

# FACTORS ASSOCIATED WITH DEPRESSION IN PATIENTS WITH BREAST CANCER

FACTORES ASOCIADOS A LA DEPRESIÓN EN PACIENTES CON CÁNCER DE MAMA

Ximena Arbulú-La Torre<sup>1</sup>

## ABSTRACT

**Objective:** Systematize the findings of the studies on the factors associated with depression in patients with breast cancer. **Methods:** A systematic review of the medical literature was made in Medline, SciELO and Google Scholar with the descriptive terms of the Medical Subject Headings: depression, breast cancer. Six articles were selected with the exclusion criteria of articles with a publication period between 2013-2018, written in Spanish or English, which analyzed patients with depression associated with breast cancer and studies with a minimum sample of 80 participants. **Results:** In this review, 6 studies have been included. The factors associated with depression in patients with breast cancer we have this age where it is seen that the population between 40 and 60 years, be divorced or single, education grade up to primary, be unemployed, belong to a low social class, the stadium clinical trial 4 and chemotherapy treatment increases the risk of depression in patients with breast cancer. **Conclusion:** It is concluded in the present review that more studies on a larger scale are needed regarding the factors associated with depression in patients with breast cancer, especially the level of Peru, since only one article related to the topic of interest was found. On the other hand, it is necessary to systematize the associated factors well since there are several factors related to depression and with different results depending on the type of hospital and country, in order to propose a good program of psychological support and education about the disease.

**Key words:** Depression; Cancer; Breast cancer; Systematic review. (source: MeSH NLM)

## RESUMEN

**Objetivo:** Sistematizar los hallazgos de los estudios sobre los factores asociados a depresión en pacientes con cáncer de mama. **Métodos:** Se realizó una revisión sistemática de la literatura médica en Medline, SciELO y Google Scholar con los términos descriptores del Medical Subject Headings: depression, breast cancer. Se seleccionaron 6 artículos con los criterios de exclusión de artículos con un periodo de publicación entre 2013-2018, escritos en español o inglés, que analizaban a pacientes con depresión asociado a cáncer de mama y estudios con una muestra mínima de 80 participantes. **Resultados:** En esta revisión se han incluido 6 estudios. Los factores asociados a depresión en pacientes con cáncer de mama tenemos está la edad donde se ve que la población entre 40 y 60 años, estar divorciada o soltera, grado de instrucción hasta primaria, estar desempleado, pertenecer a una clase social baja, el estadio clínico 4 y el tratamiento de quimioterapia aumenta el riesgo de tener depresión en pacientes con cáncer de mama. **Conclusión:** Se concluye en la presente revisión que hace falta más estudios a mayor escala respecto a los factores asociados a depresión en pacientes con cáncer de mama especialmente a nivel de Perú, ya que se encontró solo un artículo relacionado al tema de interés. Por otra parte hace falta sistematizar bien los factores asociados ya que se encuentran diversos factores relacionados a depresión y con diferentes resultados dependiendo del tipo de hospital y de país, para poder plantear un buen programa de apoyo psicológico y educación sobre la enfermedad.

**Palabras clave:** Depresión; Cáncer ; Cáncer de mama; Revisión sistematica. (fuente: DeCS BIREME)

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## INTRODUCTION

Worldwide, breast cancer is the most common cancer in women, representing 25.2% of all neoplasms and leading the causes of cancer mortality (14.7%).

In Peru, this neoplasm is the second most frequent in women and the third cause of mortality due to cancer (8.7%). Taking only on the Peruvian coast 83% of deaths in women, and within this Lima has the largest number of women with this condition<sup>(7)</sup>.

Breast cancer is a chronic disease that affects the emotional well-being and psychological adjustment of patients who suffer from it. The simple diagnosis of cancer is a stressful situation and the subsequent development of the disease affects various areas of life, such as personal, work, academic or social, which implies a considerable physical and psychological sense, in addition to having to face

The disease and its treatments, women should adapt to changes in your body image and feelings and attitudes that this with carries<sup>(4)</sup>.

So the diagnosis of cancer frequently is related to psychiatric comorbidities such as depression and anxiety, complicating recovery surgery, increasing the risk of non-adherence to treatments and isolation, generating greater symptoms and suffering in these patients<sup>(7)</sup>.

Considering the importance of symptoms emotional factors in cancer patients and the impact this. This article is presented with the purpose to evaluate the factors associated with depression in breast cancer patients.

## RESULTS

**Table 1.** Main characteristics of the studies included in the review.

TITLE	AUTHOR	YEAR	COUNTRY / CONTINENT	SAMPLE	TYPE OF STUDY
Anxiety and depression disorders related to the quality of life of patients with locally advanced stage breast cancer disseminated	Martha Carolina et al.	207	Colombia	107	Cohorte
Anxiety and depression in women with breast cancer: Social and clinical determinants and influence of the social network and social support (DAMA cohort)	R. Puigpinós-Riera et al.	2018	España	1086	Cohorte
Depression in breast cancer patients	Jovana Cvetkovic et al.	2017	Irlanda	87	Cohorte
Prevalence and factors associated with depressive symptoms in women with breast cancer in a public hospital in Lima, Peru	Silvia Berrospi-Reyna et al.	2017	Perú	385	Transversal Analítico
Anxiety and Depression among Breast Cancer Patients in an Urban Setting in Malaysia	Mohd Rohaizat Hassan et al.	2015	Malasya	205	Transversal
Assessment of Depression and Anxiety in Breast Cancer Patiens: Prevalence and Associated Factors	Konstantinos Tsaras et al.	2018	Asia	152	Cohorte

## METHODS

For such purpose, scientific articles published from January 2012 to 2018 were selected and reviewed, in the Spanish and English languages.

The bibliographic search was carried out in the electronic databases Medline, SciELO, and Google Scholar with the descriptive terms of the Medical Subject Headings: depression, breast cancer.

The selection criteria were:

- Studies looking at depression in patients with breast cancer as a function of multiple variables.
- Articles with a publication period between 2013-2018, written in Spanish or English.
- Articles that analyzed patients with depression associated with breast cancer.
- Studies with a minimum sample of 80 participants.

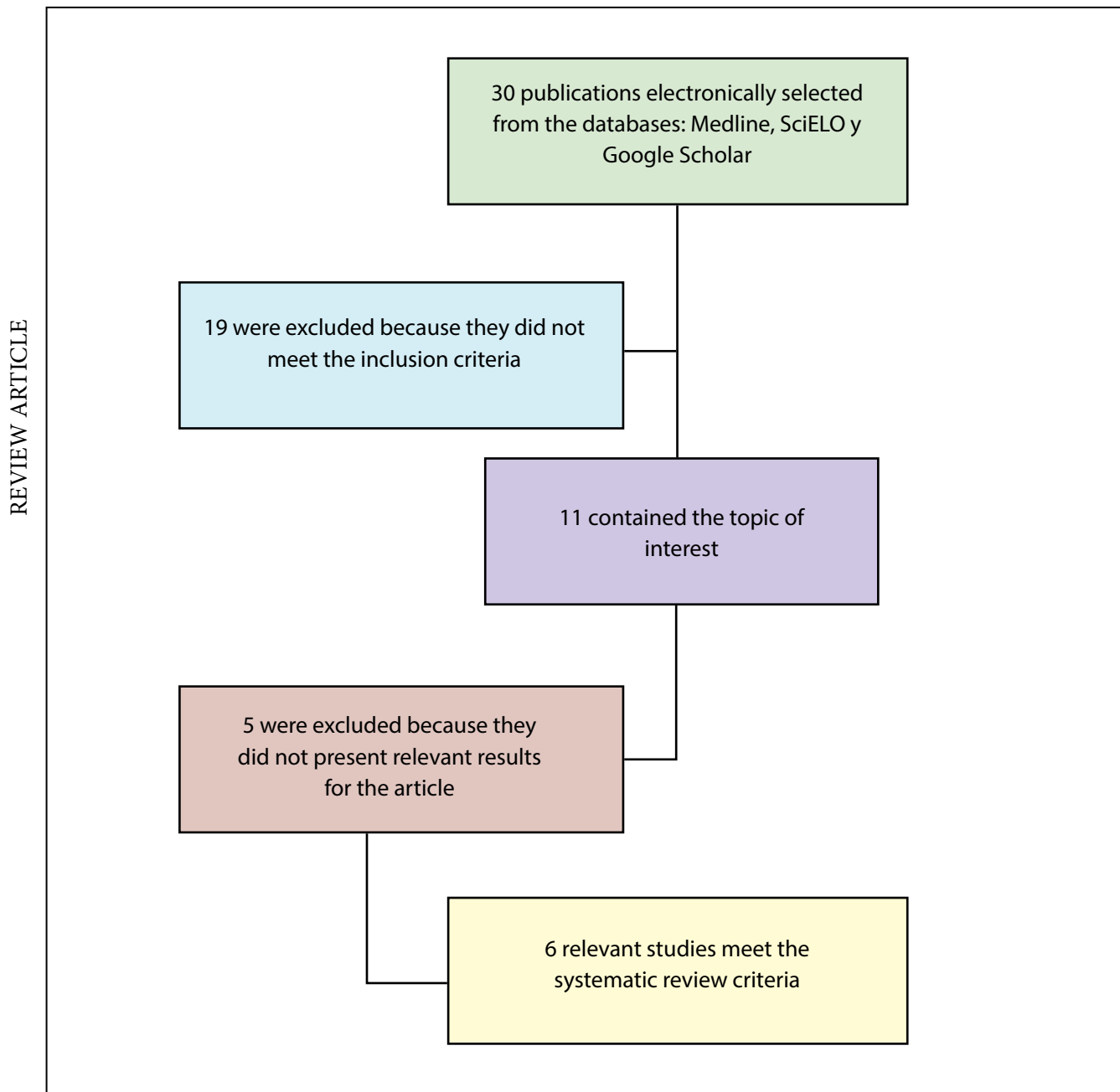
From the set of articles that described the factors associated with depression in patients with breast cancer, the data were grouped in tables taking into account the title, the author or authors, the year, the country, the sample and the type of study. (Table 1).

In a second phase, the variables related to the factors associated with depression in patients with breast cancer were grouped in a second table: age, educational level, work, coexistence, type of surgery and type of treatment.

Finally, table three groups together the factors associated with treatment and clinical stage in patients with breast cancer.

Six studies have been included in this review. Table 1 presents the main characteristics of the 6 included studies. It is appreciated that the publication period was from 2015 to 2018. The studies were developed in people of different ethnicities from 6 countries

belonging to three different continents, including Peru, Colombia, Ireland, Spain and Malaysia. The samples were very heterogeneous, the population ranged from 80 to 1086 patients.



**Figure 1.** Identification of the studies and selection process.

Table 2 shows the sociodemographic characteristics associated with depression in patients with breast, these include the age where the population between 40 and 60 years old, being divorced or single is more associated with suffering from depression than with patients who are married. In associates, a greater association was found to education grade up to primary with depression a comparison of patients with education superior they were less. Be unemployed

and belonging to a lower social class increases the risk of having depression in breast cancer patients.

Table 3 shows the factors associated with depression in breast cancer patients concerning therapy and clinical stage. Where the risk factors are patients in clinical stage 4 and chemotherapy treatment compared to patients undergoing radiotherapy that was less the number of patients with depression

REVIEW ARTICLE

**Table 2.** Sociodemographic characteristics of the studies included in the review.

REFERENCE	AGE			MARRITAL STATUS			DEGREE OF INSTRUCTION			JOB			SOCIAL CLASS			
	<50	50-60	>60	SINGLE	Married	DIVORCEE	PRI-MARY	SECON-DARY	HIGHER	ACTI-VE	UNEM-PLOYED	DISABLED	RETIRED	HIGH	HALF	LOW
Martha Carolina et al.																
R. Puigpinos-Riera et al.	5.30%	5.50%	6.30%	11	39	7	20	32	13	20	26*	14.7%*	5.60%	3.30%	5.50%	10%*
Silvia Berrospi-Reyna et al.	30-40	41-60	61-78	11	39	7	20	32	13	20	26*	19	46	17		3
Silvia Berrospi-Reyna et al.	17*	28	20													
Silvia Berrospi-Reyna et al.				28 (34,15)	54 (65,85)		12 (14,63)	33 (40,24)	37 (45,12)							
Mohd Rohaizat Hassan et al.	20-39	40-59	60-79	47.4%*	20.40%	10.50%	21.00%		.25.7%		21.40%	25.70%				
	36.40%	24.20%	11.30%													
Konstantinos Tsaras et al.	40-49	50-59	>70	54.20%	71.40%	50%										
	56.10%	70.50%	41.70%													

**Table 3.** Characteristics of the studies included in the review according to the clinical stage and type of treatment.

REFERENCE	TYPE OF TREATMENT			CLINICAL STATUS						
	MASTEC-TOMY	CHEMO-THERAPY	RADIO-THERAPY	I	IIA	IIB	IIIA	IIIB	IIIC	IV
Martha Carolina et al.						7,18± 2,27	8,84± 1,54	8,65± 1,68	8,60± 0,97	9,25± 2,02
R. Puigpinós-Rivera et al.										
Jovana Cvetkovic et al.										
Silvia Berrospi-Reyna et al.	190 (62,71)	221 (72,94)	125 (41,25)	14 (17,07)	34 (41,46)		90 (29,70)			9 (2,97)
Mohd Rohaizat Hassan et al.										
Konstantinos Tsaras et al.	61.30%	62.90%	54.20%	69.20%	69.80%		61.20%			31.3%*

REVIEW ARTICLE

## DISCUSSION

We have a few studies that analyze the factors associated with depression in cancer patient’s breast, especially in Peru there are no studies with population groups that address the problem of depression in patients with breast cancer, despite that mental health has been the second priority of health research in Peru<sup>(6)</sup>.

One of the main complications was a number of factors associated with depression in breast cancer patients, having variations in each article. Since many factors can intervene in the genesis of depressive symptoms in breast cancer patients, studies are needed additional on a larger scale to define if there are additional factors associated with the presence of depressive symptoms<sup>(6)</sup>.

Although some authors have suggested that in similar populations younger patients have a higher risk of depression<sup>1</sup> as in the study included made by Jovana Cvetković et al says there is a greater risk factor in patients between 30-40 years.

Being divorced or single is more associated with suffering depression compared to patients who are married, in the article by Mohad Rohaizat Hassan et al. It is observed that the highest percentage of patients with depression and breast cancer are single and

between the ages of 20 and 40<sup>(7)</sup>.

In the study by Konstantinos Tsaras et al., It was observed that 50% (p <0.05) of the patients divorced women suffered from depression and more than 70% were between the age of 50 and 59 years.

In the state of education, the review found that people with a degree of education up to primary was a risk factor, compared to a study was that less-educated women who deal with breast cancer were more likely to experience depression as reported by findings similar. According to our results, patients with socioeconomic status are more likely of experiencing depressive symptoms that confirm previous studies<sup>(11)</sup>.

Regarding the proportion of patients with depressive symptomatology among those subjected to chemotherapy, radiotherapy, and radical mastectomy, an increased risk was found in patients undergoing chemotherapy

Finally, according to our results, the patients who were diagnosed in stage IV of breast cancer had a high risk of depression compared to stage I patients.

This finding is in agreement with a recent study among breast cancer in Greece (Fradelos et al., 2017) in which breast cancer patients in stage IV were 1.9 (p = 0.003) more likely to experience depressive symptoms.

## CONCLUSION

It is concluded in this review that it is necessary more studies on a larger scale regarding the factors associated with depression in patients with breast cancer especially at the level of Peru, since only an article related to the topic of interest.

On the other hand, the factors must be well systematized associated as there are various factors related to depression and with different outcomes depending on the type of hospital and the country, to propose a good psychological support program and disease education.

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