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Developing linear ADL ability measures based on the ADL Taxonomy: A Rasch analysis.

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Introduction

Occupational therapy is focused towards improving or maintaining the ability of an individual to perform daily life tasks that the person needs, wants to or is expected to perform. The intention is to improve the quality of the performance by decreasing risk, and amount of time, effort and help needed. To evaluate and document whether the interventions have the intended outcomes, we need valid and reliable outcomes measures for use in outcomes research and clinical practice. Only a few instruments that consider the quality of the performance of activities of daily living (ADL) have been developed into outcomes measures.

Purpose

The aim of this pilot study was to explore the possibility of developing linear measures of ADL ability based on the ADL Taxonomy and a three-category rating scale.

Method

Data was obtained from medical records of adults with moderate to severe brain injury. The participants were rated on the ADL Taxonomy, and recorded on the ADL Taxonomy Circle, based on direct observations. By applying the Rasch rating scale model, we examined the possibility of converting the raw ordinal scores into equal-interval estimates of the participants' ADL ability.

Results

The data analysis indicated that the rating scale used in this study displays sound psychometric properties. Items from the ADL Taxonomy defined one construct after 10 actions were removed, but retention of all items did not disrupt the measurement system. Except for one item in each of five different activity domains, the item difficulty hierarchy was the same as in the hierarchy originally published, supporting reliability of the item difficulty estimates. The ADL Taxonomy discriminated well between different levels of ability in this sample of persons with brain injury.

Conclusion

This preliminary study indicates that the ADL Taxonomy has potential to become a linear measure of a person's ability to perform ADL tasks.

Contribution to the practice/evidence base of occupational Therapy

While this study should be considered an important but preliminary pilot study, the results indicate that the ADL Taxonomy has the potential to become a linear measure of the quality of a person's ADL performance.