

# REVIEW OF DIFFERENT TYPES OF PSYCHOLOGICAL INTERVENTIONS IN CANCER PATIENTS

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## Introduction

Cancer is one of the leading causes of mortality in the world and also causes morbidity and deterioration in the mental health of patients and their caregivers. The most commonly reported psychological symptoms include anxiety, depression, and the fear of recurrence. The purpose of this narrative review is to elaborate and discuss the effectiveness of the different interventions employed and their utilities in clinical practice.

## Methods

Scopus and PubMed databases were searched, with a timeframe from 2018 to 2023, to identify randomized controlled trials, meta-analyses, and reviews and reported using PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines (Figure 1). Articles were searched by the following keywords: “cancer, psychology, anxiety, and depression”. An additional search was performed with the keywords “cancer, psychology, anxiety, depression, and [intervention name]”. The most popular psychological interventions were included in these search criteria.

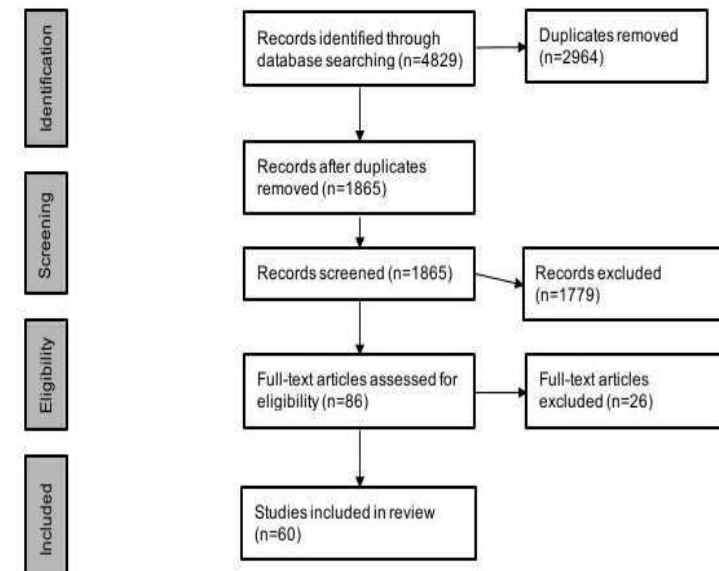


Figure 1. PRISMA flow diagram.

Table 2. The overview of included papers with more than one psychological intervention investigated per study

Therapy / intervention type	Cancer type	Psychological symptoms	Paper
ACT, MBCT, problem-solving therapy, MI	Any cancer	Chronic pain, anxiety, fatigue	<sup>14</sup> Malins et al., 2020
ACT, MBSR, MBCT	Any cancer	Stress, depression, anxiety, pain	<sup>15</sup> Ma et al., 2021
Relaxation techniques, CBT, music therapy, MBCT, ACT, supportive group therapy	Any cancer	Chronic pain, fatigue, depression	<sup>16</sup> Warth et al., 2020
CBT, psychoeducation	Prostate cancer	Depression, anxiety, distress	<sup>17</sup> Murder et al., 2021
Coping skills training	Any cancer	Depression, anxiety	<sup>18</sup> Buffart et al., 2020
Art and music therapy, physical exercise, nursing interventions, psychoeducation	Breast	Fatigue, dyspnea, insomnia, stress	<sup>19</sup> Oei et al., 2021
I-BMS, CBT	Any cancer	Reduced quality of life, impaired emotional wellbeing	<sup>20</sup> Lau et al., 2020
Psychoeducation, mindfulness, CBT	Any cancer	Fatigue	<sup>21</sup> Corbett et al., 2019
CBT, dignity therapy, life review, counselling, creative art therapy	Any cancer	Anxiety, depression, stress, fatigue, hopelessness	<sup>22</sup> Teo et al., 2019
CBT, psychoeducation, mindfulness, group therapy	Any cancer	Anxiety, depression, fatigue, socioemotional problems	<sup>23</sup> Richardson et al., 2019
CBT, exercise therapy	Any cancer	Fatigue	<sup>24</sup> Poori et al., 2021
VR intervention, music therapy	Breast	Anxiety, depression, pain	<sup>25</sup> Chirico et al., 2020
MBSR, music therapy	Osteosarcoma	Stress, insomnia	<sup>26</sup> Liu et al., 2019

Table 1. The overview of included papers with one psychological intervention per paper

Therapy / intervention	Cancer type	Psychological symptoms	Paper
ACT (Acceptance and Commitment Therapy), n=6	Breast: Any cancer Advanced lung cancer Any cancer Any cancer Breast, ovarian, colorectal	Anxiety, depression, hopelessness, stress Anxiety Impaired functioning, emotional distress Anxiety, depression, distress, psychological inflexibility, lack of acceptance Psychological inflexibility, socioemotional issues, stress Emotional distress, cancer-related pain	<sup>27</sup> Li et al., 2021; <sup>28</sup> Arch et al., 2021 <sup>29</sup> Mosher et al., 2019 <sup>30</sup> Garcia Rasero & Tamayo, 2019 <sup>31</sup> González-Fernández & Fernández-Rodríguez, 2019 <sup>32</sup> Fashler et al., 2018
Art therapy, n=5	Any cancer Any cancer Breast Any cancer Any cancer	Anxiety, depression, reduced quality of life Distress, reduced quality of life Anxiety, depression, fatigue Chronic pain, fatigue Pain, lack of control, depression	<sup>33</sup> Bosman et al., 2021 <sup>34</sup> Raybin et al., 2020 <sup>35</sup> Tang et al., 2019 <sup>36</sup> Kim et al., 2018 <sup>37</sup> Ennis et al., 2018
CBSM (Cognitive-Behavioral Stress Management), n=1	Breast	Stress, socioemotional issues	<sup>38</sup> Tang et al., 2020
CBT (Cognitive Behavioral Therapy), n=13	Any cancer Breast Any cancer Any cancer Breast, colorectal, prostate Any cancer Any cancer Breast Any cancer Any cancer Any cancer	Distress, reduced quality of life, anxiety, depression Fear of cancer recurrence Post-traumatic stress, anxiety, depression, fear of recurrence Reduced quality of life Insomnia Anxiety, depression Stress, depression, impaired quality of life, anxiety Depression, anxiety Depression, anxiety Distress, fear or cancer recurrence Anxiety, depression Fatigue, sleep disturbance, depression Depression, anxiety, stress, fatigue	<sup>39</sup> Grimmett et al., 2022 <sup>40</sup> Park & Lim, 2022 <sup>41</sup> Salem et al., 2021 <sup>42</sup> Getu et al., 2021 <sup>43</sup> Savard et al., 2021 <sup>44</sup> Hauflman et al., 2020 <sup>45</sup> Bangsund et al., 2020 <sup>46</sup> Serfaty et al., 2020 <sup>47</sup> Ren et al., 2019 <sup>48</sup> Chambers et al., 2018 <sup>49</sup> Murphy et al., 2020 <sup>50</sup> Muller et al., 2021 <sup>51</sup> Ye et al., 2018
MBAIs (Mindfulness-Based Art Interventions), n=2	Any cancer Any cancer	Fatigue and emotional distress Anxiety, depression, fatigue, stress, posttraumatic growth, fear of recurrence	<sup>52</sup> Rieger et al., 2021 <sup>53</sup> Xunlin et al., 2020
MBCT (Mindfulness-Based Cognitive Therapy), n=4	Any cancer Any cancer Breast and prostate Any cancer	Pain, emotional imbalance Psychological distress, fatigue Anxiety, depression Distress, anxiety, depression	<sup>54</sup> Ruano et al., 2022 <sup>55</sup> Compen et al., 2020 <sup>56</sup> Nissen et al., 2020 <sup>57</sup> Compen et al., 2019
MBIs (Mindfulness-Based Interventions), n=3	Any cancer Any cancer Any cancer	Anxiety, depression, stress, fear of cancer recurrence Anxiety Physical health disturbances, anxiety, fatigue	<sup>58</sup> Baydoun et al., 2021 <sup>59</sup> Qbarori et al., 2020 <sup>60</sup> Cilleisen et al., 2019
MBSR (Mindfulness-Based Stress Reduction), n=5	Any cancer Breast Breast	Fatigue Anxiety, stress Anxiety, stress, depression	<sup>61</sup> Xie et al., 2020 <sup>62</sup> Witek Janusek et al., 2019 <sup>63</sup> Schell et al., 2019

	Any cancer Breast	fatigue Anxiety, fatigue, depression, stress Stress, anxiety	<sup>64</sup> Zhang et al., 2019 <sup>65</sup> Lengacher et al., 2019
Music therapy, n=6	Any cancer Any cancer Any cancer Any cancer Lung Any cancer	Pain, stress Distress, reduced quality of life Anxiety, depression, pain Anxiety, depression Anxiety Anxiety, impaired mood, chronic pain	<sup>66</sup> Nardone et al., 2020 <sup>67</sup> Kohler et al., 2020 <sup>68</sup> Li et al., 2020 <sup>69</sup> Gramaglia et al., 2019 <sup>70</sup> Mou et al., 2019 <sup>71</sup> Bro et al., 2018
Relaxation training, n=1	Breast	Fear of recurrence	<sup>72</sup> Sharpe et al., 2019
VR (Virtual Reality) based interventions, n=1	Any cancer	Stress, embarrassment	<sup>73</sup> Singh et al., 2021

## Results

A total of 4829 articles were retrieved by the first preliminary search. After reducing duplicates, 2964 articles were assessed for inclusion according to eligibility criteria. After the full-text screening, 60 final articles were chosen. Study characteristics (cancer type and its associated therapy/intervention) and main psychological symptoms are summarized in Tables 1 and 2. To systematize psychological interventions as described in the literature, the authors have divided them into 3 broad categories, each type targeting a specific domain of mental health: cognitive-behavioural, mindfulness and relaxation.

## Conclusions

The most efficient psychological therapies, as well as therapies which require more extensive research, were outlined in this review. The authors discuss the necessity of primary assessment of patients and whether they require the help of a specialist. With the limitations of the potential risk of bias, an overview of different therapies and interventions targeting various psychological symptoms is outlined additionally.

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