

# Depressive Symptoms in Patients with Cancer

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## Abstract

The purpose of this survey was to investigate depressive symptoms in cancer patients and the differences based on gender, quality of life and social support. Sixty-eight patients diagnosed with cancer participated in the research, with ages varying between 25 and 83 years ( $A = 55.4$ ;  $SD = 13.3$ ) and 85.3% were female. The instruments used were Identification Questionnaire, Perceived Social Support Scale—adult version (EPSUS-A), Medical Outcomes Short-Form Health Survey (SF-36) and the Baptista Depression Scale Hospital—clinic version (EBADEP-HOSP-AMB). It was verified that most of the patients reported not having depression diagnosis before the cancer, nor in the current moment, besides not using anti-depressive medication. The scores obtained in the EBADEP-HOSP-AMB suggest light depressive symptoms. It is concluded that the depressive symptoms were mostly presented in women, in patients with worse mental health condition and in those less satisfied with the social support.

## Keywords

Depressive Symptoms, Depressive Disorder, Social Network, Social Support, Quality of Life

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## 1. Introduction

Cancer is a disease that affects the patient's life globally, generally seen as a disease whose synonym is suffering and death [1]. In the biological sphere, the patient faces debilitating symptoms and many times treatments which are invasive, prolonged and with unpleasant side effects. In relation to the psychosocial context, the patient could face difficulties in the change of the daily routine, dependence on other persons, change of habits, isolation, among others, not rarely triggering psychological suffering [2]-[4].

The most common mental disorder in patients with cancer is depression and the prevalence rates are in the

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range of 3% to 58%, varying according with the type of cancer (tumor), with the stage of the disease, its evolution and the types of treatment, as well as the characteristics of the population [5]-[8]. Despite this range in literature, arising from the characteristics of the population studied and the type of instrument used for assessment, the authors consider that this high number is consequence of the stress levels and emotional distress related with cancer diagnosis, having depression as a result [9].

Despite the high prevalence rate, some studies indicate that 25% to 50% of depression cases are not diagnosed by the doctor, since the symptoms arising from the cancer disease and its treatment, sometimes, take precedence over the symptoms surveyed in the depression evaluation, such as anorexia, insomnia, loss of energy, loss of interest in activities and psychomotor retardation [10]-[13]. For the population in general, the depression prevalence rates, according to the study that compiled epidemiological data coming from 18 countries in Brazil, exclusively the data from the state of São Paulo, were considered, it was verified that the greater prevalence in the last 12 months was registered in Brazil with 10.4% and the lowest in Japan, with 2.2% [14].

The presence of depressive symptoms in cancer patients is associated with the worse perception of the health, greater levels of pain, worse quality of life, lower survival, greater risk of death, among others [15]-[18]. These factors could become chronic or recurrent and take the patient to substantial losses in the capacity of caring for his own daily responsibilities, as in the case of isolation, resulting in work leave [19] [20].

However, it is necessary to consider that studies demonstrated changes in the presence of depressive symptoms according to the person's variables, among these, gender, social support and quality of life [8] [21]. Women are more prone to developing depression [22]-[25], inclusively depending on the type of cancer (for example, [17]), reaching up to twice as much as men [26]. However, other studies showed results that disagree with these statements, reporting similar prevalence between the genders [27] [28].

In respect to social support, an inadequate perception of social and family support is considered as risk factor for the presence of depressive symptoms [29] [30]. However, some factors are considered protective, such as living with a companion and the social support perceived in general [31]. Social support has been an ally in maintaining mental health, appointed as relevant in the prevention and handling of the psychological suffering of patients, related to lower rates of several disorders, including the depressive one [32]-[34]. For example, in a study with 18 patients, with 78% of the sample presenting minimum and light level of depression and 22% moderate to severe level, it was concluded that the social network and support were a protective factor to the major part of the sample in presenting a minimum or light level of depression [35]. Another study verified the relation of depression with the perception of social support in 80 fibromyalgia and cancer patients, using the EBADep-HOSP-AMB and EPSUS-A, finding correlations between  $-0.48$  ( $p < 0.05$ ) and  $-0.62$  ( $p < 0.05$ ), with exception of the instrumental dimension, which had a weak magnitude [36].

In another study, 286 women diagnosed with breast cancer were interviewed and the scores compared with the general female population (GFP). The results showed that all social support and depressive humor sub-scales among the patients were significantly lower one year after the diagnosis in relation to the moment of discovery. The authors concluded that the perception of social emotional support was among the best predictors of the depressive state among patients with breast cancer during the first year after diagnosis [37]. This data is similar to the findings of [38], with 342 patients with cancer, which observed that a larger social network was associated with lighter depression symptoms for female and younger patients; still, considering the whole sample, a higher perception of social support and more satisfaction with the functioning of the family were related to lighter depression symptoms.

Another impacting factor related to depression, and also to social support, and due to this relevant to this study, is the quality of life, such as shown by [39]. In the study made by [40], 150 breast cancer survivors participated and the results pointed out that approximately 35% of the participants presented depressive symptoms; they also pointed out social support as a moderator of depression symptoms on the quality of life, *i.e.*, social support had a moderating effect on depression and consequently, in quality of life.

In light of the data presented, the present study had a purpose to investigate depression on cancer patients, besides verifying the difference of the depressive symptoms in relation to gender, quality of life and social support. In view of the literature used, four hypotheses were prepared for this study: (*h1*) the prevalence rate of the depressive symptoms should vary between 3% and 58% [7] [8]; (*h2*) the women should present greater depressive symptomatology [23]-[25]; (*h3*) the patients with better scores in the dimensions that evaluated mental health would present lower level in depressive symptoms [15] [16] [18] [39]; (*h4*) the patients with greater satisfaction in social support should present less depressive symptomatology [32] [33] [35] [36]. The purpose of this study

was investigating depression in cancer patients and verifying the difference in presenting depression diagnosis in relation to gender, quality of life and social support.

## 2. Method

### 2.1. Participants

The survey was made with 68 cancer patients, selected by convenience in four institutions in the interior of the State of São Paulo. The average treatment time was two years and five months, varying between three months and 11 years. In relation to the demographical characteristics of participants, this is shown in **Table 1**. In relation to the data referring to depression diagnosis, this is shown in **Table 2**.

**Table 1.** Demographical characteristics of participants.

Gender [n (%)]	
Women	58 (85.3)
Men	10 (14.7)
Age in years [mean (S.D.)]	
Min-max	25 - 83
Marital status (%)	
married	67.6
single	13.2
separate	13.2
widower	5.9
Education (%)	
completed higher education	39.7
full high school	22.1
completed elementary school	16.2
Psychological evaluation or psychotherapy	
yes	52.9
no	47.1
Diagnosis	
breast cancer	38 (55.9%)
ovary	7 (10.3%)
intestine	3 (4.4%)
lung	3 (4.4%)
neck	2 (2.9%)
others	15 (10.2%)
metastasis of the cancer in another organ	15 (22.1%)
Institution (%)	
two chemotherapy clinics	47.1
NGOs	52.9

**Table 2.** Results on depression diagnosis.

		N	%
Previous depression diagnosis?	Yes	16	23.5
	No	51	75.0
Are you currently diagnosed with depression?	Yes	6	8.8
	No	61	89.7
Do you use medication for depression?	Yes	15	22.1
	No	52	76.5

According to **Table 2**, it was verified that most of the patients did not report having previous depression diagnosis nor currently. However, the number of persons that use anti-depressives was higher than the number of depression diagnosis.

## 2.2. Instruments

An identification Form was used encompassing the sociodemographic characteristics and questions about diagnosis and treatment, both for the cancer as well as for depression. Also, the Perceived Social Support Scale (EPSUS-A; [41]), the Medical Outcomes Short-Form Health Survey (SF-36; [42]) and the Baptista Depression Scale (Hospital-Clinic version)-EBADEP-HOSP-AMB [43] were applied.

The EPSUS-A is based on the theory of [44] and has as purpose assessing the social support perception. The scale is composed of 36 items ( $\alpha = 0.94$ ; encompassing four factors: Affective (17 items;  $\alpha = 0.92$ ), related to emotional order support; Social Interactions (five items;  $\alpha = 0.75$ ), about the interpersonal relationships and participation in social events; Instrumental (seven items;  $\alpha = 0.82$ ), addressing the perception of support of material order; and Problem Confrontation (seven items;  $\alpha = 0.83$ ), related to the quality of the information discussed in the social interactions and the perception about the persons considered supportive in conflict solving). The score varies from 0 to 108; the lower the score the lower the satisfaction with the social support. Studies suggest adequate psychometric properties for EPSUS-A [41].

The SF-36 encompasses generic data about the quality of life, being composed by 36 items distributed in eight domains, *i.e.*, Functional capacity ( $\alpha = 0.87$ ), Physical aspects ( $\alpha = 0.75$ ), Pain ( $\alpha = 0.86$ ), General health state ( $\alpha = 0.75$ ), Vitality ( $\alpha = 0.78$ ), Social aspects ( $\alpha = 0.71$ ), Emotional aspects ( $\alpha = 0.80$ ), Mental health ( $\alpha = 0.80$ ), besides a question on comparative evaluation between the current health condition and that related to the previous year. The score varies between zero and 100 points per domain, representing, respectively, worse and better quality of life. In this study, 50 points was adopted as cut-off point to determine that the patients below this score would be with their quality of life harmed and those with a score above 50 points with a good quality of life [45].

The EBADEP-HOSP-AMB is a depressive symptomatology tracking scale. It is made up of 43 phrases, such as, for example, “thinking on the future brings me down”, “I lose my patience with very little”. Such phrases were structured in *Likert* 3 points (0, 1 and 2) scale, with minimum score of zero and maximum of 86 points. For its interpretation, it is considered that the lower the score, the lower the depression symptomatology. The respondent fulfills all answers so as to come as close as possible to what he has been feeling, for at least the last two weeks, inclusively considering the date of the application.

## 2.3. Procedures

The project was approved by an ethics committee (CAAE: 37484914.2.0000.5514), starting in sequence with data collection. The days for application of the instruments were scheduled in accordance with the availability of the institutions and of the patients, who only could participate in the survey after agreeing and signing the Informed Consent Form. The application was made individually and the instruments were read to the patients who were unable to move their hands, due to the chemotherapy port or for those patients that chose such. The average duration of the application was 30 minutes. The data was analyzed by means of the Statistical Package for the Social Sciences (SPSS) program, starting from descriptive analyses for sample characterization, especially in terms of depressive symptomatology. Next, the sample was divided into groups to verify the differences for the variables: having or not depression diagnosis or making use of anti-depressives, gender, emotional aspects and mental health domains of the quality of life scale and EPSUS-A that evaluated social support, the total score of the EBADEP-HOSP-AMB by means of the *Student* t-test and Cohen d test. The selected domains of quality of life (SF-36), emotional aspects and mental health, occurred due to the fact of evaluating emotional aspects, raised in the literature as important factor in depressive symptoms. As of the selected domains, the groups were split according to their scores in each domain, *i.e.*, the groups were separated above and below the median value obtained in each domain.

## 3. Results

Initially, **Table 3** presents the descriptive statistics in the EBADEP-HOSP and the differences between the groups in relation to the diagnosis and medication in the EBADEP-HOSP-AMB total score and based on the

**Table 3.** Descriptive statistics and difference between the groups and gender variable for EBADEP-HOSP-AMB total score.

	Groups	N	Average (SD)	t (gl)	p	d
EBADEP-HOSP-AMB	Group 1	45	13.69 (10.96)	-1.78 (61)	0.07	0.50
	Group 2	18	19.39 (12.64)			
	Female	54	16.02 (11.84)	1.11 (62)	0.27	0.38
	Male	10	11.60 (9.60)			
	TOTAL	64	15.33 (11.56)			
	Breast cancer	34	12.12 (8.76)	-2.39 (49)	0.02	0.62
	Others diagnosis	30	18.97 (13.32)			

gender variable. The groups were separated according to the questions presented in **Table 1**, with group 1 being composed by the patients that answered not having previous nor current depression diagnosis and not using medication, and in group 2 the patients that answered yes for at least one of the questions. It should be stressed that before starting the analyses, it was verified that there was no difference ( $p > 0.05$ ) in the EPSUS-A answers, of SF-36 and of EBADEP-HOSP-AMB in relation to the participants that answered alone and those in which the surveyor read together and assisted in the application.

The results of **Table 3** show that the groups differ expressively, demonstrating that group 2 presented higher average, *i.e.*, the persons that stated having some history related to depression obtained higher scores in the EBADEP-HOSP-AMB. In relation to the difference between male and female, the data which is disposed in **Table 3** demonstrates expressive difference, with the average for the female gender being higher when compared to men. Also, the difference between diagnoses, the groups were separated by breast cancer and other diagnoses for groups not staying with very different numbers precluding the analysis correctly and the results of **Table 3** shows expressive difference, with lowest average of depressive symptoms by patients with breast cancer. In **Table 4**, the differences of the averages are exhibited for the groups in the EBADEP-HOSP-AMB total score based on the Emotional aspects and mental health domains of the SF-36 instrument and for social support, in the EPSUS-A scores.

According to **Table 4**, it can be verified that there was expressive difference between the groups in both domains of SF-36. The group that scored lower, both in emotional aspects and in mental health presented greater averages in the EBADEP-HOSP-AMB. Referring to the results found with basis on EPSUS-A, it is observed that the group with up to 87 points in the EPSUS-A, lower satisfaction with social support, presented a higher average when compared to the group that scored above 88, with expressive effect magnitudes.

#### 4. Discussion

The purpose of this present survey was investigating depression in cancer patients, weighting also differences in relation to gender, quality of life and social support. The results found make evident that the greater part of the sample does not present depression diagnosis, as well as they do not use anti-depressives. However, the number of persons that use anti-depressives was greater than the diagnosed cases.

Specifically in relation to the sample of the present study, referring to the number of patients with depression diagnosis, it could be observed in **Table 2** that 8.8% of the patients are diagnosed; this meets the range presented in the literature, confirming hypothesis h1, which points out the prevalence rate of depressive symptoms should vary between 3% and 58% [7] [8]. In studies made with admitted patients, the depression rates vary between 20% and 25% of the patients with cancer [5] [6], with higher values than the present sample, seeing in this study the patients had not been admitted. It should be observed also that the prevalence found in the present sample is less than the average reported by the general population, equal to 10.4% [14]. A hypothesis raised for the incidence of depression not being very high is that part of the sample had already finished the more invasive treatment, as well as those that cause more unpleasant side effects, taking only oral medicine, which allows the patient to return to his routine previous to the cancer. It is also possible that these divergences are related to the form of evaluation and the differences in the sample characteristics.

Still, although the depression rate is relatively high among the cancer patients, the occurrence of false negatives is not rare, in which cases the depression is not treated [10]. The small rate of patients diagnosed in this study, in comparison with the accessed literature [7] [8], could also be explained by the difficulty for the doctor

**Table 4.** Difference of the groups in EBADEP-HOSP-AMB in the emotional aspects and mental health domains of SF-36 and based on the total social support score (EPSUS-A).

		N	Average (SD)	t (gl)	p	d
Emotional aspects	≤66 points	36	18.69 (13.37)	2.99 (54)	0.01	0.70
	>67 points	28	11.00 (6.76)			
Mental health	≤76 points	32	19.34 (11.74)	2.94 (62)	0.11	0.74
	>77 points	32	11.31 (10.03)			
EPSUS-A	≤87 points	33	19.33 (13.35)	3.13 (51)	0.01	0.77
	>88 points	30	10.90 (7.43)			

Note: Considering 95% confidence interval for these data.

to diagnose the depression, reported in the literature [12] [46]. The literature clarifies that most of the oncology doctors is not familiar with the depressive disorders and that specialists in mental health frequently work separately from the oncologists [13]. This aspect possibly contributes to the difficulty in the diagnosis and treatment of depression in patients with cancer. The barriers for the treatment of depression could arise from several factors, including the uncertainty about the diagnosis, the limited time to investigate emotional questions and costs associated with the treatment [8].

However, the number of persons that use anti-depressive medication is greater than the number of patients with depression diagnostics. As of this result, one could think that some patients still use the medication prescribed earlier or uses it without an adequate prescription or for other symptoms different from depression, data observed during the application in which the participants reported taking anti-depressive, but for other purposes, like pain and difficulty in sleeping, thus corroborating with the findings that suggest the efficiency in the use of anti-depressives in the control of pain [46].

In relation to the difference between the groups created as of the questions of **Table 2**, the results of **Table 3** demonstrated that group 2 presented a higher average when compared with group 1, suggesting the patients that answered “yes” for currently having and/or with history of depression diagnosis and/or using medication for depression scored more than those that answered negatively for all these cases. Similar data, also using the EBADEP-HOSP-AMB, were found in the study made by [36], in which the patients with depression diagnosis obtained higher averages than those without the presence of the diagnosis.

With regard to the total scores obtained by the participants in the EBADEP-HOSP-AMB, it was verified in **Table 3** that the average was 15.33 points. Similar data was found in another survey, in which most of the sample presented light and moderate level of depression [35]. Another study found that after one year of treatment the depressive humor of the patients with breast cancer improved, becoming similar to the scores obtained by the population in general [37]. No data was found in the literature reporting cut-off points or even the average of the EBADEP-HOSP-AMB in other studies. However, it should be considered that the maximum score in this instrument is 86 points, which suggests low scoring by the participants of the present sample. However, in view of future studies with the instrument, it should be weighted if this is really the case.

Still in relation to the averages presented in the EBADEP-HOSP-AMB, specifically in regard to comparison between genders, the results suggest that women are very different from men, presenting a higher average. Such result confirms the findings in the literature and hypothesis *h2* of this study, *i.e.*, women are more afflicted by depressive disorders, when compared to men [23], as well as women present a higher depression rate in the population in general [22] [24] [25]. As of the temporal differences between the studies, different results were found in the study of [38], in which there were no significant differences for gender in depressive symptoms in patients with cancer. In turn, the differences between the diagnoses, **Table 3** showed that patients with breast cancer had lower scores on the depressive symptoms, with significant differences. However, so far no data were found in the literature to demonstrate such a comparison, since the majority of studies with cancer patients analyzed only one type of diagnostic in each survey, not realizing diagnostic comparisons.

Another result about the differences in the scores of the EBADEP-HOSP-AMB was related to the groups divided as of the scores obtained in instrument SF-36 for the Emotional aspects domains, referring to the reflex of the emotional performance in the daily and/or professional activities and Mental health with humor scale and well-being items [42]. According to **Table 4**, it was noticed that there was an expressive difference between the

groups in the SF-36 domains. In both domains, the group that scored lower presented higher averages in the EBADEP-HOSP-AMB, *i.e.*, people with better emotional conditions to perform their daily and/or professional activities, good humor and greater satisfaction with well-being present less depressive symptoms corroborating hypothesis *h3* of this survey, in which the patients with better mental health will present a lower level of depressive symptoms [15] [16] [18]. This data complements the findings of [17], which found that women with breast cancer that had a worse health perception presented a greater risk of depressive symptoms. Due to breast cancer being a disease stigmatized by people and, many times, by the patient herself, the same tends to isolate herself from social and family living, contributing to worsening her emotional state [2]. Besides this, depression presents an important negative effect in several domains of the quality of life of these patients [39].

As it could be seen in **Table 4**, the group with the lower score in EPSUS-A obtained a higher average in the total score of the EBADEP-HOSP-AMB, suggesting that the people with lower social support (or lower perceived social support) presented more depressive symptoms, confirming hypothesis *h4* of this study. The survey showed that the depression levels were greater in the measure in which the patients with breast cancer had lower social support [16]. Other studies also demonstrate social support related to lower adjustment disorder rates, such as depression [32] [33]. Surveys demonstrate there is a negative association between depressive symptomatology and social support, indicating that the greater the satisfaction with social support, lower will the depressive symptomatology be, besides demonstrating that social support has a moderating effect on depression symptoms, *i.e.*, the support coming from the social network influences in the depressive symptoms of patients with cancer [36] [38] [40].

## 5. Final Considerations

It is considered, from the results presented, that the purposes of the study were reached. The prevalence rate observed for the depression diagnosis was considered low in comparison with other studies made in patients with cancer. In relation to the differences based on the variables related with the quality of life and social support, it was observed that the patients with worse mental and emotional health conditions and with lower social support satisfaction presented greater depressive symptoms. Despite the data having been collected with patients with cancer, the same findings are presented in the population in general, indicating that the relationship between these variables and the prevalence rates do not change with the presence of cancer.

Among the limitations of this survey, it could be highlighted the small sample size, as consequence of the difficulty in accessing the patients, its heterogeneity and the small number of studies used the EBADEP-HOSP-AMB to allow a deeper discussion for the data found. It should also be highlighted the fact of not using a gold standard to check patients with and without depression diagnosis, since the instrument used was for tracking the symptoms and not for the purpose of diagnosis, as well as, there was no access to the medical report and it was not asked if all patients had seen a psychiatrist to confirm or not the depression diagnosis. Therefore, it is necessary to consider and evaluate the results with such exceptions. It is suggested for future studies to assess patients with the same diagnosis, or that are undergoing the same kind of treatment, since each medicine will present an influence on the patient, or present the same treatment time, besides comparing clinical and non-clinical groups referring to the depression diagnosis. Finally, it should also be aimed at understanding the relationship and influence of social support in the depressive symptoms of patients with cancer.

## References

- [1] Espírito Santo, F.H. and Souza, M.G.G. (2008) O olhar que olha o outro... Um estudo com familiares de pacientes em quimioterapia antineoplásica. *Revista Brasileira de Cancerologia*, **54**, 31-41. [http://www.inca.gov.br/rbc/n\\_54/v01/pdf/artigo\\_5\\_pag\\_31a42.pdf](http://www.inca.gov.br/rbc/n_54/v01/pdf/artigo_5_pag_31a42.pdf)
- [2] Araújo, I.M.A. and Fernandes, A.F.C. (2008) O significado do diagnóstico do câncer de mama para a mulher. *Escola Anna Nery*, **12**, 664-671. <http://dx.doi.org/10.1590/S1414-81452008000400009>
- [3] Santana, J.J.R.A., Zanin, C.R. and Maniglia, J.V. (2008) Pacientes com câncer: enfrentamento, rede social e apoio social. *Paidéia*, **18**, 371-384. <http://www.scielo.br/pdf/paideia/v18n40/13.pdf>
- [4] Veit, M.A. and Carvalho, V.A. (2010) Psico-Oncologia: Um novo olhar para o câncer. *O Mundo da Saúde*, **34**, 526-530. [http://www.saocamilo-sp.br/pdf/mundo\\_saude/79/526a530.pdf](http://www.saocamilo-sp.br/pdf/mundo_saude/79/526a530.pdf)
- [5] Arnt, C.A. and Arnt, F. (1992) Depressão em pacientes com câncer: Uma revisão. *Revista de Ciência Médicas*, **9**, 80-85.

- <http://periodicos.puc-campinas.edu.br/seer/index.php/cienciasmedicas/article/viewFile/1333/1307>
- [6] Carvalho, T.F.R. and Sougey, E.B. (1995) Depressão em pacientes com câncer: Epidemiologia, diagnóstico e tratamento. *Jornal Brasileiro de Psiquiatria*, **44**, 457-462. <http://bases.bireme.br/cgi-bin/wxislind.exe/iah/online/?IsisScript=iah/iah.xis&src=google&base=LILACS&lang=p&nextAction=lnk&exprSearch=306938&indexSearch=ID>
- [7] Croyle, R.T. and Rowland, J.H. (2003) Mood Disorders and Cancer: A National Cancer Institute Perspective. *Biological Psychiatry*, **54**, 191-194. <http://www.ncbi.nlm.nih.gov/pubmed/12893094>  
[http://dx.doi.org/10.1016/s0006-3223\(03\)00427-x](http://dx.doi.org/10.1016/s0006-3223(03)00427-x)
- [8] Bottino, S.M.B., Fráguas, R. and Gattaz, W.F. (2009) Depressão e câncer. *Revista Psiquiatria Clínica*, **36**, 109-115. <http://dx.doi.org/10.1590/s0101-60832009000900007>
- [9] Martinho, A.F., Reis, N.O., Novo, N.F. and Hübner, C.K. (2009) Prevalência dos sintomas depressivos em pacientes oncológicos no ambulatório do Conjunto Hospitalar de Sorocaba. *Revista Sociedade Brasileira de Clínica Médica*, **7**, 304-308. <http://files.bvs.br/upload/S/1679-1010/2009/v7n5/a006.pdf>
- [10] McDaniel, J.S., Musselman, D.L. Porter, M.R. Reed, D.A. and Nemeroff, C.B. (1995) Depression in Patients with Cancer. Diagnosis, Biology and Treatment. *Arch Gen Psychiatry*, **52**, 89-99. <http://www.ncbi.nlm.nih.gov/pubmed/7848055>  
<http://dx.doi.org/10.1001/archpsyc.1995.03950140007002>
- [11] Stiefel, R., Die Trill, M., Berney, A., Olarte, J.M. and Razavi, A. (2001) Depression in Palliative Care: A Pragmatic Report from the Expert Working Group of the European Association for Palliative Care. *Support Care Cancer*, **9**, 477-488. <http://www.ncbi.nlm.nih.gov/pubmed/11680829>  
<http://dx.doi.org/10.1007/s005200100244>
- [12] Evans, D.L., et al. (2005) Mood Disorders in the Medically Ill: Scientific Review and Recommendations. *Biological Psychiatry*, **58**, 175-189. <http://www.ncbi.nlm.nih.gov/pubmed/16084838>  
<http://dx.doi.org/10.1016/j.biopsych.2005.05.001>
- [13] Pasquini, M. and Biondi, M. (2007) Depression in Cancer Patients: A Critical Review. *Clinical Practice & Epidemiology in Mental Health*, **3**, 2. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1797173/>
- [14] Bromet, E., et al. (2011) Cross-National Epidemiology of DSM-IV Major Depressive Episode. *BMC Medicine*, **9**, 90. <http://dx.doi.org/10.1186/1741-7015-9-90>
- [15] Tavoli, A., Montazeri, A., Roshan, R., Tavoli, Z. and Melyani, M. (2008) Depression and Quality of Life in Cancer Patients with and without Pain: The Role of Pain Beliefs. *BMC Cancer*, **8**, 177. <http://dx.doi.org/10.1186/1471-2407-8-177>
- [16] Karakoyun-Celik, O., Gorken, I., Sahin, S., Orcin, E., Alanyali, H. and Kinay, M. (2010) Depression and Anxiety Levels in Woman under Follow-Up for Breast Cancer: Relationship to Coping with Cancer and Quality of Life. *Medical Oncology*, **27**, 108-113. <http://dx.doi.org/10.1007/s12032-009-9181-4>
- [17] Cangussu, R.O., Soares, T.B.C., Barra, A.A. and Nicolato, R. (2010) Sintomas depressivos no câncer de mama: Inventário de Depressão de Beck—Short Form. *Jornal Brasileiro de Psiquiatria*, **59**, 106-110. [http://pepsic.bvsalud.org/scielo.php?pid=S1677-74092012000100004&script=sci\\_arttext](http://pepsic.bvsalud.org/scielo.php?pid=S1677-74092012000100004&script=sci_arttext)  
<http://dx.doi.org/10.1590/S0047-20852010000200005>
- [18] Pinquart, M. and Duberstein, P.R. (2010) Depression and Cancer Mortality: A Meta-Analysis. *Psychological Medicine*, **40**, 1797-1810. <http://dx.doi.org/10.1017/S0033291709992285>
- [19] Raison, C.L. and Miller, A.H. (2003) Depression in Cancer: New Developments regarding Diagnosis and Treatment. *Biological Psychiatry*, **54**, 283-294. <http://www.ncbi.nlm.nih.gov/pubmed/12893104>  
[http://dx.doi.org/10.1016/s0006-3223\(03\)00413-x](http://dx.doi.org/10.1016/s0006-3223(03)00413-x)
- [20] Souza, B.F., Pires, F.H., Dewulf, N.L.S., Inocenti, A., Silva, A.E.B.C. and Miaso, A.I. (2013) Pacientes em uso de quimioterápicos: Depressão e adesão ao tratamento. *Revista da Escola de Enfermagem da USP*, **47**, 61-67. [http://www.redalyc.org/pdf/3610/361033324008\\_2.pdf](http://www.redalyc.org/pdf/3610/361033324008_2.pdf)  
<http://dx.doi.org/10.1590/S0080-62342013000100008>
- [21] Horowitz, A., Reinhart, J.P., Boerner, K. and Travis, L.A. (2003) The Influence of Health, Social Support Quality and Rehabilitation on Depression among Disabled Elders. *Aging & Mental Health*, **7**, 342-350.
- [22] APA (2013) Diagnostic and Statistical Manual of Mental Disorders 5. American Psychiatry Association, Washington DC.
- [23] Massie, M.J. (2004) Prevalence of Depression in Patients with Cancer. *JNCI Monographs*, **32**, 57-71. <http://dx.doi.org/10.1093/jncimonographs/lgh014>
- [24] Aros, M.S. and Yoshida, E.M.P. (2009) Estudos sobre depressão. *Boletim de Psicologia*, **LIX**, 61-76. <http://pepsic.bvsalud.org/pdf/bolpsi/v59n130/v59n130a06.pdf>

- [25] Van de Velde, S., Bracke, P. and Levecque, K. (2010) Gender Differences in Depression in 23 European Countries. Cross-National Variation in the Gender Gap in Depression. *Social Science & Medicine*, **71**, 305-313. <http://dx.doi.org/10.1016/j.socscimed.2010.03.035>
- [26] Kaplan, H.I., Sadock, B.J. and Sadock, V.A. (2007) *Compêndio de psiquiatria: Ciência do comportamento e psiquiatria clínica*. Artmed, Porto Alegre.
- [27] Paradela, E.N.P., Lourenço, R.A. and Veras, R.P. (2005) Validação da Escala de Depressão Geriátrica em um ambulatório geral. *Revista de Saúde Pública*, **39**, 918-923. <http://dx.doi.org/10.1590/s0034-89102005000600008>
- [28] Andrade, L.H.S.G., Viana, M.C. and Silveira, C.M. (2006) Epidemiologia dos transtornos psiquiátricos na mulher. *Revista de Psiquiatria Clínica*, **33**, 43-54. <http://www.scielo.br/pdf/rpc/v33n2/a03v33n2.pdf>  
<http://dx.doi.org/10.1590/S0101-60832006000200003>
- [29] Boyd, R.C., Diamond, G.S. and Bourjolly, J.N. (2006) Developing a Family-Based Depression Prevention Program in Urban Community Mental Health Clinics: A Qualitative Investigation. *Family Process*, **45**, 187-203. <http://www.ncbi.nlm.nih.gov/pubmed/16768018>  
<http://dx.doi.org/10.1111/j.1545-5300.2006.00090.x>
- [30] Panzarella, C., Alloy, L.B. and Whitehouse, W.G. (2006) Expanded Hopelessness Theory of Depression: On the Mechanisms by Which Social Support Protects against Depression. *Cognitive Therapy Research*, **30**, 307-333. <http://dx.doi.org/10.1007/s10608-006-9048-3>
- [31] Frank, M.H. and Rodrigues, N.L. (2006) Depressão, ansiedade, outros distúrbios afetivos e suicídio. Em: Freitas, E.V., Py, L., Cançado, F.A.X., Doll, J. and Gorzoni, M.L., Eds., *Tratado de Geriatria e Gerontologia*, Koogan, Rio de Janeiro, 376-387.
- [32] Lovisi, G.M., Milani, I., Caetano, G., Abelha, L. and Morgado, A.F. (1996) Suporte social e distúrbios psiquiátricos: Em que base se alicerça a associação? *Informação Psiquiátrica*, **15**, 65-68.
- [33] Langford, C.P.H., Browsher, J., Maloney, J.P. and Lillis, P. (1997) Social Support: A Conceptual Analysis. *Journal of Advanced Nursing*, **25**, 95-100. <http://dx.doi.org/10.1046/j.1365-2648.1997.1997025095.x>
- [34] Chou, C.C., Robb, J.L., Clay, M.C. and Chronister, J.A. (2013) Social Support as a Mediator between Internalized Stigma and Coping Behaviors of Individuals with Substance Abuse Issues. *Rehabilitation Research, Policy, and Education*, **27**, 104-107. <http://dx.doi.org/10.1891/2168-6653.27.2.104>
- [35] Silva, N.M., Piassa, M.D.P., da Costa Oliveira, R.M. and Duarte, M.S.Z. (2014) Depressão em adultos com câncer. *Ciência Atual—Revista Científica Multidisciplinar das Faculdades São José*, **3**, 2-14. <http://inseer.ibict.br/cafsj/index.php/cafsj/article/view/48>
- [36] Messias, C.R. (2014) Sintomatologia depressiva e associações com dor crônica, saúde geral e suporte social em pacientes fibromiálgicos e oncológicos. Dissertação, Universidade São Francisco, Itatiba, São Paulo.
- [37] Lee, M.K., Park, S., Lee, E.S., Ro, J., Kang, H.S., Shin, K.H., et al. (2010) Social Support and Depressive Mood 1 Year after Diagnosis of Breast Cancer Compared with the General Female Population: A Prospective Cohort Study. *Support Care Cancer*, **19**, 1379-1392. <http://dx.doi.org/10.1007/s00520-010-0960-4>
- [38] Hann, D., Baker, F., Denniston, M., Gesme, D., Reding, D., Flynn, T., Kennedy, J. and Kieleyka, R.L. (2002) The Influence of Social Support on Depressive Symptoms in Cancer Patients: Age and Gender Differences. *Journal of Psychosomatic Research*, **52**, 279-283. [http://dx.doi.org/10.1016/S0022-3999\(01\)00235-5](http://dx.doi.org/10.1016/S0022-3999(01)00235-5)
- [39] Brown, L.F., Kroenke, K., Theobald, D.E., Wu, J. and Tu, W. (2010) The Association of Depression and Anxiety with Health-Related Quality of Life in Cancer Patients with Depression and/or Pain. *Psycho-Oncology*, **19**, 734-741. <http://dx.doi.org/10.1002/pon.1627>
- [40] Huang, C.Y. and Hsu, M.C. (2013) Social Support as a Moderator between Depressive Symptoms and Quality of Life Outcomes of Breast Cancer Survivors. *European Journal of Oncology Nursing*, **17**, 767-774. <http://dx.doi.org/10.1016/j.ejon.2013.03.011>
- [41] Cardoso, H.F. and Baptista, M.N. (2014) Escala de Percepção do Suporte Social (versão adulta)—EPSUS-A: Estudo das qualidades psicométricas. *Psico-USF*, **19**, 499-510. <http://www.scielo.br/pdf/pusf/v19n3/13.pdf>
- [42] Ciconelli, R.M., Ferraz, M.B., Santos, W., Meinão, I. and Quaresma, M.R. (1999) Tradução para a língua portuguesa e validação do questionário genérico de avaliação de qualidade de vida SF-36 (Brasil SF-26). *Revista Brasileira de Reumatologia*, **39**, 143-150. <http://www.scielo.br/pdf/csc/v16n7/10.pdf>
- [43] Baptista, M.N. (2011) Escala Baptista de Depressão—(Versão Ambulatorial)—EBADEP-HOSP-AMB. Programa de Pós Graduação Stricto Sensu em Psicologia da Universidade São Francisco, Itatiba, São Paulo.
- [44] Rodriguez, M.S. and Cohen, S. (1998) *Social Support: Encyclopedia of Mental Health*. Academic Press, New York.
- [45] Servelhere, K.R., Fernandes, Y.B., Ramina, R. and Borges, G. (2011) Aplicação da escala SF-36 em pacientes operados de tumores da base do crânio. *Arquivos Brasileiros de Neurocirurgia*, **30**, 69-75.

- [46] Spiegel, D. and Giese-Davis, J. (2003) Depression and Cancer: Mechanism and Disease Progression. *Biological Psychiatry*, **54**, 269-282. <http://www.ncbi.nlm.nih.gov/pubmed/12893103>  
[http://dx.doi.org/10.1016/s0006-3223\(03\)00566-3](http://dx.doi.org/10.1016/s0006-3223(03)00566-3)