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## Positive psychology in women with breast cancer

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### Abstract

There are some factors that promote the personal development and psychological wellbeing, which we want to increase and adapt in the patient's life to improve their quality of life. The aim of this study is to analyze some components of Positive Psychology in women with breast cancer, like resilience, sense of humor and self-efficacy, and to observe their relation with emotional wellbeing and variables like type of surgery and type of treatment. The sample of participants consisted in 131 women diagnosed with breast cancer from different Spanish hospitals. They were evaluated by a first interview where we collected demographic data, information about disease and personal strengths; and the Hospital Depression and Anxiety Scale (HADS) to evaluate emotional wellbeing. We found relationships between emotional wellbeing and protective factors proposed. Emotional well-being was associated with a sense of humor, resilience and how to understand the disease and self-efficacy, presenting fewer symptoms of anxiety and depression.

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**Keywords:** Positive psychology; breast cancer; wellbeing.

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## 1. Introduction

The diagnosis, the disease process and the treatment for breast cancer supposed a rupture and readjustment in patient's life.

What we find in the studies analyzed is that breast cancer patients are more susceptible to depression and anxiety after been diagnosed with the disease and with the treatment, due both to the possible breast mutilation as side effects of chemotherapy (Zhao et al., 2001).

Habitually, have been found responses such as depression and anxiety that affect emotional well-being and quality of life of women (Carver et al., 2005; Fertig, 1997; Ganz et al., 2002; Hanson Frost et al., 2000; Schover et al., 1995).

In addition, there are a series of intervening variables influencing in the emotional well-being, such as the type of surgery, adjuvant therapy, social support, body image, self-esteem and the personal strength of the patient.

From Positive Psychology has been addressed the study of emotional wellbeing in patients with breast cancer, and the factors most studied are resilience, sense of humor and self-efficacy.

## 2. Problem Statement

Since Aristotle, emotional wellbeing and happiness were some of the interests of those studied in different fields. Nevertheless, due to circumstances and the fact that having to cover other issues, such as combating the disease and suffering. The study of positive emotions has been seen from the background and has not been studied in depth yet.

Positive Psychology was developed by Martin Seligman and aims to improve the quality of life and prevent the onset of mental disorders and possible pathologies. This is not to correct defects and repairing what is broken but rather to build skills and preventative work. Positive Psychology emerged as an attempt to overcome the 65 % success that in psychotherapies have been unable to overcome (Seligman & Csikszentmihalyi, 2000).

Positive emotions have contributed to creating the right conditions for our ancestors to develop the necessary physical skills to overcome predatory strategy, psychological abilities for discovering and inventing possibilities and suitable understanding for generating links between people and learning social skills helping behaviors, psychological abilities for discovering and making possibilities of surviving and the appropriate social skills to build links between people and learning the behavior to support others (Frederickson, 2003).

Positive emotions are related in an indirect and direct way with health. Is possible to pose that they are useful to prevent diseases, to reduce the intensity or duration of them and achieve levels of subjective wellbeing (Lyubomirsky, King & Diener, 2005).

In a study by Danner, Snowdon & Friesen (2001) realized in 1932 it had be analyzed the health and longevity of 180 nuns. They studied their writings and how nuns reflected in them positive emotions. This yielded that the nuns who reflect this positive emotions had better health and lived an average of 10 years longer that the ones who not express emotions. 90% of the nuns of the happiest group were still alive after 85 years in contrast to 34% of the least happy group. In this study we can conclude that positive emotions promote longevity.

Another study of 2282 subjects over age 65 with 2 years of follow-up reveals that the experience of positive emotions protected persons over the negative effects of aging, and most

importantly, successfully predicted who would live and who would die (Ostir, Markides, Black & Goodwin, 2000).

Several experimental studies have shown that cardiovascular recovery in people who had seen excerpts from horror movies (to experience fear) was quicker when he later saw clips that elicited a positive emotion than viewing emotionally neutral film or that provoked sadness. Besides, the participants who smiled spontaneously as they watched an extract from a sad film, recovered in 20 seconds ahead of those who never smiled (Fredrickson & Levenson, 1998).

In another experiment, it had been provoked anxiety reactions in a group of students whom been inform that have to present in one minute, in front of a camera, a speech about why they considered themselves good friends. Four groups were formed: two watched films that elicited positive emotions, another saw a film that elicited sadness, and a fourth group served as a control. Subjects who had seen the films eliciting positive emotions had cardiovascular recovery faster than the control group and much faster than those who watched the sad film (Fredrickson, 2003).

The first variable to be analyzed in this research is the resilience or resistance, defined as the ability of a person or group to continue projecting into the future, despite destabilizing events of hard life conditions and severe traumas. It is the ability to emerge unscathed from an adverse situation, learn from it and improve. It includes two aspects: resist and recovering the event. In a traumatic event, resilient people are able to maintain a stable balance without affecting their daily lives and remain functional levels despite the traumatic event.

It differs from the recovery in the sense that it involves a gradual return to functional normality, whilst resiliency reflects the ability to maintain a stable balance throughout the process.

The origin of the study of resilience it is based in the observation of individual behaviors of overcoming and developmental study of children who had lived in difficult conditions.

Resilience is not absolute nor is acquired once and forever, is a dynamic and evolving process that varies according to circumstances, the nature of the trauma, the context and the stage of life, and can be expressed in different ways according to culture of the subject (Manciaux, 2001).

It had been proposed some personality and environmental characteristics that promote resilient responses, such as self-confidence and self-coping skills, social support, they have a meaningful purpose in life and believe that you can learn from experiences.

In a study conducted by Frederickson and Tugade (2003), following the attacks in New York, found that resilient people cope with traumatic experiences using humor, creative exploration and optimistic thinking.

Usually, some characteristics of personality that appear most frequently associated with resilience are: hope, optimism, religious beliefs and extraversion.

In the work of Taylor, Lichtman & Wood (1984) he asked people who had been diagnosed with cancer if his life has changed and what has been those changes. 70% said that they do have changes, and 60% of them had been positive. In most cases, patients reported having learned to look at life differently and enjoy more of it (Taylor et al., 1984).

The second protective factor that we will analyze in this work is the sense of humor, which can be defined as a human capacity which is attributed numerous psychological, physical and social benefits. And the third factor, self-efficacy, allows patients perceive themselves able to control the situation and possessing the necessary skills.

Overall, resilience involves two factors. The first factor is the ability of the person to continue wholeness, healthy despite stressful situations and difficulties in which it is located. The second factor relates to obtaining beneficial results and the development of personal growth from such situations (Vanistendael, 1994; cit. in Manciaux, 2001).

There are two types of difficult situations, acute (such as attacks, hurricanes, etc.) and chronic, such as cancer. In contrast to acute stress, the distress in cancer usually it manifests more continuously and ambiguous (Hou et al., 2010).

In an investigation, where the emotional well-being of 287 women with breast cancer was studied, it had been observed that the resilient women (those who showed no distress over time) had different characteristics from the group of women who did showed distress. Resilient women were older, retained his chest and had high self-esteem and sense of personal control (Helgeson et al., 2004).

Besides these features, it is important to highlight the role of social support and satisfaction with the couple, which is associated with greater resilience in breast cancer (Hou et al., 2010).

In another interesting study, can be seen that resilience is related to the quality of interpersonal relationships, spirituality, personal growth, and an older age (Costanzo et al., 2009).

In short, resilience is a skill that helps us to overcome adversity and stressful situations. As we have noted, this is not an exceptional ability, but is based on common characteristics that all human beings possess in a greater or lesser measure. In the field of psycho-oncology this concept results very interesting because training resilience could suppose a big step in the coping of the disease.

Our second variable to investigate is sense of humor, which is defined as "one of the strengths of the human being, the ability to experience and stimulate a specific reaction, laughter (observable or not) and thereby achieve or maintain a state of positive mood" (Seligman & Csikszentmihalyi, 2000).

In many cases it has been seen that the sense of humor acts as a moderator of stress and depression, and allows greater psychosocial adjustment to traumatic experiences such as cancer (Martin & Lefcourt, 1983).

The sense of humor, as it discussed above, has been studied in relation to stressful events, such as having cancer, although not specifically breast cancer. There are few studies investigating the influence of humor in breast cancer, and in them the importance of observing this variable as a coping mechanism that may be useful to consider when implementing psychological treatments stands.

Finally, the third variable to be analyzed in this study is the self-efficacy, which was defined in 1977 by Albert Bandura as "a psychological state in which the person herself is capable of running behavior effectively under certain circumstances, judges and a certain level of difficulty". This theory has been extended to chronic diseases, including breast cancer. By itself, self-efficacy is presented as a factor of change towards more healthy habits. In this sense, self-efficacy has been linked to emotional state, psychosocial adjustment that increased self-care behaviors, adherence to treatment and attend screening programs.

So that, self-efficacy has been associated with various stages of breast cancer. At first, as a capacity for preventive behavior aimed at early detection (such as getting gynecological examinations, breast self-exams or mammograms regularly attend); and in later stages of the disease, such as control of vomiting during chemotherapy and maintaining a sense of control before a relapse.

The role of self-efficacy in breast cancer, according to Lam & Fielding (2006) refers to positive beliefs based on personal judgments about oneself on the availability of the necessary skills to achieve a result.

Self-efficacy determines the course of action of people and influences the level of perseverance to change situations (Bandura, 1982). Self-efficacy in breast cancer allows patients perceive themselves able to control the situation and have the necessary skills (Han et al., 2005).

In a study by Taylor et al. (1984), patients who felt to have control over their disease, had better psychological adjustment than those who thought they had no control about themselves and their illness. A total of 78 women with breast cancer, 51% believed it had control over the situation, and 49% do not. On the type of control that had, 51% of patients considered having control over their attitudes, and 46% of the medical regimen (diet, medication adherence, etc.).

Self-efficacy in breast cancer is related to a good regulation of stress, high self-esteem, better fitness and better adaptation to chronic disease (Bandura, 1997; Bishop, Knegsman, Beekman, & Deeg, 2004; Kuijer & Ridder, 2003, cited in Karademas et al., 2007). Nevertheless, low self-efficacy scores were associated with poorer psychological functioning between 2 and 6 months after diagnosis of the disease (Gallagher, Parle & Cairns., 2002, cited in Karademas et al., 2007) and greater communication problems with medical staff (oncologists, nurses, etc.) (Han et al., 2005).

In addition there has been an increase in psychological distress in those patients without feelings of self-efficacy (Han et al., 2005; Zachariae et al., 2003) and greater psychological adjustment, greater emotional well-being and quality of life in patients with high scores in self-efficacy (Han et al., 2005; Karademas et al., 2007; Lam & Fielding, 2006; Roger et al., 2008; Taylor et al., 1984).

Optimism is also directly related to self-efficacy, and it is postulated that optimism and a positive approach to the disease predict greater self-efficacy (Karademas et al., 2007; Lam & Fielding, 2006).

In regard to body image and sexuality, research conducted by Lam & Fielding (2006) have found significant positive relationships with self-efficacy, although these variables are mediated by the satisfaction that women have with their surgical operations. This research also noted that older women had higher scores in self-efficacy.

### **3. Research Questions**

In this research we will focus on analyzing three personal strengths in women with breast cancer: resilience, self-efficacy and sense of humor. Our main research question is: These personal strengths, can improve emotional wellbeing and the quality of life in patients with breast cancer?

### **4. Purpose of the Study**

The aim of this study is to analyze some components of Positive Psychology in women with breast cancer, like resilience, sense of humor and self-efficacy, and to observe their relation with emotional wellbeing and variables like type of surgery and type of treatment.

### **5. Research Methods**

### 5.1 Sample

The sample of participants consisted of 131 women diagnosed with breast cancer over a year ago and undergoing surgery, either breast-conserving surgery or mastectomy. Inclusion criteria were to have spent at least one year after chemotherapy or radiotherapy, they should not be in an advanced stage of the disease, be awareness to complete the testing, accept and sign the informed consent.

### 5.2 Assessment tools

To collect data were used the following instruments:

- Structured clinical interview which it included demographic and clinical data, self-efficacy, sense of humor and resilience. Self-efficacy, following the guidelines of Bandura (1982), was measured by mono-item: "Are you able to confront your situation? (none: 0 – a lot: 10)". For the sense of humor, it was evaluated by the items: "Do you think that the sense of humor helped you to adapt better to the disease? (none: 0 – a lot: 10)" and "How often do you do enjoyable activities a week? (none: 0 – a lot: 10). Resilience was measured by items "Since you have the disease what do you think is what helps you to feel better?" "What has meant for me to have had cancer?" "The suffering that I experienced could serve for something?", we try to know the meaning that the disease has had for the patient and the negative or positive impact it has had on his life.
- HADS Scale (Hospital Anxiety and Depression Scale of Zigmond & Snaith, 1983) to evaluate emotional well-being. It is a questionnaire of 14 items, composed of two subscales of 7 items, one of anxiety (odd items) and the other one of depression (pair items). The items in the anxiety subscale are selected based on the analysis and review of the Hamilton Anxiety Scale. Avoiding the inclusion of physical symptoms that could be confused by the patient with the symptoms of his own physical condition. The items in the depression subscale focuses on the area of anhedonia (loss of pleasure). It is evaluated on a Likert scale of 4 points (range 0-3). The cut-off points of the subscales are: 0-7: normal, 8-10 dubious, 11 or more: pathological. The time frame, even when the question are established in present, should refer to the previous week. It presents a reliability of .81.

### 5.3 Procedure

Patients were recruited from external consultations of the Oncology Unit, where they are attending a medical examination and were asked if they wanted to participate in the investigation. The process for collecting data was to give tests to patients who signed the informed consent, where anonymity and confidentiality is ensured in a unique moment of evaluation.

Once the data are collected, were encoded in a database and subsequently analyzed using SPSS 17.

The design of the research is correlational, although it is a one moment study in time (without intervention) and it cannot establish cause-consequence, it does allow quantify the relationships between key variables that explain the process of adaptation to the disease.

## 6. Findings

### 6.1 Socio-demographic data

This study consists of a sample of 131 women diagnosed with breast cancer, with an average age of 55.12 years (SD = 9.91).

The type of surgery was divided into radical mastectomy in 44.3% of cases (N = 58) and conservative surgery in 55.7% (N = 73).

And as treatment patients received, chemotherapy 4.6%, radiotherapy 6.9, brachytherapy 0.8%, hormone-therapy 4.6%, chemotherapy + radiotherapy 21.5% and 61.4% received the complete adjuvant treatment (chemotherapy, radiotherapy or brachytherapy) with hormone-therapy.

The 35.1% had not history of cancer in their family; 47.3% had a history of first degree and 17.6% second degree. About marital status, 68.7% of them were married, 7.6% single, 3.8% were unmarried partner, 10.7% were separated and 9.2 widowed.

About the employment status, 45.8% of patients were working, 22.9% were housewife, 12.2% were off work due to the effects of the disease, 16% were retired and 3.8% were unemployed.

And for the academic level, 3.8% had not education, 42% had primary education, 30.5% high school, 9.2% was certificated, 13% graduated, 0.8% had postgraduate studies and 0.8% had another such studies.

## 6.2 Protective factors and emotional wellbeing

-Emotional wellbeing and self-efficacy: Self-efficacy relates negatively to Anxiety ( $r=-0.394$ ;  $p<0.001$ ) and depression ( $r=-0.557$ ;  $p<0.001$ ). That is to say, those patients who considered themselves capable of handing the situation, had lower levels of anxiety and depression.

-Emotional wellbeing and sense of humor: Sense of humor relates negatively to Anxiety ( $r=-0.356$ ;  $p<0.001$ ) and depression ( $r=-0.446$ ;  $p<0.001$ ). Also, doing enjoyable activities relates negatively to Anxiety ( $r=-0.390$ ;  $p<0.001$ ) and depression ( $r=-0.520$ ;  $p<0.001$ ). Thus, we find that the sense of humor and doing enjoyable activities reduce anxious and depressive symptoms.

- Emotional well-being and resilience: Anxiety is independent in aspects of resilience that makes feel better since the disease appeared (emotional support, normalization of life, emotion management, leisure activities and others). Nevertheless, there is a significant association ( $p<0.05$ ) between Anxiety diagnosis and the variable that explores the meaning of cancer (see life differently, painful experience, break in the rhythm of life and others) ( $\chi^2=18.296$ ;  $p=0.000$ ).

This ratio with the coefficient V of Cramer as we know is moderate ( $V=0.374$ ). In this case, women with normal results in anxiety, believe that having cancer has meant to them to see life differently and enjoy the little things in life. Those with pathological anxiety scores, see the disease as a painful experience. Also, Anxiety relates to aspects of resilience that evaluate if the experienced suffering could serve some purpose. (appreciate more and stop suffering for thrifting things, personal growth, negation: suffering has not helped me at all, and others) ( $\chi^2=8.314$ ;  $p=0.040$ ); although this ratio is low ( $V=0.252$ ). As expected, patients with normal anxiety scores believe that suffering helps them to appreciate more, and those with high scores, believe that the suffering did not help.

Likewise, in the case of depression no significant relationship was found between this variable and what makes them feel better. On the contrary, depression is related to the meaning of cancer ( $\chi^2=19.592$ ;  $p=0.000$ ) moderately ( $V=0.387$ ); and the usefulness of suffering experienced ( $\chi^2=6.535$ ;  $p=0.088$ ) but in this case the ratio is low ( $V=0.223$ ).

As well as the Anxiety, scores in the range of pathological depression were higher in the group of women who consider disease as a painful experience and the suffering has not help them at all.

## 7. Conclusions

Nowadays Positive Psychology is having success in Health Psychology intervention. Although, more studies are needed to show effectiveness, we are taking small steps to achieve it

Based on our results, it is worth highlighting the relationship found between emotional wellbeing and the protective factors that we proposed. Patients who felt that they do not had personal tools to cope with the disease and did not feel able to overcome, had higher levels of anxiety and depression. These results corroborate previous studies for the proposition that self-efficacy is related to emotional wellbeing and lower levels of anxiety and depression. (Lam y Fielding, 2006; Taylor et al., 1984; Karademas et al., 2007; Han et al., 2005; Roger et al., 2008).

Moreover, patients who considered possessing sense of humor and who performed more enjoyable activities a week (for example walking, reading, etc.) had had fewer symptoms of anxiety and depression, corroborating the study of Martín and Lefcourt (1983).

Regarding the aspects we evaluate about resilience, we found that patients who believe that the disease has meant a positive change for them, like seeing life differently and has helped them to be more aware and enjoy little things in life and stop suffering for trifling things, have a higher emotional wellbeing and lower anxiety and depression levels. Our results confirm the results found in other similar investigations (Taylor et al., 1984 Hou et al., 2010 Helgeson et al., 2004; Costanzo et al., 2009).

As we have seen in the theoretical framework, sense of humor and resilience have been studied basically in relation to stressful events, including having had cancer, but not specifically in breast cancer. There are a few studies that investigate the influence of these protective factors in breast cancer, and in them the importance of observing these variables as a coping mechanism that can be useful when implement it to psychological treatments. Our results reflect the relationship between these variables and emotional wellbeing, corroborating the results of others authors who investigated in this issue (Helgeson et al., 2004; Costanzo et al., 2009; Hou et al., 2010).

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