

P210: The impact of interventions on undergraduate healthcare student empathy towards older adults and people with dementia; a systematic review and meta-analysis.

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Background: Empathy is a core characteristic expected from all healthcare professionals. Higher empathy is associated with reduced burnout, greater job satisfaction, and better patient outcomes. However, there are inequalities in care provided to older adults and people with dementia. Several reports have highlighted that, too often, care lacking in empathy is provided to older populations. The healthcare workforce needs to have the skills and attitudes to provide high-quality care that incorporates empathy. Therefore, appropriate education needs to be provided at undergraduate level to enhance empathy. To understand how empathy can be enhanced towards older adults and people with dementia, a systematic review and meta-analysis were completed.

Objective: The objectives of this systematic review and meta-analysis were:

- To identify what educational interventions were used to enhance empathy in healthcare students towards older adults and people with dementia,
- To identify what instruments were used to measure empathy change,
- To determine the efficacy of interventions on empathy.

Methods: A systematic literature search was completed in March 2021 using five electronic databases, grey literature, and snowball approaches. Studies were assessed by two independent reviewers using a pre-determined set of criteria. A narrative synthesis was completed, data was grouped and tabulated, and a random-effects meta-analysis was completed on eligible studies.

Results: Of 1,937 studies, 25 studies of moderate quality evaluated interventions that targeted empathy towards aging (n=20) and dementia (n=5). Three types of interventions were used: simulation, intergenerational contact, and mixed approaches, and most (84%) reported positive empathy change post-intervention. Empathy was measured most frequently using generic, self-administered instruments. Meta-analysis of studies (n=9) showed a small, but significant effect on empathy change; however, heterogeneity was high.

Conclusion: The evidence suggests that interventions can enhance empathy in undergraduate healthcare students towards older adults. However, few studies reviewed empathy towards dementia and the impact of interventions, therefore further research is needed.

P1: Dosing and treatment outcomes of rTMS for treatment-resistant depressed older adults in a naturalistic outpatient clinic population.

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Introduction: Repetitive transcranial magnetic stimulation (rTMS) is an effective, safe, and well-tolerated option for treatment-resistant depression (TRD). The minimal medical and cognitive side effects are advantages of rTMS for all patients. However, the majority of rTMS studies in older adults are notable for underdosing rTMS relative to the corresponding FDA-protocol, as noted by recent international meta-analyses. This study utilizes the

standardized rTMS FDA protocol and compares the response rates between older adult and non-older adult patients in a TRD clinic in Atlanta, Georgia with depressive symptoms as the primary outcome and anxiety symptoms as the secondary outcome.

Methods: This retrospective chart review of patients who received rTMS between March 2017 to June 2022 used descriptive statistics to compare treatment parameters and dropout rates between older adult and non-older adult patients. A 2 x 3 repeated-measures analysis of variance (ANOVA) analyzed changes in self-reported depression and anxiety symptom severity throughout treatment course (baseline, treatment midpoint, and final treatment) between the two groups.

Results: Eighty-nine patients were included for analysis: Group 1: >55 years old ($n=42$; $M=66.48$, $sd=6.16$; 71% female), and Group 2: <55 years old ($n=47$; $M=37.40$, $sd=9.13$; 60% female). All patients received at least 3000 pulses per session, with 85.71% of patients completing the FDA protocol in Group 1 and 85.11% of patients completing in Group 2. A >50% improvement in depression scores at the end of treatment were seen in 38.1% of patients in Group 1 and 31.9% of patients in Group 2. Both groups demonstrated significant within-group reductions of depression throughout treatment ($ps < .001$). A smaller subset of patients completed an anxiety questionnaire. Forty percent in Group 1 ($n=24$) and 33.3% in Group 2 ($n=25$) showed a >50% improvement in anxiety scores by end of treatment. Both groups demonstrated significant within-group reductions of anxiety throughout treatment ($ps < .001$). The between groups' difference for change in depression and anxiety scores was not statistically significant.

Conclusion: With FDA protocol dosing, older and non-older patients have consistent response and tolerability. While overall response rates were slightly lower than reported standardized clinical trials, our real-world sample highlights the effectiveness of rTMS for patients, including adults over 55, treated in an unselected, naturalistic outpatient sample.

P2: A voxel- and source-based morphometry analysis of grey matter volume differences in Very-Late-Onset Schizophrenia-Like Psychosis

P11: Psychosocial longitudinal correlates of mental and physical health of family caregivers of people with dementia

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There is a general consensus that providing care for a relative that has dementia is associated with negative outcomes for caregivers' mental health. There seem to be also associations with negative physical health outcomes, although the literature on this topic is more scarce. Most of the available research consist in studies with a cross-sectional design. Longitudinal studies focused on psychosocial correlates of mental and physical