Research

THE EXPERIENCE UNDERWENT BY FAMILIES OF PEOPLE SUBJECTED TO BARIATRIC SURGERY: A QUALITATIVE STUDY

EXPERIENCIA VIVIDA POR FAMILIARES DE PERSONAS SOMETIDAS A CIRUGÍA BARIÁTRICA: UN ESTUDIO CUALITATIVO

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ABSTRACT

INTRODUCTION: Obesity is considered a non-communicable disease. Surgical procedures and patient care are some of the aspects of caring for people who endure obesity, and it is often forgotten that they have a family that accompanies them in all related health care procedures. As the family is present throughout life's processes, it is important to have a greater knowledge of all the factors that influence family care during such procedures. OBJECTIVE: To describe the meaning of the experience underwent by relatives of patients who have been subjected to bariatric surgery during the first year. METHODS: An

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exploratory, descriptive and qualitative study with 11 female and 9 male participants who participated in semi-structured interviews. Data analysis used tools from the Grounded Theory. RESULTS: The family members acknowledged that bariatric surgery meant a change in health, the experiencing of surgery itself, and changing eating habits. CONCLUSIONS: The family of a person subjected to bariatric surgery lives through the changes together with the member who undergoes the procedure. Family members accompany their relative during the processes associated with the surgery and must assume adjustments in their everyday life to accommodate the changes implied by the surgery to improve the health of their relative.

Keywords: experience, family, bariatric surgery.

RESUMEN
INTRODUCCION: La familia está presente en todos los procesos de la vida; la obesidad es considerada una enfermedad no transmisible, los procedimientos quirúrgicos y la atención al paciente son algunas de las tendencias en el cuidado de las personas que padecen obesidad y muchas veces se olvida que cuentan con una familia que los acompaña en todos los procesos de atención de la salud y la enfermedad, lo que implica un mayor conocimiento de todos los factores que influyen en el cuidado familiar. OBJETIVO: Describir el significado de la experiencia de familiares de pacientes que han sido intervenidos de cirugía bariátrica durante el primer año. MÉTODOS: Estudio cualitativo, descriptivo y exploratorio con 11 participantes mujeres y 9 hombres, a través de entrevistas semiestructuradas. El análisis de datos utilizó herramientas de la Teoría Fundamentada. RESULTADOS: Los familiares describen que la cirugía bariátrica significó un cambio para la salud, vivir la cirugía y cambiar los hábitos alimentarios. CONCLUSIONES: La familia de una persona sometida a cirugía bariátrica vive los cambios junto al integrante que se opera, lo acompañan en los procesos propios de la cirugía y deben asumir ajustes en su vida diaria para lograr asimilar los cambios que implica la cirugía y que se realizan para mejorar la salud de uno de sus integrantes.

Palabras clave: experiencia, familia, cirugía bariátrica.

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INTRODUCTION

Obesity is considered a non-communicable disease and, for the World Health Organization, the current challenge is to adapt global strategies on healthy life habits, including eating and physical activity, to control diseases [1].

The adult obesity rate in the United States rose from 13.4% in 1962 to 39.8% in 2016, an increase of approximately 200%, and currently affects more than 93.3 million adults aged at least 20 years old. When compared to those who are not obese, patients with obesity experience a 36% increase in annual healthcare costs

and a 77% increase in medication costs [2]. In Colombia, the burden of disease attributable to obesity and overweight was estimated using Disability-Adjusted Life Years (DALYs), reaching a total of 997,371 DALYs. The economic impact of the care of comorbidities associated with obesity might amount to 2,158 million dollars [3].

Bariatric surgery is the only intervention that has produced long-term consistent weight loss and significant improvement for comorbidity conditions in the population with severe obesity [4]. Bariatric surgery was a cost-effective alternative when compared to non-surgical treatment in the diabetes and hypertension cohort with an incremental cost-effectiveness ratio of $6,194,899 and $43,689,527 per Quality-Adjusted Life Year (QALY) gained, respectively [5]. The family is present throughout all life processes, especially in situations requiring company and support, which are vital to meet goals, particularly those related to health and disease processes.

It is necessary to understand the role that the family plays throughout the process underwent by a person subjected to bariatric surgery, from the moment the decision is made to when the patient reaches total recovery. If the family's experience is known, we can understand its role and relationship with the person operated on and with this understanding, the health staff can implement interventions aimed at the patient and their family as a care unit [6].

Hence, this research was aimed at describing the meaning of the experience underwent by relatives of patients who have been subjected to bariatric surgery during the first year after the procedure.

METHODOLOGY

This research was conducted using a descriptive and qualitative approach with the relatives caring for people who have undergone bariatric surgery to control obesity. The participants were selected through convenience sampling, with participation of 20 relatives of patients in the post-operative period from bariatric surgery who met the inclusion criteria. This included being a relative over 18 years of age of a patient who has undergone bariatric surgery during the last year, and who has lived under the same roof in the previous six months before collecting the data. The study excluded relatives who had some type of cognitive alteration that hindered their ability to provide coherent answers.

Access to the research participants was available through a database from a health institution in Bogotá (Colombia); subsequently, through a consultation visit or via telephone, they were invited to participate in the research. If the person agreed to participate, a meeting was arranged with each participant. The data were collected between September and December 2019.

The interviews were conducted in the participants' homes, ensuring an environment that could provide quietness, emotional, physical and affective comfort, and listening without judgment. The interviews lasted between 40 and 50 minutes.

Data analysis used techniques and procedures to develop the Grounded

Theory [7]: open coding, axial coding and selective coding. Essentially, open coding refers to the process of generating initial concepts from data, axial coding refers to developing and linking concepts into conceptual families, and selective coding to formalizing these relationships into a theoretical framework. This analysis is able to propose categories but fails to propose a theory. The Health Ethics Committee approved the project, considering all the ethical aspects based on international recommendations on biomedical research with human beings [8] and the national norms established. Participation was accepted via written informed consent. Data were collected until reaching theoretical saturation [9]. Regarding methodological rigor, criteria were followed to determine the study quality and avoid threats against its validity and reliability, credibility, transferability and confirmability [10].

Transferability or applicability consists of being able to transfer the research results to other contexts. This was achieved through an exhaustive description of the characteristics of the context in which the research was carried out and of the participating subjects.

The credibility or truth value criterion made it possible to demonstrate the phenomena and human experiences as they are perceived by the subjects through the analysis of the semi-structured interviews. These interviews were conducted with the participants who met the inclusion criteria for this research, and after verification with five participants where it was verified that the appropriate interpretation was achieved. The participants expressed that their experience was reflected in the categories. For confirmability, veracity of the descriptions made by the participants was guaranteed. Confirmability refers to knowing the role of the researcher during the fieldwork and to identify its scope and limitations to control possible judgments or criticisms raised by the phenomenon or the participating subjects. Reflexivity was a dynamic process in the records, which included the analytical memos, reports of results and original texts, and guidance from an experienced researcher who carried out the analysis simultaneously. In relation to relevance in this research, it was possible to respond to the phenomenon under study, advancing the knowledge about the meanings of the experiences underwent by the relatives of patients subjected to bariatric surgery. This research can be replicated in other national and international scenarios to advance knowledge development in this Nursing area. The adequacy or theoretical-epistemological concordance criterion in this research considered coherence between the phenomenon to be investigated and the interpretation and adequate description of the meaning of the experience underwent by family members of people subjected to bariatric surgery.

RESULTS

The participants' sociodemographic profile includes the following: gender: 11 women (55%) and 9 men (45%); marital status: single 5 (25%), married 9 (45%), common-law married 5 (25%), widowed 1 (5%); schooling level: High School 1 (5%), technical 2 (10%),

professional 8 (40%), specialization 5 (25%), MSc 4 (20%); economic activity: independent 6 (30%), employed 12 (60%), pensioners 2 (10%); place of residence: urban 19 (95%), rural 1 (5%). Likewise, among the data on the caregivers' diseases, it was found that the mayority (65%) reported not suffering from any disease, and the rest (35%) syayed having health conditions such as hypertension, dyslipidemia, kidney transplant and polycystic ovary. In individuals who had been subjected to bariatric surgery, the relatives reported that they had been diagnosed with hypertension, Type 2 diabetes *mellitus*, sleep apnea, gastroesophageal reflux, spinal problems, respiratory problems, asthma, arthritis and morbid obesity before the procedure.

The meanings of the experiences underwent by relatives of individuals subjected to bariatric surgery include seeking a change in health, experiencing the surgery and changing eating habits, which are described below.

Seeking a change in health

The bariatric patient decides to undergo the surgery due to the health problems endured, which are caused by obesity and which, over time, have become more difficult to control. These issues place the patient's well-being at risk. Relatives of bariatric patients indicate that, when their relative made the decision, they decided to support them unconditionally. The following extracts present the four dimensions for this category.

Undergoing the surgery for health reasons

The relatives believe that the main reason the person had to undergo the bariatric surgery was due to physical health and the need for a forceful intervention that allows them to control their weight and, likewise, control the diseases that arise and are associated with obesity.

> *“We know we must stay well physically, but it's not because we're tormented by being fat or skinny; no that's not it: her surgery was purely for health reasons” (I13-01, 20-22).*

Physical changes

The relatives state that physical changes are relatively rapid, which is why they expressed the need to be better prepared for the changes their loved ones would experience. It was hard to see the change in image, the hair falling, changes in facial features, dry skin, muscle mass reduction, unsteadiness and loose skin.

> *“That change, that physical change, was drastic” (I14-01, 315-316).*
>
> “*The change in image is hard to take because seeing a person who is obese and little by little seeing the facial features changing too much, obviously the body” (I14-01, 42-44).*

Assimilating the physical changes

The relatives notice that, for the person who has undergone the surgery, weight loss triggers physical changes,

as well as changes in their mood, which suffers ups and downs but then stabilizes progressively. Above all, they are encouraged to see that their health is improving and to realize that it is worth the effort and the changes they have endured.

> *"When you've established yourself, that's how I say because at six months or a year, you're just starting to understand that this is your new life" (I15-01, 360-362).*

Gaining self-esteem and self-confidence

The relatives experienced happiness upon seeing the physical and emotional changes in the bariatric patients, with the following changes standing out among them: better self-esteem, better sleep, walking without fatigue, and transformations at an aesthetic level. In this stage, relatives saw their family member look at themselves in the mirror, try on and buy new clothes, and enjoy these moments. The relatives express their happiness with the process by seeing their family member happy, having achieved positive changes, which strengthens the family bond and increases satisfaction with the transformations generated by the bariatric surgery.

> *"I think that the most significant is what comes emotionally, because let's say the patients gain in self-esteem, gain in personal affection, gain in many things, and gain in health, and let's say that all that is part, I believe, of self-esteem in the confidence they can have" (I7-01, 215-219).*

Experiencing the surgery

The relatives note that the surgery is complicated at the beginning but that it begins to be bearable over time; more so when the objective of the surgery is is to resolve significant health problems. In addition, they see positive changes in the person who has undergone the surgery. The relatives state that more preparation and accompaniment are required after the surgery, which better prepares them for the physical, mental and emotional changes that can take place in bariatric patients, as well as the consultations with other health professionals, so that the relatives participate more in the process. The following description presents the four dimensions that give rise to the "Experiencing the surgery" category.

Making the decision

The bariatric patient decides to undergo surgery after several consultations, and the relatives oftentimes support them even when it conflicts with other close individuals who do not agree with the decision or think that it is exaggerated. The decision is positively reinforced as they attend the preparation program that includes consultations with health professionals and joining an obesity group in some institution to enjoy the possibility of undergoing the bariatric surgery. The process is rather long and may take up to a year before performing the surgery and complying with all the requirements before the procedure. However, the relatives indicate that the

preparation should be extended to the family, given that they will accompany the family member and experience the changes with the person.

> *"The decision was made through talks she had with the health promotion entity, with the psychologist, nutritionist, head nurse and general physician, and there it took almost a year to make that determination" (E19-01, 5-7).*

Arriving at the surgery moment

The surgery has its risks; however, the risks are greater for the family member to continue at the same obesity level. On the surgery day, the family members feel worried and nervous, but trust in the success of the surgical procedure.

> *"The surgery makes you very nervous but in general terms, obviously, any surgery will get you very nervous, and well, you're aware that anesthesia or a procedure can even kill you" (E3-01, 51-53)*

Experiencing the difficulty inherent to the surgery

The relatives state that the first days of the post-operative period is more complicated, and they suffered much because they had to be mindful of the recovery process. They need to assimilate a series of complex instructions and indications to help the family member comply with the surgery objectives.

> *"A person who undergoes bariatric surgery where at the beginning has a series of instructions and indications that are difficult to assimilate" (I16-01, 193-194).*

The surgery as a positive experience

The surgery has been a positive experience since, despite facing difficult situations, they see that the results are positive; the benefits outweigh the complications and the change is accomplished.

> *"Very positive, quite positive; it's gone very well for them" (I2-01, 5).*

Changing the diet

The relatives report that food preparation required for the person that would undergo the surgery involved changes that represented significant difficulties for the patient and the family members. There were drastic changes in their eating habits related to food intake, including smaller servings, eating more frequently and reduced consumption of carbohydrates and lipids, among others. The four dimensions that give rise to the "Changing the diet" category are presented below.

Starting by feeding with a glass

This refers to changes in the servings required by the bariatric surgery recovery process, both for patients and for their relatives. Relatives were concerned about the small servings in a glass, which was used to offer soups and isotonic drinks to rehydrate and regain carbohydrates.

> "*Well… it was very hard for me to see that she was getting super tiny glasses of liquid every certain time, so I would wonder how someone can be maintained like this*" *(I10-01, 85-87).*

Changing food textures, servings and amounts

The relatives reported that the drastic changes generated by food textures, servings and amounts, especially the first days after the surgery, were the most difficult because the eating habits must change from one moment to another. For the patients, the food textures they feel in their mouths are not pleasant. The relatives mentioned that the patients missed the food they used to eat, and that it was uncomfortable for them to eat in front of the bariatric patient.

> *"It's been quite complicated to manage from the feeding part because you have to change the food textures, the servings; if you need to go out to eat somewhere, you have to change it all; the feeding part is very hard" (I01-01, 4).*

Assimilating that their food intake is minimum

Eating for the bariatric patient is normally a challenge and, at the beginning, it is difficult to accept that the patient eats approximately one-fourth of what others do. Nevertheless, bariatric patients and their relatives managed to adapt to this situation and transform their eating habits to accommodate smaller servings.

> *"But the moment comes when I think that the person has to assimilate that their food intake is minimum" (I01-01, 24-26).*

Eating differently and feeling normal

As the process advances, bariatric patients and their relatives heed the instructions provided by the health staff and accept the changes generated by the bariatric surgery in relation to eating. Bariatric patients and their families end up eating smaller servings when they go out to share in another setting, each person orders their dish and an additional empty one to offer a quarter serving to the bariatric patient. The bariatric patient sometimes consumes only proteins, vegetables and fruits. The relatives report that they sometimes have to bring food home.

> *"She's more aware of what this part of feeding implies for her, given that she's more aware, she's now more responsible with the part of the food choices, and one thing we've seen is that it leads the family to improve a bit the nutritional intake habits; thus, sugar consumption is now minimum or almost null, so intake of certain food options drops considerably, to help her on the one side and to improve the others' habits, children's for example".*

DISCUSSION

This research described the meaning of the experiences underwent by relatives of patients subjected to bariatric surgery. The results obtained were contrasted with the literature. The findings reinforce the results obtained in a study conducted in the United States with 138 primary caregivers of adolescent bariatric patients, highlighting the importance of the caregivers to strengthen family communication and the emotional climate to optimize the weight loss results [11].

Likewise, bariatric surgery has become a highly effective treatment for individuals enduring obesity; nonetheless,

this research found that it involves a series of changes at the physical, emotional and psychological levels, affecting lifestyle and family relations. This experience also triggers a variety of events from the moment the patients and their families decide to undergo this procedure, which requires planning and preparation for the surgery, as well as recovery and the changes generated after the surgery. Due to the aforementioned factors, if a patient undergoes treatment due to obesity, it is necessary to include the family in the process to enhance motivation, encourage adaptation to change, support healthy lifestyles, and maintain practices that strengthen relationships, such as sharing food with the family.

Similarly, a research study conducted in Canada with 105 bariatric patients and their families highlighted that, despite the effectiveness of bariatric surgery, only 33% were interested in undergoing the procedure, 50.5% were not interested, and 16,2% had mixed feelings. Dissatisfaction when making efforts to lose weight, and not achieving it after a long process and following countless diets, causes them to decide to undergo bariatric surgery. However, the Canadian study identified that bariatric patients subjected themselves to the surgery because of aesthetic and psychosocial reasons rather than for their health [(12)]. On the contrary, this study found that bariatric patients and their families underwent the surgery only to improve their health status.

In relation to the changes expected with the surgery, this research project identified the importance of the family as a support source for the patients. The relatives exert a direct influence on the bariatric patients' healthy lifestyles, keeping them company, and supporting the social, psychological and emotional changes. Likewise, it is satisfactory for the relatives to see the physical changes generated in the bariatric patients. The study reasserts that the experience of caring for a relative who has undergone surgery yields satisfaction and joy. It generates positive changes, such as strengthening family relations, and much learning. Nevertheless, fear and anguish were also reported during this process as a consequence of the changes implied by the surgery [(13)]. Similarly, another study identified that families of bariatric patients developed changes in their eating habits and adapted to the bariatric patients' new eating schemes, modifying their lifestyles to perform more physical activity and improve their family relationships [(14)]. These elements were also corroborated in this research.

Regarding changes in food intake, this research identified that bariatric patients undergo preparation before the surgery, such as following a liquid diet to lose weight. These changes continued during the post-surgery period and conflicted with the eating habits of families of bariatric patients, generating changes in types of food, servings and schedules. A research study conducted in Australia highlighted the increase of bariatric surgery as a method to control obesity in developed and developing countries; nevertheless, greater support is required during the process by health professionals, families, friends, and peers (companions of those who have undergone

bariatric surgery). This study identified insufficient eating education for bariatric patients and their families, specifically on topics like food options that contain iron, proteins and vitamins. It also stated that eating education was not adapted to their circumstances; for example, they were advised to eat food products they could not afford and suggested that health institutions provide recipes or hold cooking demonstrations to support at home and adaptation to this new life situation [15].

This research identified that eating changes affect the social relationships of bariatric patients and their families. A study conducted in the United States indicated that approximately 20% - 30% of the patients do not achieve post-surgery weight loss or recover their weight during the year after the procedure; hence, family support is crucial to comply with the eating habits and, thus, adhere to the restrictive post-operative diet [16].

For bariatric patients and their families, it is difficult not to share eating spaces at the table. In addition to the shame they feel by attending settings external to their homes, where food is sold and where they consume food different from that chosen by the rest of the family, the patients must adjust to small servings, to avoid some food products although they yearn to consume them, to difficulties tolerating other food options, and to confronting their family's food culture that oftentimes makes it more difficult to transform eating habits. Families and health staff are required to support bariatric patients in changing their eating habits and adapting to new eating lifestyles [17].

This research found that the problems arising from bariatric surgery and adaptation to alternative eating habits also enhance family relationships and produce greater family union. It found high levels of emotional and psychological support from the relatives to help the bariatric patients follow a healthy diet and engage in physical activity. Thus, involving the families in the patient’s necessary behavioral changes can help bariatric surgery patients and their families to become healthier. It is also crucial for the family not to engage in psychological and emotional attacks, such as ridiculing the servings and the eating settings previously shared, given that this inhibits adherence to healthy habits.

Likewise, in this study, the relatives of bariatric patients stated the importance of food preparation before and after the surgery. They require greater support from health institutions, given that eating habits are transformed in terms of serving sizes, eating schedules and reduced intake of certain food groups. Hence, education, monitoring and accompaniment are required to strengthen bariatric patients' and their families' knowledge, attitudes and eating practices. Knowledge, motivation and adherence by the bariatric patients and their families are essential factors in weight loss. Bariatric patients and their relatives reported the need to receive better guidance from health professionals with respect to taking vitamins daily, as well as vitamin supplements, and making changes in

servings and eating schedules to strengthen adherence to the lifestyle changes generated by the bariatric surgery [18].

With respect to the implications for practice, research and education, it is essential for Nursing to be involved in developing educational interdisciplinary programs that promote discharge plans and long-term follow-up for patients and their families. The discharge plans should focus on truthful and timely information, motivate treatment adherence, and improve the ability to cope with the physical, mental and emotional changes brought about by the bariatric surgery.

The meaning of the experiences underwent by the relatives of bariatric patients has been a scarcely explored study topic and, therefore, the studies that have been carried out are qualitative and descriptive in scope. It is recommended other studies be conducted to intervene and draw greater attention to the experiences underwent by the relatives of bariatric patients in the long term, strengthening knowledge in this area.

With respect to the training of Nursing professionals, it is recommended that this topic be included in the curricula so that nurses are trained to develop comprehensive Nursing care for bariatric patients and their families.

CONCLUSION

The description of the meaning of the experiences underwent by relatives of patients subjected to bariatric surgery identified three categories: seeking a change for health reasons, experiencing the surgery, and changing the eating habits.

Concerning the meaning of the surgery experience, including making the decision to undergo the surgery, it was found that the relatives support the bariatric patients in making the decision to undergo the procedure to control diseases caused by obesity. Family support is required to decide on having the bariatric surgery and help to the patient assimilate the necessary lifestyle changes.

Through the surgery, bariatric patients seek health changes more than physical changes. The family becomes a support source for the patient because the relatives participate in all of the physical, social, psychological and emotional changes that emerge from the surgery. It is essential to mention that relatives of bariatric patients feel motivated and happy when they observe obesity disappearing during the process. As some of the diseases endured by bariatric patients start to be controlled, the relatives realize that their family members will live longer and with a better quality of life, so that they see the process as a battle won against the disease and have hope that the bariatric patients' life expectancy will increase.

Regarding the eating habits of bariatric patients and their relatives, they change to achieve the weight loss objective and control diseases caused by obesity. The changes include alternate types of food, servings, and schedules, as well as reduced carbohydrate and lipid intake and changes in food preparation. These changes modify family dynamics, bearing in mind that eating provides an

opportunity to socialize and share everyday experiences.However, the relatives of bariatric patients manage to understand and adapt to the changes so that the family works as support for transforming the eating habits of the patient.

Limitations

The limitations of this study lie in the fact that it was conducted at a single health institution in Bogotá, Colombia. In addition, only family members of bariatric patients who had undergone surgery between the last 6 and 12 months were included. Data analysis focused on categories without advancing in developing the theoretical approach.

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Conflicts of interest

The authors declare that they had no conflicts of interest during the research process.

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