

Identifying Components Of Self-Management Interventions Associated With Change In Health-Related Quality Of Life In COPD Patients: Systematic Review And A Meta-Regression Analysis

N. Jonkman¹, M. Schuurmans¹, R. Groenwold², A. Hoes², J. Trappenburg^{1, 3}

¹University Medical Center Utrecht, Utrecht, Netherlands, ²University Medical Center Utrecht, Utrecht, Utrecht, Netherlands, ³

TASTE consortium

Rationale

Self-management for patients with COPD is now widely recognized as an essential part of treatment and numerous randomized controlled trials have evaluated the effectiveness of interventions. Despite the high expectations, some trials have shown unexpected outcomes and meta-analyses encountered considerable heterogeneity in results. The diversity in interventions delivered to patients might be an explanation for these heterogeneous findings. The aim of this study is to quantify the diversity in components of self-management interventions and explore which components are associated with improvement in health-related quality of life (HRQoL).

Methods

An extensive literature was conducted in PubMed, EMBASE, CENTRAL, PsycINFO and CINAHL (January 1985 - June 2013). Studies selected were randomized trials in patients with COPD comparing self-management interventions with usual care and reporting data on health-related quality of life. A meta-regression based on weighted random effects linear regression models was conducted to identify which of the following intervention characteristics were associated with increase in standardized HRQoL measures: intensity, duration, training of interventionists, peer interaction, problem-solving skills, management of psychological aspects. Sensitivity analyses were performed excluding those studies that were deemed as high risk of bias.

Results

Following the literature search and title/abstract screening, 23 publications met our inclusion criteria and were selected for data extraction. In 3 publications the HRQoL outcome did not allow pooling in the meta-regression. This resulted in a selection of 20 trials with 22 intervention arms for this meta-regression, representing a total of 4,260 patients. Included studies showed great diversity in terms of mode, content, intensity and duration. Most interventions used individual sessions (85%) and reinforcement by telephone (57%) as a mode and focused on medication management (100%) and action plans (90%). Self-management interventions showed improvements in HRQoL of life at 6 months (effect size, 0.21 [95%CI, 0.10-0.32]) and at 12 months (effect size, 0.12 [95%CI, 0.03-0.21]). Meta-regression revealed a small positive association for intensity (effect size, 0.01 [95%CI, 0.00-0.01]) and duration (effect size, 0.02 [95%CI, 0.00-0.02]) with HRQoL at 12 months (Table 1).

Conclusion

In spite of the large diversity in interventions evaluated, self-management interventions improved HRQoL at 6 months and 12 months. Yet, we could not explain which intervention characteristics were associated with improvements in HRQoL. Investigating specific self-management interventions on a patient level rather than a study level may provide valuable insights into which subgroups of patients respond to which components of these interventions.

afbeelding1.png

This abstract is funded by: The Netherlands Organisation for Health Research and Development. Projectnumber: 520001002

Am J Respir Crit Care Med 191;2015:A1114

Internet address: www.atsjournals.org

Online Abstracts Issue