# Keyform Ability Maps and Rasch Analysis in Client-Centered Intervention Planning: A Systematic Review

Jaden Alexander, OTS, Eloise Fauland, OTS, Eli Scott Heller, OTS, Lyn Nunez, OTS
Hawai`i Pacific University, Doctor of Occupational Therapy Program, Honolulu, Hawai`i

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## Research Question

Which occupational therapy (OT) assessments use keyform maps and Rasch analysis to support accurate interpretation of assessment data and client-centered intervention planning?
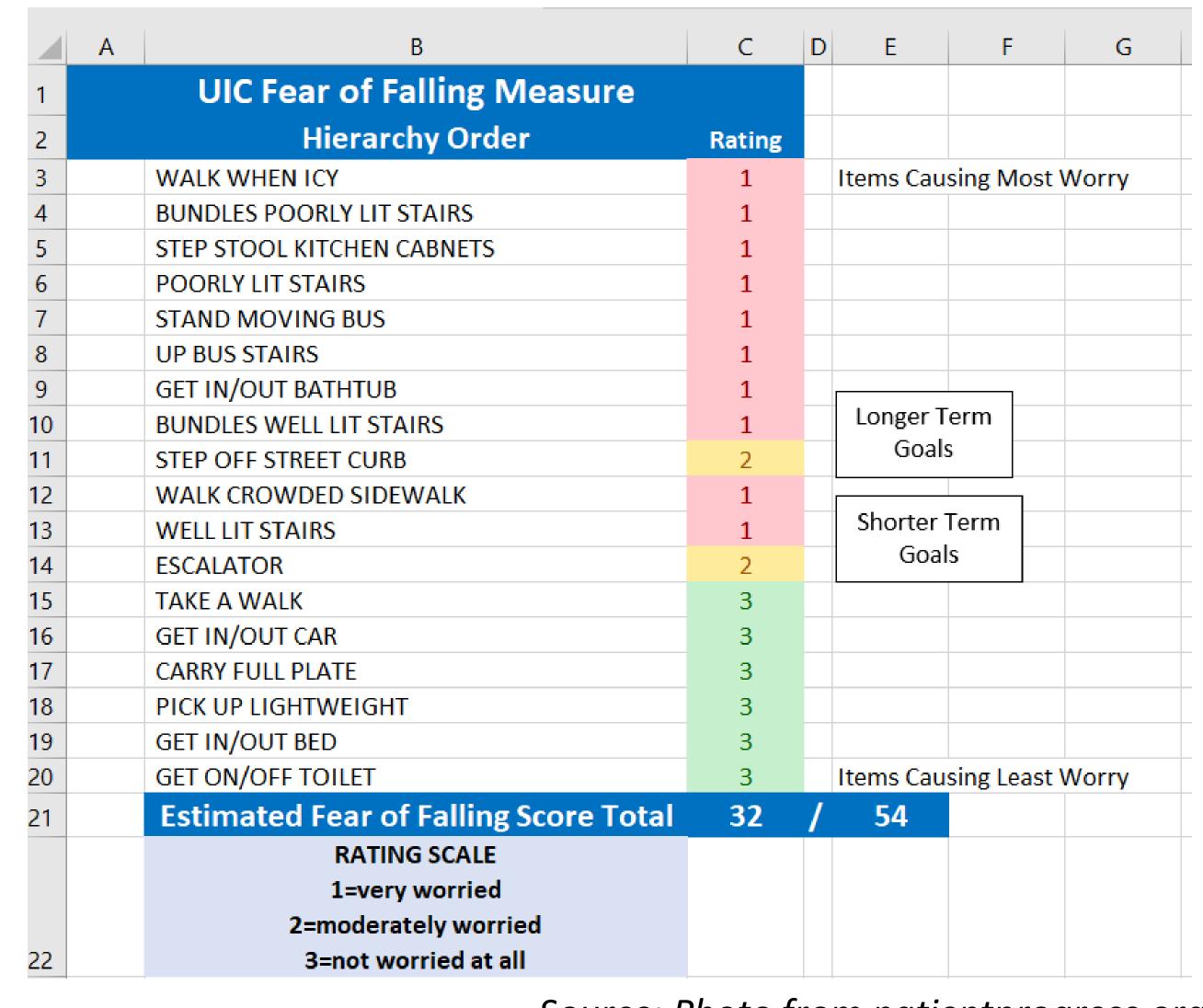
## Introduction

Effective intervention planning is a fundamental pillar in occupational therapy, aimed at improving the health and well-being of clients. Addressing diverse client needs depends on valid and reliable assessment tools. Psychometric techniques, such as Rasch analysis and keyform maps, offer robust solutions for improving assessment accuracy and streamlining intervention planning. These tools help occupational therapists to identify the "just-right challenge" for individual clients, optimizing engagement and therapeutic outcomes. This systematic review aimed to identify, evaluate, and synthesize current literature on applying keyform maps and Rasch analysis in occupational therapy intervention planning to determine their efficacy in enhancing assessment and client outcomes.
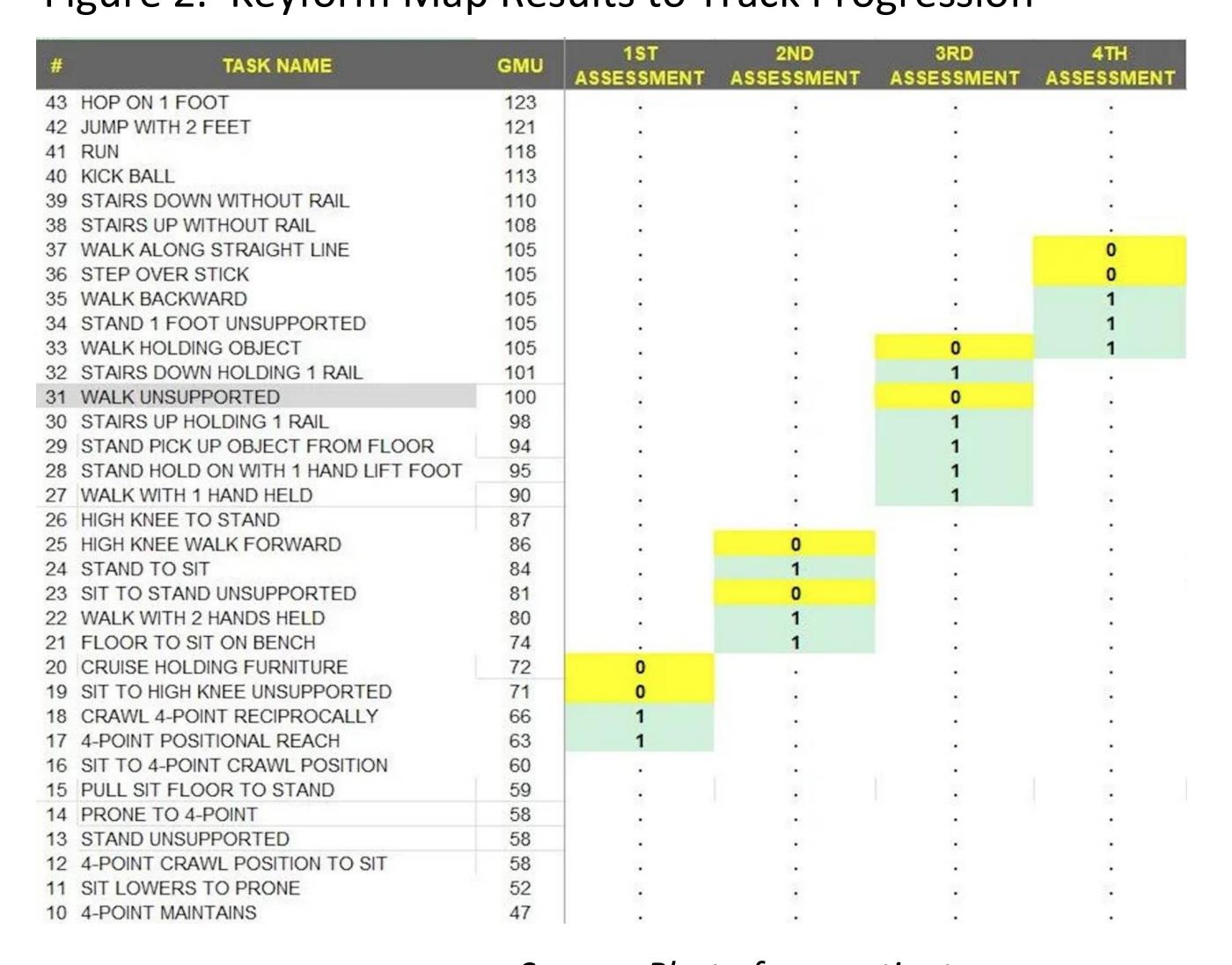
## Method

- **Date of search:** Broad search May 15, 2025, and May 22, 2025; Additional search May 30, 2025
- **Databases:** PubMed, OT Seeker, Google Scholar, Web of Science, CINAHL Complete, American Journal of Occupational Therapy, EBSCO via Hawai'i Pacific University's online library database
- **Inclusion criteria:** Peer-reviewed, English, published 2018-2025, use of keyform maps or tools from Rasch Analysis, evidence of client-centered intervention planning
- **Exclusion criteria:** Systematic reviews, scoping reviews, dissertations, conference abstracts, editorials, or opinion pieces without empirical data, and presentations
- **Search terms:** "occupational therapy" or "occupational therapist" or "occupational therapists" or "ot" and "keyform maps" or "rasch analysis"

Figure 1. Completed Keyform Map Example



*Source: Photo from patientprogress.org*

Figure 2. Keyform Map Results to Track Progression



*Source: Photo from patientprogress.org*

## Results

Six articles met the inclusion criteria with relevant information regarding the use of keyform maps in intervention planning. The studies were analyzed according to risk of bias, level of evidence, and quality. Levels of evidence included: 1 Level II, 2 Level III, 1 Level V, and 2 Level IV studies There were two themes that emerged from the studies related to psychometric strength and application to the OT process.

## Discussion

Assessment is a key feature of OT practice, though it is insufficiently employed due to high workloads and poor perceived clinical applicability. Keyform Ability Maps & Rasch analysis may be effective to improve intervention planning for OT practitioners, providing an evidence-based, structured approach to service delivery. In ranking assessment tasks by difficulty, treatment can be based on those most aligned with the client's current functional level, contributing to improved therapeutic outcomes. Through the lens of Rasch analysis and Keyform Ability Maps, assessment can directly contribute to intervention planning, simultaneously reducing clinician workload and improving the quality of OT services.

## Conclusion

Using assessment tools with Keyform Ability Maps developed through Rasch analysis can enhance occupation-focused intervention planning, as supported by current evidence. Further research is needed to confirm the effectiveness these methods in occupation-specific assessments.

## References