

Fall Mechanism and Injury Severity in Community–Dwelling Older People.

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Abstract

Purpose: This study was to determine the relations between fall mechanism, as well as other factors, and injury severity among fallers from a cohort of 1200 community-dwelling persons aged 65 and older. **Methods:** During an 18-month follow-up period, 145 falls were ascertained. When a fall was reported by an elderly or ascertained from telephone interviews at 3-month interval or from medical records of local clinics, fall-related information on injury patterns, fall mechanism, and other characteristics was collected by home visits. The proportional odds model was used to determine factors associated with injury severity, with three levels, i.e., severe (Abbreviated Injury Scale, AIS \geq 2), mild (AIS=1), and non-injuries. **Results:** Of these falls, 27.3% had severe injuries, 53.9% had mild injuries, and 18.9% non-injuries. The adjusted odds ratio (OR) of female to male for having a greater level of injury was 3.36 with 95% confidence intervals (CI) of 1.58 to 7.16. Compared with indoor falls, outdoor falls had greater level of injury (OR=2.08 with 95% CI of 0.99 to 4.37). Before a fall occurred, the vertical (OR=3.63 with 95% CI of 1.23 to 10.8) and horizontal displacement (OR=3.31 with 95% CI of 1.23 to 8.89) of body's center-of-gravity had greater level of injury compared to no or slight changes of center of gravity. Forward (OR=2.83 with 95% CI of 0.87 to 9.27) and sideways (OR=3.67 with 95% CI of 1.09 to 12.3) falls had greater level of injury compared to backward ones. Impact at body regions above shoulder also had an increased odds of greater injury severity compared to impact at buttocks. **Conclusion:** The identified factors associated with injury severity may provide the information on reduction of severe falls injuries among older people.