

EFFECTIVENESS OF A UNIVERSAL SCHOOL-BASED 'RESILIENCE' INTERVENTION IN REDUCING PAIN IN ADOLESCENTS: A CLUSTER-RANDOMISED CONTROLLED TRIAL

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Introduction and purpose: Musculoskeletal pain is the leading cause of disability

worldwide. Pain during adolescence is common, with persistent pain during adolescence associated with an increased risk of chronic pain in adulthood. Emerging evidence suggests the potential of resilience interventions in improving pain outcomes in chronic pain populations, however there are no studies that investigate this in children. The aim was to investigate the effectiveness of a school-based 'resilience' intervention in reducing pain frequency, problematic pain and pain intensity, and increasing pain self-efficacy and resilience in secondary school students.

Methods: A cluster-randomised controlled study that examined the effectiveness of a school-based resilience intervention in Grade 9 students (aged 14-15 years) in 32 Australian secondary schools (20 intervention; 12 control). A three-year intervention involving school staff implementation of programs and resources that addressed individual and environmental resilience protective factors was implemented. Outcome data was collected online and included the primary outcome of pain frequency, and secondary outcomes of problematic pain, pain intensity, pain self-efficacy and resilience protective factors (individual and environmental).

Results: Data from 1831 students (intervention=1201; control=630) were analysed. No significant differences were found between intervention and control for primary: pain frequency: OR 0.98 (95%CI: 0.73 to 1.31, p=0.88) or secondary outcomes: problematic pain prevalence: OR 0.93 (0.74 to 1.18, p=0.54); pain intensity: MD -0.09 (-0.34 to 0.16, p=0.47);

pain self-efficacy: MD 0.61 (-1.38 to 2.61, $p=0.53$); individual resilience: MD -0.02 (-0.11 to 0.07, $p=0.65$); environmental resilience: MD 0.04 (-0.07 to 0.14 $p=0.48$). Post hoc mediation analyses showed resilience was not a mediator of pain frequency.

Conclusions: The school-based resilience intervention was not effective in reducing pain frequency, problematic pain, pain intensity, or improving the pain self-efficacy or resilience in secondary school students. The results suggest resilience, as defined and measured in this study, may not be a suitable intervention target for reducing pain frequency in general adolescent populations.