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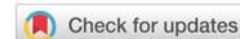
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Research Article

Impacts of radical prostatectomy with emphasis on physical and psycho-socio-emotional declines: An integrative review

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Abstract

Introduction: Prostatectomy oncological surgery is necessary for the continuity of life, but it has physical consequences (momentary inability to drive, erectile dysfunction), emotional (anxiety about the diagnosis and the consequences of treatment, depression) and psychosocial (feeling of impotence, failure, loss of status in society), which may or may not be transitory.

Objective: to identify, through an integrative literature review, the biopsychosocial impacts of Radical Prostatectomy.

Methodology: This is an integrative literature review, which included articles related to the proposed theme, published between the years 2012 to 2022, available in full, without language restriction; in addition to theses, dissertations and monographs. For this, the PRISMA guidelines were used, as well as the PICO strategy for the best delineation of the research question and research theme.

Results and discussions: In view of the discussion, the study can respond to the objections raised by this research, and can show that the culture of masculinity, with regard to virility, strength, and better performance, composes risk factors for possible impacts on Quality of Life of men undergoing radical prostatectomy. These factors are intrinsically associated with the majority of relationships and characteristics represented by a man.

Final considerations: Psychoeducation and general guidelines on sexual and mental health should be carried out to patients who undergo radical therapies, such as radical prostatectomy, so that these patients can achieve coping strategies that make them feel better, contributing directly to the best quality of life, functional capacity, and their social relationships.

Introduction

In Brazil, the National Cancer Institute (INCA) identified 61,200 new cases of prostate cancer in 2016, among a total of 295,200 new cases of the incidence of various types of cancer [1]. In the same period, according to this institution, 9,139 surgical procedures were performed in patients affected by the disease in question, including Radical Prostatectomy (RP), which refers to surgery to remove the prostate [2].

One of the main disadvantages of performing RP is erectile dysfunction as a complicating factor, which considerably affects

the quality of life of operated patients [3,4]. Is estimated that 68% of men suffer from this condition in the postoperative period [3]. The oncological surgery of prostatectomy is necessary for the continuity of life, but it has physical consequences (momentary impossibility of driving, erectile dysfunction), emotional (anxiety regarding the diagnosis and consequences of treatment, depression) and psychosocial (feeling of powerlessness, failure, loss of status in society), which may or may not be transitory [5].

For Bratu, et al. [5], erectile dysfunction is understood as a condition that makes penile erection impossible for



satisfactory sexual intercourse, within an interval of at least three months, and according to Barreira, et al. [4], originates from several factors, including after radical prostatectomy. According to the author, during this surgical intervention, there may be a macroscopic lesion of the cavernous nerves, which causes permanent loss of erectile function [6]. In addition to this injury caused by the contact of surgical materials, the author also points out postoperative factors that contribute to postoperative Wallerian degeneration, for example, edema and inflammation, and consequently cause prolonged damage to the cavernous nerves [4-6].

It can be assumed that this side effect can discourage men from taking preventive exams and carrying out the necessary procedures to combat the progression of the disease. In addition, according to Briganti, et al. [7], there is the notion that physical illness would negatively impact men in terms of their strength, virility, and endurance, that is, this fragility resulting from illnesses would not be something natural for men, being perceived as a weakening of their masculinity [7-8]. This perception is not just individual: the authors point to possible discrimination in the work environment if the man is absent from his duties to seek medical care [8].

Faced with the difficulties faced by patients who underwent RP, it is important to highlight the role of the nursing profession in this stage of medical treatment. Capogrosso, et al. [9], analyzed studies on this topic and concluded that educational interventions under the responsibility of nurses aimed at reestablishing erectile function are effective in alleviating the discomforts resulting from RP in the sexual function of patients, as they are successful in their efforts to mitigate the physical consequences resulting from the surgery and to improve their quality of life and well-being.

Lassen, Gattinger and Saxer [10] also identified studies that showed positive results from educational interventions in the treatment of erectile dysfunction, which are evident in different stages of follow-up according to each study [11]. Therefore, it is assumed that prostatectomies men have difficulty in adequately performing self-care, due to the habits stimulated by the ideal of hegemonic masculinity, such as the perception of male fragility in the face of medical needs, which makes men give up correct practices of long-term care [8]. In addition, it is observed that men undergoing this surgery need comprehensive and humanized care, given that it is essential to mitigate the physical, emotional, and social consequences of prostatectomy [12].

This research is justified by the scarcity of scientific materials that address the impacts of RP and the lack of knowledge or practice on the part of nursing professionals in dealing with this theme and with care related to men's health, especially those related to sexuality [13]. Thus, this work aims to fill this gap in academic studies, whose topic is still taboo among students, professionals, and patients [14].

As with any surgical procedure, in RP there is a risk of complications, even temporarily, which can negatively interfere with the Quality of Life (QoL) of these patients. Such

complications can be immediate or long-term, such as Urinary Incontinence (UI) and Erectile Dysfunction (ED) [14]. Both complications can have negative effects on the lives of patients undergoing RP, consequently, they may present psychosocial changes, such as the presence of anxiety and depression, and low self-esteem, factors that lead to changes in the QoL of these men. It is assumed that these changes are the result of a feeling of uncertainty about how to deal with the physical and social changes resulting from the consequences of the treatment [14].

This research is necessary since men's health is not addressed in the academy in the same proportions as other topics in the health area, such as women's and children's health, in addition to receiving little attention from nursing professionals as well as public policymakers [13,14].

The contribution of this study is important, as it allows exploring and identifying the impacts of PR and its relationships with psychosocial and physical factors, with a view to contributing to the increase of scientific production within this theme, which is still little discussed. In this context, the following research question was raised: "What are the physical, emotional and social impacts of prostatectomy?" The objective of the study is to identify, through an integrative literature review, the biopsychosocial impacts of Radical Prostatectomy.

Methodology

This study is characterized as an integrative literature review, with a descriptive and qualitative approach, which was carried out through a survey of scientific articles related to the objective of the study [15,16]. This review was carried out between September 2021 and March 2022, and for the consolidation of this research, the following methodological steps were chosen: identification of the theme and research question; sampling selection; categorization of selected studies; definition of information extracted from reviewed publications; evaluation of selected studies; interpretation of results; and presentation of research results.

For this, a survey was carried out according to searches in the SciELO, PubMed and LILACS databases. After applying the inclusion and exclusion criteria, articles were selected for the study sample. Data collection took place in the aforementioned databases, where the words indexed in the Health Sciences Descriptors (DeCS) were used: "Prostatectomy", "Care" and "Psychosocial", as well as the Boolean descriptor "AND" to carry out the crossing between the above-mentioned descriptors.

Articles were included that were related to the proposed theme, published between the years 2011 to 2021, available in full, without the restriction of languages; in addition to theses, dissertations, and monographs. Exclusion criteria will be bibliographic review articles, articles, or abstracts that have been published in conference proceedings; plus letters from editors and preprints. After applying the inclusion and exclusion criteria and evaluating the abstracts, the studies that met the criteria were selected and organized, tabulated, and discussed. The research follows the protocols and guidelines of the Preferred Reporting Items for Systematic Reviews



and Meta-Analyses (PRISMA), as well as the PICO strategy (Population, Intervention, Comparison, Outcome) [17].

The data collection procedure occurred by guaranteeing the information of the articles previously selected for the construction of the results, considerations and final considerations of the study. Within the process of data analysis, the content of Bardin Laurence [18] was used, and this analysis was divided into 3 gains: research of the material and organization according to subthemes; exploration of the data and later the synthesis of the most important aspects of the text; as evidence and description of the most important information. And the presentation of the results and final discussion will be carried out in a descriptive way, in the form of tables.

Four steps were performed in the article recruitment strategy, in the first one there was the identification of articles in the databases, in this step, all duplicate articles were removed. In the second stage, all remaining articles had their titles and abstracts read. In the third stage, all remaining articles were read in full, and finally, in the fourth stage, the selected articles were tabulated and discussed in this review.

Results and discussions

After crossing the descriptors with their respective Boolean operators, 294 articles were identified, and after applying the filter of articles published between (2015 - 2021), 86 articles were found, among these: 85 (BVS) and 1 (PUBMED), these were evaluated by title and abstract, and soon after, 25 studies were pre-selected and read in full, in which 14 articles were excluded, leaving 11 articles that were used in the results and discussions of this review. Table 1 represents the synthesis and characterization of the selected articles.

According to Lehto, et al. [19] Prostate Cancer (PC) is the result of a disorderly multiplication of prostate cells. When cancer is present, the gland hardens. In the early stages, prostate cancer has no symptoms. Among the cases, about 95% of these appear at an advanced stage, and with numerous functional sequelae. With this, studies sought to investigate patients' experiences and psychological well-being in a Finnish national sample of patients with prostate cancer who received various types of treatment [20].

It was observed that most of the men who underwent interventions and nursing care obtained greater satisfaction through the care and information they received about cancer and the side effects of the treatment [18]. Experiences and psychological well-being were very positive among patients who received brachytherapy. Patients who underwent prostatectomy or brachytherapy were more likely to have been involved in treatment selection [20].

It was also observed that unmet supportive care and information needs were common. Experiences and well-being varied between treatments. Patients tend to prefer prostatectomy and brachytherapy. Unmet needs, which would likely be reduced by improvements in care, appear to have a long-lasting impact on patient's psychological well-being [19,20].

Corroborating the above findings, the study by Nielsen, et al. [20], sought to integrate the results of quality of life (QoL) in the clinics to help identify the main aspects of commitment in the patient's life, as well as to demonstrate the main problems experienced by cancer survivors.

And through this study, it was possible to perceive that there is a great impairment of the biopsychosocial aspects inherent

Table 1: Characterization of selected studies (n = 11), Distribution of articles according to the author, year of publication, place of study, objectives, methodological approach -BP, 2022.

Authors	publicatio year	place of study	Objective	Methodological Approach
Lehto, et al. [19]	2017	Finland	To investigate patient experiences and psychological well-being in a Finnish national sample of prostate cancer patients who received various types of treatment.	Cross-sectional study with a descriptive approach
Nielsen, et al. [20]	2018	U. S	Integrating quality of life (QoL) outcomes into clinics can help providers identify and respond to issues experienced by cancer survivors.	Randomized cross-sectional study
Cathelineau, et al. [21]	2018	Canadá	To examine the feasibility and effects of pre-rehabilitation on perioperative and postoperative outcomes in men undergoing radical prostatectomy.	Clinical trial
Dourado, et al. [22]	2019	Brazil	To describe the Nursing diagnoses evidenced in elderly men in the postoperative period of prostatectomy.	Randomized cross-sectional study
Chambers, et al. [23]	2019	Australia	To identify psychosexual morbidity after prostate cancer treatment.	longitudinal study
Lepor [24]	2019	Brazil	To investigate health-related quality of life and correlations with psychosocial factors (anxiety, depression, and self-esteem) in prostatectomized men.	Randomized cross-sectional study
Bratu, et al. [5]	2019	Italy	Explore the relationship between erectile function, sexual satisfaction, and sexual desire	Randomized cross-sectional study
Chambers, et al. [13]	2019	Italy	To identify risk indicators for poorer trajectories of psychological adjustment and health-related quality of life (QoL) after surgery for localized prostate cancer.	Clinical trial
Breidenbach, et al. [6]	2020	Germania	To identify patient and center characteristics that elucidate POS use by patients in prostate cancer centers (PCCs).	Randomized cross-sectional study
Heidenreich, et al. [25]	2020	U. S	To examine the intentions, behaviors, and unmet needs of prostate cancer (PCa) survivors seeking sexual help.	Longitudinal study
Hoffman, et al. [26]	2020	U. S	To assess treatment-related changes in quality of life up to 15 years after diagnosis of localized prostate cancer.	Longitudinal study

in the QoL process of these patients, and it was also possible to observe that the QoL and patient satisfaction were higher among men treated in a survival program based on nursing and physiotherapy practices, suggesting that specific diseases such as the one in question may have their effects minimized when these patients are instructed to have a good routine of specialized care, whose benefits can be better visualized when compared to those who do not have any type of assistance and health care [20–22].

Within this context, the study by Cathelineau, et al. [21] states that preoperative exercises and physical conditioning are predictors of surgical recovery; however, little is known of the effect of preoperative exercise-based conditioning, known as prehabilitation, on this for men undergoing radical prostatectomy [22,23]. And with that, conducted a study that examined the feasibility and effects of prehabilitation on perioperative and postoperative outcomes in men undergoing Radical Prostatectomy (RP) treatment [21]

The results of this aforementioned research could show that patients undergoing radical prostatectomy treatment through specific exercises to gain strength, range of motion, and breathing exercises, obtained great results, and had their functional capacity and quality of life improved through these interventions [21]

In addition, it can also be observed that the treatment of these patients must be mostly multidisciplinary, so that, in this way, all aspects inherent to the QoL of this individual can be preserved or reestablished, especially with regard to psychosocial aspects. These interventions prove to be viable and safe for pre-rehabilitation, where there are promising benefits for physical aspects and psychological well-being at important moments in relation to radical prostatectomy [24].

In what concerns this problem, Dourado, et al. [22] sought to describe the Nursing diagnoses evidenced in elderly men in the postoperative period of prostatectomy. Through a mixed, descriptive study, of 50 men undergoing prostatectomy surgery in a philanthropic hospital. It was evidenced that the main diagnoses in nursing include: a sedentary lifestyle, risk-prone health behavior, ineffective health management, frail elderly syndrome, risk of infection, impaired dentition, impaired skin integrity, risk of injury to the urinary tract, risk of the impaired oral mucosa, risk of contamination and ineffective sexuality pattern [22–25].

The study also suggested that the development of specialized nursing interventions aimed at comprehensive health care for elderly men in the aging process is essential, especially with attention focused on ensuring safety in the surgical process and its complications, urological, affective and sexual, promotion and control of expanded health [26].

Within this scenario, psychosexual morbidity is common after prostate cancer treatment, with sexual adjustment, unmet sexual support needs, low male self-esteem, low marital satisfaction and use of erectile devices being the main precursors of mental illness [22–26]. Corroborating the study by Lehto, et al. [19], research by Chambers, et al. [23] also

demonstrates the importance of these men undergoing RP undergoing specific treatments for the dysfunctions resulting from this surgery.

Among the main interventions that are carried out, therapies with couples stand out, since these psychosexual interventions administered in pairs and with nurses have the potential to increase men's adherence to treatments for erectile dysfunction [26]. Finally, good effects are observed on the patient's general QoL, which can be achieved through an integrated approach, applying these modes of support and support [23–26].

With the aim of investigating the health-related quality of life and correlations with psychosocial factors (anxiety, depression, and self-esteem) in prostatectomized men. The study by Lepor (2019) sought to carry out descriptive correlational research carried out with 85 men who underwent radical prostatectomy at least three months ago and at most five years ago. And the results of this research could show that the participants showed a compromised quality of life with regard to impairment of sexual function and the presence of urinary symptoms.

It was also evident that radical prostatectomy impairs the quality of life of men, requiring assistance from health professionals to minimize the effects of the most common complications. It is recommended to implement educational interventions and multidisciplinary support based on a better understanding of the physical and psychosocial implications to help improve the quality of life of men after radical prostatectomy [19].

According to Bratu, et al. [5] erectile function, libido, and sexual discomfort are incompletely correlated: a man may or may not be satisfied with a given level of erectile function; Likewise, 2 men can have the same erectile function, and different levels of sexual desire. And within this context, the author sought to explore the relationship between erectile function, sexual satisfaction, and sexual desire, through a cross-sectional study where 3,944 questionnaires were completed by patients after radical prostatectomy as part of routine care [27].

Within the results of this research, it can be seen that the mean age at RP surgery and preoperatively was 63 years [27,28]. Among questionnaires completed after surgery, there was a moderate correlation between the score of sexual desire and sexual discomfort, showing that men have an active sexual desire, however, due to the absence of physiological factors, they cannot stand erect and feel depressed. The study may also show that sexual desire helps to explain the moderate correlation between erectile function and sexual discomfort. Sexual desire and discomfort issues should be incorporated into patient-reported outcome instruments for male sexual function [5,26].

Heidenreich, et al. [25] state that RP is the most complex intervention in the treatment of men with prostate cancer. These present a high level of psychological distress and have an increased risk of suicide. The management of this anguish



and risk is crucial for quality urological care, improving the general QoL, and improving the functional and social capacity of these individuals.

The aforementioned study states that regular distress screening should be performed, indicated over 24 months after surgery for localized prostate cancer. Corroborating the above study, Breidenbach, et al. [6] indicate that cancer patients often suffer from psychological distress. And through this, health centers specializing in psychological services should be more present in our society in order to address such issues [5,6,23].

Heidenreich, et al. [25] with the aim of examining the intentions, behaviors, and unmet needs of male prostate cancer survivors seeking sexual help. The authors were able to show that most of these patients (93%) underwent RP and more than 50% of these patients had significant declines in their quality of life. Essentially in erectile dysfunction and urine loss and depressive symptoms. Sexual aspect and care needs were significantly associated with worse erectile function, reduced satisfaction with sex life, valuing sex as important/integral to identity (masculine values) and increased depression [28].

Sexual help-seeking intentions were significantly associated with valuing sex as important/integral to identity, recent help-seeking, greater confidence/control, perceiving support from significant others, and positive attitudes toward seeking sexual help [25]. Interventions to improve men's access to effective sexual care are needed, especially focused on reformulating male values about the importance of sex [26]. Hoffman, et al. [26] patients who are followed up and have initial active treatment for localized prostate cancer generally take longer to experience a decline in their QoL than when compared to men without a diagnosis of prostate cancer.

This is one of the few studies that address the impact of RP on the biopsychosocial aspects of prostatectomized men. Being useful to researchers in the area and also to others interested in the subject, essentially for the clear and objective language about the approached scope.

Final considerations

In view of the above, the study can respond to the objections raised by this research and can show that the culture of masculinity, with regard to virility, strength and better performance, comprises risk factors for possible impacts on the QoL of men undergoing radical prostatectomy. These factors are intrinsically associated with the majority of relationships and characteristics represented by men.

Studies found in the literature show that anxiety, depression and social decline are predominantly present in individuals undergoing RP. Essentially due to abandonment, low self-esteem, erectile dysfunction and the possibility of rejection by your spouse. However, more studies need to be carried out to fill in the gaps that exist within this subject and because it is scarce, studies that demonstrate the relationship between sex and sexuality must be carried out, since male people, regardless of their sexual orientation, can be affected by the sequelae of

RP. Therefore, the emergence of new research related to the theme would be extremely relevant.

Finally, psychoeducation and general guidelines on sexual and mental health should be given to patients who undergo radical therapies, such as RP, so that these patients can achieve coping strategies that make them feel better, directly contributing to the best quality of life, functional capacity, and their social relationships.

This study had some important limitations, such as the scarcity of current scientific studies that addressed the theme in question, in addition to articles with a low number of participants, which can be explained by the decline in emotional and psychological aspects commonly evidenced in men after RP, generating discomfort and shame in talking about the subject.

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