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Inter-rater reliability of the Westmead Home Safety Assessment in elderly Japanese people

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Introduction: A meta-analysis suggested that home hazard assessments and modifications that are professionally prescribed would lower the risk of falls among older people with a history of falling (Cochrane 2007). There is, however, no standardized assessment tool in Japan. Our aim is to develop such a tool. The objective of this study was to verify the reliability of home hazard assessment in elderly Japanese people. We investigated the inter-rater reliability of the Westmead Home Safety Assessment (WeHSA) developed in Australia.

Methods: Twelve evaluation items were altered with permission of the author (Clemson); for example, 'shower recess' in bathroom was changed to 'bathroom' and 'internal steps' in internal traffic ways to 'internal steps including Agari-Kamachi'. Participants were recruited from among those aged ≥65 years, who either lived at home or were about to get discharged from hospital. Two occupational therapists visited concurrently each participant's home to implement WeHSA. We used dichotomous scoring for 71 evaluation items (i.e. hazard or no hazard and not relevant). The kappa statistic was used to determine levels of inter-rater agreement. The items rated as 'not relevant' by ≥15 participants (75% of the all) were excluded from this analysis.

Results: Twenty people (age, 80.3 ± 7.9 years; sex, 7 male and 13 female) participated in this study. Eighteen people were considered at risk of falling (Functional Balance Scale score: ≤45) and the remainder were assessed at Care Levels 3 or 4 (moderate or heavy care needs). Sixteen people could walk independently indoors and the remainder walked with the help of care-givers or used wheelchairs. Kappa values for 50 items (70%) indicated a fair to good level (kappa >0.4) of agreement. 'Commonly opened windows/ curtains/ shades' and 'grab rails in bath' demonstrated poor agreement. Kappa values for 4 items could not be calculated because of the algorithmic limitations. Fifteen items corresponded to exclusion criteria.

Conclusion: Further research with more participants is needed to clarify the reasons for not verifying 30% of the evaluation items. This study will be continued in order to reevaluate the requirements for applying WeHSA to elderly Japanese people.