



**“Emotions words can’t translate”: Studying alexithymia in a
sample of women with breast cancer**

**“Emoções que as palavras não traduzem”: Estudo da alexitimia
numa amostra de mulheres com cancro de mama**

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ORIGINAL



Abstract

This study aims to characterize alexithymia in a sample of women with breast cancer and to analyze the relationship of alexithymia with quality of life perception and with a set of disease specific symptoms from the Quality of Life Questionnaire (QLQC-30) and Breast Cancer Module (QLQ-BR23). Our sample consists of 85 women with breast cancer that are receiving treatment in a hospital in Porto, with a mean age of 47 years ($M = 46.99$, $SD = 7.39$). In clinical terms, 44.7% of the sample is between the 2nd and 6th month after cancer diagnosis, 63.5% went through a total mastectomy and 89.4% are going through or have already finished chemotherapy. The results show that women in our sample are significantly more alexithymic than the regular population and that the presence of alexithymia seems to hinder the adjustment to the disease, since it is associated with worse perceptions on the functional scales, greater perceptions of physical symptoms and side effects from anticancer treatments.

Keywords: breast cancer, alexithymia, quality of life

Resumo

Este estudo pretende caracterizar a alexitimia numa amostra de mulheres com cancro de mama e analisar a relação da alexitimia com a perceção de qualidade de vida e com os sintomas físicos relacionados com a doença, do *Quality of Life Questionnaire (QLQC-30)* e do *Breast Cancer Module (QLQ-BR23)*, instrumentos utilizados para este estudo. A amostra é constituída por 85 mulheres com cancro de mama utentes de um Hospital do Porto, com uma média de 47 anos ($M=46.99$, $DP=7.39$). Em termos clínicos, 44.7% da amostra encontra-se entre o 2º e o 6º mês após o diagnóstico de cancro de mama, 63.5% realizou mastectomia total e 89.4% encontra-se a realizar ou já realizou quimioterapia. Os resultados encontrados demonstram que as mulheres com cancro de mama da nossa amostra são significativamente mais alexitimicas do que as mulheres da população normativa e que a presença da alexitimia na nossa amostra parece prejudicar a adaptação à doença, uma vez que está associada a perceções mais negativas sobre as escalas de funcionamento, a uma maior perceção sobre a presença de sintomas físicos e efeitos colaterais associados aos tratamentos antineoplásicos.

Palavras-chave: cancro de mama, alexitimia, qualidade de vida

Introduction

Breast cancer is the malignancy that most affects the female population. It's estimated that, over a lifetime, one in nine women will develop this disease (Fernandez-Delgado et al., 2008). Studies on this condition have registered a significant increase in incidence, but cases of death have been declining in recent decades. Due to technological advancements in medical sciences, we are witnessing a growing optimism regarding the treatment of cancer and increased survival rates of about 84% within 5 years after treatment (Brenner & Hakulinen, 2006).

Nevertheless, breast cancer continues to be an adverse and potentially traumatic life-event, with treatments that are usually prolonged and uncertain, accompanied by high biopsychosocial and spiritual needs, with a deep and lasting impact in quality of life (Montarezi, 2007).

In order to better identify the factors that may interfere with the risk of

psychosocial dysfunction in this population, it's important to know the variables that may put at risk and/or protect the quality of life of these women (Silva, Bettencourt, Moreira, & Canavarro, 2011).

The importance of emotional expression and its consequences on a physical and psychological level has been increasingly studied by health psychology, because of its critical role in diseases (Fonte, 1993), including cancer (Graves et al., 2005). The study of alexithymia or “no words for feelings” (Fernandes & Tomé, 2002, p.97), arises in this context as a maladaptive coping mechanism (Iwamitsu et al., 2003) that has been shown to have a negative correlation with some dimensions included in the quality of life concept (Gritti et al, 2010; Shibata et al, 2014).

Alexithymia

Alexithymia is defined as the difficulty to recognize and express emotions (Manna et al., 2007).

Theoretically, alexithymics are described as individuals who demonstrate emotional difficulties, since they (1) fail to describe their emotions and feelings, (2) have difficulties dissociating emotions from bodily sensations, (3) trouble perceiving emotional states and desires of others, (4) expressionless and introverted behavior and (5) low capacity for empathy (Fonte, 1993).

There are different perspectives on the role of alexithymia in cancer, since it can be considered primary or secondary to the disease (Sifneos, 1991; Taylor, Parker, Bagby, & Acklin, 1992). Alexithymia is conceptualized as either a stable personality trait or a defensive reaction and a coping mechanism in response to stressful events (Gritti et al., 2010). In these hypotheses alexithymia could, alternatively, be considered as a health risk factor or as a consequence of the emotional struggle that comes with facing cancer, working, in both cases, as a predictor of treatment outcome.

According to the first hypothesis, alexithymia has been regarded as a vulnerability factor (Vries, Forni, Voellinger, & Stiefel, 2012). Several studies have indicated alexithymia as a stable Type C Personality trait (Sifneos, 1991; Taylor, 1992; Vazquez et al, 2003). By contrast, some studies define alexithymia as a coping strategy secondary to certain traumatic events, taking place as a defense mechanism against the intense emotion that comes with a serious disease. Thus, it would be a transitory state, softening up after remission (Fernandes & Tomé, 2001; Graves et al., 2005). This theory that alexithymia would decrease with survival is consistent with studies of the possibility of a post-traumatic growth and self-discovery that, in turn, would provide better emotional expression (Graves et al., 2005).

In both cases, being a personality trait or a coping mechanism secondary to cancer, studies seem to indicate that alexithymia impairs quality of life, since it

is a strong indication of a repressive coping mechanism and, therefore, maladaptive to the cancer process (Iwamitsu et al., 2003). Moreover, a good emotional expression seems to be associated with a higher psychosocial well-being, increased confidence and assertiveness, a better fighting spirit and an improved quality of life (Lieberman & Goldstein, 2006; Mantani et al., 2007).

Alexithymia is also hypothesized to be an important factor in the development of medically unexplained physical symptoms (Gritti et al., 2010). The association between alexithymia and cancer is still unclear and controversial. The investigation of this variable in chronic illnesses such as cancer, highlights intriguing issues regarding the nature and the role of this construct. Some studies have detected high alexithymia rates in cancer patients compared to healthy controls. Manna et al. (2007) compared a group of women with breast cancer with a control group (women without the

disease), concluding that women with breast cancer are significantly more alexithymic. Watson, Pettingale and Greer (1984, as cited in Graves et al., 2005) also show that women with this condition tend to respect social norms, intend to be seen as good people and have a strong tendency to deny, suppress or internalize their feelings. In Portugal, we found only one study by Guerra, Pinto and Mariano (2007), indicating a prevalence of alexithymia in women with breast cancer two times higher than the regular population. No significant differences were found on a sociodemographic level or by type of treatment (whether surgical or adjuvant), so the authors raise the hypothesis that distress induced by the disease, has such a magnitude, that it may cause alexithymia by itself.

However, the role of alexithymia in cancer patients seems to be more complex and requires further investigation.

Quality of life

A breast cancer diagnosis presents different challenges for women (Holland & Holahan, 2003). As a chronic disease, it seems to affect and modify multiple domains of quality of life with consequences that can last for years (Pinto & Ribeiro, 2006).

There are different definitions of the concept of quality of life. In 1993, the World Health Organization proposed a definition that considers "the perception of the individual about their position in life, in the context of their culture and their value systems, in relation to their goals, expectations, standards and concerns" (WHOQOL Group, 1994, 1995, as cited in Paredes et al, 2008, p 74; Pimentel, 2006).

Due to a growing interest in the study of quality of life within the framework of the disease, the term "quality of life related to health" emerges (Pimentel, 2006, p.25). This concept represents the individual responses to the effects of the disease (Costa et al, 2013),

comprising a multidimensional perspective that includes physical, psychological, social and spiritual dimensions, as well as the evaluation of health services (Pimentel, 2006; Pinto & Ribeiro, 2006).

In oncology setting, studies evaluating the quality of life in cancer patients have come to different conclusions. Some authors advocate the importance of evaluating this variable in breast cancer, as this disease is characterized by an incidence in the female population and it is associated with a wide range of biopsychosocial consequences, such as on a working level (chemobrain, difficulties moving the upper limbs affected by the disease), on a social and family level (sexual life, fertility issues) and on a personal level (self-image, self-esteem) (Holland & Holahan, 2003; Safarinejad, Shafi, & Safarinejad, 2013). Other studies report that the quality of life of women with breast cancer is better than expected (Lopes Ribeiro, & Leal, 1999).

Recent Portuguese studies show that women with breast cancer have a moderately positive perception of their quality of life (Rebelo, Rolim, Carqueja, & Ferreira, 2007). This seems to suggest that cancer may affect a woman's quality of life less than what is generally expected and that, despite the fact that breast cancer is a potentially traumatic life-event, patients tend to show normal operating standards, which can be an important indicator of their resilience (Knobf, 2007).

Alexithymia and quality of life in oncology

Studies that focused on dispositional tendencies to suppress emotions, have been associating this trait with poorer adjustment to the cancer experience, indicating that it has a negative relationship with physical and psychological health (Classen, Koopman, Angell & Spiegel, 1996; Watson, Greer, & Rowden, 1991).

Research points to several mechanisms through which emotional suppression may influence symptom experiences and well-being during cancer treatments (Schlatter & Cameron, 2010). On the one hand, alexithymics may be motivated to hide their experiences and under-report side effects of treatment in the attempt to be brave and to minimize the distress of their caregivers. On the other hand, emotional difficulties may exacerbate and predict the severity and perception of specific symptoms like fatigue (Gritti et al., 2010), constipation, pain (Porcelli et al., 2007; Shibata et al., 2014), nausea and vomiting (Ashkhaneh et al., 2015). Studies seem to be more consistent on this last hypothesis, showing that alexithymia is related to higher levels of cancer-related worries and to a poorer quality of life (Grassi, Rossi, Sabato, Cruciani, & Zambelli, 2004). The physiological effect of alexithymia seems to enhance stress-related action of hypothalamic–pituitary–adrenocortical

(HPA) processes and, therefore, it might increase the experience of autonomic and immune-related symptoms during treatments (Schlatter & Cameron, 2010).

However, the majority of the research found on this subject is focused on demonstrating the relation between emotional difficulties by measuring anxiety, depression and anger and studying its association with quality of life. Very few studies have evaluated alexithymia and its impact on cancer symptoms and treatments side effects with relation to quality of life perceptions (Grassi, Caruso, & Nanni, 2013). Although one of the major challenges of the cancer experience is coping with treatment and its symptomatic side effects, research also seems to focus on a limited set of chemotherapy side effects like fatigue, pain, nausea and vomiting. Consequently, Grassi et al. (2013) point to the need of more research aiming to evaluate the prevalence of alexithymia in oncology settings, while considering a more

dimensional inclusive approach and other clinically relevant symptoms.

Taking that into consideration and, to our knowledge, this is the first research that aims to study the role of alexithymia in the quality of life of women with breast cancer, evaluating its impact on a new set of symptoms, usually reported by patients while undergoing treatment.

Objectives

This study has two main objectives. The first, is to characterize alexithymia in our sample of women with breast cancer, considering the lack of research on this variable in clinical populations. The second aim of this study, is to analyze the relation of alexithymia with quality of life perceptions and, also, with the most reported disease specific symptoms. In order to accomplish this goal, we have selected the European Organization for Research and Treatment of Cancer Quality of Life Questionnaire (QLQC-30) and

Breast Cancer Module (QLQ-BR23). This instruments aim to evaluate the patients' quality of life perceptions and to assess the presence of a wide range of clinical relevant symptoms, currently associated with the disease (see Instruments section for a more detailed description).

Methods

Participants

Our sample consists of 85 women with breast cancer that are receiving treatment in a hospital in Porto (Portugal). It's a non - probabilistic convenience sample, selected based on the patients availability and willingness to participate. Despite the fact that non-probabilistic samples present some limitations, like the lack of representativeness regarding the population and the impossibility of generalizing the results, in this case, this method was the only one possible. These methodology was chosen considering that studies with this population are difficult to accomplish due to ethic motives, the disease and treatments side effects,

prolonged hospitalizations and impact on well-being.

The mean age is 47 years ($M = 46.99$, $SD = 7.39$) and the mean education is 10 and a half years ($M = 10.45$, $SD = 5.47$). They are mostly married (76.5%) and with children (71.8%). In clinical terms, 44.7% of the sample is between the 2nd and 6th month after the diagnosis, 63.5% went through a total mastectomy and 89.4% is going through or has already finished chemotherapy.

Instruments

For data collection, we used four self-report instruments. The Sociodemographic and Clinical Questionnaire includes two sections, the first on sociodemographic data and the second on the clinical characteristics of the sample.

The Toronto Alexithymia Scale (TAS-20), is the most commonly used tool to evaluate the cognitive and affective deficits of alexithymia. It's a 5-point Likert

scale with 20 items. The results are obtained through the sum of all responses and may vary between 20 and 80. Individuals with scores higher or equal to 61 are considered alexithymic, while scores lower or equal to 51 are non alexithymic. The results scored between 52 and 60 (included), correspond to a “border zone”.

The original version - "Toronto Alexithymia Scale (TAS-20)" - was developed by Taylor, Ryan and Bagby. In this study, we used the Portuguese version from Prazeres, Parker, & Taylor (2000). After the translation process, the authors demonstrated a cross-linguistic equivalence between the original and the Portuguese version, applying both versions in a non-clinical sample of bilingual subjects ($r = .91$, $p < .001$). The internal consistency of the complete instrument, reveals good psychometric qualities with a Cronbach's alpha coefficient of .79 in both samples. In terms of stability, this Portuguese version showed an excellent

accuracy test-retest for three weeks ($r = .90$, $p < .001$) and for a six weeks interval ($r = .86$, $p < .001$). Overall, these results support the use of the TAS-20 as an instrument to evaluate alexithymia in our population (Prazeres et al., 1998). No studies were found using this instrument in clinical samples.

The European Organization for Research and Treatment of Cancer Quality of Life Questionnaire (QLQC-30, v. 3.0) is an internationally used instrument, with 30 items that assess quality of life in cancer patients. It is a questionnaire used or considered appropriate for use with cancer patients from the moment of diagnosis to long survivorship (Aaronson et al., 1993). It is composed by a global quality of life subscale; 5 functional subscales (physical, role, cognitive, emotional, and social); 3 symptom subscales (fatigue, pain, and nausea/vomiting); and single items for the assessment of additional symptoms commonly reported by cancer patients (dyspnoea, appetite loss, sleep disturbance,

constipation, and diarrhoea); one more item related to the perceived financial impact of cancer and cancer treatment. All items are ranged in a 4-point Likert scale (1 = None; 4 = Very), except 2 items (29 and 30) that are filled on a 1 to 7 scale (1 = Poor; 7 = Great). All of the scales and single item scales range in score from 0 to 100, obtained by specific algorithms. Higher scores for functional scales and global quality of life represent higher/healthy level of functioning and quality of life. However, higher score for a symptom scale/item represents a higher level of symptomatology or problems.

This questionnaire was designed and structured for international use, being currently translated and validated in 38 languages. Study of the Portuguese version metric properties was conducted by Pais-Ribeiro, Pinto and Santos (2008). The authors used a heterogeneous cancer patient sample of 933 subjects, with at least one month after diagnosis of cancer until 31 years after diagnosis. 294 subjects

of this sample were women with breast cancer.

The study of reliability through Cronbach alpha shows an appropriate internal consistency for multi item functional and symptom scales, with values ranging from .57 to .88. When comparing the Portuguese version with the original and with other versions from different languages and cultures (Japanese, Turkish, Chinese and Spanish), the authors found comparable values, suggesting an adequate functional equivalence of the questionnaire across languages and cultures. A retest for 274 patients was conducted six months after the first evaluation, and for functional dimensions the values are, 0.31, 0.16, 0.28, 0.06, and 0.19, respectively for physical functioning, role functioning, cognitive functioning, social functioning, and global quality of life. For symptom scales values are, 0.35, 0.21, 0.39, 0.35, 0.29, 0.38, 0.32 and 0.21, respectively for, fatigue, nausea and vomiting, pain, dyspnea, appetite loss,

sleep, constipation, diarrhea. These are moderate values and substantially higher than functional scales (Pais-Ribeiro, et al., 2008).

In conclusion, the authors affirm that the Portuguese version of the QLQC-30 has good metric properties and measures the same constructs the same way as the versions from other languages and cultures. Therefore, it is appropriate to be applied to people with cancer disease.

Since it is a general measure, there are several modules depending on the specific cancer disease.

The Breast Cancer Module (QLQ-BR23) is an extension of the QLQ-C30, specific for breast cancer (Aaronson et al, 1993). It consists of 23 questions divided into four functional items (body image, sexual functioning, sexual enjoyment and future perspectives, after treatment ends) and four symptom items (treatment side effects, breast symptoms, arm symptoms and upset by alopecia). All items are

presented on a 4-point Likert scale (1 = None; 4 = Very). All functional scales and symptoms items range from 0 to 100, obtained by specific algorithms. Higher values on the functional scales correspond to a higher functional capacity, while in contrast, the highest values in the symptoms items, correspond to more symptoms, thus to a lower quality of life (Fayers et al, 2001). It should be noted that for sexual function and sexual enjoyment, a higher value corresponds to a better functioning.

QLQ-BR23 was translated by the organization itself in an intercultural study (EORTC), from English into other languages (including Portuguese), using a process of translation and back translation. No studies were found with its metric properties in Portugal. International studies show good psychometric qualities, with good validity and consistency values. It has been an instrument widely applicable in patients with breast cancer (Fayers et al., 2001) and it can be used in patients

who are at different stages of the disease, covering the different types of treatment (surgery, chemotherapy, radiotherapy and hormone therapy).

The use of EORTC QLQC-30 and module QLQ-BR23 in this study, implied an application for permission to the EORTC, who personally released the instruments for the study purposes.

Procedure

The project was presented to the Hospital Ethics Committee, in order to be authorized by the Director of Administration. After the approval, the first approach was made in the waiting room of the Breast Cancer Clinic, while the patients awaited for their oncology consults. Instruments were applied in an office of this Clinic, since the beginning of February until May 2012. The sample is composed by all women with breast cancer that, after the clarification of the study's objectives and confidentiality issues, have

shown interest in participating. The evidence of cognitive and/or physical deficits that could hinder the completion of the questionnaires were the only exclusion criteria.

Data analysis

Descriptive data (means and standard-deviations) and parametric tests for means comparison (t test) were performed. In order to measure the association between our variables we used Pearson's correlation. Data analysis was performed using the Statistical Package for Social Sciences (SPSS), version 19.0.

Results

The diagnosis of alexithymia obtained from the scores of the TAS-20, shows that 47.1% of our sample is alexithymic, 31.8% are not and the remaining 21.1% are located in the "border zone". Our study has a mean value of 58.7 which, considering the findings of Parker's and Taylor's (2000) adaptation of TAS-20

to the Portuguese population ($M = 36.7$) and, after performing the student's t test for one sample, reveals that alexithymia levels in our sample are significantly higher than the regular population ($t(84) = 4.14, p < .01$).

Table 1 shows the values of Pearson's r correlations between alexithymia, the functional scales and the symptom items from QLQC-30.

Table 1

Pearson's R Values From The Correlations Between Alexithymia, The Functional Scales And The Symptom Items From QLQC-30 (N = 85).

	Alexithymia
Global Health Status	-.529**
Functional Scales	
Physical functioning	-.431**
Role functioning	-.544**
Emotional functioning	-.600**
Cognitive functioning	-.254*
Social functioning	-.580**
Symptom Items	
Fatigue	.583**
Nausea and vomiting	.398**
Pain	.501**
Dyspnea	.178
Insomnia	.440**
Loss of appetite	.396**
Obstipation	.211
Diarrhea	.227*
Financial difficulties	.770**

Note: * $p < .05$, ** $p < .01$.

The analysis of table 1 shows that alexithymia correlates negatively with the global health status of women with breast cancer from our sample ($r = -.529, p < .01$). Additionally, alexithymia presents a significant negative correlation with all functional scales from the QLQC-30, indicating that the most alexithymic women have a worse perception of their emotional ($r = -.600, p < .01$), social ($r = -.580, p < .01$), role ($r = -.544, p < .01$), physical ($r = -.431, p < .01$) and cognitive functions ($r = -.254, p < .05$) during the disease. In terms of clinical symptoms,

major results seem to indicate that the more alexithymic participants are, the greater the perception of fatigue and tiredness ($r = .583, p < .01$), pain ($r = .501, p < .01$), insomnia ($r = .440, p < .01$), nausea and vomiting ($r = .398, p < .01$), loss of appetite ($r = .396, p < .01$) and diarrhea ($r = .227, p < .05$).

Table 2 shows the values of Pearson's r correlation between alexithymia, the functional scales and the symptom items from the Breast Cancer Module (QLQ-BR23).

Table 2

Pearson's R Values From The Correlation Between Alexithymia, The Functional Scales And The Symptom Items From QLQ-BR23.

	Alexithymia
Functional Scales	
Body image	-.499**
Sexual functioning	-.071
Sexual enjoyment	-.228
Future perspective	-.464**
Symptom Items	
Treatments side effects	.637**
Breast symptoms	.319**
Arm symptoms	.219*
Upset by alopecia	.451**

Note: * $p < .05$, ** $p < .01$.

Regarding the correlation between alexithymia, the functional scales and the symptom items from QLQ-BR23, table 2 demonstrates statistically significant negative correlations with some scales and some important symptoms specific to breast cancer and its surgical and adjuvant treatments. Results indicate that the more alexithymic women are, the worse is their assessment of their body image ($r = -.499$, $p < .01$) and their prospects for the future ($r = -.464$; $p < .01$).

There were no statistically significant results in relation to sexual functioning. It should be noted that the size of our sample in these items is smaller, since only part of the participants agreed to answer questions related to their sexuality ($N = 57$).

Regarding the symptom items, alexithymia has statistically significant positive correlations with all symptoms from QLQ-BR23. This indicates that the women in our sample that are more alexithymic also have a worse and a

greater perception of the side effects from treatments ($r = .637$, $p < .01$), are more upset with alopecia ($r = .451$, $p < .01$), have more breast symptoms ($r = .319$, $p < .01$) and more complaints about the affected arm ($r = .219$, $p < .05$).

Discussion

Answering the first objective of this study that aims to (1) characterize alexithymia in a sample of women with breast cancer, our results show that our sample is significantly more alexithymic than women from the regular population (without the disease). These findings are consistent with pre-existing literature found by Guerra, Pinto and Mariano (2007) and Manna et al. (2007) in women with breast cancer, where the prevalence of alexithymia was 40 and 36%, respectively. They also confirm that the prevalence of alexithymia in this population appears to be more than double than the regular population (Guerra, Pinto and Mariano, 2007), estimated to be

between 10 and 20% (Fernandes & Tomé, 2001). This seems to suggest that a large percentage of our participants have difficulties coping with the emotional tasks required during the adjustment to cancer.

The second aim of this study is to (2) analyze the correlation of alexithymia with the quality of life perception and with the disease symptoms indicated on the Quality of Life Questionnaire (QLQC-30) and on the Breast Cancer Module (QLQ-BR23), instruments by the European Organization for Research and Treatment of Cancer (EORTC) used in this study. Our findings suggest that the most alexithymic participants are the ones with lower perceptions about their global quality of life. This reinforces the negative effect of alexithymia in our sample, which is consistent with other studies that indicate that alexithymia may be a risk factor in the adjustment to breast cancer (Sousa, Guerra & Lencastre, 2015).

This can be sustained when analyzing the relationship of alexithymia

with different aspects of quality of life. Our findings seem to indicate that the presence of this variable is associated with a lower perception of different functioning categories, indicating that the most alexithymic patients have a worst perception of their emotional, social, role, physical and cognitive functions after diagnosis.

In our sample, a bad expression of emotions and feelings seems to be related to the perception of physical suffering associated with breast cancer, because of the greater perception of physical side effects associated with the anti-cancer treatments, whether surgical or adjuvant. Also, the most alexithymic women seem to be more upset with alopecia and have a lower body-image, findings that suggest that this variable might have an effect on self-esteem related to cancer treatments.

Our study findings seem to be consistent with previous literature, indicating that emotional difficulties may exacerbate and predict the severity and

perception of symptoms (Schlatter & Cameron, 2010). In our sample, the most alexithymic patients, also have greater perception of their clinical symptoms presence. Considering this, we might hypothesize that, while having emotional difficulties, the women with breast cancer who have alexithymia, might focus more on their physical and somatic symptoms, and therefore, exacerbate the perception of their presence. This can, in some cases, cause misinterpretations and misunderstandings about the signs of the disease (Taylor, Parker, Bagby, & Acklin, 1992), which instead of a physiological origin, would have a psychosomatic nature. This hypothesis is also consistent with the theory of the physiological effect of alexithymia, in which this variable seems to enhance stress-related action of hypothalamic–pituitary–adrenocortical (HPA) processes and, therefore, it might increase the experience of autonomic and immune-related symptoms during treatments (Schlatter & Cameron, 2010).

Conclusion

This study seems to point out the negative impact of alexithymia in the quality of life of women with breast cancer, showing that it may be a risk factor in the adjustment to the disease. As a personality trait or a repressive coping mechanism of avoidance and maladaptation, in both cases, alexithymia appears to significantly impair various dimensions of quality of life of our sample. Taking that into consideration, this study reinforces the importance of greater and better expression of emotions and feelings during the experience of this disease. The repression of emotions during the experience of breast cancer and its impact on life and suffering seems to significantly impair the assessment made by women in our sample about their physical symptoms and the side effects of the disease and its treatments. This shows that emotional expression seems to constitute an important aspect for a better

adjustment to potentially traumatic events, such as breast cancer.

Based on this study's findings, we can retrieve some integrative conclusions that translate into implications for the intervention and support of cancer patients. We suggest that psychological interventions should demystify the negative emotional reactions to cancer, which are normative in the course of the disease, in order to reduce the coping styles of avoidance and emotional repression. This includes the need to deconstruct beliefs that reinforce the social stigma surrounding cancer that are present in both general population and amongst health professionals, concerning the tendency to avoid the expression of negative emotions.

In a clinical context, and considering the example of Emotions Focused Therapy (EFT), the patients should be encouraged to reflect and verbalize their negative emotions, overcoming avoidance and repression. The

psychologist should guide them to increase awareness of the sensations felt in their body in order to be able to experience them and assign words to the experience (focus) (Greenberg & Safran, 1987).

We also suggest interventions focused on emotional regulation and distress tolerance, by teaching symptom monitoring techniques, strategies to identify, appoint and recognize emotions associated with physical discomfort, as well as the discussion of cognitions associated with those emotions. Moreover, important interventions that explore the acceptance, tolerance and validation of emotions should be performed, aiming to increase the access to positive emotions and to reduce the vulnerability to negative ones by using coping strategies, such as relaxation and emotion-written disclosure.

For further investigations, it is important to keep studying the role of alexithymia in cancer, because of its potential influence on the underestimation of psychological suffering and psychiatric

outcome. In order to characterize alexithymia as a primary trait of personality related to cancer development or as an emotional state and coping mechanism secondary to cancer, it would be necessary to perform an experimental study, controlling the effect of this variable and comparing it within an experimental group and a control group. Also, it would be interesting to analyze the effect of alexithymia over time, allowing us to check if the relation between cancer and alexithymia would be causal or not and, therefore, analyze its potential influence on cancer development. Although this type of

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research would be very interesting, it is also very difficult to be performed and implemented within this population.

Another suggestion for further investigations using this variable, would be the study of its impact on cancer progression, since recent, but very few studies, have suggested a relation between emotion suppression and the immunological system and, therefore, with biological markers of illness severity, implied in cancer invasion and progression (Messina, Fogliani, Paradiso, 2011).

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