

Effects of Activity Pacing on Cancer-related Fatigue Severity

Effects of activity pacing-related interventions on cancer-related fatigue and classification of behavior change techniques: A systematic review and meta-analysis

Supplemental materials

Supplementary Material 1: Standardized prompt (verbatim)

Supplemental Fig. 1: Funnel plots for the assessment of publication bias of the included randomized controlled trials (RCTs)

Supplemental Table 1. Details of terms for systematic literature search

Supplemental Table 2. Additional outcomes reported in the included studies

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Supplementary Material 1: Standardized prompt (verbatim)

According to the BCT taxonomy, please list the behavioral change technique using in the attached research paper with the BCT code number and cite the appropriate section in the paper.

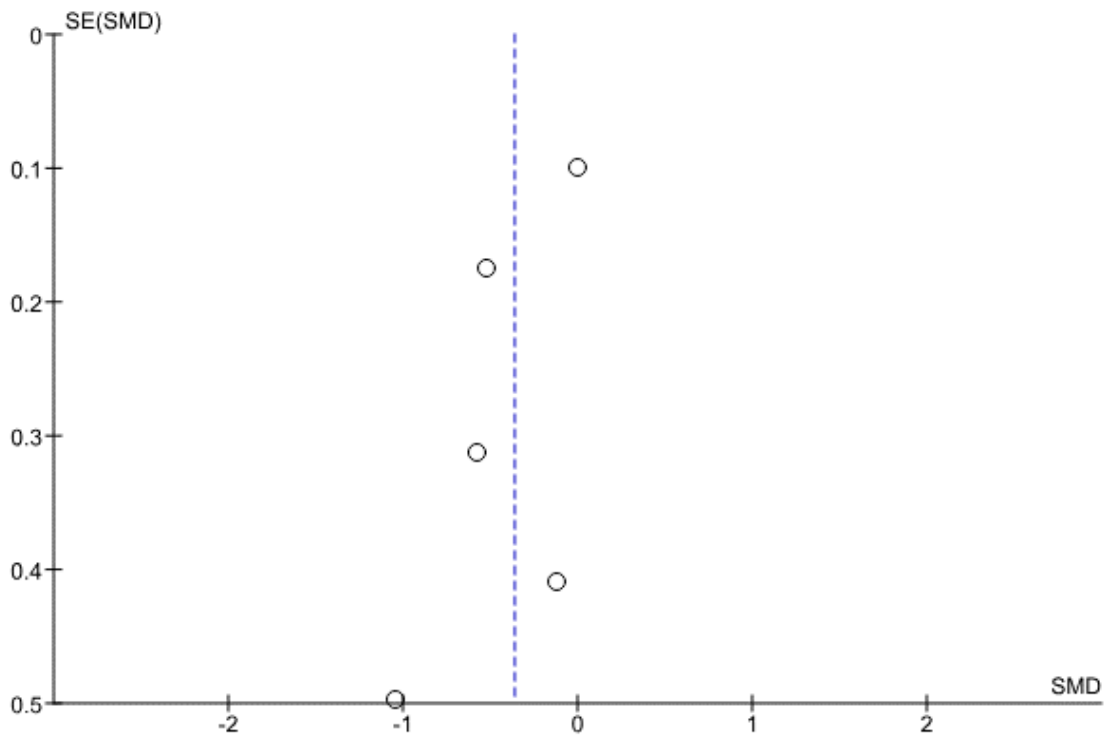
Out put format

Behavioral change technique in <title of the attached resarch paper>

1> 1.1. Goal setting (behavior) ;Agree on a daily sleeping time (p.9, 1.13)

2> 8.7. Graded tasks ;5min walking per week during chemotherapy, then plus 10min, then double the time (p.10, 1.15)

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Supplemental Fig. 1

Funnel plots for the assessment of publication bias of the included randomized controlled trials (RCTs)

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Supplemental Table 1. Details of terms for systematic literature search

#1	(Conservation of Energy Resources) OR (Energy Conservation Technique) OR (Energy Conservation Therapy) OR (Activity pacing)	"conservation of energy resources"[MeSH Terms] OR ("conservation"[All Fields] AND "energy"[All Fields] AND "resources"[All Fields]) OR "conservation of energy resources"[All Fields] OR (("energie"[All Fields] OR "energies"[All Fields] OR "energy"[All Fields]) AND ("conservancies"[All Fields] OR "conservancy"[All Fields] OR "conservancy s"[All Fields] OR "conservation"[All Fields] OR "conservational"[All Fields] OR "conservations"[All Fields] OR "conservative"[All Fields] OR "conservatively"[All Fields] OR "conservatives"[All Fields] OR "conserve"[All Fields] OR "conserved"[All Fields] OR "conserves"[All Fields] OR "conserving"[All Fields]) AND ("methods"[MeSH Terms] OR "methods"[All Fields] OR "technique"[All Fields] OR "methods"[MeSH Subheading] OR "techniques"[All Fields] OR "technique s"[All Fields])) OR (("energie"[All Fields] OR "energies"[All Fields] OR "energy"[All Fields]) AND ("conservancies"[All Fields] OR "conservancy"[All Fields] OR "conservancy s"[All Fields] OR "conservation"[All Fields] OR "conservational"[All Fields] OR "conservations"[All Fields] OR "conservative"[All Fields] OR "conservatively"[All Fields] OR "conservatives"[All Fields] OR "conserve"[All Fields] OR "conserved"[All Fields] OR "conserves"[All Fields] OR "conserving"[All Fields]) AND ("therapeutics"[MeSH Terms] OR "therapeutics"[All Fields] OR "therapies"[All Fields] OR "therapy"[MeSH Subheading] OR "therapy"[All Fields] OR "therapy s"[All Fields] OR "therapys"[All Fields])) OR (("activable"[All Fields] OR "activate"[All Fields] OR "activated"[All Fields] OR "activates"[All Fields] OR "activating"[All Fields] OR "activation"[All Fields] OR "activations"[All Fields] OR "activator"[All Fields] OR "activator s"[All Fields] OR "activators"[All Fields] OR "active"[All Fields] OR "acted"[All Fields] OR "actively"[All Fields] OR "actives"[All Fields] OR "activities"[All Fields] OR "activity s"[All Fields] OR "activities"[All Fields] OR "motor activity"[MeSH Terms] OR ("motor"[All Fields] AND "activity"[All Fields]) OR "motor activity"[All Fields] OR "activity"[All Fields]) AND ("paced"[All Fields] OR "paces"[All Fields] OR "pacing"[All Fields] OR "pacings"[All Fields]))
#2	(((fatigue) OR (tired*)) OR (exhaustion)) OR (lethargy)) OR (asthenia)	"fatiguability"[All Fields] OR "fatiguable"[All Fields] OR "fatigue"[MeSH Terms] OR "fatigue"[All Fields] OR "fatigued"[All Fields] OR "fatigues"[All Fields] OR "fatiguing"[All Fields] OR "fatigueability"[All Fields] OR "tired*"[All Fields] OR "exhausted"[All Fields] OR "exhausting"[All Fields] OR "exhaustion"[All Fields] OR "exhaustions"[All Fields] OR "exhaustive"[All Fields] OR "exhaustively"[All Fields] OR "lethargy"[MeSH Terms] OR "lethargy"[All Fields] OR "asthenia"[MeSH Terms] OR "asthenia"[All Fields] OR "asthenias"[All Fields]
#3	#1 and #2	

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Supplemental Table 2. Additional outcomes reported in the included studies

First Author (Year), Country	Outcome measure	Summary of results
RCTs		
Barsevick (2004), USA	Functional Performance Inventory	No significant improvement in overall functional performance; however, the intervention group reported significantly less disruption of usual activities compared with the control group.
Yuen (2006), USA	Not reported	Additional outcomes beyond fatigue were not reported.
Sadeghi (2016), Iran	Health Promoting Lifestyle Scale	Significant improvements in health-promoting lifestyle behaviors were observed after the intervention, particularly in interpersonal relationships and physical activity domains.
Ninsen (2021), Thailand	Pain and sleep: NRS; Depression: PHQ-9	The intervention group showed reductions in pain and depressive symptoms, as well as improvements in sleep duration and physical activity levels compared with the control group.
Sharbafchi (2023), Iran	Not reported	Additional outcomes beyond fatigue were not reported.
Naraphong (2023), Thailand	Satisfaction and usefulness with the intervention	Most participants were satisfied (9/10). The most used strategies were hydration and activity prioritization, while prioritizing and delegating activities were perceived as most effective.
Getu (2023), Ethiopia	Depression: PHQ-9; QoL: EORTC QLQ-C30, QLQ-BR45	The intervention group showed significant reductions in depressive symptoms and improvements in quality of life and several symptom scales (fatigue, nausea/vomiting, pain, insomnia, appetite loss, financial difficulties) compared with usual care.
non-RCTs		
Barsevick (2002), USA	Not reported	Additional outcomes beyond fatigue were not reported.
Getu (2022), Ethiopia	Depression: PHQ-9; QoL: EORTC QLQ-C30, QLQ-BR45	Improvements were observed in global quality of life and functioning domains, along with reductions in several symptom scales including fatigue, pain, dyspnea, insomnia, and appetite loss. Depression scores had also decreased.
Lu (2024), China	Not reported	Additional outcomes beyond fatigue were not reported.
Abbreviations: PHQ-9, Patient Health Questionnaire-9; QoL, Quality of Life; EORTC QLQ-C30, European Organisation for Research and Treatment of Cancer Quality of Life Questionnaire-Core 30; EORTC QLQ-BR45, European Organisation for Research and Treatment of Cancer Quality of Life Questionnaire-Breast Cancer Module; NRS, Numeric Rating Scale.		

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