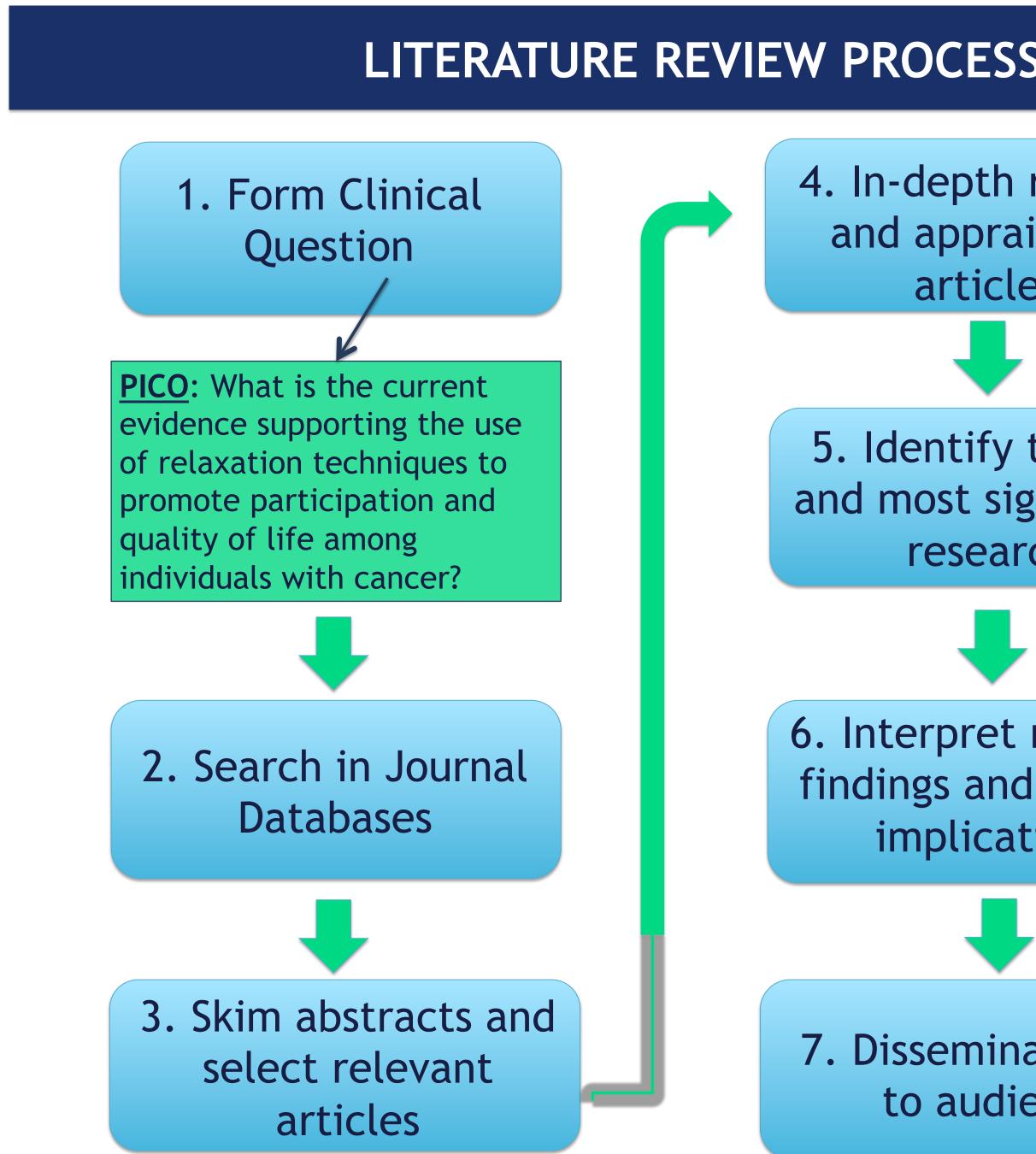




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BACKGROUND INFORMATION

- High levels of anxiety and distress are associated with the diagnosis, treatment, and remission stages of cancer.
- Psychological symptoms have the potential to negatively influence functional performance, quality of life, overall health, and recovery of individuals with cancer.
- Improvements in occupational performance and quality of life, as well as reductions in anxiety and pain have been demonstrated in a variety of health conditions with the use of therapeutic relaxation techniques, such as:
 - Yoga/Tai Chi
 - Mindfulness based stress reduction (MBSR)
 - Relaxation Training
 - Massage
- Research continues to emerge investigating trends in use, patient experiences, and efficacy of therapeutic relaxation techniques with individuals living with cancer.



DATABASE SEARCH TERMS AND STUDY INCLUSION

Search Terms

- Cancer
- Palliative Care
- Relax*
- Breathing
- Yoga
- Mindfulness
- Anxiety
- Complementary and Alternative Medicine
- Occupational Therapy
- Stress Reduction

Inclusion Criteria

- Published after 2003
- Peer Reviewed
- Subjects with primary diagnosis of cancer and/or receiving palliative care
- Studies including or describing relaxationbased techniques as therapeutic interventions

Evaluating the Use of Relaxation Interventions to Promote Participation and Quality of Life in Individuals with Cancer

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Exclusion Criteria

• Studies including relaxation-based therapeutic interventions on subjects without a primary diagnosis of cancer.

STUDY EVALUATION AND ANALYSIS

Article	Level of Evidence	Yoga	MBSR	Relaxation Training	Massage	Other	Outcome(s) Measured
Adamsen, et. al. (2006)				X	X	X (body awareness training)	Q, PA
Lengacher, et al. (2009)	I		Х				Q , A , P
Ulger, O. & Yagli, V. (2010)		X					Q
Post-White, et al. (2009)	I				Х		A , P
Subedi, S. (2014)	Literature review	X					Q , A , P , PA
Ram, et al. (2012)	l	Х					Q , S, A
Smith, K. & Puckall, C. (2009)			X				Q , S, A
Smith, et al. (2005)	I		X				Q , S, A , P
Castellar, Fernandes, & Tosta (2014)						X (Pranic Meditation)	Q , S, A , P
Duclox, Guisado, & Pautex (2013)				X		X (deep breathing)	S
Furzer et al. (2014)	IV		X	X	X	X (touch mind-body, and energy - based therapy)	Q, A
Rosenow, S. & Silverman, M. (2014)	I and II					X (music therapy)	Q, A, P

LEVELS OF EVIDENCE

Level I: Randomized control trial; Systematic review of randomized **control trials** (N=6 studies) Level II: Cohort trials (non-randomized) with two comparison **groups** (N=2 studies) Level III: Non-randomized pre- and post-test with one group (N=3 studies) Level IV: Qualitative study (N=1 studies) CAP Worksheet adapted from: Critical Review Form - Quantitative Studies Law, M., Stewart, D., Pollack, N., Letts, L., Bosch, J., & Westmorland, M., 1998, McMaster University. **OUTCOMES MEASURED**

P: Pain

Q: Quality of Life A: Anxiet

S: Sleep Quality

* Denotes expanded search based on keyword

Abigail Gilmore, OTS; Brianna Schwoyer, OTS; Audrey Zapletal MS, OTR/L

ty/stress	PA:	Physical Activity
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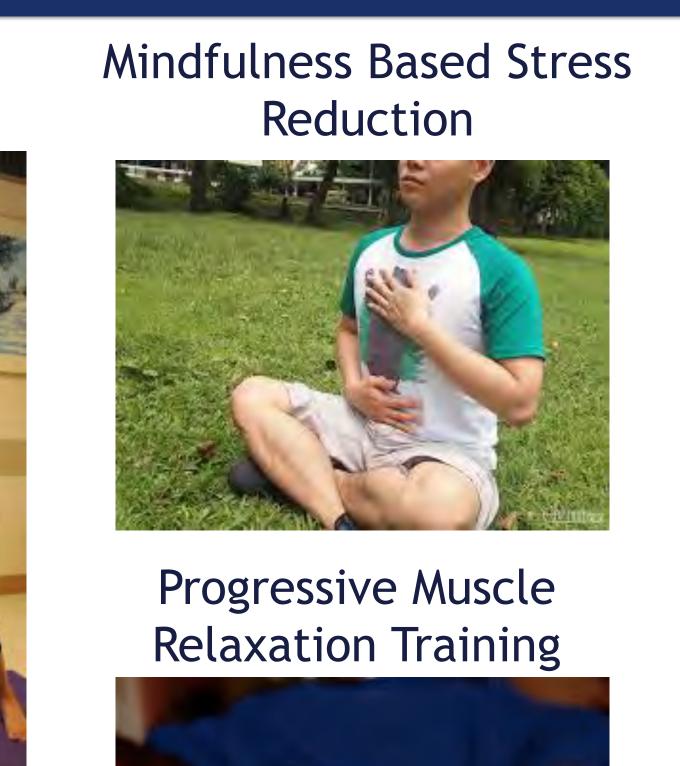
- articles)

- (2/12 articles)

- relation to improved quality of life.
- functional performance.
- the treatment journey.

listening to an outside source) and sensations)

TYPES OF RELAXATION TECHNIQUES



Massage



THEMES DERIVED FROM EVIDENCE

1) In current literature, yoga and relaxation training are the most commonly indicated relaxation interventions for patients living with cancer. (6/12)

2) Current practice involves integrating a variety of relaxation interventions to improve quality of life, sleep, anxiety, and pain. (12/12)

3) Participation in massage, yoga, meditation, and relaxation training contributes to increased feelings of empowerment, self-confidence, and personal wellness in individuals living with cancer. (3/12 articles)

4) The European Organization for Research and Treatment of Cancer Quality of Life Questionnaire (EORTC QLQ-C30) and qualitative assessments indicate that relaxation interventions can significantly improve the quality of life in individuals with cancer. (10/12 articles)

5) Individuals with cancer experience increased levels of activity and role fulfillment during and post-participation in relaxation interventions such as mindfulness based stress reduction, massage, relaxation training, and yoga.

6) Anxiety, stress, and tension are improved in individuals with cancer after participation in relaxation interventions as measured by the State Trait Anxiety Inventory (STAI), Perceived Stress Scale (PSS), and the Hospital Anxiety and Depression Scale (HADS). (9/12 articles)

FUTURE RESEARCH

• Future research is needed to investigate the potential distinction between passive* versus active** patient involvement in relaxation interventions in

• Longitudinal studies are needed to assess the degree and duration of impact these relaxation interventions make in the lives of individuals with cancer.

• Occupational Therapists can use the evidence to develop holistic treatment plans that incorporate relaxation techniques to enhance the individual's

 Occupational Therapists and the interdisciplinary care team can utilize relaxation interventions to address the psychosocial needs of patients, increase motivation, and improve patients' sense of empowerment throughout

* Passive indicates interventions in which the patient solely receives the intervention and does not participate in administering the intervention (i.e. massage, which is administered by a third party, and music therapy, which requires

** Active indicates interventions in which the patient holds an active role in administering and participating in the interventions (i.e. yoga, progressive muscle relaxation, and MBSR in which the patient controls their own body movements