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Health measurement using the ICF

Test-retest reliability study of ICF codes and qualifiers in geriatric care

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Abstract This study examines the test-retest reliability of ICF codes in long-term care settings of the elderly to evaluate the measurement property of the ICF and its qualifiers. The mean weighted kappa of 152 AP items were 0.55 and the reproducibility improved when experienced evaluators performed the measurement. The reliability of the ICF codes when measured with the current ICF qualifiers is relatively low. However, proper education may improve the reliability.

Introduction

The ICF consists of approximately 1424 codes. Therefore, it is necessary to select appropriate ICF codes according to the interest of each user. One of such activities is the development of the ICF checklist, which is composed of major three digit ICF items, as a practical tool to elicit and record information about an individual's functioning and disability. Another approach is the development of the ICF core-sets. They are developed to standardize what to measure for each chronic condition.

In addition to these studies, which are aimed to determine what to measure, the authors consider it is necessary to discuss how to describe health and its related status using the ICF codes.

One possible approach, as taken in this study, is to directly apply as many ICF items as possible, as measures to describe health conditions, then to discuss the reliability and applicability of the ICF codes in a health domain such as geriatric care.

In Japan, after the implementation of the long-term care insurance (LTCI) law in 2000, accurate assessment of the needs of elderly clients using LTCI services became considerably important. As the Ministry of Health, Labor and Welfare today recommends the use of the ICF in rehabilitation care planning, it is imperative to assess the accuracy of the application of the ICF codes in the geriatric care and rehabilitation settings.

This study examines test-retest reproducibility of the ICF codes related to the geriatric care setting.

Because of the high volume of the ICF codes, this poster targets the AP domain.

This study has been published in electric form with the BF domain results.

Jiro Okochi, Sakiko Utsunomiya, Tai Takahashi.
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Health and Quality of Life Outcome 2005,3:46
http://www.hqlo.com/content/3/1/46/

Methods & Materials

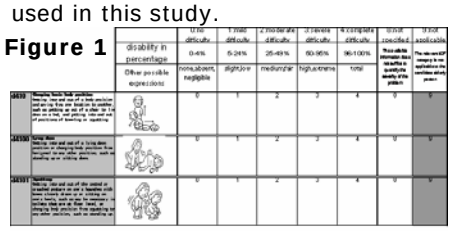
Participants

788 elderly patients (age>=65 years) using LTCI services were selected from 5 hospitals, 29 long-term care institutions, 11 day-care, and 14 visiting nursing service centers on the basis of functional stability during the one week test-retest period, and ability to give informed consent.

Measurement

Each participants was independently evaluated by two health care professionals. The two evaluations were performed within a week of each other. 152 AP items (81 three-digit and 71 four-digit) ultimately composed the study instrument. In response to concerns raised by evaluators, illustrations to each item on the study questionnaire were added to promote efficient comprehension of each ICF item. The *performance* qualifier was used to evaluate the AP items. Figure 1 shows the format of the questionnaire used in this study.

Figure 1

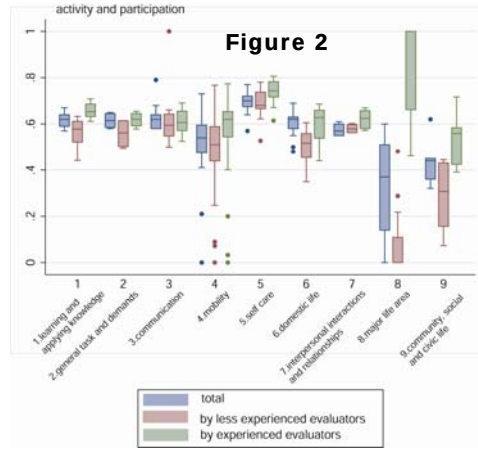


The evaluators were given instructions by the authors, using a manual comparable to the ICF checklist

Analysis

To evaluate the reliability of each ICF item, the weighted kappa of each item was calculated. Stratification was done in terms of evaluators' experience and measurement settings.

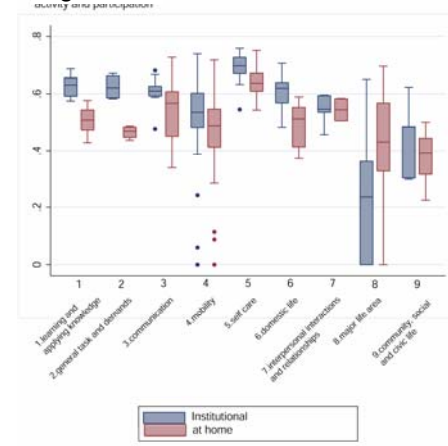
Figure 2



Results

Weighted kappa values of AP domain items ranged from -0.17 to 0.79, with an average of 0.55 and a median of 0.59. **Figure 2** shows the weighted kappa statistics according to the chapters of the ICF by the experience of the evaluator (more or less than 8 years work experience as a health care professional). In AP domain, experienced evaluators showed better reproducibility in chapters 1,5,6,7,8 and 9. **Figure 3** shows the stratified results by the place of measurement.

Figure 3



Conclusions

Key findings

1.Test retest reliability of the AP domain using the performance qualifier was at acceptable level except for chapter 8 and 9

2.Evaluaters' experience affects the reliability. It suggests the importance of education

3.The reliability of measurement in institutional settings is more reliable

4.This study should help to select useful set of the ICF item for elderly population