

## FEMALE SEXUALITY AFTER BARIATRIC SURGERY ACCORDING TO THE MERLEAU-PONTY PHENOMENOLOGY: INTEGRATIVE REVIEW

Sexualidade feminina após cirurgia bariátrica segundo a fenomenologia de Merleau-Ponty: revisão integrativa

Sexualidad femenina después de la cirugía bariátrica según la fenomenología de Merleau-Ponty: revisión integrativa

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### ABSTRACT

**Objective:** The study's main goal has been to analyze changes in the sexuality of women who underwent bariatric surgery. In order to do so, an integrative literature review was undertaken. **Methods:** The search took place on the following databases: the Medical Literature Analysis and Retrieval System Online (MEDLINE), the *Literatura Latino-Americana e do Caribe em Ciências da Saúde (LILACS)* [Latin American and Caribbean Literature on Health Sciences], the *Base de Dados de Enfermagem (BDENF)* (Nursing Database) and the Scientific Electronic Library Online (SciELO); moreover, the Periodicals Portal from the *Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES)* [Coordination for the Improvement of Higher Education Personnel]. **Results:** A total of 158 publications were identified, including original, quantitative and qualitative studies, published in English and Portuguese. By using the keywords female sexuality and bariatric surgery, 7 articles remained, which were analyzed according to the Merleau-Ponty's phenomenology of perception. Four thematic categories were identified, as follows: positive, negative, medical, and psychosocial factors. **Conclusion:** The essence of the phenomenon was considered multifactorial. In some cases, the physical body's representation led to psychosocial, marital, cultural, and sexual improvement, yet, not in its fullness of pleasure and satisfaction. On the other hand, others have experienced negative repercussions.

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**Descriptors:** Sexuality, women's health, bariatric surgery, weight loss, body image, perception.

## RESUMO

**Objetivo:** Analisar as alterações na sexualidade das mulheres submetidas à cirurgia bariátrica, por meio de revisão integrativa da literatura. **Método:** A busca ocorreu nas bases *Medical Literature Analysis and Retrieval System Online*, Literatura Latino-Americana e do Caribe em Ciências da Saúde, Enfermagem, *Scientific Electronic Library Online* e Portal de Periódicos Coordenação de Aperfeiçoamento de Pessoal de Nível Superior. **Resultados:** Foram identificados 158 publicações, sendo incluídos estudos originais, quantitativos e qualitativos, publicados em inglês e português, com as palavras-chave sexualidade feminina e cirurgia bariátrica, restando 7 artigos, os quais foram analisados segundo a fenomenologia de Merleau-Ponty. Foram identificadas 4 categorias temáticas: Alterações positivas, negativas, questões médicas e fatores psicossociais. **Conclusão:** A essência do fenômeno se mostrou multifatorial de modo que a representação do corpo físico em alguns casos gerou melhora psicossocial, conjugal, cultural, e na sexualidade, porém não na sua plenitude de prazer e satisfação e em outros repercutiu em alterações negativas.

**Descritores:** Sexualidade, Saúde da Mulher, Cirurgia Bariátrica, Perda de Peso, Imagem Corporal, Percepção.

## RESUMEN

**Objetivo:** Analizar los cambios en la sexualidad de las mujeres sometidas a cirugía bariátrica, a través de una revisión integradora de la literatura. **Método:** La búsqueda se realizó sobre la base del Sistema de Análisis y Recuperación de Literatura Médica en línea, Literatura Latinoamericana y del Caribe en Ciencias de la Salud, Enfermería, Biblioteca Científica Electrónica en línea y Portal de Periódicos Coordinación de Mejora de Personal de Nivel Superior. **Resultados:** Se identificaron un total de 158 publicaciones, incluyendo estudios originales, cuantitativos y cualitativos, publicados en inglés y portugués, con las palabras clave sexualidad femenina y cirugía bariátrica, restantes 7 artículos, que fueron analizados según la fenomenología de Merleau-Ponty. Se identificaron cuatro categorías temáticas: factores positivos, negativos, médicos y psicossociales. **Conclusión:** La esencia del fenómeno fue multifactorial por lo que la representación del cuerpo físico en algunos casos generó una mejora psicossocial, marital, cultural y sexual, pero no en su plenitud de placer y satisfacción, y en otros tuvo repercusiones negativas.

**Descritores:** Sexualidad, Salud de la Mujer, Cirugía Bariátrica, Pérdida de peso, Imagen Corporal, Percepción.

## INTRODUCTION

Obesity has reached endemic proportions worldwide. Its prevalence more than doubled between 1980 and 2014.<sup>1</sup> In 2014, more than 1.9 billion (39%) of adults aged 18 years old or more were overweight and, of these, 600 million were obese.<sup>1</sup> In Brazil, overweight was found in more than half of the population (53.9%), while obesity was present in 18.9% of people, in 2015.<sup>2</sup>

Obesity is notably high among women. In 2014, the incidence of overweight in this population was 40% worldwide.<sup>3</sup> In 2015, among Brazilian women, overweight was described in 50.8% of them and obesity in 19.7%.<sup>2</sup>

Some comorbidities are common in obese patients, such as hypertension and diabetes.<sup>4</sup> The adverse effects on people's quality of life and health are also well documented in the literature.<sup>5,6</sup> Obese people have high rates of depression, body image dissatisfaction, low self-esteem,<sup>4,7</sup> and negative self-concept.<sup>8</sup> Society imposes a thin culture, but it does not apply to the population in general.<sup>9</sup> Such comorbidities when associated with obesity can impose a burden on obese people's lives.<sup>10</sup>

One of the important aspects of people's quality of life is sexual function. Some studies show that obesity has an impact on sexual functioning,<sup>11</sup> in a negative way, influencing indisposition and sexual desire.<sup>12</sup> Such comorbidities and their treatment can influence sexual activity, making it unpleasant, difficult, painful or even impossible to perform.<sup>4</sup>

In particular, women may develop sexual dysfunction,<sup>5,11</sup> changes in reproductive hormones,<sup>5</sup> with consequent changes in menstrual flow, reduced fertility, decreased libido, excitation, orgasm, in addition to causing dyspareunia.<sup>13</sup>

For these and other health factors, the treatment of obesity has been the focus of many studies. Given this context, there is evidence that describes Bariatric Surgery (BS) as an effective treatment not only for obesity but also its comorbidities.<sup>14</sup> As a result, the number of bariatric surgeries increased from 158,000 in 2011 to 196,000 in 2015.<sup>15</sup>

After the weight loss caused by BS, the literature shows the occurrence of changes in the individual's psychosocial status,<sup>16</sup> with improvement in social insertion,<sup>8</sup> improvements in quality of life,<sup>10,16</sup> in psychological function,<sup>16</sup> in women body image and decreasing depressive symptoms.<sup>5</sup> Improvement in self-esteem has also been reported, which may be the reason for the increased interest in sex, desire, and higher arousal, described in some studies.<sup>14</sup>

Given this framework, recent studies have shown improvement in women's sexuality after surgery in general,<sup>10,17</sup> such as increased desire, arousal, lubrication, and sexual satisfaction, in addition to showing significant hormonal changes.<sup>5</sup> However, other authors describe that, even with weight loss, there were no changes in the mental domain,<sup>6</sup> nor in female sexual dysfunction, considering women in the pre and postoperative period.<sup>14</sup>

Bearing in mind the aforesaid, aiming to summarize the results of scientific evidence in the literature on women's sexuality after BS, the present research was performed to analyze changes in the sexuality of women who underwent BS.

## METHODS

This is an Integrative Literature Review (ILR) addressing the sexuality of women after weight loss as a result of BS, built through the six stages of the ILR.<sup>18</sup>

The selection of the hypothesis or research question was made from the concepts learned by the authors, generating the guiding question, elaborated through the strategy: P, population/patient; I, area of interest/intervention; C, comparison (not used); O, outcomes/effects; T, time

required (PICOT), which provides a sufficient basis for searching for data and retrieving relevant studies, as it refers to a particular meaning.<sup>19</sup>

Herein, the following items were described, as follows: P: women who underwent BS; I: assessment of changes in sexuality; O: their perception of changes in sexuality after weight loss; T: 10-year period (2007 to 2016).

The guiding question used to carry out this research was: “What are the changes in the sexuality of women who have undergone bariatric surgery, with subsequent weight loss?”

The inclusion and exclusion criteria were carefully prepared, including original, complete, quantitative and qualitative studies, carried out in humans, which directly or indirectly assessed/analyzed the sexuality of these women, published between 2007 and 2016, in the language English and Portuguese. There were excluded articles addressing ILR, systematic review, meta-analyses, unpublished literature, master’s dissertations or doctoral theses. Furthermore, articles addressing sexuality in those women after weight loss by means other than BS were not explored.

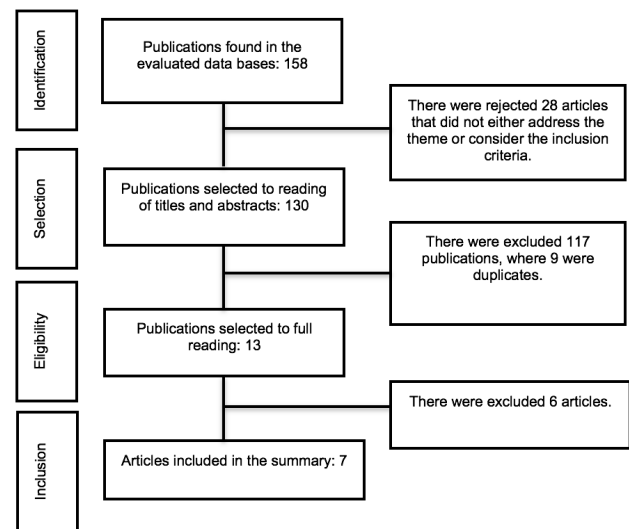
Concerning the searching strategy, four electronic databases were used, the portal named Public Medical Literature Analysis and Retrieval System Online, which encompasses the Medical Literature Analysis and Retrieval System Online (MEDLINE), the *Literatura Latino-Americana e do Caribe em Ciências da Saúde (LILACS)* [Latin American and Caribbean Literature on Health Sciences], the *Base de Dados de Enfermagem (BDENF)* (Nursing Database) and the Scientific Electronic Library Online (SciELO); moreover, the Periodicals Portal from the *Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES)* [Coordination for the Improvement of Higher Education Personnel]. The search took place in January 2017.

The following keywords were used in Portuguese, listed in the Health Sciences Descriptors, from the Virtual Health Library and in English listed in Medical Subject Headings, from the National Center for Biotechnology Information, US National Library of Medicine: *sexualidade feminina*/ female sexuality and *cirurgia bariátrica*/ bariatric surgery. The search strategy used the Boolean operator “AND”, in order to identify articles that contain the two descriptors.<sup>20</sup>

Following the survey of the articles, the initial selection of the articles was carried out, according to the guiding question and the inclusion criteria previously established, through the analysis of the titles. Subsequently, a new selection was made after reading the abstracts. In situations where reading the abstract was insufficient to determine the inclusion criteria, the articles were read in full. At this point, the articles were compared, and the duplicates available in more than one database were rejected. After reading and selecting through the abstracts, the full articles were read, being finally either designated or not to be part of this research.

Figure 1 presents the information on the different phases of this ILR, adapted from the model named Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA).<sup>21</sup>

**Figure 1** - Selection of publications for appraisal, which is adapted to the PRISMA model.



The definition of the information to be extracted from the articles, after a thorough reading of the same, was performed and an instrument was elaborated for the organization of this information and subsequent analysis of the data, contemplating the following items, in addition to the identification of the article, authors, and publication bibliography: database, type of publication, main theme, objectives, methodology (type of study, initial and final sample, inclusion and exclusion criteria), main results, main conclusions, and limitations.

The collection and analysis of this data were carried out independently by two different reviewers, and the conflicts were resolved by the main author.

Once the articles to be included were selected and defined, they were evaluated according to the level of evidence, based on Evidence-Based Practice;<sup>22</sup> and methodological rigor, observing the clarity in the identification of the methodological trajectory (the method used, participating subjects, inclusion/exclusion criteria, intervention, and outcomes), classified as yes or no, according to the authors’ evaluation.

Conclusively, there was a synthesis of the available knowledge and analysis of the quantitative data, through the frequency and description of the main findings and conclusions, and a phenomenological analysis of body perception and sexuality, based on the theoretical-philosophical framework of the existentialist philosopher Maurice Merleau-Ponty.

The phenomenological approach was used to promote a vision of the human being in its entirety, providing the interpretation of the lived experience. Phenomenology is the study of essences, it is a philosophy that restores essences in existence, transcends the phenomenon, and puts it on emphasis to understand it.<sup>23</sup> Thus, when the phenomenological approach was used, it was possible to understand the phenomenon “experience of the sexuality of women who underwent BS”.

## RESULTS AND DISCUSSION

Figure 2 shows the found articles' description.

**Figure 2** - Articles selected over the period from 2007 to 2016, including identification, year and journal of publication, level of evidence and methodological rigor.

Article	Year/ Journal	Authors	Level of evidence/ Methodological rigor
01 <sup>24</sup>	2014/ Obes Surg	Mariano MLL, Paula MAB, Bassi DG, et al.	VI/Yes
02 <sup>25</sup>	2011/Obes Surg	Assimakopoulos K, Karaivazoglou K, Panayiotopoulos S, et al.	VI/ Yes
03 <sup>26</sup>	2015/ Israel Medicine Association Journal	Erden SC, SEyit H, Yazisiz V, et al.	VI/ Yes
04 <sup>10</sup>	2015/ Obes Surg	Efthymiou V, Hyphantis T, Karaivazoglou K, et al.	VI/ Yes
05 <sup>27</sup>	2015/ Obes Surg	Ramalho S, Bastos AP, Silva C, et al.	VI/ Yes
06 <sup>14</sup>	2015/ Obes Surg	Janik MR, Bielecka I, Pasnik K, et al.	IV/ Yes
07 <sup>17</sup>	2015/ Obes Surg	Goitein D, Zendel A, Segev L, et al.	VI/ Yes

The individual characteristics of the included articles are shown in Figure 3.

**Figure 3** - Characterization of studies selected over the period from 2007 to 2016.

Article	Methods	Main results
01 <sup>24</sup>	Qualitative/ Quantitative study.	3 people reduced the number of sexual intercourse and 16 increased its frequency. Four themes were identified: experiencing; not experiencing female sexuality; experiencing male sexuality; improvement of comorbidities and psychological factor.
02 <sup>25</sup>	Prospective study.	BS produces a significant reduction in body mass index, relief of depressive symptoms, and improvement in all domains of sexual function except orgasm.
03 <sup>26</sup>	Prospective study.	Sexual dysfunction is high in women after BS. There is an improvement in sexual functioning after 6 months of postoperative period. There is a positive correlation between the scores on the Sexual Experiences Scale and the Beck Depression Scale; and a negative correlation with the Body Scale. Improvement in sexual functioning, body image, levels of depression, and anxiety. There was no improvement in lubrication and sexual satisfaction.
04 <sup>10</sup>	Prospective study.	The body mass index reduced significantly. This improvement was correlated with progress in physical activity, body pain, and mental health. There was an improvement in sexual satisfaction for both genders.
05 <sup>27</sup>	Prospective, qualitative study.	Excess skin is a factor that causes depression, a disorder of self-image, and also impairs sexual function, in addition to causing psychological changes due to frustration of body image.
06 <sup>14</sup>	Transversal.	The related results were similar in both groups; the domains of lubrication and orgasm did not differ between groups. The post-BS group showed more desire and arousal.
07 <sup>17</sup>	Prospectivo.	After BS, it was observed a significant difference in sexual functioning in some areas of the applied scales, except for desire. The sexual dysfunction of the obese person results in personal suffering, then impairing both health and quality of life.

The synopsis of the information extracted from the seven articles was organized into four major thematic categories, as follows:

- Positive changes in female sexuality.

Improvement of body image and self-esteem due to reduced Body Mass Index (BMI).

Increased sexual intercourse frequency, increased interest in sex, increased desire, and arousal.

- Negative changes in female sexuality.

Worsening self-esteem and negative body vision due to regaining weight or excess skin after surgery.

The absence of orgasm and vaginal lubrication does not improve desire.

- Medical issues associated with female sexual function.

With weight loss after BS, there is an improvement in comorbidities (diabetes, hypertension, fatigue, and metabolic syndrome) associated with obesity, which limited the sexual function of women who underwent BS.

- Psychosocial factors and female sexuality.

Improvement of emotional state and relief of depressive symptoms. Improvement in quality of life, acceptance, and social interaction due to the new body image acquired with weight loss after BS. Improvement in the marital relationship (complicity, closeness, affection, security, joy, and freedom).



Human sexuality is multifactorial, being influenced by all dimensions of the individual and their experiences. It is related to affective relationships and body image. Especially in obese women, changes related to sexual dysfunctions, as a result of medical and psychological problems, and related to body image before surgery, they are described in the literature. The weight loss caused by BS promotes changes in female sexuality, which should be addressed.

Phenomenology provides the perception of the body/sexuality phenomenon and that is why it has been used in studies involving body image and sexual satisfaction. To date, no studies have been found in the literature addressing changes in female sexuality after BS, from the perspective of Maurice Merleau-Ponty's phenomenology of perception, which justified this work.

From the thematic categories highlighted, it was possible to approach the essence of the woman's weight loss phenomenon after BS, seeking to unveil the experiences suffered in the sexuality aspect.

Understanding the ex-obese individual's perception of their own image is essential for understanding the phenomenon of sexuality, not simply their perception, but the perception of the body itself, in other words, understanding the experience of the body and the body itself as the subject of perception.<sup>23</sup> Weight is one of the main factors with the greatest impact on the negative self-concept of body image.<sup>28</sup>

Our body reflects our way of being, reacting, and relating to the world. The perception of this body can be imagined as the body's original experience with the world around it. When a person comes into contact with things, objects, he comes in contact with himself, the body being, from then on, considered as corporeality, representing the source and network of existential meanings.<sup>23</sup>

The body represents the origin in our being, the way we relate to the world. The lived body is the one experienced in the existential daily life, starting to be considered as corporeality, being a source of meanings and a network of existential meanings.<sup>23</sup> The negative body image, the perception of oneself as inadequate self-image can be reflected by the model imposed by society, generating dissatisfaction with oneself. Considering this framework, BS can be the way out of the much-desired weight loss, and this can modify the interaction of the obese, especially the woman, with society, reflecting on their perception of their own body, promoting a positive interaction in the middle of their experiences. The reduction in BMI after BS is described in several national<sup>29,30</sup> and international studies,<sup>31,32</sup> as well as the improvement of several comorbidities.<sup>30</sup>

The body has been highly valued in societies, especially with regard to aesthetic issues, sexuality, and social gender issues. The almost perfect female body pattern recommended socially might reflect problems related to sexual libido.<sup>33</sup>

The obese person faces prejudices and restrictions imposed by society due to a pre-established aesthetic

standard of lean beauty, in addition to other difficulties in simple daily activities, such as personal hygiene and domestic occupations, transportation, transportation, clothing, and work.<sup>34</sup> Some authors describe this change in body image with a consequent outbreak of feelings of sadness and isolation.<sup>33</sup> We perceive and are perceived by our body because it represents the vehicle of being-in-the-world. It is he who makes the vital communication with the world, being what is lived and not what is thought. The body represents our way of having the world and through it is the relationship with the world, with other people, with things, experiencing the body itself.<sup>23</sup>

Lower rates of dissatisfaction with body image after BS are described by several authors.<sup>7</sup> The experience of weight loss brings to women distortions about their image before surgery. Corporeality uses the body to materialize as a phenomenon. It consists of our attitudes, our interaction with others, values, and emotions, the way we present ourselves to people and society.<sup>33</sup> So, the representation that the body of the obese person, especially the woman, has on society, directly influences their own perception of the body, directly reflecting on their self-image and self-concept.

In an obese person, the perception of the body in the world is altered, and the transition to a lean body may represent a different experience. In a way, the body image suffers and determines changes in this construct. Weight loss can represent an improvement in interaction with society, with an improvement in self-perception, directly reflecting on sexual issues. The sexuality of a human being projects its way of being in relation to the world, in relation to time and to other men.<sup>23</sup> Therefore, body image can directly impact on sexuality.

Obesity-related sexual dysfunction has been shown in researches. There were found about 86% of obese women's sexual dysfunctions.<sup>35</sup> Nevertheless, a similar percentage was found among healthy women (83%). For the authors, although obesity does not seem to contribute to sexual dysfunction, it affects several aspects of sexuality.<sup>35</sup> Few studies describe an exponential improvement in sexual dysfunctions after BS.<sup>4</sup>

Although sexual dysfunctions in obese women are sometimes attributed to hormonal changes, authors have found the opposite.<sup>36</sup> No significant difference was found in levels of follicle-stimulating hormone, luteinizing hormone, estradiol, free thyroxine, thyrotropin, and testosterone, in obese and non-obese women, as well as in relation to the female sexual function. Still, a negative correlation was found in BMI and orgasm, as well as sexual satisfaction. Testosterone levels were negatively related to sexual satisfaction indexes.<sup>35</sup>

Various aspects of sexuality can change with weight. Pain and desire were not found to be associated with BMI; nonetheless, arousal, lubrication, orgasm, and sexual satisfaction have concluded that obesity affects several aspects of sexuality in healthy women with sexual dysfunction.<sup>37</sup>

On the other hand, researchers describe that the female sexual dysfunction found in obese women candidates for BS was strongly associated with psychosocial distress.<sup>36</sup> Following this background, some authors describe the improvement in depressive symptoms in women after BS.<sup>30</sup>

Another important factor that showed significant improvement after weight loss as a result of BS was health-related quality of life.<sup>10,31,32</sup> This improvement in the quality of life may reflect a better body perception by the individual after weight loss and, consequently, improvement in sexual dysfunctions.

Authors describe that after BS, individuals who lose weight experience a “honeymoon”, with psychological improvement and social insertion. However, as time passes, new feelings appear, such as anguish, emptiness, boredom. The person is faced with a new reality, previously hidden by obesity, and has to face it.<sup>38</sup>

Several consequences of weight loss contribute to self-image disorders, such as body flaccidity (in the breasts, abdomen, thighs, and glutes), which can generate an appearance of residual obesity, in addition to being limitations in daily activities, walking, body hygiene, including sexual activity.<sup>39</sup> Excess skin after weight loss is another factor responsible for psychological and body image changes after BS.<sup>27</sup> Furthermore, the weight gain among people who underwent BS is documented in the literature and impacts negatively among patients, making them feel unsuccessful and rejected by society, then contributing to social isolation.<sup>40</sup>

## FINAL CONSIDERATIONS

This research revealed the occurrence of changes in female sexuality after bariatric surgery, demonstrated in the aforesaid categories. Female sexuality was expressed in the corporeality represented by the satisfaction of the thin body in the world and its relationship with the body, revealed through changes in the formation of the body image of these women, who experienced the acceptance of a biotype accepted by society/world. The essence of the woman's sexuality phenomenon after BS proved to be multifactorial. In some cases, the physical body's representation led to psychosocial, marital, cultural, and sexual improvement, yet, not in its fullness of pleasure and satisfaction. On the other hand, others have experienced negative repercussions.

Hence, from a phenomenological viewpoint, changes occur with the woman who underwent BS, which are related to physical, emotional, social issues, with body image reformulation, suggesting the need for an interdisciplinary professional look that helps the ex-obese women to resize their existence, preparing them for new life projects that contemplate their new way of being/existing in the world.

This study has some limitations, such as narrowing by the inclusion and exclusion criteria; study with self-reports that might generate bias in the answers. Because it is a specific issue related to intimacy, participants may

feel uncomfortable or even embarrassed when answering questions or questionnaires applicable for their assessment. Several studies have adopted the latter methodology, which might also be biased due to the lack of understanding regarding the instrument.

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