INCIDENCE AND NEUROPSYCHOLOGICAL CONSEQUENCES OF MILD TRAUMATIC BRAIN INJURY IN OLDER ADULTS

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To my grandmother, Dorothy, who inspired my endeavours in the field of Neuropsychology

ABSTRACT

This study examined the epidemiology and neuropsychological effects of Mild Traumatic Brain Injury (MTBI) in older adults (with a mean age of 83). The study was conducted in two parts. Part one involved the administration of a questionnaire to 264 residents from nursing homes and retirement villages. Results indicated that 41.9% of nursing home and 26.5% of retirement village residents reported they had sustained a fall during the past year. Of these falls, 2.3% met criteria for a TBI. Of the retirement village participants, 4.1% indicated they had sustained a head injury during the past five years which met the criteria for a MTBI, equating to an annual incidence rate of 816 per 100,000. Analysis of incidence rate by age revealed TBIs increased with age; older adults aged 84 and under were less likely to have sustained a TBI (2.2%) than those aged 85 and over (4%). Of those who had sustained a TBI, 92.5% were of mild severity, and, of these between 10.8% and 16% had not sought any medical attention. Participants admitted to hospital for orthopaedic injuries were less likely to be diagnosed with a MTBI (18.1%) than those with non-orthopaedic injuries (40%).

Part two involved the administration of measures of attention, memory and executive functioning to 21 MTBI participants. Compared with age matched controls, the MTBI group performed significantly lower on measures of attention. Analysis of the MTBI group according to severity of non-brain injury/s indicated significant differences on measures of memory (visual) and information processing speed. Post hoc analysis within the MTBI group according to fall frequency revealed significant differences on measures of information processing speed, attention and memory (verbal and visual). Further analysis revealed only fall frequency, age, gender and an interaction effect between fall frequency and age predicted neuropsychological performance. The reported findings suggest that the variables of fall frequency and age be taken into consideration when evaluating outcome post MTBI in older old adults.

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