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Descriptive Epidemiology of Fall-Related Injuries Among Older Adults in Ontario, Canada

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COMPARING THE SHORT AND ORIGINAL VERSIONS OF THE ACTIVITIES-SPECIFIC BALANCE CONFIDENCE (ABC) SCALE IN OLDER ADULTS

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Balance confidence assessment in older adults has implications for falls and quality of life. It remains unclear whether the original Activities-specific Balance Confidence (ABC-16) scale or the shortened 6-item (ABC-6) scale is recommended. To further inform the decision-making process of balance confidence tool selection, a secondary analysis of an existing dataset consisting of 77 community-dwelling older adults was performed. ABC-16 and ABC-6 association and agreement, internal consistencies, and relationships with self-rated health (SRH) were assessed. Participants were primarily female (80.5%) between the ages of 60 and 87 years. Results indicated a strong association between the scales [$r = .97$, $p < .001$]; ICC(2,1) = .80] but limited agreement (95% Limits of Agreement range = 22.1; mean difference of 7.2 points in the direction of the ABC-16). Cronbach's alphas were .95 (ABC-16) and .89 (ABC-6), suggesting high internal consistency for both scales but possible item redundancy with the ABC-16. Regression model 1 (ABC-6 = primary predictor) explained more of the variance ($R^2 = .36$) in SRH compared to model 2 (ABC-16 = primary predictor; $R^2 = .29$). Hotelling's t-test [$t(74) = 2.4$, $p = .008$] indicated that the correlation coefficient (Multiple R) from the ABC-6 model was significantly higher than the correlation coefficient from the ABC-16 model. In conclusion, despite a high correlation, the two scales did not agree strongly and should not be considered interchangeable. Given that the ABC-16 takes longer to administer, does not relate to SRH as strongly, and could have redundant items, the ABC-6 should be considered for balance confidence assessment in older adults.

DESCRIPTIVE EPIDEMIOLOGY OF FALL-RELATED INJURIES AMONG OLDER ADULTS IN ONTARIO, CANADA

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The number of older adults is growing rapidly in the province of Ontario meaning there will be more fall-related injuries (FRIs) in coming decades. Falls are the leading cause of injury-related hospitalizations in Canada. The purpose of this study was to describe the prevalence, circumstances, types, and locations of FRIs among older adults in Ontario. Using a population-based retrospective design, we analyzed secondary data from three health administrative databases (NACRS, DAD, RPDB) for 2010-2014. Older adults (≥ 65 years) admitted to an emergency department (ED) with a combined diagnosis of ICD-10-CA codes for a fall (W00-W19) and injury (S00-S99 or T00-T14) were selected. Descriptive statistics were performed in R and rates were reported per 100,000 population. There were 304,610 FRI ED admissions (3,089/100,000) and 143,210 patients (47.0%) were subsequently hospitalized (1,452/100,000). Females accounted for 63.0% ED and 61.2% hospital admissions. Age-specific rates increased with age at both ED (2,208/100,000

in 65-69 group, 6,552/100,000 in 90+ years old) and hospital (698/100,000 in 65-69 group, 4,364/100,000 in 90+ years old). Females had higher rates of ED (3,503 vs. 2,572/100,000) and hospital (1,598 vs. 1,270/100,000) admissions than males. The most common injury types at the ED were fractures (1,234/100,000), superficial injuries (719/100,000), other or unspecified injuries (572/100,000), open wounds (498/100,000), and sprains, strains, and tears (162/100,000). FRIs are a considerable problem for older adults and better injury prevention strategies are needed for all female age groups, the 90+ year age group of both genders, and fractures.

DEVELOPMENT OF A SCREENING TOOL FOR FEET/ FOOTWEAR- RELATED INFLUENCES ON FALL RISK

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The effectiveness of multifactorial fall risk assessment and intervention strategies is well documented. Although identifying feet/footwear-related influences on fall risk is a vital fall risk assessment component, few evidence-based resources or screening tools are available. To address this need, we developed the Screening Tool for Feet/Footwear-Related Influences on Fall Risk. Our tool is designed for older adults who are identified as at risk for falling, based on the CDC's Stopping Elderly Accidents, Deaths, and Injuries (STeADI) Algorithm for Fall Risk Screening, Assessment, and Intervention. Tool development was informed by results of our systematic review of lower-limb factors associated with balance and falls. Our initial tool was evaluated by an external group of 9 interprofessional content experts. Those experts recommended modification of 8 items and rated the tool's clarity as 81.2/100, appeal as 79.1/100, and clinical feasibility as 76.1/100. After incorporating recommended changes, we completed a modified Delphi study using 8 new interprofessional experts (average years of experience: 19.3). During Phase 1, Delphi participants recommended we combine items with similar treatment recommendations, add a question about orthoses, and increase the specificity of 9 items. This refinement resulted in a 20-item screening tool, which met approval after two rounds of consensus voting. Approval was defined based on the Item Content Validation Index, percentage of agreement $> 80\%$ on each item. The high level of agreement illustrates the tool's content validity. Using our tool, an older adult's feet/footwear-related risk factors can be identified and incorporated into an effective multifactorial fall prevention intervention.

FALL-RELATED INJURIES IN OLDER ADULTS AND MEDICATIONS PRESCRIBED WITHIN 30 DAYS PRIOR TO THE INJURY

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Fall-related injuries in older adults have serious consequences both for individuals and the public health care