

# Effects of Acceptance and Commitment Therapy on quality of life, fatigue, and psychological distress for patients with advanced cancer: A systematic review and meta-analysis



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## Introduction

Advanced cancer is an incurable and life-threatening disease that poses a major challenge to patient's psychological and physical well-being. This review aimed to systematically summarize the current studies and explore the immediate effect of Acceptance and Commitment Therapy (ACT) on quality of life (QOL), fatigue and psychological distress.

## Methods

Nine electronic databases were searched by key words. Two independent reviewers assessed the eligible studies by The Joanna Briggs Institute critical appraisal checklist. Meta-analysis was conducted when at least three studies reported the same outcome, with subgroup analysis for modality of ACT and presence of dyadic involvement, otherwise, narrative synthesis was used. Sensitivity analysis was performed to test the influence of study quality and control type.

## Results

Six studies involved 261 participants were identified (Fig. 1). Meta-analysis found face-to-face individual ACT significantly improved psychological distress (standardized mean difference [SMD]: -0.50; 95% confidence interval [CI]: -0.93 to -0.08;  $p = 0.02$ ;  $I^2 = 0\%$ ) post-intervention (Fig. 2. (a) (b)). However, a favourable but non-significant improvement in

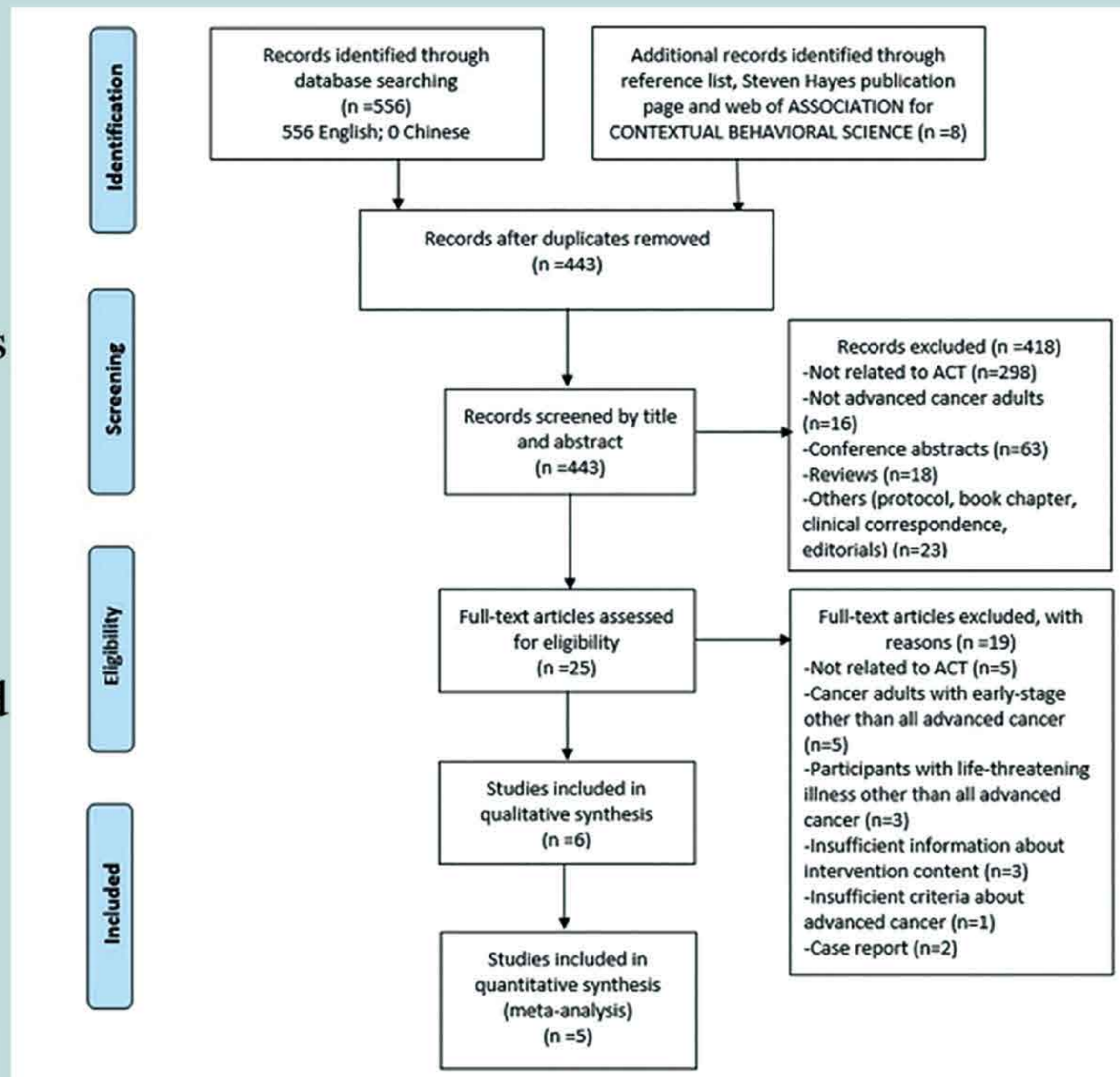


Fig. 1. Flow diagram for study retrieval and selection

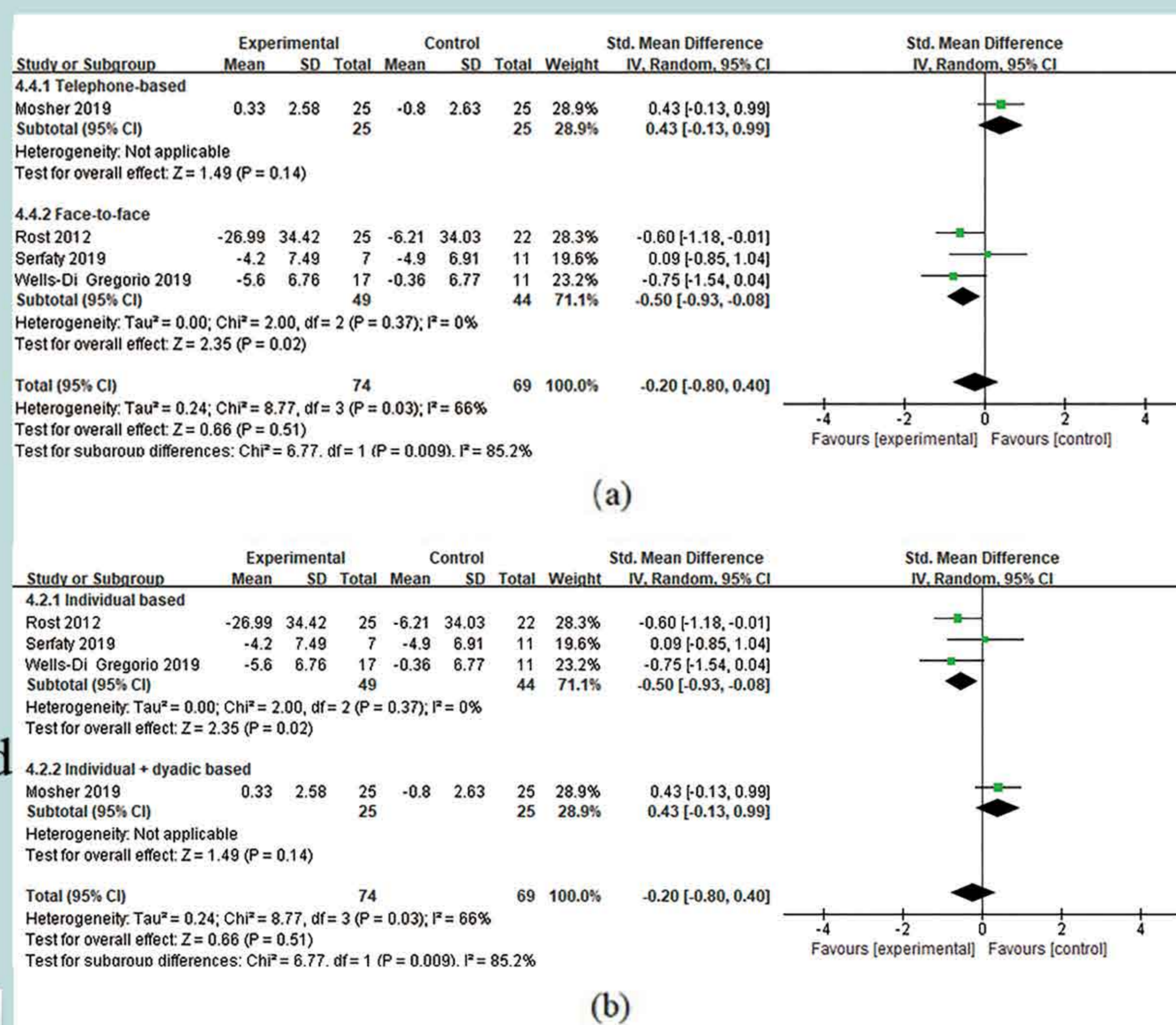


Fig. 2. (a) (b) Forest plot of the effect of ACT on psychological distress post-intervention.

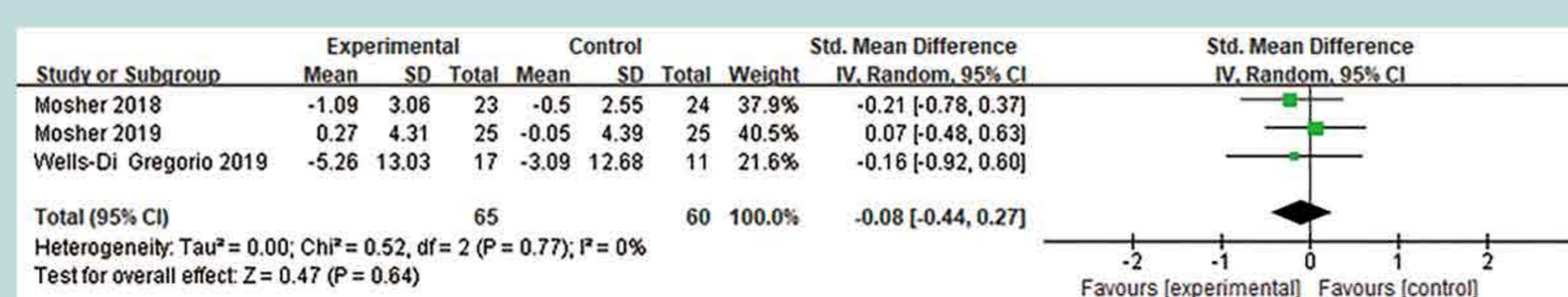


Fig. 3. Forest plot of the effect of ACT on fatigue post-intervention.

Table 1 The results of sensitivity analysis

Outcome		SMD (95% CI)		
		R=0.5	R=0.25	R=0.75
Psychological distress	Overall	-0.20 [-0.80, 0.40]	-0.19 [-0.71, 0.33]	-0.29 [-1.12, 0.55]
	Telephone-based	0.43 [-0.13, 0.99]	0.35 [-0.21, 0.91]	0.48 [-0.01, 0.96]
	Face-to-face	-0.50 [-0.93, -0.08]	-0.45 [-0.87, -0.03]	-0.90 [-1.38, -0.42]
	Individual-based	-0.50 [-0.93, -0.08]	-0.45 [-0.87, -0.03]	-0.65 [-1.28, -0.01]
Fatigue	Individual and dyadic based	0.43 [-0.13, 0.99]	0.35 [-0.21, 0.91]	0.60 [0.03, 1.17]
	-	-0.08 [-0.44, 0.27]	-0.08 [-0.44, 0.27]	-0.09 [-0.44, 0.27]

Note. SMD, standard mean difference; CI, confidential interval; R, Correlation coefficient

fatigue was found post-intervention (SMD: -0.08; 95%CI: -0.44 to 0.27;  $p = 0.64$ ;  $I^2 = 0\%$ ) (Fig. 3). Narrative synthesis revealed ACT could significantly improve their QOL. Sensitivity analysis revealed that type of control group influenced the outcomes.

## Conclusion

These findings support ACT is an effective approach for advanced cancer patients to promote health condition.

## Key words

Acceptance and Commitment Therapy; Advanced cancer; quality of life; fatigue; distress; Systematic review; Meta-analysis

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