Revista Psicologia, Saúde & Doenças
Vol. 23, Nº. 2, 449-456, 2022
Sociedade Portuguesa de Psicologia da Saúde
ISSN 2182-8407
www.sp-ps.pt
https://doi.org/10.15309/22psd230213

PSYCHOLOGICAL INTERVENTIONS IN WOMEN WITH BREAST CANCER: A SYSTEMATIC REVIEW

INTERVENÇÕES PSICOLÓGICAS EM MULHERES COM CANCRO DA MAMA: UMA REVISÃO SISTEMÁTICA

Ana Santos[1], & Isabel Silva[†2]

[1]Universidade Fernando Pessoa, Porto, Portugal, anasofiasantospsi@gmail.com
[2]FP-B2S, Universidade Fernando Pessoa, Porto, Portugal, isabels@ufp.edu.pt

Abstract: Breast cancer is still an illness that causes significant changes in women's lives and, therefore, has important consequences on their quality of life and well-being, which makes psychological interventions truly relevant for this population. A systematic review was developed with the objective to analyse psychological interventions that address quality of life, spirituality, social support, positive and negative affect, and resilient coping in women with breast cancer. B-On was searched for the following Boolean phrase: (("breast cancer"[TI]) AND ("quality of life or health-related quality of life") AND ("spirituality or religion or faith") AND ("positive affect or negative affect or positive emotions or negative emotions") AND ("resilience or resilient coping") AND ("chemotherapy")), considering the period between 2011 to 2021. Only five studies were included for the final review. The conclusions drawn were that: psychological interventions inspired in distinct theoretical models have been developed and implemented with this population, achieving satisfactory results in improving these dimensions comparatively to control groups. Moreover, even psychological interventions that aim to improve specific psychological dimensions can simultaneously contribute to improvements in wider psychological dimensions. Therefore, psychologists should continue to develop these interventions with patients to improve their quality of life and associated outcomes.
Keywords: breast cancer, psychological well-being, quality of life, psychological interventions.

Resumo: O cancro da mama é ainda uma doença que provoca mudanças significativas na vida da mulher e, portanto, tem consequências importantes na qualidade de vida e bem-estar, o que torna pertinentes intervenções psicológicas para esta população. Uma revisão sistemática foi desenvolvida com o objetivo de analisar as intervenções psicológicas que abordam a qualidade de vida, a espiritualidade, o suporte social, o afeto positivo e negativo e o coping resiliente em mulheres com cancro da mama. Recorreu-se à B-On com a frase booleana: (("breast cancer"[TI]) AND ("quality of life or health-related quality of life") AND ("spirituality or religion or faith") AND ("positive affect or negative affect or positive emotions or negative emotions") AND ("resilience or resilient coping") AND ("chemotherapy")), considerando o período entre 2011 e 2021. Apenas cinco estudos foram incluídos para a revisão final. As conclusões retiradas foram que: foram desenvolvidas e administradas intervenções psicológicas baseadas em modelos teóricos distintos nesta população, que obtiveram resultados satisfatórios na melhoria destas dimensões comparativamente aos grupos de

[†]Morada de Correspondência: Universidade Fernando Pessoa (Edifício Sede). Praça 9 de Abril, 349; 4249-004 Porto.
Submetido: 14 de junho de 2022
Aceite: 10 de setembro de 2022

controlo. Mesmo intervenções psicológicas que visam melhorar dimensões psicológicas especificas podem simultaneamente contribuir para melhorias em dimensões psicológicas mais amplas. Assim, os psicólogos devem continuar a desenvolver estas intervenções com esta população para melhorar a sua qualidade de vida e dimensões associadas.
Palavras-Chave: cancro da mama, bem-estar psicológico, qualidade de vida, intervenções psicológicas.

In Portugal, it is estimated that in 2020 appeared approximately 7 000 new cases of breast cancer in women (European Commission, 2020). Breast cancer (BC) causes diverse psychological consequences associated with the fear of breast's amputation (partial or total), which is a body part largely linked to the notions of sensuality, sexuality,and maternity (Silva, 2008). Furthermore, women also suffer changes in their social relationships, positive affect (PA), negative affect (NA) and spirituality (Paris et al., 2014). Therefore, comprehensive oncology care concerns all these aspects, valuing the importance of psychological interventions that meet the needs of the patients according to the different phases of illness and treatments (Strada & Sourkes, 2015).

This systematic review aims to synthesize the current knowledge about psychological interventions developed with women with BC, preferably during chemotherapy, and that were directed to these psychosocial dimensions, such as quality of life (QoL), resilient coping, social support, PA, NA, and spirituality.

METHOD

The present systematic review complies with the guidelines recommended in the guide *Preferred Reporting Items for Systematic Reviews and Meta-Analyses* (PRISMA; Liberati, 2009). The following research question was created: What do we know about psychological interventions that aim the QoL, social support, spirituality, PA, NA, and/orresilient coping of women with BC? Firstly, eligibility inclusion criteria defined were thefollowing: full-text publications in Portuguese, English or Spanish of the last 10 years; studies that assessed at least one of the variables of interest; and studies in which the participants were women aged 18 years or more and that had a diagnosis of BC. The procedure for the research in the database *Biblioteca do Conhecimento Online* (B-On) is presented in Figure 1. From this research resulted 126 studies and after the phases of study selectiononly five studies were included for final review.

RESULTS

A summary of the interventional articles from this literature review can be foundin Table 1. In Table 2 is presented a summary of the interventions mentioned in the studies.

By analysing Table 1, it can be verified that all studies were experimental and hadas main objective to evaluate the efficacy of a particular intervention in women with BC.In terms of sample, the participants were always women with BC. Regarding the main focus of the studies, Henderson and colleagues (2013) and of Fallah et al. (2011) tested the effectiveness of an intervention on spirituality, through a Mindfulness-Based Stress Reduction (MBSR) programme and a psycho-spiritual group intervention, respectively. Both studies documented an improvement on spirituality from pre-intervention to post- intervention: in the Henderson and colleagues' study (2013) improvement was more significant in the intervention group, than in the control group and in the Fallah and colleagues'

study (2011) improvement was only verified in the intervention group, sincethe control group showed a reduction in spirituality.

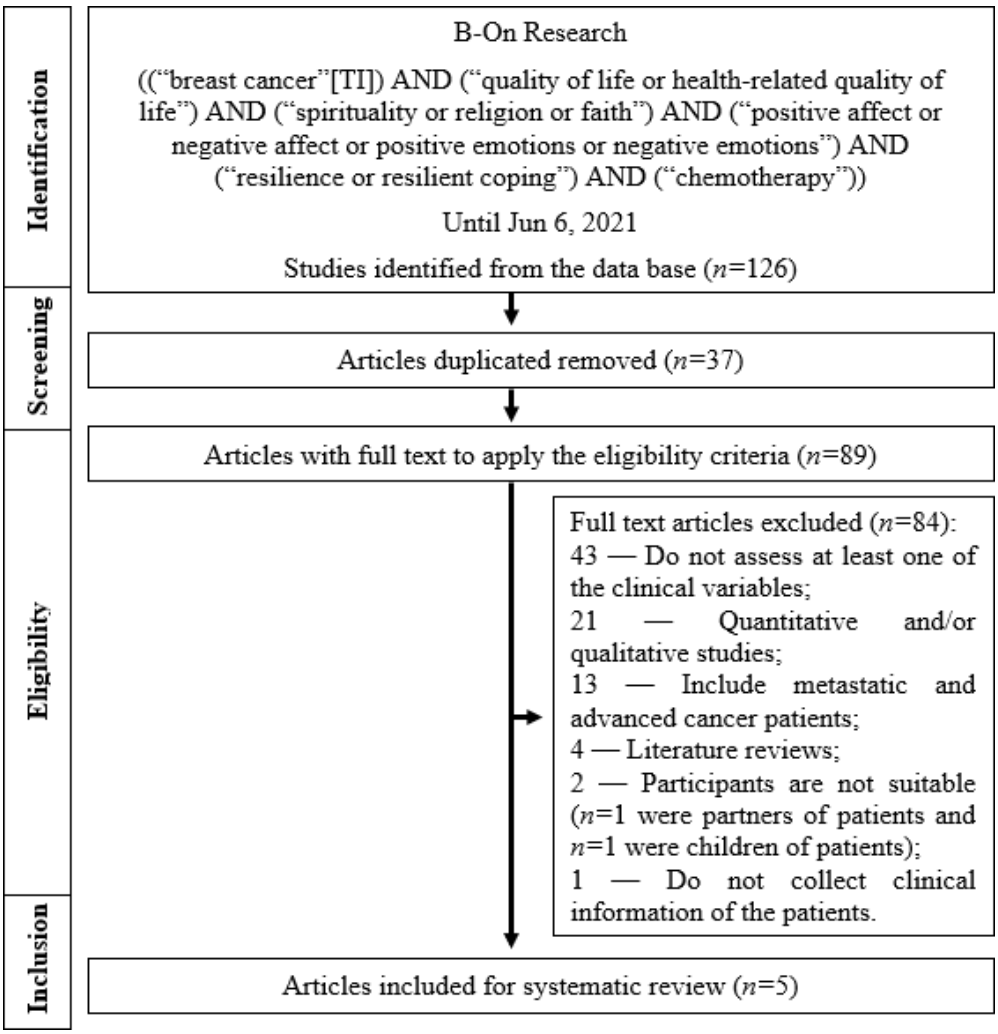

Figure 1. Flow chart with the phases of studies selection

Affect was assessed in women with BC after two interventions, namely: a telephonic psychoeducational intervention trial (Ashing & George, 2020); and a positive psychology-based group intervention (Cerezo et al., 2014). On both studies, women showed improvements in terms of affect: the first verified that the change in emotional well-being was statically significant, with the emotions related to sadness, coping and nervousness having significant improvements and the changes in NA were more significant in the intervention group than in the control group (35% of the participants showed an increase in NA); and the other showed higher scores on PA and total affect and lowest scores on NA from pre-test to post-test, more significant in the intervention group than in the waitlist group.

Table 1. Summary of the Interventional Studies

Author, year, country	Type of study and objectives	Participants	Relevant measures	Procedure and main results
Ashing and George (2020), USA	Experimental study. To evaluate the effectiveness of a psycho-educational intervention trial on improving emotionalwell-being in BC survivors.	40 women diagnosed withBC assigned tothe IG or to thecontrol group CG.	1. Emotional Well-Being:Emotional Well-Being subscale of FACT – General.	For the IG, significant improvements were observed for emotions related to sadness, coping, and nervousness. NA decreased afterintervention. In the CG, 20% of the participants demonstrated a reduction, but 35% showed an increase.
Pat-Horenczyket al. (2015), Israel	Experimental study. To investigate the impactof a resilience-buildingintervention on copingand Post-Traumatic Growth in BC survivors.	94 BC survivors, who had completed adjuvant therapy (IG = 49; CG = 45).	1. Coping strategies: Cognitive Emotional Regulation Scale.	The IT group demonstrated a more significant increase in both Post-Traumatic Growth and positive coping, when compared to the CG. Asignificant difference in negative emotion regulation was verified between the IG and the CG ($Z = 3.31$, $p = .001$).
Cerezo et al. (2014), Spain	Experimental study. To assess the effects of a psychological group intervention based on positive psychology in women with BC.	175 women diagnosed withBC were assigned to an IG ($n = 87$) or to a CG ($n = 88$).	1. Resilience: Connor-Davidson Resilience Scale; 2. Affective component ofwell-being: Affectivity Scale.	The IG showed an increase on positive affect, total affect, emotional intelligence, optimism,resilience and self-esteem and a decrease on NA from pre-test to post-test, when comparedto the CG. On a second phase, after the CG received the intervention, the same resultswere achieved.
Henderson et al. (2013), USA	Experimental study. To test the relative effectiveness of a MBSR programme compared with a NEPand Usual Care UC in women with BC.	163 women with BC who were undergoing radiotherapy, distributed to a MBSR IG ($n = 53$) and two CG: NEP ($n = 52$) and UC ($n = 58$).	1. QoL: FACT-Breast; 2. Coping: Deal with Illness Questionnaire; Mini-Mental Adjustment to Cancer Scale; 3. Social support: University of California Loneliness Scale; Resilience: Sense of Coherence Scale.	The MBSR group showed a significant ($p < .05$) development in 16 psychosocial variables, comparatively to the CG. The largest improvements in the MBSR IG seemed to occur at 4 months, immediately after the completion of the programme. The findings were: better stress management; improved emotional control; improved QoL related to spirituality; better QoL through an increase of emotional and social-family well-being; and greater coping abilities.

Fallah et al. (2011), Iran	Experimental study. To determine the effectiveness of a spiritual intervention on the increase of hope, life satisfaction, and happiness inwomen with BC.	60 women diagnosed with early-stage BC equally assigned to theIG or to the CG.	1. Spirituality: Spiritual Experience Questionnaire.	The scores of hope, happiness, life satisfaction, and spirituality increased in the IG. In the CG,the four variables showed a reduction from pre-test to post-test. The intervention showed to be effective ($p <$ 0.05). Spirituality can reduce NA, while it increases positive affect.

Note: BC = Breast Cancer; IG = Intervention Group; CG = Control Group; FACT = Functional Assessment of Cancer Therapy; NA = Negativeaffect; MBSR = Mindfulness-Based Stress Reduction; NEP = Nutrition Education Programme; UC = Usual Care; QoL = Quality of life.

Table 2. Summary of the Interventions

Author, year	Sessions	Type and model of intervention	Form of administration and evaluation	Intervention professional	Techniques
Ashing and George (2020)	Eight biweekly sessions for 4weeks.	Individual. Psychoeducational.	Telephonic. At baseline and atfollow-up (4/6 months).	Two clinical assistants with a degree in social sciences and trained interventionists.	Psychoeducation.
Pat-Horenczyk et al. (2015)	Eight weekly sessions for 2months.	Group of 12 women onaverage. Did not specify.	In person. At baseline and at 6 months follow-up.	Did not specify.	Relaxation training, experientialexercises, and psychoeducation.
Cerezo et al. (2014)	14 sessions, per week for 3 months and a half.	Group of 10 to 15 women. Positive Psychology.	In person. Before and after intervention.	Two trained psychologists.	Psychoeducation, mindfulness, mutual support and gratitude exercises, communication skills, cognitive restructuring, role-play.
Henderson et al. (2013)	Eight weekly sessions for 2 months and follow-up.	Two groups of 25to 30 women. Mindfulness.	In person. At baseline and at follow-up.	Mental health clinicians and a psychiatrist.	Cognitive-behavioural techniques, group support, experiential focus andeducational orientation.
Fallah et al. (2011)	Eight weekly sessions for 2 months.	Groups of 30women. Did not specify.	In person. Before and after intervention.	Did not specify.	Focused meditation, role playing, educational orientation, problem solving, and gratitude techniques.

Cerezo et al. (2014) and Henderson et al. (2013) applied a positive psychology- based group intervention and a MBSR programme, respectively. Both studies showed an improvement on resilience more significant in the intervention group than in the groups that did not receive the intervention. Coping was assessed by Henderson et al. (2013) and Pat-Horenczyk et al. (2015), that evaluated the effectiveness of a MBSR group programme and of a resilience-building group intervention, respectively. Active cognitive coping and active behavioural coping showed more significant improvements in the intervention group than in the other two control groups (Henderson et al., 2013) and 75%of the women of the intervention group reported an increase in positive coping and/or a decrease in negative coping after intervention, while in the control group only 29.2% of the women showed developments (Pat-Horenczyk et al., 2015).

Social support and QoL were assessed in the same study (Henderson et al., 2013).It was verified an improvement on QoL related to spirituality and to emotional and social-family well-being in the intervention group, higher than in the other groups (Henderson et al., 2013). However, regarding social support, although the study mentions it in the measures' section and refers using the Revised University of California Loneliness Scale,there were not presented any results regarding it.

DISCUSSION

A systematic review of the literature was carried out to synthetize the current knowledge about psychological interventions administered to women with BC and that assessed the evolution of their QoL, social support, spirituality, PA, NA, and coping resilient. Five studies that evaluate the efficacy of different interventions were found, specifically interventions based on mindfulness, on psychoeducation, on psycho- spirituality, on positive psychology, and on existential psychology. However, they have different numbers of sessions, have different durations, have different types of intervention and forms of administration, are managed by different professionals, and address different topics. Additionally, in some of the studies (i.e., Fallah et al., 2011; Pat-Horenczyk et al., 2015) there was some information that was not specified. Therefore, the conclusions reached may be also influenced by all these factors mentioned, which can make the comparison between interventions' efficacy and results difficult.

All five studies demonstrated positive results, despite the target dimension or theintervention model. Although some interventions are focused on teaching or enhancing some characteristics, they have also seen improvements in other areas, because of the correlations among the variables. Some examples are a spiritual intervention showing improvements in NA and in PA (Fallah et al., 2011); and, a resilience-building intervention having a positive effect in coping, in the PA and in the NA of women with BC (Pat-Horenczyk et al., 2015).

This literature review allows us to conclude that: psychological interventions targeting these psychosocial aspects have been developed and administered in this population; psychological interventions that aim to improve certain psychological dimensions (e.g., spiritual well-being, coping, etc.) can also enhance wider dimensions (e.g., quality of life, well-being, etc.); and that most of these interventions achieved goodresults in improving these dimensions. These conclusions are important for health care, since several of these dimensions will influence the psychological adjustment to the disease (Stanton et al., 2001) and should be valued by health professionals in order to promote the best possible adjustment.

Regarding this review's limitations, the following are important to mention: an excessive number of descriptors were defined which may have led to the exclusion of relevant studies that could be about psychological interventions administered to women with BC; it was only used one database (B-On); and the variety of the variables assessed,of the intervention-model, of the techniques used and

of the psychometric instruments applied can make the analysis of these results complicated and does not allow generalisations. Furthermore, some of the studies did not specify information, which would allow more clarity about the interventions and their results. Also, some studies donot mention who the interventionists are, which could be important to know, to possiblycompare with other interventions, since who delivers the intervention may influence its results. It is suggested for future reviews the inclusion of less psychosocial dimensions, to have a larger number of interventional studies, which could allow more generalisations.Further deepening of knowledge about psychological interventions aimed at women withBC seems crucial, to understand whether these produce good results and whether they help meeting these women's needs and to provide more hints about what health professionals, namely psychologists, could do different to achieve even better outcomes, namely better QoL and well-being.

ORCID

Ana Santos https://orcid.org/0000-0003-4522-1563
Isabel Silva https://orcid.org/0000-0002-6259-2182

AUTHOR'S CONTRIBUTION

Ana Santos: Conceptualization; Formal Analysis; Investigation; Methodology; Project Administration; Visualization; Resources; Writing – Original draft; Writing – Revision and edition.

Isabel Silva: Conceptualization; Formal Analysis; Methodology; Project Administration; Validation; Visualization; Resources; Supervision; Writing – Revision and edition.

REFERENCES

Ashing, K. T., & George, M. (2020). Exploring the efficacy of a paraprofessional delivered telephonic psychoeducational intervention on emotional well-being in African American breast cancer survivors. *Supportive Care in Cancer, 28*(3), 1163–1171. https://doi.org/10.1007/s00520-019-04899-7

Cerezo, M. V., Ortiz-Tallo, M., Cardenal, V., & Torre-Luque, A. (2014). Positivepsychology group intervention for breast cancer patients: A randomised trial. *Psychological Reports: Disability & Trauma, 115*(1), 44–64. https://doi.org/10.2466/15.20.PR0.115c17z7

European Cancer Information System. (n.d.). *Estimates of cancer incidence and mortalityin 2020: Portugal, female, all ages.* https://ecis.jrc.ec.europa.eu

Fallah, R., Golzari, M., Dastani, M., & Akbari, M. E. (2011). Integrating spirituality intoa group psychotherapy program for women surviving from breast cancer. *IranianJournal of Cancer Prevention, 4*(3), 141–147. https://shorturl.at/fADE1

Henderson, V. P., Massion, A. O., Clemow, L., Hurley, T. G., Druker, S., & Hébert, J. R.(2013). A randomized controlled trial of mindfulness-based stress reduction for women with early-stage breast cancer receiving radiotherapy. *Integrative Cancer Therapies, 12*(5), 404–413. https://doi.org/10.1177/1534735412473640

Liberati, A., Altman, D. G., Tetzlaff, J., Mulrow, C., Gøtzsche. P. C., Ioannidis, J. P., Clarke, M., Devereaux, P. J., Kleijnen, J., & Moher, D. (2009). The PRISMA statement for reporting systematic reviews and meta-analyses of studies that evaluate healthcare interventions: Explanation and elaboration. *Journal of Clinical Epidemiology, 62*(10), 1–34.

Pat-Horenczyk, R., Perry, S., Hamama-Raz, Y., Ziv, Y., Schramm-Yavin, S., & Stemmer, S. (2015). Posttraumatic growth in breast cancer survivors: Constructive and illusory aspects. *Journal of Traumatic Stress, 28*(3), 214–222. https://doi.org/10.1002/jts.22014

Silva, L. C. (2008). Câncer de mama e sofrimento psicológico: Aspectos relacionadosao feminino. *Psicologia em Estudo, 13*(2), 231–237. https://doi.org/c9j9zh

Stanton, A. L., Collins, C. A., & Sworowski, L. (2001). Adjustment to chronic illness: Theory and research. In A. Baum, T. A. Revenson, & J. E. Singer (Eds.), *Handbook of health psychology* (pp. 387-404). Lawrence Erlbaum.

Strada, E. A., & Sourkes, B. M. (2015). Principles of psychotherapy. In J. C. Holland, W. S. Breitbart, P. N. Butow, P. B., Jacobsen, M. J. Loscalzo, & R. McCorkle (Eds.), *Psycho-Oncology* (3rd ed., pp. 431–436). Oxford.