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Chiropractic and exercise for elderly with neck pain: A mixed methods comparative effectiveness trial

Neck pain (NP) is common among the elderly, experienced annually by 8-20% of those over 65 years of age. Moreover, it has considerable negative impact on the health, quality of life, and independence of this rapidly growing population. Evidence supports the use of spinal manipulative therapy (SMT) and exercise to treat NP in the general adult population. To date, no studies have evaluated the effectiveness and risk of harm of these therapies specifically in seniors with NP. Further, it is unknown how this population perceives satisfaction with care and how they ascribe value to these therapies.

The broad objective of this work is to comprehensively describe the results and implications of a mixed-methods randomized clinical trial (RCT) investigating conservative treatments for chronic NP among individuals 65 years of age and older. The primary aim of the RCT was to determine the relative short- and long-term clinical effectiveness of SMT and supervised rehabilitative exercise, both in combination with and compared to home exercise alone. The main outcome measure was a difference in pain, as measured after the 12 week intervention phase. Secondary aims include additional patient-rated and biomechanical outcomes, adverse events (AE), and an assessment of patients' perceptions of value among study treatments.

This study enrolled 241 participants 65 years of age and older with a primary complaint of mechanical NP, rated ≥ 3 (0-10) for 12 weeks or longer in duration. Linear mixed model analyses were used for between group comparisons and to assess within group differences at individual time points, as well as through the short-term (through week 12) and long-term (through week 52). Qualitative interviews were conducted (n=222) after the 12 week intervention phase, recorded, transcribed, and analyzed using content analysis. AE were recorded at each treatment visit, as well as documented within patient interviews and incidental mention by patients.

SMT with home exercise resulted in greater reduction of NP among the elderly after 12 weeks of treatment compared, with both supervised plus home exercise and home exercise alone. Supervised exercise sessions added little benefit to home exercise alone. Non-serious musculoskeletal AE were common, and can be regarded as normal reactions to SMT and exercise. The patient-provider relationship was highly valued in this group, which likely facilitated active care and information exchange. These participants felt empowered to manage their chronic NP, with the goal of maintaining perceived improvement in terms of pain reduction and improved function.

Dissemination of these findings among a community of practice will aid in the evidence-informed management of NP in the elderly. A description of the care experience and what contributed to value among these study participants creates unique context for effectively disseminating quantitative findings of this trial. A knowledge transfer plan includes diverse methods of information dissemination to meet the needs of several stakeholder groups, including the study participants, elderly NP patients, organizations who advocate their health care interests, health care providers, academic institutions training these providers, administrators of senior health care facilities, and policy makers. Methods of outreach include plain language summaries, video and written instruction of the exercise intervention, and peer-review publication and presentation.