Religiosity and Hope in Coping with Breast Cancer: Women in Chemotherapy

Religiosidade e Esperança no Enfrentamento do Câncer de Mama: Mulheres em Quimioterapia
Religiosidad y Esperanza en el Cáncer de Mama: Mujeres en Quimioterapia

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ABSTRACT

Introduction: Breast cancer stands out as the highest incident cancer in Brazil's Southeastern region. Cancer patients in chemotherapy, the most common therapeutic modality for this disease, have several reactions and to minimize these effects, they seek for non-pharmacological strategies. Hope and religiosity are two coping strategies often utilized because they have been promoting positive and beneficial results for patients undergoing cancer treatment. **Objective:** To assess the levels of religiosity and hope and analyze the current relationships of women with breast cancer submitted to chemotherapy. **Method:** Quantitative research, with the application of a sociodemographic questionnaire, the Herth hope scale (HHS) and the Duke University religion index (DUREL). **Results:** 41 women participated of this study, with mean age of 53.61±11.8 years. The median score obtained in the HHS was 39 (±9) and the variation was from 32 to 48 points. The median score of organizational religiosity was 5 (±2) and the variation obtained was 1 to 6 points. The median intrinsic religiosity score was 15 (±1) and the variation obtained was 9 to 15 points. In the study sample, it is possible to identify high score and homogeneity of the responses. **Conclusion:** Hope and religiosity of patients with breast cancer did not show a positive correlation. However, high levels of hope and religiosity were found in the patients interviewed, which demonstrates the search for non-pharmacological therapies to cope with the disease.
Key words: breast neoplasms/drug therapy; spirituality; religion and medicine; hope.

RESUMO

Introdução: O câncer de mama tem-se destacado como a neoplasia de maior incidência na Região Sudeste do Brasil. Na quimioterapia, que é a modalidade terapêutica mais utilizada para essa doença, os pacientes oncológicos podem apresentar diversas reações, assim, na tentativa de minimizar esses efeitos, buscam por estratégias não farmacológicas. Destacam-se duas estratégias de enfrentamento, a esperança e a religiosidade, as quais têm promovido resultados positivos e benéficos para pacientes em tratamento oncológico. **Objetivo:** Avaliar os níveis de religiosidade e esperança e analisar as relações presentes em mulheres com câncer de mama submetidas à quimioterapia. **Método:** Pesquisa quantitativa, com a aplicação de questionário sociodemográfico, da escala de esperança de Herth (EEH) e da escala de religiosidade da Universidade Duke (DUREL). **Resultados:** Participaram desta pesquisa 41 mulheres, com idade média de 53,61±11,8 anos. O escore mediano obtido na EEH foi de 39 (±9) e a variação foi de 32 a 48 pontos. O escore mediano da religiosidade organizacional foi de 5 (±2) e a variação obtida de 1 a 6 pontos. O escore mediano da religiosidade intrínseca foi de 15 (±1) e a variação obtida de 9 a 15 pontos. Na amostra da pesquisa, podem-se identificar o alto escore e a homogeneidade nas respostas. **Conclusão:** A esperança e a religiosidade de pacientes com câncer de mama não apresentaram correlação positiva entre si. No entanto, foram encontrados altos níveis de esperança e de religiosidade nas pacientes entrevistadas, o que demonstra a busca por terapêuticas não farmacológicas para o enfrentamento da doença.
Palavras-chave: neoplasias da mama/tratamento farmacológico; espiritualidade; religião e medicina; esperança.

RESUMEN

Introducción: El cáncer de mama se ha destacado como la neoplasia con mayor incidencia en la Región Sudeste de Brasil. En la quimioterapia, que es la modalidad terapéutica más utilizada para esta enfermedad, los pacientes con cáncer pueden presentar varias reacciones, por lo que en un intento por minimizar estos efectos, buscan estrategias no farmacológicas. Destacan dos estrategias de afrontamiento, la esperanza y la religiosidad, que han promovido resultados positivos y beneficiosos para los pacientes sometidos a tratamiento oncológico. **Objetivo:** Evaluar los niveles de religiosidad y esperanza y analizar las relaciones actuales, en mujeres con cáncer de mama sometidas a quimioterapia. **Método:** Investigación cuantitativa, con la aplicación de un cuestionario sociodemográfico, la escala de esperanza de Herth (HHS) y la escala de religiosidad de la Universidad Duke (DUREL). **Resultados:** En esta investigación participaron 41 mujeres, con una edad media de 53,61±11,8 años. La mediana de la puntuación obtenida en la EHSS fue de 39 (±9) y el rango fue de 32 a 48 puntos. La puntuación media de la Religiosidad Organizativa fue de 5 (±2) y la variación obtenida fue de 1 a 6 puntos. La puntuación media de la Religiosidad Intrínseca fue de 15 (±1) y la variación obtenida fue de 9 a 15 puntos. En la muestra de la investigación se puede identificar una alta puntuación y homogeneidad en las respuestas. **Conclusión:** La esperanza y la religiosidad de las pacientes con cáncer de mama no mostraron una correlación positiva entre ellas. Sin embargo, se encontraron altos niveles de esperanza y religiosidad en los pacientes entrevistados, lo que demuestra la búsqueda de terapias no farmacológicas para afrontar la enfermedad.
Palabras clave: neoplasias de la mama/tratamiento farmacológico; espiritualidad; religión y medicina; esperanza.

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INTRODUCTION

The term cancer covers a set of more than 100 types of diseases in which abnormal cells divide without control causing tumors according to the National Cancer Institute José Alencar Gomes da Silva (INCA); the cells that suffered genetic mutations can invade nearby tissues and organs[1].

The rate of mortality by cancer is rising, it is the second main cause of death in the world. In addition, the estimates for poor and in development countries indicate that in the upcoming decades, neoplasms will be the first cause of death[2].

For each year of the triennium 2020-2023, INCA estimates that 66,280 new cases of breast cancer will occur in Brazil, an estimated risk of 61,61 new cases at each 100 thousand women. After rates adjustment, breast cancer will be ranked first at all Brazilian regions, the highest incidence in the Southeast[3].

Cancer diagnosis raises negative feelings and eventually death, uncertainties and poor outlook for the future, affecting the patient's emotional and psychological condition and its relatives. The emotional instability is expressed through desperation of the family who believe cancer is incurable, in addition to the social stigma of being an incurable disease and great odds of death[4].

The psychological suffering and harms to the functional roles of the women in the society are among the impacts the diagnosis creates to the woman and its family, many of them go through an intense process of anguish, suffering and anxiety when the pathology is detected. Further to physical consequences, psychosocial and economic changes are part of the process. This whole scenario leads to a denial process where acceptance is tough[5].

As early as the diagnosis of breast neoplasms is made, higher is the cure. It is remarkable the occurrence of a psychological awareness being possible to identify the repercussions and ensure the patient and its family the full care[6].

Throughout the chemotherapy cycles, adverse reactions are inevitable most of the times and patients and health caregivers search for conventional therapies and non-pharmacological strategies to minimize the damages and improve the process of coping with the disease. The strategies are usually found within the sociocultural context.

An integrative review conducted by the investigating team attempted to understand how women with breast cancer manage fatigue with non-pharmacological strategies. One of the results revealed that religiosity was identified as coping strategy for adverse events; religious practice ensured a spiritual retreat in addition to more safety and tranquility for patients in chemotherapy treatment[7].

Religiosity can be defined as how an individual expresses its spirituality based in values, beliefs and rituals, in addition to the systematization of the cult and doctrine of a certain group of individuals[8]. The clinical practice revealed that persons affected by cancer usually pursue religious practices and religiosity as resources to cope with the disease in view of its severity and complexity of the treatment.

It is a positive strategy to cope with tough situations as concluded for persons who are diagnosed with cancer and need treatment. Despite benefits for physical health, a potential factor to prevent the development of other diseases, further to the drop of deaths, studies which investigate and prove the connection between physical health and spirituality need to be carried out[9].

Hope is a subjective probability of good outcomes, a feeling of optimist future. In the process of coping with chronic diseases, it is of great importance to know and understand its influence in the course of sickening and treatment[10].

The construction of an integrative review which attempted to investigate hope in oncologic patients submitted to chemotherapy was essential to develop the present study. The main result is that hope is a non-pharmacological strategy which alone or associated with other strategies can promote better coping during cancer treatment[11].

It is important that the oncologic patient soon after the diagnosis seeks support from the family and social network to face the upcoming suffering and challenges to be overcome in the long course of the treatment and keep hope. The diagnosis of a disease stigmatized with suffering and life-threatening feelings can cause hopelessness with consequences on life condition and poor prognosis. Patients who keep or increase their hope accept the diagnosis and the therapeutic conduct better, with improved adherence to the treatment and response[12].

The care to the oncologic patient involves, in addition to physical-biological and sociocultural factors, subjective aspects as psycho-emotional needs, among them, religiosity and emotions. The nurse should be able to understand the patients' demands in all its dimensions within the context health-disease, coping and therapies to plan a full care and patient-centered therapeutic.

The objective of the present study was to evaluate the levels of religiosity and hope and review the current relations, further to hypothesizing the influence of religiosity on hope in women with breast cancer

submitted to chemotherapy treatment and broaden the comprehension of non-pharmacological resources utilized in coping with the disease and adverse reactions resulting from the proposed therapeutic.

METHOD

The current investigation adopted the quantitative methodology. Women diagnosed with breast cancer, aware of the diagnosis, submitted to chemotherapy, at the third or four cycle when data were collected, older than 18 years of age, able to realize the instruments of data collection without deficit of understanding were selected.

The investigators attended an oncologic service associated with a university hospital at the State of Minas Gerais. During the chemotherapy sessions, the patients who met the inclusion criteria were approached and invited to join the study and those who were selected were instructed about the process and signed the Informed Consent Form (ICF). Upon approval by the Institutional Review Board (IRB), report number 5285201, CAAE (Submission for Ethical Review) 32609820.5.0000.5152 the data were collected. The participants were not exposed to physical or psychological risks during the investigation and no invasive procedures or that could harm their moral or ethical principles were applied.

A sociodemographic questionnaire and two scales to evaluate hope and religiosity were applied once for each patient: the Herth Hope Scale (HHS)[13] and Duke University Religion Index (DUREL)[14].

HHS facilitates the evaluation of the levels of hope and variations at several time points by the investigators. The total score ranges from 12 to 48, as high the score is, higher is the level of hope[13].

DUREL consists in five items: "How often you attend church or other religious meetings?"; "How often do you spend time in private religious activities, such as prayer, meditations, Bible study or other religious texts?";"In my life I experience the presence of the Divine or the Holly Spirit"; "My religious beliefs are what really lie behind my whole approach to life"; "I try hard to carry my religion over into all other dealings in life".

These items measure three dimensions of the religious involvement of the individual: organizational religiosity, attending religious meetings frequently; non-organizational religiosity, attending private religious activities and intrinsic religiosity, the search for internalization and experience of religiosity as main focus of the individual. The three dimensions should be evaluated individually and not only as a total score[15].

The investigators responded to the participants doubts about the study and instruments. The interviewee was identified by an alias chosen by herself to respond to the sociodemographic questionnaire.

After collection, the data were analyzed initially through an Excel spreadsheet; the descriptive analysis of the sociodemographic data was based in the frequency, percentage, mean and standard deviation. The data generated with the application of the scales were analyzed by the interquartile range and median. The data were exported to the software Statistical Package for the Social Sciences (SPSS˚) version 23.0, of the International Business Machines Corporation (IBM). The Kolmogorov-Smirnov test was utilized for the normality of the continuous data. The Fisher, chi-square and Mann-Whitney tests were adopted to compare the proportions and some of the quantitative data were correlated among themselves with Spearmnan's correlation. Values of $p \leq 0.05$ were considered statistically significant.

RESULTS

Forty-one women who met the inclusion criteria joined the study and 48 women were excluded because 17 were in palliative care, 17 were treated with hormone therapy, seven were submitted to radiotherapy alone, one, only hormone therapy and seven were in later cycles than those defined as inclusion criteria. Table 1 shows the sociodemographics of the women enrolled.

The mean age of the participants was 53.61±11.8 years, the age range of 36 to 50 years of age concentrated 43.9% of the interviewees. Twenty-three (56.1%) were married, 11 (26.8%), single and the remaining, widows or divorced. Sixteen (39%) completed high school, 12 (29.3%), did not complete elementary school and five (12.2%) completed college. All of them practiced some type of religion, Catholicism was claimed as main (n=22, 53.7%), followed by evangelical (n=13, 31.7%) and spiritualism (n=6, 14.6%). More than half earned more than 1.5 minimum wage (n=24, 58.5%). 23 (56%) were housewives and 33 (80.5%) had children. Most of them were in the third cycle of chemotherapy(n=30, 73.2%).

Table 2 shows the evaluation of hope of 41 women with breast cancer in chemotherapy by the HHS.

The median, the interquartile range, the standard deviation and the variation of each one of the 12 items of the HHS are shown in Table 2. Item 5 – "I have faith that gives me comfort" – presented the highest median of 4±1, with standard-deviation of 0.49 and variation of 3-4. Item 3 – "I feel alone" – had the highest standard-deviation of 0.89.

The median score of HHS was 39 (±9) and the variation was from 32 to 48 points. HHS scale may vary from 12 to 48 points, the high the score is, higher is the

individual's level of hope. The study sample presented high score and homogeneity of the responses.

It was possible to identify the median, the interquartile range, the standard-deviation and the variation obtained from organizational religiosity, non-organizational religiosity and intrinsic religiosity that are part of the DUREL in Table 3. The median score of organizational religiosity was 5 (±2) and the variation obtained was from 1 to 6 points. The median score of intrinsic religiosity was 15 (±1) and the variation was from 9 to 15 points.

Table 4 identifies the correlation between sociodemographic data, HHS and DUREL data. Positive correlation between income and education (r2= 0.315, p<0.05), and between income and HHS items (E5, E6, E9, E12 and total score of hope) was found. It was also detected positive correlation between total score of HHS and education (r2=0.348, p<0.01). Inversely moderate correlation between the chemotherapy cycle and organization religiosity (r2=-0.415, p<0.01) was found. There was no correlation between hope and religiosity.

No significant association was found between marital status, number of children and hope/religiosity (data not shown).

DISCUSSION

This study attempted to investigate the correlation between the variables hope and religiosity of 41 women with breast cancer during chemotherapy with the objective of checking whether the hypothesis that religiosity influences the hope of the oncologic patient.

Most of the women was at the age range of 36-50 years corroborating a study conducted with ten women with breast cancer in the State of Santa Catarina. Despite the small number of participants, the results found are similar to this study, 60% of the women were aged 35-50 years old[16]. Another study with 55 women with breast cancer at a Brazil's Northeast university hospital concluded that 54.5% of them were younger than 50 years old[17]. The mean age of 49.6±12.5 years of this last study can be compared with the current study, where the mean age was 53.61±11.8 years. A cross-sectional study with a sample of 12,689 women with breast cancer in treatment conducted from 2000 to 2009 concluded that half of the women were in the age-range of 36 to 39 years old[18].

A percentage of 56.1% of the interviewees were older than 50 years old. According to INCA[19], breast cancer has not one cause alone, there are several factors related to increased risk of developing the neoplasm as age, further to the fact that women above 50 years had more odds of developing breast cancer[19].

Table 1. Sociodemographic and clinic characterization of the study women. Uberlândia, Minas Gerais, Brazil, 2021 (n=41))

Variable	n	%
Age range		
From 36 to 50 years	18	43.9
From 51 to 65 years	17	41.5
Older than 65 years	6	14.6
Marital Status		
Single	11	26.8
Married	23	56.1
Widow	2	4.9
Divorced	5	12.2
Education		
Incomplete elementary school	12	29.3
Complete elementary school	4	9.8
Incomplete High-School	3	7.3
Complete High-School	16	39
Complete University	5	12.2
Post-graduation	1	2.4
Income*		
From 0 to 1.5 minimum wage	17	41.5
Above 1.5 minimum wage	24	58.5
Religion		
Catholic	22	53.7
Evangelic	13	31.7
Spiritualist	6	14.6
Occupation		
Housewives	23	56.1
Employees	18	43.9
Children		
None	8	19.5
From 1 to 3 children	27	65.9
More than 3 children	6	14.6
Chemotherapy cycles		
Third cycle	30	73.2
Fourth cycle	11	26.8

(*) Minimum wage of R$ 1,192.40 in 2021, Brazil.

The study participants were mostly married with children, earning more than 1.5 minimum wage with some type of religion and Catholicism claimed as principal. A study conducted at a Northeast's university hospital showed that 74.5% of the interviewees earned up to one minimum wage and 50.9% had no spouse (50.9%) but similar to the current study, most had children (76.4%)[17], different from INCA's data on nulliparity as an important risk factor for breast neoplasm.

Table 2. Descriptive statistics of Herth Hope Scale, 2021 (n=41)

Items of the HHS	Median ± IQR	SD	VO
1. I have a positive outlook towards life	3±1	0.50	3-4
2. I have short-and-long-range goals	3±1	0.64	2-4
3. I feel alone	3±1	0.89	1-4
4. I can see possibilities in the midst of difficulties	3±1	0.58	2-4
5. I have faith that gives me comfort	4±1	0.49	3-4
6. I feel scared about my future	3±1	0.83	1-4
7. I can recall happy and joyful times	3±1	0.55	2-4
8. I have deeper inner strength	3±1	0.50	3-4
9. I am able to give and receive caring/love	3±1	0.55	2-4
10. I have a sense of direction	3±1	0.52	2-4
11. I believe that each day has potential	3±1	0.49	3-4
12. I feel my life has value and worth	3±1	0.50	3-4
HHS total	39±9	5.06	32-48

Captions: HHS = Herth Hope Scale; IQR = Interquartile range; SD = standard deviation; VO = variation obtained.

Table 3. Descriptive statistics of DUREL, Brazil, 2021 (n=41)

DUREL Items	Median ± IQR	SD	VO
Organizational religiosity	5±2	1.25	1-6
Non-organizational religiosity	6±1	0.74	3-6
Intrinsic religiosity	15±1	1.11	9-15

Captions: DUREL = Duke University Religious Index; IQR= interquartile range; SD = standard deviation; VO = variation obtained.

Another study[16] in the State of Santa Catarina shows that the interviewee's month income varied from one to five minimum wages: 70% earn from one to two, 30%, from three to five and 80% are married. Catholicism was the main religion for 80% of the participants, 20% completed elementary school and 30%, high-school.

The HHS score was similar to a study by Menezes et al.[20] who identified high score of HHS with median of 40.59 for a group of 42 individuals with cancer in treatment, followed-up at a primary attention clinic. Zhang et al.[21], in a study with Chinese women with breast cancer in chemotherapy found high score of hope with median of 38.62. The totality of the present study sample practices some type of religion.

According to "*Instituto Brasileiro de Geografia e Estatística (IBGE)*"[22], Catholicism is the main religion for the Brazilian population sample (64.6%), followed by Evangelic (22.2%) and 2% of Spiritualism, similar to the present study.

The same result was encountered regarding religiosity, the study population presented high scores of organizational religiosity, non-organizational religiosity and intrinsic religiosity. Wang et al.[23] concluded that scores >24 reveal high religiosity for the three dimensions. The sum of the medians reached 26, confirming high scores according to DUREL[23].

Oncologic patients seek religiosity as a positive coping strategy during sickening, mainly during the treatment, they look for strength and comfort, embracing religious practices as prayers and religion meetings, reporting feelings of inner peace and appeasement that contribute to well-being and better quality-of-life[24]. These strategies should be incorporated as interventions by nurses as a palpable resource of their practice.

No correlation between religiosity and hope was found in the present study, as opposed to other investigations which encountered positive correlation[12,17]. Because there wasn't any participant without religion, a comparison was not possible among different study populations to find the required statistical difference to prove the correlation between these two variables.

Positive correlation among sociodemographic variables income and levels of hope of patients in chemotherapy was found. Social inequities in Brazil directly impact the health of the population and health social determinants are a key protagonist within this context. Advances are visible for women and children's health, but great inequalities are present according to the region and socioeconomic

Table 4. Correlations obtained from the participant's responses for HHS and DUREL, Brazil, 2021 (n=41))

	Age	Income	Education	CCT	E1	E2	E3	E4	E5	E6	E7	E8	E9	E10	E11	E12	Herth total	OR	NOR	IR
Age	1.000																			
Income	-.182	1.000																		
Education	-.316*	.315*	1.000																	
CCT	-.214	.063	.277	1.000																
E1	-.139	.146	.214	.130	1.000															
E2	.070	.247	.180	.168	.555**	1.000														
E3	-.035	.005	.226	.307	.172	.284	1.000													
E4	-.132	.272	.327*	.113	.757**	.673**	.342*	1.000												
E5	-.032	.342*	.238	-.080	.506**	.454**	.300	.599**	1.000											
E6	-.184	.322*	.466**	.160	.418*	.433**	.525**	.546**	.461**	1.000										
E7	-.098	.110	.358*	.117	.229	.507**	.500**	.414**	.476**	.368*	1.000									
E8	-.118	.286	.081	-.011	.558**	.525**	.311*	.547**	.743**	.434**	.397*	1.000								
E9	-.164	.344*	.250	-.024	.517**	.685**	.241	.637**	.687**	.374*	.534**	.752**	1.000							
E10	-.268	.252	.195	-.028	.707**	.599**	.158	.777**	.591**	.427**	.541**	.672**	.726**	1.000						
E11	-.195	.306	.249	.049	.552**	.501**	.144	.695**	.673**	.430**	.517**	.509**	.566**	.844**	1.000					
E12	-.215	.475**	.154	-.040	.513**	.666**	.115	.613**	.681**	.353*	.450**	.757**	.800**	.736**	.664**	1.000				
Herth total	-.113	.347*	.348*	.086	.668**	.755**	.522**	.816**	.802**	.699**	.683**	.749**	.807**	.790**	.740**	.775**	1.000			
OR	.268	-.304	-.118	-.415**	-.129	-.151	.076	-.155	.024	.000	-.052	-.139	-.064	-.155	-.089	-.064	-.052	1.000		
NOR	.057	-.286	-.069	-.152	.199	-.016	.114	.246	.150	-.026	.029	.154	.120	.301	.111	-.026	.156	.139	1.000	
IR	.046	-.025	-.082	-.042	-.177	-.217	-.049	-.220	.023	.022	-.080	.033	-.177	-.151	-.122	-.110	-.103	.090	.133	1.000

Captions: HHS = Herth Hope Scale; DUREL = Duke University Religiosity Index; CCT = cycles of chemotherapy; E1 = I have a positive outlook towards life; E2 = I have short-and long-range goals; E3 = I feel alone; E4 = I can see possibilities in the midst of difficulties; E5 = I have faith that gives me comfort; E6 = I recall happy and joyful times; E7 = I feel scared about my future; E8 = I have deeper inner strength; E9 = I am able to give and receive caring/love; E10 = I have a sense of direction; E11 = I believe that each day has potential; E12 = I feel my life has value and worth; HHS total = Herth Hope Scale total; OR= organizational religiosity; NOR = non-organizational religiosity; IR = intrinsic religiosity.

(*) Correlation is significant at 0.05.
(**) Correlation is significant at 0.01.

condition of the target-population[25]. Most of the interviewees earned more than 1.5 minimum wages and level of education which ensures good comprehension of the treatment and diagnosis. Balsanelli and Grossi[12] quote a study with Chinese women with breast cancer which has also found positive correlation between income and total score of hope, as high the income is, better is the level of hope.

While facing a diagnosis of neoplasm, the patient seeks its religiosity, support from the transcendental to cope with sickening. Faith as part of spirituality promotes the development of coping mechanisms that bring more tranquility and acceptance. Overall, patients who engage in spiritual and religious practices show more psychosocial strength dealing easily with negative feelings as anxiety, depression and hopelessness[17,26].

Moderate inverse correlation was identified among the number of cycles of chemotherapy and organizational religiosity, it portrays that as intense the cycles are, the frequency of oncologic patients who engage in religious activities, diminishes. This may reflect the issue that oncologic patients in chemotherapy are likely to be immunosuppressed and present hematological alterations. They are instructed, therefore, to avoid public places with agglomerations to prevent exposure to infections or other complications[17]. A qualitative study conducted in the State of Paraná revealed that some of the women interviewed mentioned social distancing, mainly in public places was due to their debilitating health condition, a barrier to go outdoors[27].

The limitation of the study was the small number of the population which may have hindered comparisons and correlations among the individuals. In addition, the sample selection by convenience may have impacted the results.

CONCLUSION

Hope and religiosity for the sample of patients with breast cancer did not hold positive correlation. However, high levels of hope and religiosity were found in the interviewees, strengthening the assumption that those in chemotherapy pursue non-pharmacological therapeutic strategies to cope with the disease which ensure more trust and motivation for the treatment. It is important to reflect about these strategies and incorporate them into nursing practices to offer the patient an individualized and holistic care to meet its actual necessities other than the biological. It is necessary to value hope and religiosity in coping with breast cancer.

The authors intend to contribute to the clinical practice and better understanding of coping with the disease and chemotherapy treatment adopted by the patients beyond conventional pharmacological therapies. Future studies should investigate levels of hope and religiosity in groups with different characteristics applying scales of hope and religiosity at different timepoints of the treatment with larger samples.

CONTRIBUTIONS

Isabella Cabral dos Santos, Geovanna Alves Nunes; Anna Claudia Yokoyama dos Anjos; Luana Araújo Macedo Scalia contributed to the study design, acquisition, analysis and interpretation of the data, wording and critical review. Nayara Ferreira Cunha contributed to the wording and review. All the authors approved the final version to be published.

DECLARATION OF CONFLICT OF INTERESTS

There is no conflict of interests to declare.

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