Development and Psychometric Properties of Self-Efficacy of Fall Prevention Measurement on Hospitalized Patients

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Background: Self-efficacy of fall prevention related scales have been developed to measure confidence in performing activities of daily living on elderly person in community settings widely. But, no fall efficacy scale is available in hospital-based environment.

Purpose: The purpose of study was to develop a Self-efficacy of Fall Prevention Measurement (SEFPM) on hospitalized patients. The validity and reliability of the SEFPM were tested.

Methods: This study was a cross-sectional design. The sample consisted of 220 patients were hospitalized at a medical center in the middle district of Taiwan. The instrument development followed the steps of the psychometric testing procedure. The validity of the instrument was determined by content and expert validity, item analysis, exploratory factor analysis (construct validity). The reliability of instrument was determined by internal consistency reliability. SPSS for Windows, version 20.0, was used for all statistical analyses.

Results: The participants were hospitalized patients form surgical, medical and oncology wards. The average age of participant’s was 49.72 (SD=14.15). The initial FSEM of 16 items was developed. After expert validity and items analysis, a total of 15 items remained. The exploratory factor analysis yielded two factors: “General activities”, and “Complex environment and assistance needed”. The Content Validity Index (CVI) is 0.95. The Cronbach’s α is 0.94, which indicated the instrument retained an excellent psychometric property. The results also revealed that average score of fall self-efficacy was 42.54 (SD=9.04), indicating a moderate level of concern about falling for hospitalized patients in this study. The most concern of fall was walking in wet and slippery floor, while getting up to sit on the bed / getting out of bed was listed at 10.

Conclusions: The findings of psychometric test indicate SEFPM having a satisfied reliability and validity. This instrument can be applied to assess or evaluate the confident of fall prevention measurement on hospitalized patients. The findings also found the facts of hospitalized patients’ self-efficacy of fall prevention, which contribute the knowledge of fall prevention at hospitals. The results serve as a reference for fall prevention on hospital based environment.

Table 1: Construct Validity by Factor Analysis

<table>
<thead>
<tr>
<th>Item</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor 1:</td>
<td></td>
</tr>
<tr>
<td>General activities</td>
<td>0.91</td>
</tr>
<tr>
<td>7</td>
<td></td>
</tr>
</tbody>
</table>
Factor2:

complex environment and assistance needed  
\[
\begin{array}{ccc}
\text{Total} & 15 & 0.94 \\
\end{array}
\]

Table 2: Construct validity : Internal Consistent Reliability

<table>
<thead>
<tr>
<th>Item</th>
<th>Mean± SD</th>
<th>Average per each items</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Factor1:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General activities</td>
<td>17.85±6.02</td>
<td>2.55±0.86</td>
</tr>
<tr>
<td><strong>Factor2:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complex environment and need helped</td>
<td>24.69±5.98</td>
<td>3.09±0.75</td>
</tr>
</tbody>
</table>

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Keywords:
Hospitalized patients’ fall, Psychometric test and Self-efficacy of fall prevention

References:


**Abstract Summary:**

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**Author Summary:** The author has been a teacher more than 20 years in the school of nursing at a medical university. The specialty of my professional experience is health education. To contribute the better care in health industry, the author works with a team for the purpose of evaluating the patient safety in the hospital. These result of study will not only benefit the hospitals, but their patients and health system itself.

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