68 (52-81)	76 (68-80)	66 (56-76)	64 (42-90)	56 (40-80)	0.493	

Note: †Kruskal Wallis test; ‡Interquartile range; †† Dull Test

Source: Created by the authors

Discussion

The results of this study refer to a group of women in a more significant proportion aged over 50 years, with monthly family income below three minimum wages and a low level of education. These sociodemographic characteristics follow the literature that points out that the frequency of overweight in the Brazilian population is higher with increasing age and among people with lower socioeconomic status and schooling⁽²⁾.

With advancing age, people tend to develop health problems, such as functional disabilities and chronic diseases⁽¹⁷⁾. Social and economic factors are present in determining obesity and quality of life, and education and income levels are essential. These variables can influence people's understanding of their illness process

and impact treatment coping and follow-up, as well as reflect living conditions, access to goods and services, and, consequently, better health conditions⁽¹⁸⁾.

Although more than half of the women performed some paid work activity, the predominance was of monthly family income below three minimum wages. Most women had until high school, which opens a range of occupations with lower pay returns. Occupation and education represent means of access to income and essential social services and are directly related to the worst self-assessment of health status⁽¹⁹⁾. Studies show that education level, low income, and housing in poor residential areas are associated with a worse health perception and increased risk of diseases⁽²⁰⁻²¹⁾.

In this study, the results showed that, among the chronic diseases presented, systemic hypertension was the most frequent. This comorbidity is approximately three times higher in obese people compared to those with a BMI in the normal range^(6,9). The sociodemographic profile of overweight women and the high proportion of comorbidities, including type II diabetes mellitus, dyslipidemia, and musculoskeletal diseases found in this study, are in accordance with scientific evidence that states that weight accumulation is one of the main risk factors for the emergence and worsening of these health problems⁽²¹⁾.

The high proportion of women with regular, poor, and very poor perceived health status corroborates the literature that highlights that women have higher survival than men and experience more years with diseases and disabilities⁽²²⁾. According to these authors, because of this condition, they tend to evaluate health more negatively. Thus, negative self-rated health may be more associated with poor quality of life. It is also known that increased BMI and dissatisfaction with obesity may reduce the chances of better health perception⁽²³⁾.

Regarding the classification of BMI, a minority of women were overweight, and grade III obesity ranked second in terms of frequency. These findings are critical as it is known that obesity has a significant impact on health, psychological well-being, longevity, and quality of life⁽⁶⁾.

In the analyses of the different domains of the quality of life scale for women, the most significant impairments were in the domains "pain," "general health status," and vitality, corroborating with other studies that used the SF-36^(5,7). As obesity is widely associated with physical disabilities and joint and musculoskeletal diseases, especially knee osteoarthritis, it justifies this result⁽²⁴⁾.

The other domains, except the physical aspect, also presented median values that expressed compromised quality of life, suggesting the negative impact of being overweight due to its complexity and clinical and psychosocial

implications. The negative effect of obesity on the significant loss of physical capacity, gait impairment, and knee-related symptoms is evidenced in the literature⁽²⁴⁾.

When comparing the SF-36 domains with BMI, women with a higher degree of obesity, that is, grade III, presented lower quality of life in all domains, with the lowest medians in the functional capacity, physical aspects, and mental health domains. These findings show that being overweight changes women's quality of life.

The lowest medians found in the functional capacity, physical aspects, and pain domains for women with obesity III indicate that a higher degree of obesity can generate harmful effects related to health conditions. Authors have shown the negative impact of obesity on functional capacity since it is strongly linked to various clinical comorbidities and influences socioeconomic and psychological issues as well as increased pain levels, such as chronic pain syndromes^(21,25).

The low median for the domain of emotional aspects is critical. It corroborates investigations that affirm that being overweight is not only associated with the increased prevalence of some diseases and syndromes of chronic pain but also the alteration of body image and consequent psychological suffering^(6,23). Another study that evaluated the frequency distribution for each domain of the SF-36 questionnaire as a function of BMI found that eutrophic women had a higher frequency of emotional aspect scores compared to overweight and obese women, suggesting an influence of BMI on the manifestations of emotional problems⁽¹²⁾.

Another aspect, no less relevant, concerns the findings regarding the social aspects domain, whose median was lower for women with grade III obesity. The overweight person may have her body depreciated, suffer discrimination by society, and opt for social isolation, which can compromise her quality of life⁽²³⁾.

Therefore, the data obtained in this study showed that being overweight can compromise

the quality of life of women. In this sense, it is crucial to identify the changes in QoL, considering the domains that affect the health and well-being of these women directly, and to plan joint strategies capable of contributing significantly to the improvement of their QoL.

The results allow the reflection that health professionals who work with overweight women need to be able to assess the physical, psychological, social, and biological problems related to them to identify and create together care strategies. For this, they have to consider women's perspective on care, the sense of excess weight in their lives, and the social reality of each one. Health care goes beyond weight control and must involve aspects of quality of life that need to be improved.

An important limitation of the study is the relatively small number of women from a single study center. However, the findings have scientific and social relevance for providing better knowledge and understanding of the interference of obesity in the quality of life of overweight women. They can support the planning of health care aimed at this public with a focus on weight control, prevention of its complications, and consequently, the improvement of quality of life.

Conclusion

The results showed a sociodemographic, clinical, and anthropometric profile similar to most studies conducted in public health services. We observed a higher frequency of women in the age group ≥ 50 years, self-declared black race/color, low schooling, and low family income, who live with socioeconomic difficulties and other comorbidities and are overweight.

In this group, women being overweight affected the quality of life in most domains of SF-36. Women with grade III obesity had the lowest medians in all domains of the scale, showing the negative impact of the degree of obesity on quality of life.

Collaborations:

1 – conception and planning of the project: Catia Suely Palmeira, Natalia Vieira de Jesus, and Fernanda Carneiro Mussi;

2 – analysis and interpretation of data: Catia Suely Palmeira, Natalia Vieira de Jesus, Jessica Cruz da Silva Monteiro, Fernanda Santos Oliveira, and Fernanda Carneiro Mussi;

3 – writing and/or critical review: Catia Suely Palmeira, Natalia Vieira de Jesus, Jessica Cruz da Silva Monteiro, Fernanda Santos Oliveira, Tassia Teles Santana de Macedo, and Fernanda Carneiro Mussi;

4 – approval of the final version: Catia Suely Palmeira, Natalia Vieira de Jesus, Jessica Cruz da Silva Monteiro, Fernanda Santos Oliveira, Tassia Teles Santana de Macedo, and Fernanda Carneiro Mussi.

Conflicts of interest

There are no conflicts of interest.

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