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## Occupational Therapy Interventions for ADLs in Adults Post-TBI with Visual Symptoms: A Systematic Review

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# Occupational Therapy Interventions for ADLs in Adults Post-TBI with Visual Symptoms: A Systematic Review

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# Background

Traumatic brain injury (TBI) is a leading cause of death and injury in the United States.

It is estimated that 1.5 million Americans experience them every year <sup>(1)</sup>.

Visual impairments may be a symptom following a TBI <sup>(5)</sup>.

This can affect an individual's ability to perform their activities of daily living (ADLs).



# Research Question

Which interventions within the scope of occupational therapy are effective for improving ADL performance in adults with post-traumatic brain injury experiencing visual symptoms?



# Method

## Inclusion Criteria

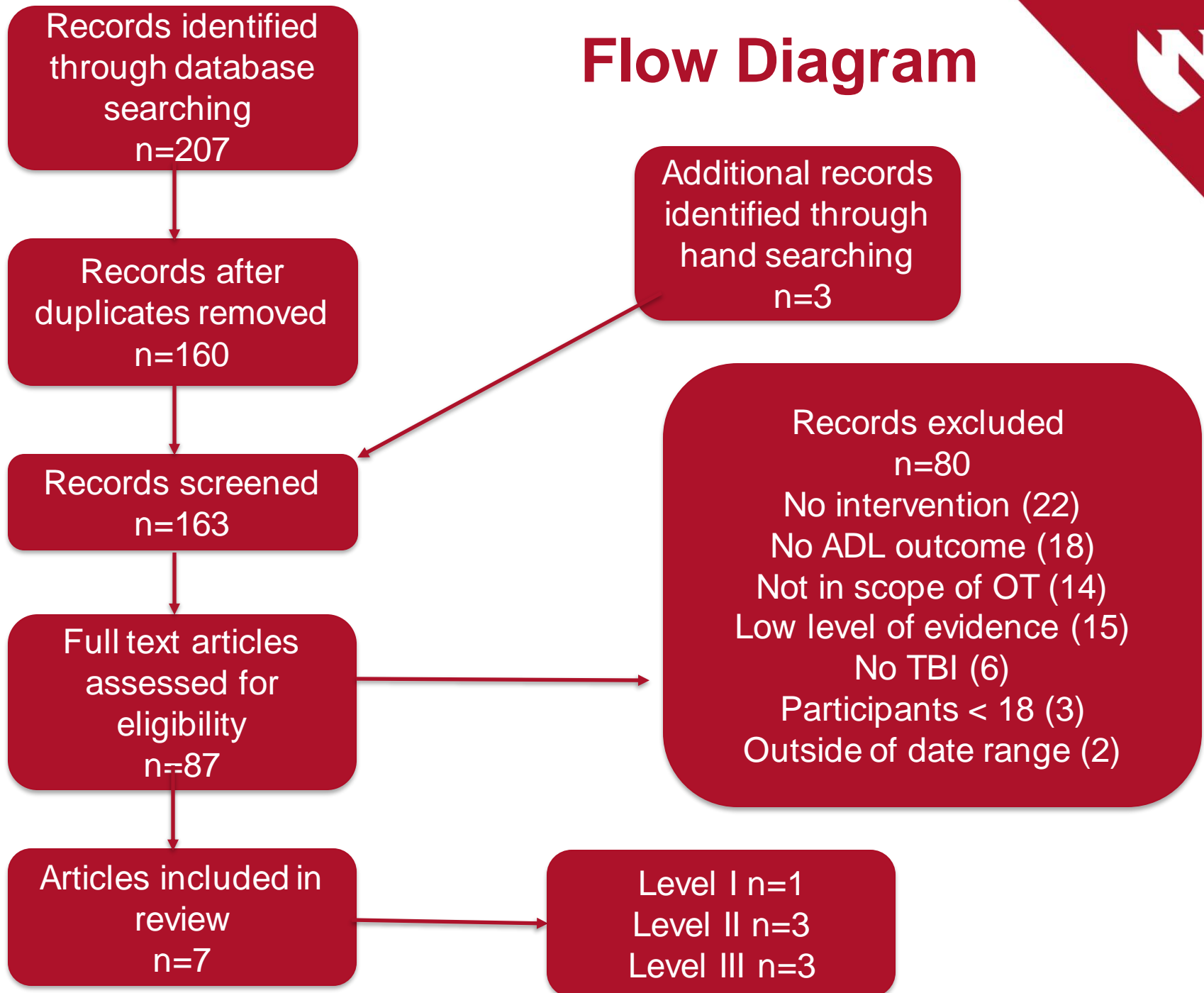
- Participants aged 18 years or older
- TBI
- Peer reviewed human subject research published in English
- All gender, races, and socioeconomic statuses
- Published in 2002-2022

## Exclusion Criteria

- No intervention
- No ADL outcome
- Not in the scope of occupational therapy
- Levels IV and V evidence



# Flow Diagram





# Results

## Oculomotor and compensatory scanning training

- 5 articles (2, 3, 7, 8, 9)
- Level I-II evidence
- Moderate strength of evidence
- Recommended dosage:
  - 20–90-minute sessions
  - 1-2x per week
  - 4-11 weeks

## Training in device use

- 2 articles (4, 6)
- Level II-III evidence
- Low strength of evidence
- Recommended dosage:
  - 4-10 hours total



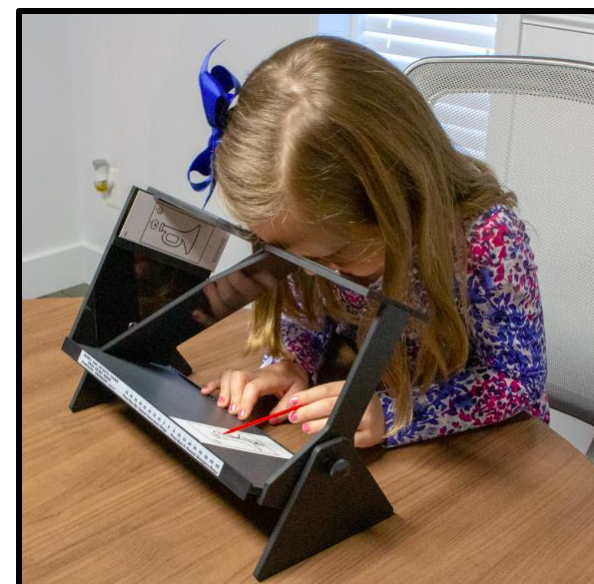
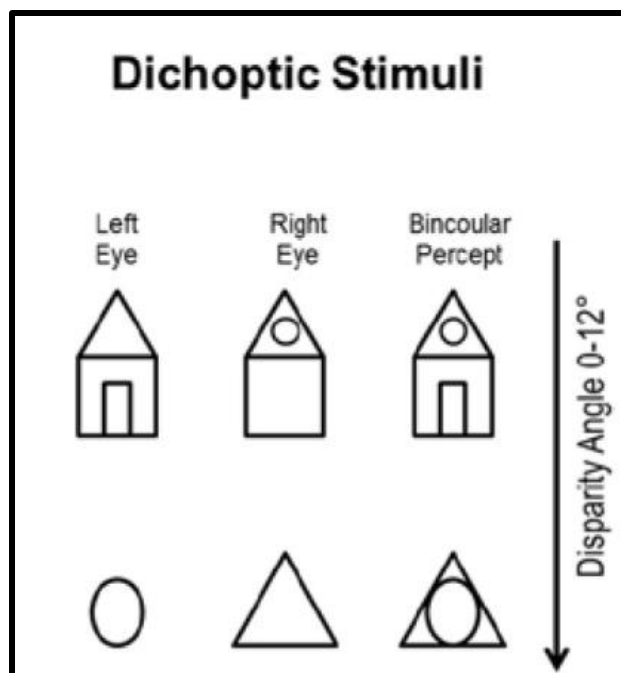
# Discussion

## Oculomotor and compensatory scanning training

- Recommend routine use

## Device use training

- BrainPort Vision Pro, prisms, dichoptic device, cheiroscope
- Recommend use on a case-by-case basis







# Discussion

## Limitations

- Limited evidence
- Lack of research in this area
- Heterogeneity of articles

## Future research

- Occupation-based interventions
- Measurement at the occupation level



# Implications

## Practice

- Current research supports oculomotor and compensatory scanning training for adults post-TBI experiencing visual symptoms

## Research

- Occupation-based interventions with larger sample sizes to determine effective interventions to improve ADL performance in adults post-TBI experiencing visual symptoms are needed

## Education

- Professional development in oculomotor and compensatory scanning for occupational therapists
- Knowledge of contemporary devices

# References

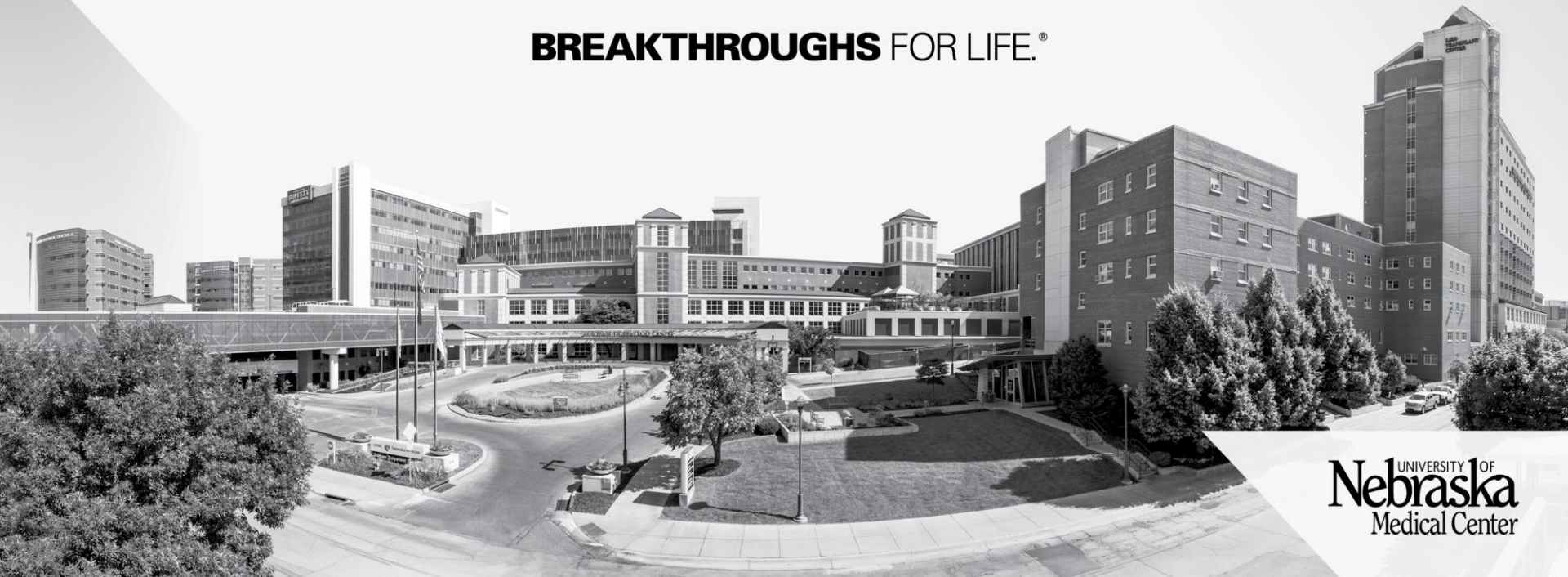


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