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Supported self-management interventions for families and children aged 4 to 11 years old living with arthritis, asthma and type one diabetes: an integrative review

## **Background**

The Shared Management Model implies that as children with chronic conditions like rheumatic and musculoskeletal diseases (RMDs) mature, they should increasingly take on responsibility for self-managing their health, in partnership with those involved in their care and education.<sup>1</sup> An initial search of the literature suggested that there was a reduced emphasis on the supported self-management of chronic conditions like RMDs in children aged 4 to 11 years, inspiring a more rigorous and systematic search of the empirical literature.

## **Objectives**

The aim of this integrative review were to understand the evidence base regarding supported self-management of chronic conditions by children and their families, including interventions that promote supported self-management skills development.

## **Methods**

Studies published since 2012 were identified through a search of eight bibliographic databases. Given the extensive nature of chronic conditions in children, the review focused on three groups of chronic conditions sharing similar self-management characteristics: asthma, RMDs, and type one diabetes mellitus (T1DM). The methodological quality of quantitative studies was assessed using the Cochrane Risk of Bias scale. Non-randomised studies were assessed using the Methodological Index for Non-randomised Studies (MINORS) instrument. Review articles and qualitative studies were assessed using Critical Appraisal Skills Programme (CASP) Systematic Review Checklist and CASP Qualitative Checklist, respectively.

## **Results**

The review identified 29 relevant articles, reporting on 22 primary research studies and three review articles. Study participants were children with asthma ( $n = 17$ ) and T1DM ( $n = 4$ ). No studies were identified for children with RMDs. Seventeen studies reported an underlying theoretical basis, the most common of which was social cognitive theory. Interventions promoting supported self-management skills appeared to be effective in improving a range of self-reported and clinical outcomes, including health status, health knowledge, and self-efficacy. However, there was limited evidence of the effect of interventions on the psychosocial wellbeing of children. It also became clear that education-based interventions alone are insufficient in improving self- and shared-management skills. In addition, most studies failed to contextualise chronic conditions in children and their families, who shift between interacting with interventions and living their everyday lives over time.

## **Conclusions**

Given the complexity of childhood chronic conditions and intervention components and contents, further investigation is required to specify the mechanisms by which supported self-management interventions operate. Most studies were also aimed at parents and carers, and appeared to neglect the importance of including and engaging children in decisions involving their healthcare. Finally, the review clearly highlighted the need for research on the supported self-management of RMDs in children, since no evidence-based interventions were identified for these individuals.

## **References**

1. Lindsay, S. et al. 2014. A systematic review of self-management interventions for children and youth with physical disabilities. *Disability and Rehabilitation*. 36(4): pp.276-288.