Development of a Fall Screening Checklist based on Person-Environment-Occupation (PEO) model for Safe Discharge Program for frail elderly

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Keywords:
PEO model
Fall
Screening Tool

Introduction
Fall is an important clinical issue in elderly rehabilitation.   Occupational Therapist (OT), as a key member of the multi-disciplinary team who evaluates patients 'independent and safe ADL functions, plays an important role on fall prevention and management.   The development of a fall screening checklist based on the Person-Environment-Occupation (PEO) model will be helpful for safe discharge of the frail elderly with risk of fall.

Objectives
To develop a fall screening checklist based on PEO model for effective and efficient fall prevention and management

Methodology
A fall prevention working group under the Elderly Specialty Group was set up in December 2014 after specialty training on fall prevention.   Members of the group decided to conduct a survey on the existing fall assessments that OT colleagues currently use in different clusters.   After search of evidence, a new fall screening checklist that based on the PEO model was planned to develop.   The PEO model is a well-known and well-established conceptual model that emphasized the transactional relationship between person, environment and occupation (Law et al., 1996).   It is well adopted by occupational therapists in clinical practice and research. The assessment items were further validated by literature reviews.   The first trial run of the preliminary PEO Fall Screening Checklist was conducted on client types including medical and geriatric cases, surgical cases, orthopedic cases and A&E cases. It was followed by panel discussion on its reliability and validity before its

finalization and widely application in HA settings.

Result
Evidence supported the use of the PEO model in fall prevention and management. The PEO model (Law et al., 1996) is a well-known and established conceptual model as well as a model of practice in overseas and local occupational therapy settings. Occupational therapy theory, practice and research has increasingly emphasized on the transactional relationship between person (P), environment (E) and occupation (O). Occupational performance results from the dynamic relationship between the three domains: people, their occupations (ADL, work, leisure) and life roles, and the environments in which they live. The PEO Fall Screening Checklist was trial run in different settings of all the clusters from October 2015 to February 2016. Panel review on individual assessment items of fall screening checklist was conducted, with reference to its clinical applicability. Feedbacks and comments from OT colleagues were positive in terms of its quick and easy administration. They reported that they took average 10-15 minutes to complete the assessment and the listing of the prioritized risk factors will help quick decision in fall prevention management. They commented that it was applicable to in-patients, day patients and out-patients.
Pilot analysis of the data in one setting was reported as follows: 1. Demographics: 23 elderly cases were conducted, mean MBI was 53.08, mean FIM was 76.94 (motor 49.38; cognition 27.56), mean MMSE score 17.37. 2. The problem risk factors identified in relation to each domain were: Person (P): ROM and joint (43.5%), strength (69.6%), balance (82.6%), sensation (52.2%), Pain (26.1%), cognition (60.9%), psychological or emotional (39.1%), behaviors and habits (69.6%), medication (65.2%), nutrition (8.7%) Environment (E): living environment (56.5%), social (27%) Occupation (O): ADL or leisure (69.6%), life routine (60.9%) Conclusion: The PEO Fall Screening Checklist needs further stage of panel discussions. The trial run in different setting is continued. Further refinement will be made if indicated in order to streamline the adopted screening items and make its utility more relevant to our local elderly fall risk population.