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‘Together WE can make it better’: Should family-based interventions be considered to promote health-related quality of life of patients with chronic physical conditions?

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Background

Due to its increasing prevalence worldwide, the management of chronic physical conditions became one of the biggest global health challenges. As a consequence, an extensive body of literature reports the results of patient-centred interventions that aim to promote patients’ disease self-management, well-being and quality of life [1]. In this sense, it appears to have been assumed that patients with chronic physical conditions independently manage their own disease and little to no influence is needed from the interpersonal relationships that define the family context of care. However, family members also cope with many changes and losses during the patient’s illness and represent an important source of support and care. Nevertheless, family-based interventions for chronic physical conditions are still scarce in the scientific literature and in clinical practice. Recent meta-analyses suggested its relative effectiveness for patients’ outcomes such as self-efficacy, depression, pain, and marital satisfaction [2-4]. Yet, little is known about the effectiveness of family based-interventions for patients’ health-related quality of life (HRQoL), a construct that is fundamental to ensure healthy disease adjustment as it represents the individuals’ perception of his/hers physical and mental health over the disease course. The aim of this study was to meta-analyse randomized clinical trials (RCTs) comparing the effectiveness of family-based (FB) versus patient-centred (PC) interventions for the HRQoL of patients with chronic physical conditions.

Methods

The search was performed from March 25 to December 02, 2019, on Web of Science (all databases included), Scopus, and PsycInfo. Studies were included if they were randomized clinical trials (RCTs) comparing the effectiveness of FB with PC interventions for the HRQoL of adults (≥ 18 years old) with a chronic physical condition. No limits were applied for publication time. Cohen’s d values were computed by subtracting the experimental group (FB) mean from the control group (PC) mean and dividing this value by the pooled sample standard deviation. The meta-analysis was conducted with the MetaXL add-in for Microsoft Excel (version 5.3). Since the studies comprised different chronic conditions, different interventions, measures and outcomes, the random effects model was applied to account for heterogeneity using the DerSimonian and Laird’s method. Heterogeneity among studies was evaluated using the I-squared statistic.

Keywords:

chronic physical conditions;
family-based interventions;
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Results

The database search provided a total of 1308 records. From these, eight RCTs met the inclusion criteria and were included for the quantitative synthesis. The meta-analysis comprised a total of 662 patients with a chronic physical disease; of these, 331 received a FB intervention (331 dyads). Patients from the PC group were on average 57.5 years old. Patients and their family members from the FB condition were on average 58.1 and 55.1 years old, respectively. Five different chronic physical conditions were included such as cancer ($k=3$), cardiac disease ($k=1$), chronic obstructive pulmonary disorder ($k=1$), osteoarthritis ($k=1$) and rheumatoid arthritis ($k=2$). Meta-analytical results suggested that the aggregated effect size for HRQoL ($k=8$) is medium but nonsignificant and highly heterogeneous ($d=0.60$; 95% CI = -0.08—1.28; $I^2=94\%$, $p<.01$). Sensitivity analysis were performed by sequentially omitting individual studies. This analysis resulted on the exclusion of one study as it presented the effect of a negative extreme outlier. Hereafter, the meta-analysis was rerun ($k=7$) and it revealed a moderate to large statistically significant aggregated effect size ($d=0.74$, 95% CI = 0.01—1.46), although highly heterogeneous ($I^2=94\%$, $p<.01$).

Conclusions

The overall results suggest that family-based interventions significantly improve HRQoL for patients with chronic physical conditions ($k=7$). It may be that the presence of a family member helps the patient manage the several demands that a chronic physical condition entails. Besides emotional support, family members can assist the patient by motivating for behaviour change, helping in symptom's management and control, partnering in information gathering, and assisting in problem-solving and decision-making. The sensitivity analysis performed resulted in the exclusion of one study. Interestingly, this study only applied behavioural techniques while the FB interventions from the remaining studies included educational and supportive components and cognitive-behavioural techniques. It may be that a behavioural-only approach does not necessarily respond to all the disease's demands, considering the multidimensional construct of HRQoL as it involves a combination of physical, emotional, behavioural, social and existential domains. Due to the small number of studies included, this meta-analysis was not able to explore the substantial heterogeneity between studies since, when there are fewer than 10 studies, the Egger's test power is too low to distinguish chance from real asymmetry. In conclusion, the overall results suggest that it is crucial to change the paradigm of research and clinical practice by recognizing the importance of integrating a family member into chronic physical conditions' self-management interventions to promote patients' HRQoL, although further research is required.

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