Therapeutic adherence of patients with breast and prostate cancers*

Adesão terapêutica de pacientes com cânceres de mama e próstata

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ABSTRACT

Objective: to analyze the treatment compliance of patients with breast and prostate cancers. **Methods:** cross-sectional study with 303 patients with breast and prostate cancers. A semi-structured instrument and the *Adherence Determinants Questionnaire* Scale Brazilian version were used, and the data were analyzed using descriptive and inferential statistics. **Results:** mean adherence was found among all participants (100.0%). In patients with prostate cancer, we observed weak correlations between age and interpersonal aspects of care (r=0.198; p=0.048); and between treatment time and intentions (r=-0.295; p=0.049). In breast cancer patients, there was a positive correlation between age and perceived support/severity (r=0.174; p=0.013); and between years of study and interpersonal aspects of care (r=0.145; p=0.038) and intentions (r=0.156; p=0.026). **Conclusion:** patients with breast and prostate cancers showed moderate adherence to treatment, with higher means in the Support/Severity domain and lower in the Perceived Susceptibility domain.

Descriptors: Breast Neoplasms; Prostatic Neoplasms; Treatment Adherence and Compliance; Oncology Nursing.

RESUMO

Objetivo: analisar a adesão ao tratamento de pacientes com cânceres de mama e próstata. **Métodos:** estudo transversal com 303 pacientes com cânceres de mama e próstata. Utilizaram-se um instrumento semiestruturado e a Escala *Adherence Determinants Questionnaire* Versão Brasileira, e os dados foram analisados através de estatística descritiva e inferencial. **Resultados:** verificou-se adesão média entre todos os participantes (100,0%). Nos pacientes com câncer de próstata, observou-se correlações de fraca magnitude entre a idade e os aspectos interpessoais do cuidado (r=0,198; p=0,048); e entre o tempo de tratamento e intenções (r=-0,295; p=0,049). Nos pacientes com câncer de mama, houve correlação positiva entre idade e o apoio/severidade percebida (r=0,174; p=0,013); e entre anos de estudo e os aspectos interpessoais do cuidado (r=0,145; p=0,038) e intenções (r=0,156; p=0,026). **Conclusão:** os pacientes com cânceres de mama e próstata apresentaram adesão moderada ao tratamento, com maiores médias no domínio Apoio/Severidade e menores no domínio Susceptibilidade percebida.

Descritores: Neoplasias da Mama; Neoplasias da Próstata; Cooperação e Adesão ao Tratamento; Enfermagem Oncológica.

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Introduction

Cancer represents a major public health problem and is one of the main causes of mortality in the world[1]. In the year 2020 alone, more than 18 million new cases of cancer were diagnosed, especially breast (12.5%), lung (12.2%), colorectal (10.7%), and prostate (7.8%) in both genders. In Brazil, the incidence was 592,212 cases, with prostate (16.4%) and breast (14.9%) cancers being the most prevalent, excluding non-melanoma skin cancer[2].

Regardless of the prescribed modality, the therapeutic success and the achievement of greater survival of patients with cancer depend on their adherence to treatment. This can be defined as the rigorous follow-up of the recommendations of a healthcare professional, among which are orientations about medications, lifestyle changes, and preventive measures[3].

Adherence to cancer therapy may be influenced by multidimensional factors related to representations about the health-disease process, beliefs in the ways of cure and preservation of physical and psychological well-being, social roles, the way of relating to oneself and to others, cultural context, and socioeconomic conditions[4], such as health literacy and education[5], age group and presence of comorbidities, as well as aspects involving the relationship with the health professional and the complexity and toxicity of the treatment[6-7].

The low level of compliance may imply greater chances of recurrence and increase in the cancer mortality rate[7], besides causing inadequate and adverse therapeutic responses such as worsening of the clinical picture and tumor progression into metastases. On the other hand, the continuity of therapy reduces the need for readmissions, reduces hospital costs, and improves the patient's quality of life[6].

A study conducted with 122 participants showed that the acquisition of antineoplastic drugs was the main difficulty encountered in treatment adherence, due to its high cost. However, the health team's help regarding the use of medication was the factor that most facilitated adherence[6]. Another study with 220 cancer patients in Porto Alegre found that factors related to personality, conscientiousness, and affability were predictors of high adherence, while family history of cancer was a predictor of low adherence in the sample[3].

In the meantime, the nursing team plays a significant role in providing information about the disease, emphasizing the importance of continuing treatment and its benefits[8]. For this, it is essential to encourage changes in the patient-adherence relationship, understanding the implications involved in this process[9], which requires the individual assessment of each patient, seeking to identify the aspects that interfere with therapeutic adherence. Nursing interventions should focus on approaches that encourage self-care, as well as establish a bond and agreement with the user about following the therapeutic scheme[6].

It is noteworthy that adherence to cancer treatment is still little discussed, although it is a reality. Most current studies stop at assessing adherence, limiting it to the use of medications[7,10], which makes its comprehensive and multidimensional view impossible, since it points out the need for an assessment of adherence involving all its dimensions, as proposed by the validated scale[9], which involves interpersonal aspects of care, perceived susceptibility, subjective aspects, intentions to adhere to support, and perceived severity.

Thus, this research aimed to address adherence to cancer therapy, valuing all its dimensions and determinants that can bring negative and/or positive impacts to adherence, going beyond its limited biological concept, making possible a comprehensive and humanized health care. Thus, the objective of this research was to analyze the treatment compliance of patients with breast and prostate cancers.

Methods

This is a cross-sectional study, conducted in a hospital for oncological treatment in the municipality of João Pessoa, Paraíba, Brazil. The population was composed of adults and elderly with breast and prostate cancer undergoing chemotherapy or radiotherapy in that service.

For the sample calculation, we used a formula for comparison of groups with a level of significance (95% confidence level) and test power (80%) pre--fixed in an Analysis of Variance (ANOVA). Thus, the sample was divided into three groups: breast cancer in chemotherapy, breast cancer in radiotherapy, and prostate cancer in radiotherapy, for which patients were allocated in a balanced manner, 102 in each chemotherapy group and 101 in the radiotherapy group, for a total of 303. It should be noted that prostate cancer patients on chemotherapy treatment were excluded due to low demand, since this modality applies more frequently to cases of metastasis.

Participants aged 18 years or older, diagnosed with breast or prostate cancer, and undergoing chemotherapy (minimum 4 sessions) or radiotherapy (minimum 20 sessions) were included. Patients in palliative treatment, in hormone therapy, with metastasis, with severe communication and/or hearing deficits, who presented clinical complications at the time of data collection or who had no cognitive condition, assessed by the Mini Mental State Examination[11], were excluded. It is noteworthy that 35 participants were excluded from the cognitive evaluation.

Data collection was conducted between the months of June to November 2019 through individual interviews with an average time of 15 minutes in the collective waiting rooms of the sectors. The sample was selected by convenience and consecutive. After the initial explanation about the aspects involving the research, participants were asked to sign the Informed Consent Form.

A semi-structured instrument was used to obtain data on the sociodemographic and clinical profile of patients, with information on gender, age group, color/race, marital status, education, religion, professional status, personal and family income, household arrangement, origin, diagnosis, time of diagnosis, type and frequency of current treatment, type of previous treatment, difficulties with the disease/treatment, comorbidities, and use of medications. This instrument was adjusted based on a pilot test conducted with 20 participants.

Adherence to treatment was assessed by the Adherence Determinants Questionnaire Brazilian version (ADQ-VB)[9]. This is a Likert-type scale with 38 items distributed in five domains with responses ranging from 1 to 5 (strongly agree, agree, neither agree nor disagree, disagree, and strongly disagree). The domains are: Interpersonal aspects of care, which depicts the relationship between patient and health professional; Perceived susceptibility, which addresses the client's perception of their vulnerability in the face of cancer and the cost-benefit ratio of adherence; Subjective norms, which refer to support from the personal and family network; Intentions, which address the willingness and desire to adhere; Support/Perceived severity, which refers to the perception about the severity of cancer and the need for social support.

The scale has a maximum score of 100 points, with 0-40 being considered low adherence, 41-70, medium adherence, and above 71, high adherence. The reliability of the original version of the scale showed Cronbach's alpha of 0.76, while in the version adapted for Brazil this value was slightly higher (0.83), which was attributed to changes made after the factor analysis, with the exclusion of two domains[9].

The data were processed by the software Statistical Package for the Social Science for Windows, version 22.0, and analyzed by descriptive statistics (mean and standard deviation-PD) and inferential statistics. The Kolmogorov-Smirnov Test was used to verify the normality of numerical variables. Pearson's Correlation Coefficient was used for the correlation

between variables, and the results were classified into correlations of weak magnitude (≤0.5 or -0.5); of moderate magnitude (0.51 and 0.7 or -0.51 and -0.7); and of strong magnitude (≥0.71 or -0.71). The significance level used for statistical analyses was 5% (p<0.05). The reliability of the scale was assessed using Cronbach's Alpha Coefficient.

The research was developed in accordance with Resolution no. 466/2012 of the National Health Council and its complementarities, as well as Resolution 580/2018, and the project was approved by the Research Ethics Committee under Opinion no. 3,293,768/2019 and Certificate of Submission for Ethical Consideration no. 88994918.1.0000.5188.

Results

Among the participants, we observed a prevalence of female gender (66.9%), age between 50 and 69 years (56.1%) with a mean of 56.3 years (±12.3), mixed race (38.0%), married or in a stable union (60.0%), with 13 years or more of schooling (42.3%), retired or receiving benefits (36.4% and 36.1%, respectively), family income between one and two minimum wages (86.2%), and living with a spouse and children (41.6%).

Regarding the clinical condition of participants, most had breast cancer (66.9%), diagnosed 1-2 years ago (93.1%), undergoing radiotherapy (66.2%), with 20 to 29 sessions completed (50.5%), history of previous treatment of surgery (82.0%), who reported transportation as the main difficulty (43.3%) and reported the absence of a companion (60.0%). Most had between one and two comorbidities (54.8%), especially hypertension (44.6%) and diabetes mellitus (23.3%) and used a medication (38.0%).

All patients presented an adherence classified as average (100.0%), obtaining a value of 61.6 (±3.4). As for the domains of the scale, for both women with breast cancer undergoing chemotherapy or radiotherapy and men with prostate cancer undergoing radiotherapy, the highest means were evidenced in the Support/ Perceived Severity domain (13.7; 13.3 and 12.8, respectively) and the lowest means corresponded to the Perceived Susceptibility domain (11.0; 11.0 and 11.5, respectively). The internal consistency analysis of the scale showed a Cronbach's alpha value of 0.80 (Table 1).

Table 1 – Domains of treatment adherence in patients with breast and prostate cancers. João Pessoa, PB, Brazil, 2019

| Classification | Prostate | | Breast | | | |
| | Radiotherapy | | Chemotherapy | | Radiotherapy | |
	Average	*SD	Average	SD	Average	SD
Interpersonal aspects of care	12.6	0.8	12.6	0.8	12.5	0.8
Perceived susceptibility	11.5	2.1	11.0	1.7	11.0	1.8
Subjective rules	11.9	0.4	11.9	0.7	12.0	0.5
Intentions	12.6	0.9	12.8	1.2	12.5	1.2
Perceived support/ severity	12.8	1.6	13.7	1.5	13.3	1.9
Total	61.5	3.3	62.1	3.4	61.3	3.5

*SD: Standard deviation

In patients with prostate cancer, the correlation between domains and variables related to socio--demographic and clinical characteristics of patients showed correlations of weak magnitude, being positive between age and Interpersonal aspects of care (r=0.198; p=0.048); and negative between the time of treatment and Intentions (r=-0.295; p=0.049). In breast cancer patients, age showed a positive and significant correlation with Support/Perceived Severity (r=0.174; p=0.013), while the variable years of study showed a significant and positive correlation with Interpersonal aspects of care (r=0.145; p=0.038) and Intentions (r=0.156; p=0.026) (Table 2).

Table 2 – Correlation between the domains of treatment adherence and the variables age, years of study, and current treatment time of patients with breast and prostate cancers. João Pessoa, PB, Brazil, 2019

Treatment adherence	Age		Years of study		Treatment	
	r	p*	r	p*	r	p*
Breast cancer						
Interpersonal aspects of care	-0.030	0.671	0.145	0.038	-0.005	0.944
Perceived susceptibility	0.133	0.058	-0.029	0.677	-0.019	0.786
Subjective norms	-0.036	0.606	-0.071	0.315	0.003	0.962
Intentions	-0.059	0.402	0.156	0.026	-0.067	0.344
Support/Perceived Severity	0.174	0.013	-0.068	0.337	-0.039	0.582
Total	0.119	0.091	0.011	0.881	-0.052	0.458
Prostate Cancer						
Interpersonal aspects of caregiving	0.198	0.048	-0.166	0.096	0.017	0.868
Perceived susceptibility	0.131	0.190	0.049	0.626	-0.020	0.839
Subjective norms	-0.012	0.906	0.138	0.170	-0.029	0.768
Intentions	-0.012	0.906	0.138	0.170	-0.295	0.049
Support / Perceived Severity	-0.043	0.668	0.086	0.393	-0.071	0.477
Total	0.100	0.319	0.056	0.576	-0.116	0.249

*Pearson's Correlation Coefficient

Discussion

The limitation of this study refers to the use of a cross-sectional design, which does not allow the establishment of a cause-and-effect relationship between the variables, thus highlighting the importance of longitudinal studies that make long-term research possible and allow a broad evaluation of therapeutic adherence and the factors that influence it, as well as its cost-effectiveness in patients with breast and prostate cancers.

In nursing care, the findings of this research can contribute to the identification of determinants of therapeutic noncompliance, guiding the development and implementation of a comprehensive and individual care plan according to the needs of each patient. Furthermore, this study represents a significant advance in the field of oncologic research due to its innovation, especially regarding a multidimensional view of therapeutic adherence, seeking to break its merely biomedical/pharmacological character.

Among the patients investigated, all presented moderate adherence to oncologic treatment. Adherence to the therapeutic regimen has been widely addressed as the ability to follow the treatment recommended by health professionals within an established period[12]. In cancer patients, low compliance is generally associated with the side effects of therapy, regardless of its modality[7,13], which contributes to the increased risk of cancer recurrence and mortality. Thus, elucidations about adverse effects and other factors that may interfere with compliance are essential for treatment maintenance[7].

A research conducted in South Korea with 210 women undergoing hormone therapy treatment showed that most had high (37.6%) and medium adherence (36.7%)[10] when evaluated by means of the Morisky Medication Adherence Scale-8, like this research. In Recife-PE, a 44.8% non-adherence rate was observed among 67 interviewees, where most of them (68.7%) demonstrated a moderate degree of difficulty in adhering to treatment according to results obtained

by means of the Morisky and Green Test, with the side effects of Tamoxifen use and affective relationships being the most sensitive points[7].

In Colombia, researchers found that 56.5% were non-adherent to chemotherapy according to the Cuestionario Simplified Medication Adherence Questionnaire[13] and in Minas Gerais, adherence was considered good in 95.1% of participants with the Measure of Therapeutic Adherence[6]. It is noteworthy that the only study conducted in Brazil using the ADQ-VB scale does not classify the sample according to levels of adherence[3].

A worse perception of the severity of the disease was observed, as well as a need for social support to cope with it. The cancer patient often has repercussions at the individual and family level. The biopsychosocial dimension is affected due to the deterioration of the organism that is expressed by physical symptoms, such as fatigue, pain, nausea, insomnia, among others, besides the psychological ones, such as anguish, sadness and anger, which cause losses in the relationship with others and with the environment[1].

When initiating treatment, patients deal with a burden of adverse effects that impact on health, quality of life and compliance and continuity of the prescribed therapy[13]. In a study carried out in Boston, United States, it was evidenced that lower adherence among participants using oral chemotherapy was related to greater severity of symptoms (r= -0.20; p=0.020) and their interference in the lives of these individuals (r= -0.15; p=0.068)[14].

In this context, one realizes the need for social support to face the difficulties arising from the disease and treatment. A qualitative study conducted with patients undergoing chemotherapy showed that the financial and emotional support received from family and friends during therapy contributed to minimize the difficulties, especially regarding social relationships[8].

Perceived susceptibility was the domain with the least impact on treatment adherence, which means that they did not feel vulnerable to the disease because they believed in the possibility of cure and positively evaluated the cost-benefit ratio of the treatment. This result differs from what was obtained in a research carried out in Bogota, Colombia, which pointed out as the main psychological needs the presence of depressive symptoms, the fear of the expansion of the disease, and anxiety. In addition, uncertainty about the future and the need to learn to control the situation and maintain a positive attitude were present in almost half of the sample[15]. It is noteworthy that this feeling of vulnerability can lead to denial of the disease, compromising treatment adherence[16].

The correlation between age and interpersonal aspects of care for patients with prostate cancer showed weak magnitude. It is worth noting that there is often a certain degree of passivity of elderly men in relation to decisions about the therapy proposed by the health professional, giving them a better perception of the relationship established with this professional, when compared to younger people.

Therapeutic success is directly proportional to the quality of the patient-professional relationship, since decisions about the care plan must be shared by both, considering the autonomy and management capacity of the patient, who will become the agent of his own health. For this, the individual must be made aware of the harm of non-adherence, making him co-responsible for his self-care[7]. Thus, the importance of encouraging greater participation of patients in aspects related to their treatment is emphasized, especially regarding the expression of their knowledge and perceptions.

Among patients with prostate cancer, the presence of a longer treatment time also showed a weak correlation with the Intentions domain. The chronic nature of cancer and the prolonged duration of treatment can lead to demotivation[6], since the longer the period of therapy, the greater its impact on the patient's life. Thus, according to each person's capacity to tolerate treatment, adherence may be affected due

to worsening of symptoms and inadequate management of toxicity[12].

Regarding prostate cancer, it is known that the therapy may affect urinary function, causing dysuria, nocturia, urinary incontinence, as well as sexual dysfunction and loss of libido, affecting the marital relationship and male identity[17]. A study carried out with 90 cancer patients revealed that the reduction of suffering caused by symptoms caused a 1.0% increase in patient compliance[18]. However, it is pointed out that the current model of health care in oncology has distanced itself in its approaches to issues involving care in relation to the adverse effects of cancer therapies[14].

Among women, the support/adherence domain showed a weak correlation with age. A literature review about barriers and difficulties to adherence to hormone therapy in women with breast cancer highlights that non-adherence was related to the younger age of the participants[19].

Elderly people undergoing cancer treatment generally have more symptom complaints and, consequently, lower levels of quality of life. The explanation for this would be the exacerbation of difficulties by the physiological limitations imposed by age. Thus, monitoring quality of life can help in making better decisions about the prescribed treatment, because it allows mapping the patient's responses and the need for adaptations[20], aiming at the continuity of therapy.

In this study, the domains interpersonal aspects of care and intentions showed a weak correlation with education. Education can provide greater access to information, understanding and comprehension of aspects related to the disease and treatment[7], besides being reported as a relevant element in the health-disease process, especially in relation to therapeutic adherence[5]. In a study conducted in Colombia with cancer patients, it was evidenced that the high educational level worked as a protective factor in the sample evaluated, since cancer mortality rates were decreased in people with higher education[1].

Thus, it is inferred that patients with longer time of study understand the importance of the patient-professional relationship for the implementation of therapy, because they have greater ease in understanding the aspects that permeate the disease and treatment, which reflects in greater intentions to adhere to therapy, aiming at better living conditions. It is worth emphasizing the importance of the relationship between patient and health professionals since the establishment of bonds with greater trust and confidence in the professional can lead to the follow-up of the prescribed guidelines[3].

Conclusion

Adherence to treatment in patients with breast and prostate cancer was moderate in this study, and the perceived support/severity of the disease was the domain of the scale that contributed most to this. In contrast, perceived susceptibility was the least determinant factor for such an outcome. The correlations between age, education, treatment time and the domains of the Adherence Determinants Questionnaire Brazilian version were weak, although significant.

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Collaborations

Viana LRC, Ferreira GRS, Pimenta CJL, Costa TF, Silva CRR, and Costa KNFM contributed to the conception and design, data analysis and interpretation, writing of the article, relevant critical review of the intellectual content, and final approval of the version to be published.

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