● **Original article**

RELAXATION WITH GUIDED IMAGERY AND DEPRESSION IN PATIENTS WITH CANCER UNDERGOING CHEMOTHERAPY*

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ABSTRACT: The present study aimed to assess the effect of relaxation and guided imagery on depression in cancer patients undergoing chemotherapy. Quasi-experimental study conducted in two chemotherapy centers between 2009-2011. The intervention group was subjected to relaxation with guided imagery; the intervention (n = 73) and control (n = 9) groups completed the Beck Depression Inventory. The most frequent cancers were breast, intestinal and gastric cancers. Statistically significant differences (p <0.05) were observed between the groups (Mann-Whitney test, p = 0.0158) and times (Wilcoxon test, p = 0.0401), and the intervention group had more patients "without depression" than the control group. According to Beck Depression Inventory, the results showed that intervention contributed to reduce the presence of depression among these patients. It is expected that this intervention be disseminated in routine nursing care, so that in the near future cancer patients may benefit from these therapies.
DESCRIPTORS: Neoplasias; Chemotherapy; Depression; Relaxation; Imagination; Complementary therapies.

RELAXAMENTO COM IMAGEM GUIADA E PRESENÇA DE DEPRESSÃO EM PACIENTES COM CÂNCER DURANTE QUIMIOTERAPIA

RESUMO: O objetivo foi avaliar o efeito do Relaxamento com Imagem Guiada sobre a presença de depressão em pacientes com câncer durante quimioterapia. Estudo quase-experimental, realizado em duas centrais de quimioterapia, entre 2009-2011. O grupo intervenção foi submetido ao relaxamento com imagem guiada; os grupos intervenção (n=73) e controle (n=79) responderam ao Inventário de Depressão de Beck. Os cânceres mais frequentes foram: mama, intestinal e gástrico. Diferenças estatisticamente significantes (p<0,05) entre os grupos (Teste de Mann-Whitney, p=0,0158) e entre os tempos (Teste de Wilcoxon, p=0,0401) foram encontradas, com o grupo intervenção apresentando mais pacientes "sem depressão" do que o controle. De acordo com Inventário de Depressão de Beck, os resultados evidenciaram que a intervenção ajudou a reduzir a presença de depressão nestes pacientes. Espera-se que a prática desta intervenção seja divulgada e difundida no trabalho do dia-a-dia do enfermeiro, para que, em um futuro próximo, os pacientes oncológicos possam se beneficiar com estas terapias.
DESCRITORES: Neoplasias; Quimioterapia; Depressão; Relaxamento; Imaginação; Terapias complementares.

RELAJACIÓN CON IMAGEN GUIADA Y PRESENCIA DE DEPRESIÓN EN PACIENTES CON CÁNCER DURANTE QUIMIOTERAPIA

RESUMEN: El propósito del estudio fue evaluar el efecto de la Relajación con Imagen Guiada sobre la depresión en pacientes con cáncer durante la quimioterapia. Estudio casi experimental, realizado en dos centrales de quimioterapia, entre 2009 y 2011. El grupo de intervención fue sometido a la relajación con imagen guiada; los grupos de intervención (n=73) y control (n=79) contestaron al Inventario de Depresión de Beck. Los tipos de cáncer más frecuentes fueron: de mama, intestinal y gástrico. Hubo diferencias de estadística significantes (p<0,05) entre los grupos (Test de Mann-Whitney, p=0,0158) y entre los tiempos (Test de Wilcoxon, p=0,0401). El grupo de intervención presentó más pacientes "sin depresión" que el de control. De acuerdo con el Inventario de Depresión de Beck, los resultados evidenciaron que la intervención contribuyó con la reducción de la presencia de depresión en eses pacientes. Se considera importante que la práctica de esa intervención sea divulgada y difundida en el trabajo diario del enfermero, para que, en un futuro prójimo, los pacientes oncológicos puedan beneficiarse con esas terapias.
DESCRIPTORES: Neoplasias; Quimioterapia; Depresión; Relajación; Imaginación; Terapias complementarias.

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● INTRODUCTION

Cancer diagnosis and treatment of is a very stressful experience for most patients. In addition to the emotional impact, patients undergo very aggressive treatments such as chemotherapy, radiotherapy and surgery. This can lead to symptoms such as pain, fatigue, sleep disturbance, causing anxiety and depression, impairing the Quality of Life (QOL) of patients with cancer [1-3].

Many patients experience depressive symptoms in response to their illness, i.e., it is a way of responding to the news of their cancer diagnosis. These symptoms may decrease with time or persist for a long period [4].

Depression is a common mental disorder and its main symptoms are low self-esteem, guilt, depressed mood, sleep and appetite disorders, loss of interest, energy and concentratio [5]. The patients also face other difficulties related to the control of disease and treatment symptoms and longer hospital stay, low adherence to treatment and reduced survival rates [2-6].

The emotional impact of diagnosis and painful treatment have a negative impact on quality of life, and this may persist after treatment. The evidence obtained shows that psychosocial variables during diagnosis and treatment of cancer are key predictors of the quality of life in the short and long terms. Thus, the importance of early psychosocial intervention for individuals diagnosed with cancer is emphasized here [7-8].

Chemotherapy can cause undesirable side effects such as weakened immune system, hair loss, loss of appetite, nausea, vomiting, fatigue, low libido or sexual dysfunction, as well as anxiety and depression [1,5].

Currently, complementary and alternative therapies have been disseminated in the treatment of patients with cancer [6-7,9-11], and mind-body therapies such as relaxation, guided imagery, meditation, yoga, hypnosis, tai chi, support groups and spirituality are widely used.

These therapies are based on the understanding that thoughts, feelings, beliefs and attitudes can affect and determine all aspects of biological functioning. They recognize that everything that affects the physical body can modify mental and psychological functioning [12-13].

Mind-body therapies are administered to cancer survivors to increase relaxation, reduce stress, anxiety and pain, restore sleep and improve coping. They are well suited to patients who face fear, stress, anxiety and uncertainty. These therapies can increase the ability to face disease and its symptoms [2,9-10].

In this study, relaxation and guided imagery therapies were used. Relaxation reduces sympathetic nervous system responsivity (fight or flight response) reducing stress levels. Regular relaxation shows impressive results for people with cancer, e.g. lower stress levels and better immune system function, decreased pain, fewer side effects of chemotherapy, decreased anxiety, improved mood and less suppression of emotions [12].

Guided imagery therapy involves the use of imagination to create a sensory experience and achieve a clinical goal, which can be specific, such as reduce heart rate, boost immune function or reduce pain or stress, or general objectives related to the improvement of physical and mental well-being, often combined with relaxation [14].

Therefore, the present study aimed to assess the effect of the complementary therapy relaxation with guided imagery on depression in adult patients with cancer undergoing chemotherapy. The specific objectives were characterization of the initial sample: total sample and groups, identify the presence of depression through Beck Depression Inventory (BDI) in the groups - Control Group (CG) and Intervention Group (IG) at three periods: Time 1 (T1) - Beginning of chemotherapy (baseline), Time 2 (T2)- three months later and Time 3 (T3) - at the end of the study (six months later); and compare the BDI between groups and between times.

● METHOD

This is a quantitative study of quasi-experimental design – of non-equivalent anterior-posterior control group [15].

The inclusion criteria were patients older than 18 years, of both genders, diagnosed with cancer and beginning chemotherapy treatment, under Brazil's Unified Health System (SUS), from May/2009 to December/2011. Patients with cognitive impairment who were unable to reliably answer the survey questions were excluded.

The survey was conducted at the Oncology Specialized Center (CEON) of Hospital Sociedade Portuguesa de Beneficência and at the Chemotherapy Center of Hospital das Clínicas of the Medical School of Ribeirão Preto- Universtidade de São Paulo (HC-FMRP-USP).

Patients who were beginning chemotherapy treatment were weekly monitored. Of these, the subjects who met the inclusion criteria were contacted by the researcher, informed on the objectives of the study and invited to participate in the study.

Purposive (intentional) sampling was used. In this type of sample, the researcher selects the subjects based on the characteristics of a given population and the purpose of the study[15]. Thus, the patients who agreed to participate in the study and submit to relaxation sessions with guided imagery were included in the intervention group (IG) and the patients who did not participate in the intervention, but agreed to participate in the study by answering the BDI survey were included in the control group (CG).

IG patients underwent relaxation therapy with guided imagery, through the use of CD recording[16], with guidance to the patients. Each session lasted 15 minutes. The patients were initially asked to get comfortable, then instructed to perform breathing and relaxation exercises. Subsequently, they were expected to imagine themselves in a safe place, feeling relaxed and cured of their cancer. The patients were also asked to think of something pleasant and inaccessible to them but that could now be enjoyed because they were cured. This produced a positive expectation. Then, the patients were instructed to be grateful for this time devoted to their health and then move and slowly open their eyes to get back to their current place.

The first session was held on the first day of treatment and was monitored by the researcher who has six years of experience in the therapy. At the end of the session, copies of the CD with the exercises were given to the participants. These were told to perform the exercises at home, at least one to three times a week during chemotherapy treatment.

The Beck Depression Inventory (BDI) adapted for Brazil[17] was used to assess depression. The inventory consists of 21 items that evaluate depressed mood, pessimism, sense of failure, self-dissatisfaction, guilt, self-hatred, self-accusation, suicidal ideation, crying, irritability, social withdrawal, indecisiveness, distortion of body image, inability to work, sleep disorders, fatigue, loss of appetite, weight loss, somatic symptoms and lost libido.

In the BDI, the patient chooses the description that best corresponds to how he/she felt in the past week, including the current day (interview). The scale ranges from 0 (symptoms not present) to 3 (very intense symptoms). The minimum score is zero and the maximum is 63. Analysis of the scores is performed by summing, and the cutting point for "no depression" from zero to 15, for "Dysphoria" 16 to 20 and for "depression", 21 to 63. This instrument was applied at times T1, T2, T3 in both groups, in the two chemotherapy centers.

For data analysis, Stata / SE software, 12.0, was used. Means and standard deviation were calculated for descriptive analysis of the data, and Fisher's Exact Test, Mann-Whitney Test and Wilcoxon's Test were performed to detect significant differences in the data.

The study was approved by the Research Ethics Committee of the Nursing School of Ribeirão Preto – USP, under protocol no 1002/2009.

● RESULTS

The initial sample at T1 was composed of 152 patients: 79 of the CG and 73 of the IG. Table 1 shows the frequency and percentage of the sociodemographic characteristics of the total sample and by group.

Table 1 - Frequency and percentage of sociodemographic characteristics of the sample per group (control and intervention) and total (baseline). Ribeirao Preto, SP, Brazil, 2009-2011

	CHARACTERISTICS	CG N (%)	IG N (%)	Total N (%)
Gender	Female	40 (50.63)	45 (61.64)	85 (55.92)
	Male	39 (49.37)	28 (38.36)	67 (44.08)
	Total	79 (100)	73 (100)	152 (100)
Age Group	18 to 39 years	3 (3.80)	6 (8.22)	9 (5.92)
	40 to 59 years	43 (54.43)	40 (54.79)	83 (54.61)
	60-79 years	31 (39.24)	27 (36.99)	58 (38.16)
	80 and above	2 (2.53)	0 (0.00)	2 (1.32)
	Total	79 (100)	73 (100)	152 (100)
Marital status	Single	13 (16.46)	10 (13.70)	23 (15,13)
	Married	47 (59.49)	40 (54.79)	87 (57.24)
	Widowed	10 (12.66)	7 (9.59)	17 (11,18)
	Divorced/Living together	9 (11.39)	16 (21.92)	25 (16.45)
	Total	79 (100)	73 (100)	152 (100)
Profession / Occupation	Retired	20 (25.32)	15 (20.55)	35 (23.03)
	Housewives	23 (29.11)	13 (17.81)	36 (23.68)
	Informal work (e.g. cleaning lady, mason)	19 (24.05)	12 (16.44)	3 1 (20.41)
	Salesperson, merchant	11 (13.92)	10 (13.70)	21 (13.82)
	Rural work	4 (5.06)	2 (2.74)	6 (3.95)
	Self Employed	1 (1.27)	5 (6.85)	6 (3.95)
	Teacher	0 (0.00)	5 (6.85)	5 (3.29)
	Technical and administrative	1 (1.27)	7 (9, 59)	8 (5, 26)
	Healthcare professional	0 (0)	4 (5.48)	4 (2.63)
	Total	79 (100)	73 (100)	152 (100)
City/Origin	Ribeirao Preto	39 (49.37)	41 (56.16)	80 (52.63)
	Ribeirão Preto Region	37 (46.84)	31 (42.47)	68 (44.74)
	Other regions	3 (3.80)	1 (1.37)	4 (2.63)
	Total	79 (100)	73 (100)	152 (100)
Level of schooling	≤ Elementary Education	60 (75.95)	40 (54.79)	100 (65.79)
	≤ High School	10 (12.66)	16 (21.92)	26 (17,11)
	≤ Higher Education	9 (11.39)	17 (23.29)	26 (17,11)
	Total	79 (100)	73 (100)	152 (100)
Religion	Catholic	57 (72.15)	50 (68.49)	107 (70.39)
	Evangelical / Christian	20 (25.32)	15 (20.55)	35 (23.03)
	Spiritualist	1 (1.27)	5 (6.85)	6 (3.95)
	Atheist	1 (1.27)	2 (2.74)	3 (1.97)
	Buddhist	0 (0.00)	1 (1.37)	1 (0.66)
	Total	79 (100)	73 (100)	152 (100)

Source: Research data, 2012.
GC = Control Group; IG = Intervention Group; n = frequency

As shown in Table 1, the total initial sample was predominantly composed of women aged 40-59 years old, married, retired or housewives. Most were catholic, lived in Ribeirão Preto and had low educational level (elementary school).

Table 2 shows the frequency and percentage of clinical and therapeutic characteristics of the total sample and per group.

Table two - Frequency and percentage of clinical and therapeutical characteristics of the sample per group (Control and Intervention) and total (baseline). Ribeirão Preto, SP, Brazil, 2009-2011

	CHARACTERISTICS	CG N (%)	IG N (%)	Total N (%)
Cancer location	Breast	12 (15,19)	24 (32.88)	36 (23.68)
	Gastric	13 (16.46)	6 (8.22)	19 (12.50)
	Intestinal	20 (25,32)	12 (16.44)	32 (21.05)
	Gynecological	5 (6.33)	10 (13.70)	15 (9.87)
	Lung / mediastinum	9 (11.39)	6 (8.22)	15 (9.87)
	Genitourinary	2 (2.53)	3 (4.11)	5 (3.29)
	Head and neck	9 (11.39)	4 (5.48)	13 (8.55)
	Neurological	4 (5.06)	1 (1.37)	5 (3.29)
	Leukemia/lymphomas	3 (3.80)	5 (6.85)	8 (5.26)
	Skin and Melanomas	2 (2.53)	2 (2.74)	4 (2.63)
	Total	79 (100)	73 (100)	152 (100)
Metastasis	Yes	21 (2 6.58)	14 (19:18)	35 (2 3 0 3)
	No	8 5 (7 3.42)	59 (80.82)	117 (7 6.97)
	Total	79 (100)	73 (100)	152 (100)
Surgery	Yes	5 9 (7 4.68)	8 5 (7 9.45)	117 (76.97)
	No	20 (25.32)	15 (2 0.55)	35 (2 3.03)
	Total	79 (100)	73 (100)	152 (100)
Radiotherapy	Yes	25 (31.65)	17 (23.29)	42 (2 7, 63)
	No	54 (68.35)	56 (76.71)	110 (2 7, 37)
	Total	79 (100)	73 (100)	152 (100)

Source: Research data, 2012.
CG = Control Group; IG = Intervention Group; n = frequency

According to Table 2, the most common cancers were breast, intestinal and gastric. Most patients had already undergone surgery and some had also undergone radiotherapy.

Regarding the chemotherapy regimen, 46 different chemotherapeutic combinations were found, with emphasis to 5-Fluorouracil + Leucovorin in 19 (12.50%) patients; Cisplatin in 18 (11.84%); Paclitaxel + Carboplatin in 17 (11.18%); Oxaliplatin + Capecitabine (intravenous and/or oral) in 12 (7.89%), and Epirubicin + Cyclophosphamide + Docetaxel in 12 (7.89%) patients.

Most patients (76.97%) reported side effects of chemotherapy such as nausea, vomiting, constipation, diarrhea, malaise, fatigue, weakness, pain, insomnia, loss of appetite, irritability and anxiety complaints

Table 3 shows the frequencies and percentages of BDI scores of the sample by group. It also shows Fischer's exact test values. The test was performed to determine the differences in depression levels between the groups at the three time periods. Significance $p < 0.05$.

The last line of Table 3 shows patients' loss to follow up. In the CG: there were 17 patients lost from T1 to T2 and 13 other patients lost at T3. In IG, 15 and 13 patients lost from T1 to T2 and T3, respectively. Despite this loss, the percentage of patients without depression increased and the percentage of patients with dysphoria and depression decreased in IG, while the opposite occurred with the CG.

Table 3 – Frequency and percentage of Beck Depression Inventory (T1, T2 and T3), Control and Intervention Groups. Ribeirão Preto, SP, Brazil, 2009-2011

Scores	CG	CG	CG	IG	IG	IG
	N (%) T1	N (%) T 2	N (%) T3	N (%) T1	N (%) T 2	N (%) T3
Without Depression	63 (80.77)	40 (65.57)	29 (60.42)	52 (71.23)	48 (82.76)	39 (86.67)
Dysphoria	9 (11.54)	13 (21.31)	14 (29.17)	13 (17.81)	5 (8.62)	2 (4.44)
Depression	6 (7.69)	8 (13.11)	5 (10.42)	8 (10.96)	5 (8.52)	4 (8.89)
Total	78 (100)	61 (100)	48 (100)	73 (100)	58 (100)	45 (100)

CG = Control Group; IG = Intervention Group; n = frequency; T1 = Time 1; T2 = Time 2; T3 = Time 3.
Fisher's Exact Test: T1 = 0.360, T2 = 0.086 and T3 = 0.004 *

Table 4 shows the values of Mann-Whitney test run during BDI for the Control and Intervention groups at T1, T2 and T3.

Table 4 - Mann-Whitney Test run during application of Beck Depression Inventory (T1, T2 and T3), Control and Intervention groups. Ribeirão Preto, SP, Brazil, 2009-2011

Variables Control/Intervention Groups	Z	P
Beck Depression Inventory T1	-1,827	0.0677
Beck Depression Inventory T2	0.825	0,409
Beck Depression Inventory T3	2,413	0.0158 *

Source: Research data, 2012.
* $P < 0.05$; z = Mann-Whitney Test; T1 = Time 1; T2 = Time 2; T3 = Time 3.

Considering significant $p < 0.05$, values, these were found only in T3, with most patients "without depression" for the IG compared to the CG, despite the patients lost during the study.

Table 5 shows Wilcoxon Test values for the BDI tool for the CG and IG, comparing the times T1xT2,T1xT3,T2xT3, considering values $p < 0.05$ as significant.

Statistically significant differences were found from T1 to T2 and T1 to T3 in the CG, with negative results, and from T1 to T3 in the IG, with positive results, indicating improvement for the IG compared to the CG.

Table 5 - Wilcoxon test for BDI tool (T1xT2, T1xT3 and T2xT3), Control and Intervention groups. Ribeirão Preto, SP, Brazil, 2009-2011

Variables	Control Group	Control Group	Intervention Group	Intervention Group
	Z	P	Z	P
BDI(T1) x BDI (T2)	-3.552	0.0004 *	0.349	0,727
BDI(T1) x BDI (T3)	-2,922	0.0035 *	2.053	0.0401 *
BDI(T2) x BDI(T3)	-0.521	0,602	1.371	0.1705

Source: Research data, 2012.
* $P < 0.05$; Z = Wilcoxon test; BDI = Beck Depression Inventory; T1 = Time 1; T2 = Time 2; T3 = Time 3.

● **DISCUSSION**

The sociodemographic and clinical characteristics identified in this study were similar to those of other national and international studies[1,16,18]. Regarding the most common types of cancer, the findings are consistent with the estimates for 2011 (end of data collection) and the estimates for 2016 and 2017 in Brazil[19].

Regarding the BDI, both in the CG and IG groups, most patients had "no depression" at the three time periods. In the comparison between the groups, the differences were significant only at T3, with more patients showing "no depression" in the IG. In the comparison between the times, the statistically significant differences found for the CG were observed fromT1 to T2 and from T1 to T3, and for the IG, from T1 to T3.

One study[1] analyzed the effectiveness of a coping strategy program composed of educational information, cognitive restructuring, improvement of coping skills and relaxation with guided imagery in patients with breast cancer undergoing chemotherapy comparing the intervention group with a control group. The results obtained during a one-year follow-up showed that the individuals in the IG (n = 38) had significant improvement in their general quality of life (QOL), in psychological/spiritual well-being (P <0.01), in health, functional well-being and socioeconomic well-being (p <0.05) compared to the CG (n = 35). The CG reported mild depression according to the BDI, but there were no statistically significant differences in depression scores between the groups.

One study[3] assessed results related to standards of emotional regulation, perception and satisfaction with social support following cognitive-behavioral intervention in stress management that consisted in muscle relaxation, cognitive restructuring and training in coping strategies and compared the results of the IG with the CG, in cancer patients undergoing radiotherapy, who experienced fatigue in the beginning and at the end of the treatment. The IG (n = 35) showed a significant decrease (p <0.001) in anxiety, depression and stress, assessed by the Depression, Anxiety and Stress scale (DASS), and greater awareness and satisfaction with social support, while the control group (n = 35) showed the opposite.

One study[6] examined the effect of musical therapy and progressive muscle relaxation on depression, anxiety and hospital stay in women with breast cancer who underwent radical mastectomy, and compared the findings with a CG who received routine care. The intervention began 48 hours after surgery and was performed twice daily until discharge. The IG patients (n = 85) showed significant improvement in anxiety (p <0.017), as measured by the State Anxiety Inventory (SAI), depression (p <0.001) as assessed by the Zung Self-rating Depression Scale (ZSDS) and shorter hospital stay than the subjects in the CG (N = 85) with statistical significance (P <0.001).

The impact of guided imagery was assessed in patients who underwent radiotherapy for breast cancer. The guided imagery sessions were conducted before radiotherapy, and the patients (n = 60) were given copies of the CD to practice the therapy at home. The questionnaire EuroQol Group's EQ-5D was used before and after the session. The instrument assesses five current health status domains (mobility, self-care, usual activities, pain or discomfort, anxiety or depression), Paradoxically, the results revealed increased pain and discomfort (P <0.001) and decreased levels of anxiety and depression (P = 0.01). These findings illustrate the positive impact of guided imagery and support the incorporation of these alternatives to standard practice[10].

A psychological intervention consisting of relaxation and guided imagery was assessed and compared with a CG (N = 100). The groups were formed by patients with breast and prostate cancer undergoing chemotherapy. At the IG (N = 100), saliva was collected before and after relaxation and guided imagery sessions. It was found that salivary amylase levels decreased and reacted faster than salivary cortisol with the intervention, suggesting a more effective relaxation. The relaxation with guided imagery technique effectively reduced anxiety levels, as assessed by the Self-rating Anxiety Scale (SAS), depression, through the BDI, and bodily discomfort in the IG[11].

One study[20] tested the six-month efficacy of an intervention consisting of one-hour guidance provided by a nurse specialized in oncology, a manual containing information on chemotherapy e.g. side effects, exercises and diet, a 30-minute audio tape with relaxation techniques and a follow-up program consisting of four monthly phone calls by a nurse and compared with the CG, for patients with colorectal cancer. They assessed self-efficacy, symptoms of distress, anxiety, depression (assessed

by the Hospital Anxiety and Depression Scale - HADS) and QoL and found that patients in the IG (P = 0.01), had significant improvement in self-efficacy (P = 0.003), decrease in symptom severity (p=0.01), symptom interference (p = 0.025), anxiety (p = 0.006), and depression (p = 0.03), assessed at three and six months, compared to the CG (N = 76), and without statistically significant difference in QOL

One study about the frequency of depression symptoms through BDI in 41 patients with head and neck cancer undergoing radiotherapy found that dysphoria increased during the treatment, as well as the number of depressed patients. There was a statistically significant difference between the first and third application of the BDI, indicating that the changes in symptoms of dysphoria and depression were significant considering the beginning and end of the treatment. The results demonstrated the importance of detection of the prevalence and levels of depression symptoms by health professionals, since these symptoms tend to increase and may lead to consequences such as lack of adherence to treatment and decreased QOL of these patients[18].

Regarding the loss observed in this study, these difficulties are reported in the literature[10,21]. The reasons for these occurrences were death of patients, health complications, such as sequelae of cerebrovascular accident, which prevented the subjects from participating in the study, withdrawal and completion of the chemotherapy treatment earlier than expected, i.e. before the end of the study.

One study[21] showed that guided imagery attracted patients with high levels of anxiety and low emotional well-being, but not permanently. Patients of the guided imagery group who discontinued the therapy had an average physical health score of 16.22 versus 19.61 (p = 0.03); emotional well-being of 12.44 versus 17.1 (p = 0.07) and total FACT-G score of 74.00 versus 85.85 (p = 0.03) compared to the participants who did not quit the study. The patients who left the intervention group had more severe symptoms, depressive symptoms and anxiety and worse physical and emotional well-being compared to the others.

It should be noted that opposition and poor knowledge on complementary practices such as relaxation and guided imagery persist in Brazil, with few studies published recently on the issue in the country. In turn, the referred international literature demonstrated that relaxation with guided imagery, used separately, combined and/or associated to other therapies are used in cancer patients in chemotherapy and in other treatments such as radiotherapy and surgery, and most of them showed positive results.

● **CONCLUSION**

This study that assessed the effect of intervention Relaxation with Guided Imagery on depression in cancer patients undergoing chemotherapy showed that the characterization of the sample was similar to that of other studies carried out in Brazil and in the world, and that the frequency of cancers found in this study corroborates the estimated incidence of cancer.

According to the BDI, there were statistically significant differences between the groups and the periods of time, and the IG had a greater number of patients "without depression" than the CG at the end of the study.

One limitation of the study concerns the difficulty in conducting a quasi-experimental study, as it depends on patient adherence to this type of intervention.

The present study contributes to the dissemination of mind-body approaches such as relaxation and guided imagery. These can be performed by nurses and aim to reduce depression in cancer patients undergoing chemotherapy, as well as to encourage further studies on the subject.

It is expected that the intervention Relaxation with Guided Imagery, in addition to being administered to cancer patients undergoing chemotherapy, may also be administered to other patients in other treatments.

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