

Report - MACP Research Award Level 1 – Michael Mansfield

Thank you to the Musculoskeletal Association of Chartered Physiotherapists for granting me the research award level 1. I am grateful for the funding which has supported a number of the steps involved in the systematic review process including; literature searching, data extraction, study appraisal and write up of the report. In addition, I would like to extend my gratitude and thanks to Dr Mick Thacker and Dr Toby Smith for their support throughout this project. We are pleased to report that our systematic review has been accepted for publication in *Musculoskeletal Care* journal.

Workers of various occupations often report Work Related Upper Quadrant Disorder (WRUQDs) with general estimates indicate that 20–40% of all workers experience symptoms in the neck, shoulders, wrist/hand, or upper limb pain over a 12 month period. These symptoms can have significant psychosocial and financial consequences for the individual and workplace. Research has shown that associative factors for WRUQDs are multifactorial in nature. These include factors related to psychosocial elements, life-style, postural elements, joint hypermobility, environmental elements, gender and physical activity levels.

Physiotherapists are well placed to address the current public health agendas around physical activity participation. Developing our understanding in physical activity participation will help support physiotherapists decision making when assessing and managing patients with musculoskeletal conditions including WRUQDs. Physical activity and musculoskeletal conditions such as WRUQD, are key research themes identified as priority areas by the Chartered Society of Physiotherapy (CSP) and Musculoskeletal Association of Chartered Physiotherapists (MACP).

To date no review has investigated whether physical activity participation is associated to the incidence or may predict the development of WRUQDs. Subsequently, the aim of this review was to determine whether physical activity participation is associated with and/or predicts the development of Work Related Upper Quadrant Disorders (WRUQDs).

A systematic review was conducted including searches of PubMed (MEDLINE), EMBASE and CINAHL from inception to March 31st 2017. Quantitative studies including any outcome measure of physical activity participation and its association with and/or prediction to WRUQDs were included. One reviewer conducted the search and two reviewers independently assessed eligibility and completed methodological quality assessment using a modified Downs and Black checklist. Data was analysed narratively.

Eight moderate to high quality studies were included in the final review. Three studies reported nil statistical difference between physical activity participation and the risk of developing WRUQD. Three studies reported a negative and one study reported a positive association between physical activity participation and WRUQDs. One study reported that little or no physical exercise participation was a risk factor WRUQD. There is limited evidence for a negative association between physical activity participation and WRUQDs development. However this was not a consistent finding across all studies included. Further research is indicated in standardising diagnostic criteria and physical activity participation measurement in this patient population.

The reflections and leaning points from the applicant are to continue to ensure that robust PICO structure is within the research question. The careful structuring of our research question supported the systematic literature searching and reporting according to PRISMA guidelines.

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