



Baylor University

ROBBINS COLLEGE OF HEALTH AND HUMAN SCIENCES
Occupational Therapy

Investigating OT Interventions for Moderate/Severe TBI Patients

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Background and Problem

- In the hospital setting, Occupational Therapists facilitate patient recovery from TBIs by addressing cognition, ADLs/IADLs, safe transfers, and functional mobility; in addition to providing caregiver education.
- Novice practitioners often require clinical support to guide clinical reasoning.
- The literature review supports a multisensory treatment approach incorporating visual, auditory, and tactile input (Padilla & Domina, 2016; Weaver et al., 2023; Wheeler & Acord-Vira, 2023). Bartolo et al. (2017) support early mobilization as appropriate for positive patient outcomes.
- The PEO Model was used as the frame of reference.
 - addresses life changes experienced by the patient.
 - Measures occupational performance through meaningful tasks.
 - Personal changes (cognition, sensory-motor abilities)
 - Change of environment
 - Changes in occupation (self-care tasks, hobbies)

Purpose

This capstone project aimed to promote best practices when working with moderate/severe TBI patients and create an occupational therapy resource for novice therapists to support their clinical reasoning process when developing treatment plans for this patient demographic in the inpatient acute hospital setting.

Method

Setting: Inpatient acute care hospital setting at a Level 1 trauma military treatment facility in San Antonio, TX. The population served here are military members, their dependents, and civilian trauma patients.

Subjects: 19 moderate/severe TBI patients between the ages of 18-60 with no premorbid cognitive deficits.

Instrument Used: The Activity Measure for Post-Acute Care (AM-PAC) "6-Clicks" for Activities of Daily Living (AMP-AC 6-Clicks for ADLs). It assesses patient independence in lower body dressing, toileting, upper body dressing, bathing, grooming, and eating. Each activity is scored from 1 (Dependent) to 4 (Independent), with a total score ranging from 6 to 24.

Procedures: This retrospective quasi-experimental study reviewed subjects' pre- and post-treatment AMP-AC 6-Clicks for ADLs scores. Data was deidentified before being analyzed by the researcher.

Data Analysis:

- Data from this project was described using descriptive statistics to analyze the change in pre- and post-AMP-AC 6-Clicks scores.
- Data was analyzed using Excel and Statistical Package for the Social Sciences (SPSS).
- The data corresponded with the literature review and supports a multisensory approach to OT intervention when creating a treatment plan for moderate/severe TBI patients.

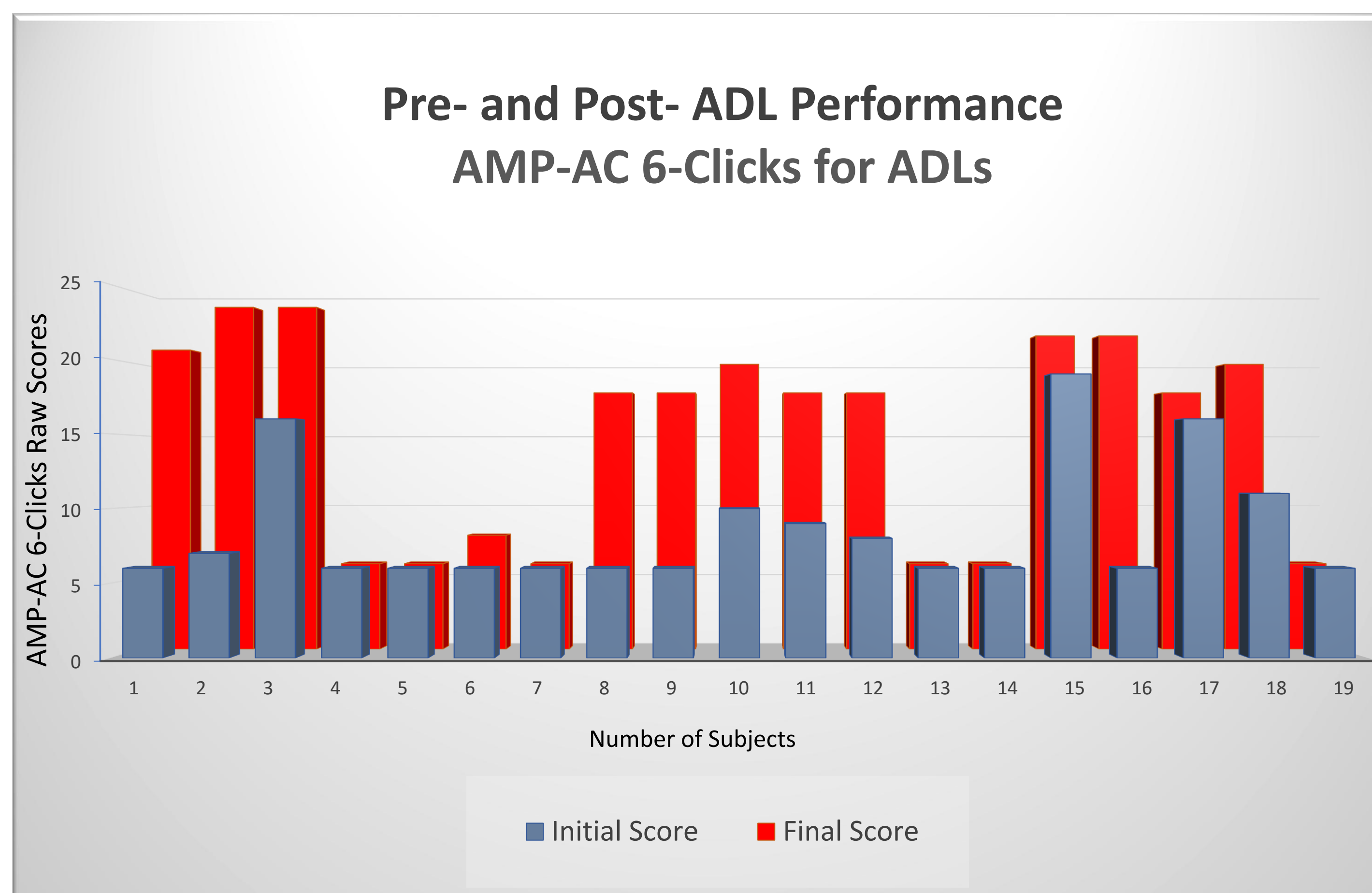


Figure 1. Shows improved overall AMP-AC scores following OT treatment using a multisensory approach.



Results

- Most patients (12/19 or 63% of subjects) improved significantly from their pre-test AMP-AC score after receiving a multisensory approach to OT treatment during hospitalization.
- Findings were not statistically significant.

Conclusions

- This study showed that a multisensory approach to OT intervention aligns with best evidence-based practices.
- Using a multisensory approach has implications for supporting improved patient functional outcomes at discharge
- Outcomes are highly variable between individuals.
- Possible variables related to patient outcomes include factors such as age and severity of injury.

Implications for Occupational Therapy

- Results indicate the need for further research to increase positive patient outcomes for this population.
- Limitations of this study:
 - This was a retrospective study
 - Small sample size
- Implications for OT:
 - This study correlates with the evidence and supports a multi-sensory approach to treating moderate/severe TBI patients.
 - Results can be used to create a resource to support the clinical reasoning of novice OTs when treating treatment plans for moderate/severe TBI patients in the hospital setting.

References

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