

Interactions Between Impairment & Occupational Performance After Acquired Brain Injury

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PURPOSE: To examine impairment-activity interactions following ABI in order to establish which impairments are most strongly correlated with I/ADL dependence. Identifying and targeting these client factors in occupational therapy interventions may subsequently foster independence for this population following ABI.

DESIGN: This study is a cross-sectional descriptive correlation analysis of a prospective cohort.

METHOD: The authors collected de-identified evaluation findings of individuals with ABI (n = 20) who were receiving services at a community-based therapeutic day program setting. Recruitment occurred via convenience sampling. To be included among the sample, individuals must have sustained an ABI at least 1 year prior. Non-English speaking individuals, those with cognitive deficits un-related to ABI, and those whose brain injury occurred less than 1 year ago were excluded. Assessment measures included the Mayo-Portland Adaptability Inventory (MPAI-4), an assessment tool used to measure client factor level disability impact following brain injury, and four IADL subtasks of the Performance Assessment of Self-Care Skills (PASS), an observational measure used to examine an individual's ability to function safely and independently in the community. Participants were assessed as part of their regular services at the therapeutic day program.

RESULTS: A Spearman's Rho test was used to measure the strength of the correlation between 13 impairment indicators (MPAI-4) and PASS performance on each task realm (functional mobility, instrumental activities of daily living with a cognitive emphasis, and instrumental activities of daily living with a physical emphasis). For functional mobility tasks, a medium moderate negative correlation was found for use of hands ($r = -.565, p = .009$), verbal communication ($r = -.532, p = .016$) and visuospatial abilities ($r = -.501, p = .024$). For IADL tasks with a physical emphasis, a large moderate negative correlation was found for use of hands ($r = -.730, p = .00$) and mobility ($r = -.622, p = .003$). For IADL tasks with a cognitive emphasis, a large moderate negative correlation was found for verbal communication skills ($r = -.721, p = .000$).

CONCLUSION: Client factors under the following domains: neuromusculoskeletal and movement-related functions, voice and speech functions, and sensory functions were identified as those significantly negatively correlated with I/ADL performance. These finding are critically relevant for occupational therapists because community-based treatment plans for those in the chronic stage of recovery from ABI that target these client factors may have the greatest impact on reducing dependence with IADL.

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