

## Educational and informative booklet on the perioperative period of bariatric and metabolic surgery: An integrative review

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**Keywords** — *Bariatric Surgery, Health Education, Booklet.*

**Abstract**— *According to the World Health Organization (WHO) (2020), obesity is considered a global public health problem and relates to the death of 2.8 million people per year. Bariatric and metabolic surgery proves to be a great ally against obesity, however, it needs more studies to reaffirm its condition of offering safe treatment and good results in the short and long term. The objective of this study is to analyze the importance of building and disseminating a booklet on the perioperative period of bariatric and metabolic surgery. This is a descriptive, qualitative study carried out through an integrative literature review (ILR). Databases were used: University repositories, VHL, PubMed, Journals, Magazines, Federal Laws and Ordinances, SCIELO, Online Search System and MEDLINE. The study included articles related to the theme of the project, articles with Portuguese language, online and free access to the full text between the years 2012 to*

2022, with sixteen (16) references being found. The reading of all the scientific production chosen made it possible to contemplate the researchers' concern in the adoption and development of resources that facilitate communication and in the implementation of effective care surgery in the perioperative period of bariatric surgery for assistance. In view of the above, we can conclude by saying that knowledge and information is of fundamental importance and training of the patient in the preoperative period of bariatric surgery.

## I. INTRODUCTION

According to the World Health Organization (WHO) (2020), obesity is considered a global public health problem and relates to the death of 2.8 million people per year. Despite showing stories from the Paleolithic Era about "big men", the prevalence of obesity is still at an epidemic level across all continents (GONÇALVES, 2010).

Furthermore, worldwide, more than 1.9 billion people over the age of 18 are overweight. Furthermore, 650 million people are obese and more than 340 million children are overweight or obese, according to the WHO (2020).

The successive rise in the prevalence of obesity in the world is a reflection of modern society such as economic growth, change in society's lifestyle, and the modernization of interpersonal relationships promoted by globalization and urbanization (SIPPEL; et al, 2014).

Faced with globalization, food quality has undergone a major transformation, including an abusive increase in the consumption of free sugars and fats, a high disproportion of saturated fats and products of animal origin with insufficient fruits and vegetables (SANTOS, 2012). The tendency towards a sedentary lifestyle, due to great technological advances and modernization, also promotes the advancement of obesity (SANTANA, 2014).

Obesity is seen as a chronic condition, with a predicted evolution (hypertension, type II diabetes mellitus), where multiple factors participate in its etiology. Furthermore, the treatment must go through several approaches, including nutritional, drug and, above all, physical activity (SANTOS, 2012). Despite this, most individuals are not responsive to more conservative treatments, thus requiring a more effective intervention such as bariatric surgery, due to all attempts at the aforementioned methods having been exhausted (SOUSA, 2019).

In addition, there is the Metabolic Syndrome (MS) that has been increasing its prevalence due to the increasing lifestyle and obesity in the world. Despite its importance in the context of metabolic and cardiovascular diseases, few studies in Brazil have evaluated its

prevalence and its determinants, restricting the quality of information on the magnitude of the problem in the country (SCHILD; SANTOS; ALVES, 2013).

Aligning the treatment of obesity and Metabolic Syndrome (MS) has high social relevance as it directly impacts quality of life, family, work and the expenditure of avoidable expenses and suffering (DINIZ and GONÇALVES, 2020). MS is a complex of interrelated risk factors for cardiovascular disease, type II diabetes mellitus, arterial hypertension, dyslipidemia and increased abdominal circumference, thus increasing the risk of death (BEZERRA and OLIVEIRA, 2013).

The correlation between bariatric surgery, type II diabetes mellitus and MS needs to be detailed, as there are patients with metabolic syndrome who are still prediabetic, and the long-term results point to a very complete resolution of comorbidities. Changing habits with healthy diets, regular physical exercises and monitoring by a multidisciplinary team should be emphasized as a continuous process (BORDALO; et al, 2011).

Bariatric and metabolic surgery proves to be a great ally against obesity, however, it needs more studies to reaffirm its condition to offer safe treatment and good results in the short and long term. Therefore, the perioperative period represents the starting point for sensitizing patients to the future changes that will occur (CUNHA et al, 2020).

Several surgical techniques have been developed in the last 50 years and the advent of laparoscopic surgery has increased its safety and efficacy (SANTANA, 2014). Currently, the increasing and successful use of new techniques and maneuvers has been responsible for several changes in established treatment paradigms (ARAÚJO, 2022).

The surgical treatment of obesity and MS is based on the principle of precise indication within the parameters already defined by the Ministry of Health via the National Health Agency and corroborated by the Brazilian Society of Bariatric and Metabolic Surgery (BRASIL, 2018). Also guided by the Federal Council of Medicine, which approved the surgery as no longer experimental, for type II diabetes mellitus, indicated for patients with a BMI between 30 and 34.9 kg/m<sup>2</sup>, therefore being able to

encompass a large number of patients with MS, resulting in thus having a positive impact on the future (SILVA, 2021).

To maximize the results of bariatric surgery, it is necessary to position a coherent multidisciplinary team, in which all members decide holistically and in agreement with the patient's psychological, nutritional and health conditions, whether or not to recommend surgery (REZENDE, 2011). In addition, the team must be in constant communication to exchange information, since the isolated work does not process the objective achieved, as it does not conceptualize all the individual's points of view, which makes the evaluation and performance of all qualified individuals essential. of the team to monitor the client as a whole from the preoperative period.

Given this context, the repercussions of bariatric surgery in morbidly obese and, due to the lack of publications on surgical treatment in obese individuals and, related to the preoperative period, the objective of this study is to analyze the importance of the construction and dissemination of a booklet on the perioperative period of bariatric and metabolic surgery.

**II. METHOD**

This is a descriptive, qualitative study carried out through an integrative literature review (ILR).To carry out the bibliographic review, searches were carried out in the following databases: repositories of Universities, Virtual Health Libraries, PubMed, Journals, Magazines, Federal Laws and Ordinances Scientific Electronic Library Online (SCIELO) and Online System of Search and Analysis of Literature Medical (MEDLINE).

The study included articles related to the theme of the project, articles with Portuguese language, free online access to the full text between the years 2012 to 2022.As

exclusion criteria, scientific productions with English and Spanish language and that were not complete and outside the established year were discarded.The descriptors used in the research were: bariatric surgery, health education, health booklet.

When crossing the descriptors, bariatric and metabolic surgery and health education with filters, several articles were found, of these sixteen (16) references followed according to the inclusion criteria and that present the importance of knowledge about bariatric and metabolic surgery in the perioperative period, as well as a report of several experiences that resulted in a framework to build a booklet aimed at eligible bariatric surgery patients.

**III. RESULTS**

The results were analyzed through content analysis according to Bardin (2006).The RIL should be developed from three phases: pre-analysis, exploration of the material and treatment of results, inference and interpretation.

The essence of the integrative review is the categorization of studies. In this sense, the results are presented and the information discussed in a descriptive way and through the construction of synoptic tables (BARBOSA et al., 2011).Thus, for a better analysis, the data were synthesized from their characterization of the themes that emerged from the scientific evidence found, with the description and classification of each article in order to gather the knowledge produced on the theme explored in the review (POLIT; BECK, 2011).

The definition of references considered the information related to the descriptors, authors, year, research title, type of study, subjects and the results found described in table 1.

Table 1: References used to prepare the RIL

AUTOR	TÍTULO	TIPO DE ESTUDO	DESCRITORES	ANO
GOZZO. T.O	Informações para Elaboração de um Manual Educativo as Mulheres com Câncer de Mama	Descritivo exploratório	Neoplasia De Mama, Enfermagem, Cirurgia, Educação Em Saúde	2012
OMS	World Obesity Federation. Obesity and overweight	Descritivo exploratório	Obesity, Overweight.	2012
DODT, RCM.; XIMENES, L B; ORIÁ, MOB.	Validação de Album Seriado para Promoção do Aleitamento Materno	Estudo de Validade Aparente e De Conteúdo.	Materiais de Ensino, Aleitamento Materno, Estudos de Validação, Alojamento	2012

			Conjunto	
FELIX, L. G.; SOARES, M.J. G. O.; NÓBREGA, M. L.	Protocolo de Assistência de Enfermagem ao Paciente em Pré e Pós-Operatório de Cirurgia Bariátrica	Estudo Transversal	Enfermagem, Auto- Cuidado, Cirurgia Bariátrica, Protocolos de Enfermagem	2012
MOREIRA. LB.	Construção e Validação de uma Cartilha Educativa Sobre Cuidados no Perioperatório de Cirurgia Bariátrica	Pesquisa Bibliográfica	Obesidade, Cirurgia Bariátrica, Educação em Saúde.	2015
KELLES, S. M. B., DINIZ, M. D. F. H. S., MACHADO, C. J., & BARRETO, S. M.	Perfil de Pacientes Submetidos a Cirurgia Bariátrica, Assistidos pelo Sistema Único de Saúde do Brasil: Revisão Sistemática	Revisão Sistemática	Cirurgia Bariátrica, Derivações Gástricas, Perfil de Saúde.	2015
SOUZA, V. E. C.	Desenvolvimento e Validação de Software Para Apoio ao Ensino Aprendizagem Sobre Diagnósticos em Enfermagem	Dissertação	Enfermagem, Diagnóstico de Enfermagem, Tecnologia, Validação de Programas de Computador,	2015
MOREIRA. LB.	Efetividade da Cartilha “Cirurgia Bariátrica:Cuidados Para Uma Vida Saudável” no Preparo Pré- Operatório: Ensaio Clínico Randomizado Pragmático	Ensaio Clínico Randomizad o Controlado	Obesidade, Cirurgia Bariátrica, Enfermagem, Tecnologia Educacional, Educação em	2017
TUCCI, M.M.	Comunicação e Saúde: Percepções Sobre a Cirurgia Bariátrica na Esfera Pública e Mídias Digitais.	Dissertação	Cirurgia Bariátrica, Comunicação Pública, Relações Públicas, Mídias Digitais.	2017
BEAMISH, A. J.; REINEHR, T.	Should Bariatric Surgery be Performed in Adolescent?	Descritiva	Bariatric surgery, Severe Obesity	2017
CHAIM,E.A.; PAREJA, J.C.; GESTIC, M.A.; UTRINI,M.P.; CAZZO, E.	Programa Multidisciplinar de Assistência Pré- Operatória para Cirurgia Bariátrica: Uma Proposta Para o Sistema Público de Saúde do Brasil	Estudo Prospectivo Comparativo	Obesidade, Cirurgia Bariátrica, Derivação Gástrica, Saúde Pública.	2017
BRASILIA	Política Nacional de Promoção da Saúde	Documental	Política Nacional de Promoção da Saúde	2018
TEIXEIRA, B. N.; DE RESENDE, L.	Relação Entre Cirurgia Bariátrica e Fertilidade	Revisão	Hormônio anti- mulleriano; Fertilidade;	

C., BIGNOTO, L. L. C.; BATISTA, M. M., & TURCI, M. A	Feminina: Uma Revisão Sistemática	Sistemática	Cirurgia Bariátrica; Mulheres	2019
MINISTÉRIO DA SAÚDE	Vigilância de Fatores de Risco para Doenças Crônicas por Inquérito Telefônico nas capitais dos 26 estados brasileiros e no Distrito Federal	Documental	Doenças Crônicas, Vigilância Sanitária, Serviços de Saúde.	2019
SOEIRO, R. L., VALENTE, G. S. C., CORTEZ, E. A., MESQUITA, L. M., XAVIER, S. C. D. M., & LOBO, B. M. I. D. S	Educação em Saúde em Grupo no Tratamento de Obesos Grau III: um Desafio para os Profissionais de Saúde	Revisão Integrativa	Obesidade Mórbida, Enfermagem, Educação Em Saúde, Atenção Primária a Saúde.	2020
CUNHA, C. S. O.; CUNHA, T. A. S.; LIRA, R. B.; SOUZA, L. L. B., & RODRIGUES, T. C. M. M	Impactos Psicológicos em Pacientes Submetidos à Cirurgia Bariátrica	Pesquisa Bibliográfica Tipo Exploratória	Cirurgia-Bariátrica, Impactos Psicológicos, Psicologia	2020

#### IV. DISCUSSION

Among the references cited in table 1, in relation to the year of publication, there was one article from 2018, two articles from 2019, two from 2020 and three articles from 2015, four from 2012 and four articles from 2017, all published in Brazil. All the selected production is part of the health area, presenting diversity in relation to the research context, in which the theme involved the importance of building and disseminating a booklet on the perioperative period of bariatric and metabolic surgery. In addition, publications with health professionals and the multidisciplinary team being cited.

The reading of all the scientific production chosen made it possible to contemplate the researchers' concern in the adoption and development of resources that facilitate communication and in the implementation of effective care surgery in the perioperative period of bariatric surgery for assistance.

It was evidenced in the references found that the highest prevalence, between genders, was female (76.6%), although, according to WHO data (2018), the increase in the incidence of obesity is occurring in both sexes, regardless of the social class and cultural level.

With regard to comorbidities associated with obesity, all studies (9 100%) refer to Diabetes Mellitus type

II as the most prominent, followed by systemic arterial hypertension and smoking. According to Mayrink (2021), obesity determines important functional implications in the population, more recent studies indicate that insulin resistance is associated with abdominal obesity.

Regarding the age group, 81.25% of the publications mention that the average age group is 40 years old, although in recent decades, with the changes, obesity has advanced in all age groups and social classes, with a significant impact on women inserted in the strata. with lower income (GONÇALVES; ASCIUTTI & CAVALCANTI, 2010).

As for the presence of MS, of the studies studied, it was evidenced that 52.2% consider Diabetes Mellitus (DM) to be a condition with a strong correlation with MS, obese people have a good knowledge of the problems that obesity can cause them, however, have unhealthy behaviors, such as sedentary lives and poor eating at irregular times (KLIER; ARCANJO & DE SOUZA, 2021).

Similar to what is observed in the literature, the prevalence of comorbidities was high. Rangel et al (2020), reported percentages of AH in 60%, followed by DM 2 in 10% of patients. However, Soero et al (2020) revealed higher values in DM 2 with 35%. One aspect that deserves to be highlighted is the considerable improvement in the



conditions of the operated patients. In addition, 13 references cite that the vast majority of patients can discontinue the use of antihypertensive drugs and all had normal levels. Confirming these findings, Moreira (2015) reports that with a follow-up of at least one year, they reported cure in 72.7% of DM 2 and 65.4% of AH. The improvement in glucose metabolism can be explained by the severe nutrient deprivation that occurs after surgery, providing weight loss and negative energy balance, conditions that classically improve glucose tolerance (BORDALO; MOURÃO & BRESSAN, 2011).

The main doubts and fears are related to the operating room, how the surgery is performed and what the anesthesia is like. Another strongly present concern is the fear of weight regain and the occurrence of complications in the postoperative period (BELELI, 2011). In the weight loss analysis, a reduction compatible with literature data was identified. In an evaluation, a weight reduction of 37.5% was observed after the first year of surgery. On the other hand, they found lower percentages in this period (30.69%). Several researchers found that weight reduction is greater in the first six months, becoming slower and more continuous, until reaching an average loss of 35 to 40% of the initial weight between the 12th and 24th month of the surgery (COELHO; FONTELA; WINKELMANN, 2016).

Regarding the practice of physical activity, none of the conditions may be occurring regularly before the surgery. Another highlight refers that after the surgical procedure, 34.4% of the patients performed physical activity in relation to the cited publications. In addition, only 15% of the studies showed that according to the postoperative period and the closer the weight loss to the desired ideal activity, the greater the lack of interest of this population in the practice of physics.

Therefore, patient education is important to help them make decisions about bariatric surgery (GOZZO, 2012). Several studies have reported the effect of preoperative education on lifestyle changes after surgery (CHAIM et al, 2017). It is worth mentioning that educational strategies as a measure of health promotion make it possible to carry out self-care, considering that patient education in preoperative preparation allows for the identification of individuals' needs, in addition to representing the opportunity to resolve doubts and assist them. him to deal with his expectations regarding the surgical procedure and with the challenge of experiencing the postoperative period (CAMBI; MARCHESINI & BARETTA, 2015).

The level of evidence of the studies must be evaluated in order to determine the confidence in the use

of their results and to strengthen the conclusions that will generate the current state of knowledge of the investigated topic (POLIT; BECK, 2011). These results confirm that bariatric surgery was an effective procedure to promote weight loss and its maintenance for two years, without the occurrence of low weight, as well as improvement of biochemical parameters and comorbidities, with clinical and nutritional symptoms reduced and/or avoided by monitoring specialized nutrition.

It was found that most studies were intended to contribute to increasing knowledge about obesity, bariatric surgery and perioperative care. A better qualification of the health professional implies a more effective assistance in which the patient is attended according to his needs and is able to make decisions about the treatment and the performance of self-care throughout the perioperative process. It is also imperative to highlight that the articles infer the importance of patient education to achieve good results throughout the postoperative period and the prevention of complications with greater well-being and a better quality of life.

In view of the presentation of the results obtained from the analysis of the studies selected for the integrative review, the role of each professional in the bariatric surgery team in guiding and educating the patient about the implications of the surgical procedure and the necessary care in each phase of the perioperative period is evident. In order to enable a better experience of each stage of treatment.

## V. CONCLUSIONS

This booklet should serve as educational and informative parameters for patients eligible for bariatric surgery, and should be widely disseminated in the relevant medical societies and serve as a reference for all who are interested in the subject. In addition, it must be updated periodically, as the subject evolves every year, shaping the growing changes in the scenario of world bariatric surgery. In order to further stimulate the continuous learning process, access will be free of cost to all.

Health education is an instrument for exchanging knowledge between health professionals and the population.

This leads to the search for the autonomy of the Being as a transforming element of its reality.

This is a complex involving the biological Being and its social contexts. (PEREIRA et al, 2015).

The attitude of an individual informed about their procedure, being guided and well informed, provides a

safer and more aware of the advantages and disadvantages of bariatric surgery and all the benefits that surgery brings.

In view of the above, we can conclude by saying that knowledge and information is of fundamental importance and training of the patient in the preoperative period of bariatric surgery. It is considered that the constructed product can also serve family members and health professionals who work with the subject or who are unaware of the subject, given that its content addresses the main information about bariatric surgery and perioperative care, being a reliable source of information. In this sense, the expectation is that the booklet constructed will be made available, disseminated and used by patients, family members and health professionals, being an instrument that enables health promotion, the development of skills and the favoring of autonomy and empowerment.

It is suggested to carry out other studies that aim to implement the educational booklet in consultations as an auxiliary method to provide information about the surgery and the necessary care, as well as to evaluate if the educational technology really allows learning, if it promotes behavior change. desired and whether the available content encourages the search for material to resolve doubts and favors adherence to treatment and postoperative follow-up.

## REFERENCES

- [1] BARROS, L.M. **Construção e validação de uma cartilha educativa sobre os cuidados no perioperatório da cirurgia bariátrica**. Tese de Mestrado. [recurso eletrônico]. Universidade Federal do Ceará, Fortaleza, 2015. Disponível em <<http://www.repositorio.ufc.br/handle/riufc/10531>>. Acesso em: 19 nov. 2020.
- [2] Barros, L. M. (2017). Efetividade da cartilha "Cirurgia bariátrica: cuidados para uma vida saudável" no preparo pré-operatório: ensaio clínico randomizado pragmático. Disponível em: <<http://www.repositorio.ufc.br/handle/riufc/29201>>.
- [3] BEAMISH, A.J; REINEHR. Bariatric Surgery be Performed in Adolescent? European Journal of Endocrinology. v. 176, i. 4, p. D1-D5, 2017. Disponível em: <<https://pubmed.ncbi.nlm.nih.gov/28174231/>>. Acesso em: 19 nov. 2020.
- [4] BELELI, C. A. V et al. Fatores preditivos na perda ponderal de pacientes submetidos ao Bypass Gástrico em Y de Roux. *Bariátrica & Metabólica Ibero-Americana*. Valinhos, p. 16-23, 2011. Disponível em: <<https://www.bmi-journal.com/index.php/bmi/article/download/2/pdf>>. Acesso em: 19 nov. 2020.
- [5] Bezerra, A. P. M., & de Oliveira, D. M. (2013). Síndrome metabólica: bases moleculares e fundamentos da interação com obesidade. *DEMETRA: Alimentação, Nutrição & Saúde*, 8(1), 63-76.
- [6] BORDALO, L. A et al. Cirurgia bariátrica: como e por que suplementar. *Rev. Assoc. Med. Bras.*, São Paulo, v. 57, n. 1, p. 113-120, 2011. Disponível em: <[https://www.scielo.br/scielo.php?script=sci\\_arttext&pid=S0104-42302011000100025](https://www.scielo.br/scielo.php?script=sci_arttext&pid=S0104-42302011000100025)>. Acesso em: 19 nov. 2020.
- [7] BRASIL, M. S. Secretaria de Vigilância em Saúde. Departamento de Análise em Saúde e Vigilância de Doenças não Transmissíveis. **Vigitel Brasil 2018: vigilância de fatores de risco e proteção para doenças crônicas por inquérito telefônico: estimativas sobre frequência e distribuição sociodemográfica de fatores de risco e proteção para doenças crônicas nas capitais dos 26 estados brasileiros e no Distrito Federal**. Brasília, 2019. Disponível em: <<https://portalarquivos2.saude.gov.br/images/pdf/2019/julho/25/vigitel-brasil-2018.pdf>>.
- [8] BRASIL, M. S. Secretaria de Vigilância em Saúde. Secretaria de Atenção à Saúde. **Política Nacional de Promoção da Saúde**: PNPS: Anexo I da Portaria de Consolidação nº 2, de 28 de setembro de 2017, que consolida as normas sobre as políticas nacionais de saúde do SUS. Brasília, 2018. Disponível em: <[http://bvsms.saude.gov.br/bvs/publicacoes/politica\\_nacional\\_promocao\\_saude.pdf](http://bvsms.saude.gov.br/bvs/publicacoes/politica_nacional_promocao_saude.pdf)>. Acesso em: 19 nov. 2020.
- [9] BORDALO, L. A., MOURÃO, D. M., & BRESSAN, J. (2011). Deficiências nutricionais após cirurgia bariátrica por que ocorrem?.
- [10] CAMBI, M. P. C., MARCHESINI, S. D., & BARETTA, G. A. P. (2015). Reganho de peso após cirurgia bariátrica: avaliação do perfil nutricional dos pacientes candidatos ao procedimento de plasma endoscópico de argônio. *ABCD. Arquivos Brasileiros de Cirurgia Digestiva (São Paulo)*, 28, 40-43.
- [11] CHAIM, E. A et al. Preoperative multidisciplinary program for bariatric surgery: a proposal for the Brazilian Public Health System. *Arq. Gastroenterol.*, São Paulo , v. 54, n. 1, p. 70-74, 2017. Disponível em: <[https://www.scielo.br/scielo.php?pid=S0004-28032017000100070&script=sci\\_abstract&tlng=pt](https://www.scielo.br/scielo.php?pid=S0004-28032017000100070&script=sci_abstract&tlng=pt)>. Acesso em: 19 nov. 2020.
- [12] CHRISTOFORO, B. E. B.; CARVALHO, D. S. **Cuidados de enfermagem realizados ao paciente cirúrgico no período pré-operatório**. *Rev. esc. enferm. USP*, São Paulo, v. 43, n. 1, p. 14-22, 2009. Disponível em:
- [13] <[https://www.scielo.br/scielo.php?script=sci\\_arttext&pid=S0080-62342009000100002](https://www.scielo.br/scielo.php?script=sci_arttext&pid=S0080-62342009000100002)>. Acesso em: 19 nov. 2020.
- [14] COELHO, E. M. L., FONTELA, P. C., WINKELMANN, E. R., & SCHWENGBER, M. S. V. (2016). Perda de peso, estado de saúde e qualidade de vida durante 2 anos após cirurgia bariátrica. *Ciência & Saúde*, 9(3), 174-181.
- [15] CUNHA, C.S.O et al. **Impactos Psicológicos em Pacientes Submetidos à Cirurgia Bariátrica**. [recurso eletrônico]. Universidade de Vargem Grande. 2020. Disponível em: <<https://www.repositoriodigital.univag.com.br/index.php/Psico/article/download/602/598>>.
- [16] CUNHA, C. S. O., CUNHA, T. A. S., LIRA, R. B., SOUZA, L. L. B., & RODRIGUES, T. C. M. M. (2020). Impactos psicológicos em pacientes submetidos à cirurgia bariátrica. *Tcc-psicologia*.

- [17] DODT, R. C. M.; XIMENES, L. B.; ORIA, M. O. B. **Validação de álbum seriado para promoção do aleitamento materno.** Acta paul. enferm., São Paulo, v. 25, n. 2, p. 225-230, 2012. Disponível em: <[https://www.scielo.br/scielo.php?pid=S0103-21002012000200011&script=sci\\_abstract&tlng=pt](https://www.scielo.br/scielo.php?pid=S0103-21002012000200011&script=sci_abstract&tlng=pt)>. Acesso em: 19 nov. 2020.
- [18] DINIZ, F. L., & GONÇALVES, K. M. C. (2020). Síndrome Metabólica: O papel da nutrição no tratamento.
- [19] FELIX, L. G; SOARES M. J. G. O; NÓBREGA, M. L. **Protocolo de Assistência de Enfermagem ao Paciente em Pré e Pós-Operatório de Cirurgia Bariátrica.** Rev. bras. Enferm., Brasília, v. 65, n. 1, p. 83-91, 2012. Disponível em: <[https://www.scielo.br/scielo.php?script=sci\\_arttext&pid=S0034-71672012000100012](https://www.scielo.br/scielo.php?script=sci_arttext&pid=S0034-71672012000100012)>. Acesso em: 19 nov. 2020.
- [20] GARRIDO JUNIOR, A. B. G. **Cirurgia em Obesos Mórvidos -Experiência Pessoal.** Arq Bras Endocrinol Metab, São Paulo, v. 44, n. 1, p. 106-110, 2000. Disponível em: <[https://www.scielo.br/scielo.php?script=sci\\_arttext&pid=S0004-2730200000100017](https://www.scielo.br/scielo.php?script=sci_arttext&pid=S0004-2730200000100017)>. Acesso em: 19 nov. 2020.
- [21] GONÇALVES, M. D. C. R., ASCIUTTI, L. S. R., & CAVALCANTI, A. L. (2010). Envelhecimento e obesidade: um grande desafio no século XXI. Rev. bras. ciênc. saúde, 87-92.
- [22] GOZZO, T.O et al. **Informações para a elaboração de um manual educativo destinado às mulheres com câncer de mama.** Esc. Anna Nery, Rio de Janeiro ,v. 16, n. 2, p. 306-311, 2012. Disponível em: <[https://www.scielo.br/scielo.php?script=sci\\_arttext&pid=S1414-81452012000200014](https://www.scielo.br/scielo.php?script=sci_arttext&pid=S1414-81452012000200014) >. Acesso em: 19 nov. 2020.
- [23] KELLES, Silvana Marcia Bruschi et al. **Perfil de pacientes submetidos à cirurgia bariátrica, assistidos pelo Sistema Único de Saúde do Brasil: revisão sistemática.** Cad. Saúde Pública. Rio de Janeiro, v. 31, n. 8, p. 1587-1601, 2015. Disponível em: <[https://www.scielo.br/scielo.php?pid=S0102-311X2015000801587&script=sci\\_abstract&tlng=pt](https://www.scielo.br/scielo.php?pid=S0102-311X2015000801587&script=sci_abstract&tlng=pt)>. Acesso em: 19 nov. 2020.
- [24] KELLES, S. M. B., DINIZ, M. D. F. H. S., MACHADO, C. J., & BARRETO, S. M. (2015). Perfil de pacientes submetidos à cirurgia bariátrica, assistidos pelo Sistema Único de Saúde do Brasil: revisão sistemática. Cadernos de Saúde Pública, 31, 1587-1601.
- [25] KLIER, A., ARCANJO, F. M., & DE SOUZA, I. F. (2021). Impacto do álcool sobre os parâmetros da síndrome metabólica em adultos: uma revisão integrativa. Revista Eletrônica Acervo Saúde, 13(2), e5843-e5843.
- [26] MAYRINK, L. H. G. (2021). Cuidado das pessoas com obesidade, hipertensão arterial sistêmica e diabetes mellitus na atenção primária à saúde no Brasil, no ano de 2019.
- [27] REZENDE, F. F. (2011). Percepção da imagem corporal, resiliência e estratégias de coping em pacientes submetidos à cirurgia bariátrica (Doctoral dissertation, Universidade de São Paulo).
- [28] SANTANA, T. D. S. (2014). Meio ambiente como determinante da obesidade e fator de risco para doenças cardiovasculares.
- [29] SANTOS, R. H. D. (2012). Efeito do programa de atividade física do Conviver nos níveis de obesidade dos idosos participantes.
- [30] SIPPEL, C. A., DE AZEVEDO BASTIAN, R. M., GIOVANELLA, J., FACCIN, C., CONTINI, V., & DAL BOSCO, S. M. (2014). Processos inflamatórios da obesidade. Revista de Atenção à Saúde, 12(42).
- [31] SCHILD, B. Z., SANTOS, L. N., & ALVES, M. K. (2013). Doença hepática gordurosa não alcoólica e sua relação com a síndrome metabólica no pré-operatório de pacientes submetidos à cirurgia bariátrica. Revista da Associação Médica Brasileira, 59(2), 155-160.
- [32] SOEIRO, RAQUEL LIMA ET al. **Educação em Saúde em Grupo no Tratamento de Obesos Grau III: um Desafio para os Profissionais de Saúde.** Rev. bras. educ. med., Brasília, v. 43, n. 1, supl. 1, p. 681-691, 2019. Disponível em: <[https://www.scielo.br/scielo.php?script=sci\\_arttext&pid=S0100-55022019000500681&lng=en&nrm=iso](https://www.scielo.br/scielo.php?script=sci_arttext&pid=S0100-55022019000500681&lng=en&nrm=iso)>. Acesso em: 19 nov. 2020.
- [33] SOEIRO, R. L., VALENTE, G. S. C., CORTEZ, E. A., MESQUITA, L. M., XAVIER, S. C. D. M., & LOBO, B. M. I. D. S. (2020). Educação em Saúde em Grupo no Tratamento de Obesos Grau III: um Desafio para os Profissionais de Saúde. Revista Brasileira de Educação Médica, 43, 681-691.
- [34] SOUSA, V. E. C. Desenvolvimento e Validação de Software para Apoio ao Ensino Aprendizagem sobre Diagnósticos em Enfermagem. Tese de Doutorado. [recurso eletrônico]. Universidade Federal do Ceará, Fortaleza, 2015. Disponível em: <[HTTP://WWW.REPOSITORIO.UFC.BR/BITSTREAM/R](http://www.repositorio.ufc.br/bitstream/riufc/12557/1/2015_TESE_VECSOUSA.PDF) IUFc/12557/1/2015\_TESE\_VECSOUSA.PDF>. Acesso em: 19 nov. 2020.
- [35] SOUSA, S. C. C. D. (2019). A influência da farmácia comunitária na promoção de estilos de vida saudáveis em crianças e adolescentes (Master's thesis).
- [36] TEIXEIRA, B. N.; DE RESENDE, L. C., BIGNOTO, L. L. C., BATISTA, M. M., & TURCI, M. A. **Relação Entre Cirurgia Bariátrica e Fertilidade Feminina: Uma Revisão Sistemática.** e-Scientia, Belo Horizonte, v. 12, n. 2, p. 59-64, 2019. Disponível em: <<https://revistas.unibh.br/dcbas/article/view/2983>>.
- [37] TUCCI, M. M. **Comunicação e Saúde: Percepções Sobre a Cirurgia Bariátrica na Esfera Pública e Mídias Digitais.** Monografia. [recurso eletrônico]. Universidade Católica de Santos. Santos, 2017. Disponível em: <[https://www.unisantos.br/wp-content/uploads/2019/05/305-COMUNICA%C3%87%C3%83O-E-SA%C3%9ADE\\_-PERCEP%C3%87%C3%95ES-SOBRE-A-CIRURGIA-BARI%C3%81TRICA-NA-ESFERA-P%C3%9ABLICA-E-M%C3%8DDIAS-DIGITAIS.pdf](https://www.unisantos.br/wp-content/uploads/2019/05/305-COMUNICA%C3%87%C3%83O-E-SA%C3%9ADE_-PERCEP%C3%87%C3%95ES-SOBRE-A-CIRURGIA-BARI%C3%81TRICA-NA-ESFERA-P%C3%9ABLICA-E-M%C3%8DDIAS-DIGITAIS.pdf)>.
- [38] WORLD HEALTH ORGANIZATION. **World Obesity Federation. Obesity and overweight.** Fact Sheets. 16 fev. 2018. Disponível em: <https://www.who.int/news-room/fact-sheets/detail/obesity-and-overweight>. Acesso em: 19 nov. 2020.