



Exploring Occupational Therapy's Role in Concussion Management to Promote

Occupational Performance

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BACKGROUND

- In the U.S, approximately 2.5 million ED visits occurred as a result of traumatic brain injuries in 2014 (Centers for Control Disease and Prevention [CDC], 2019).
- Concussions can occur from falls, struck in the head, neck, or face by or against an object, motor vehicle accidents, or sport participation (CDC, 2019).
- Symptomology following a concussion includes a combination of vestibular, visual, cognitive, somatic, and/or emotional impairments (McCrorry et al., 2017).
- Clients are instructed to participate in early, symptom-free participation in physical and cognitive activities after sustaining a concussion (McCrorry et al., 2017).
- In some instances, concussive symptoms can persist longer than 7-10 days in adults and greater than 4 weeks in children (McCrorry et al., 2017).
- Persistent symptoms are associated with a decrease in quality of life and limited performance in activities of daily living (Finn & Waskiewicz, 2015).
- Persistent visual impairments may negatively impact a client's academic and occupational performance (Paniccia & Reed, 2017).
- Occupational therapists are trained to analyze occupations to maximize participation while monitoring the client's response.
- Utilizing a holistic approach, occupational therapists can improve clients' motivation, quality of life, and well-being following a concussion (Finn, 2019a).

Purpose

- Gain advanced clinical knowledge and skills in concussion management for clients experiencing persistent symptoms.
- Examine the role occupational therapy in concussion management clinics.

METHODS

- Completed the capstone experience with an occupational therapist in an outpatient clinic in southeastern South Dakota learning occupation-based and neuromuscular re-education approaches to concussion management.
- Participated in three online and one in-person continuing education courses to develop a deeper understanding of the impact concussions have on occupational performance and appropriate educational/intervention strategies.
- Completed an in-service for at the facility regarding a common intervention strategy for concussion-impairments as well as the benefit of incorporating occupational therapy in the multi-disciplinary team for concussion management.
- Educated occupational therapy students about the visual and perceptual system, and the role of occupational therapy in concussion management.
- Created an OT practice article to expand the role of occupational therapy in the athlete population.

RESULTS

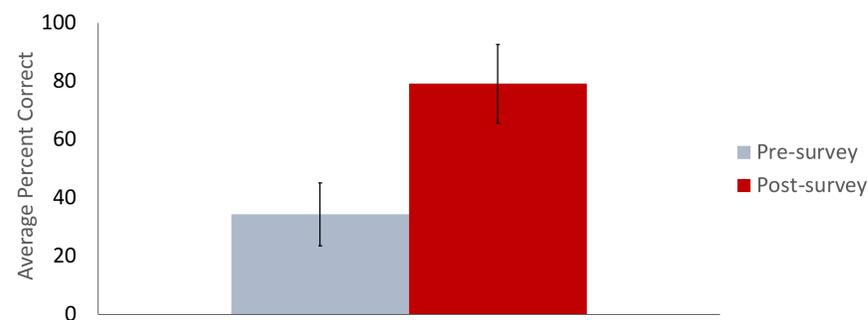
To highlight the effectiveness of occupational therapy interventions in promoting health for clients who have sustained a concussion a case example was included:

Case Example:

A 21-year-old basketball player was referred to outpatient occupational therapy three weeks following the diagnosis of a concussion with persistent headaches, dizziness, difficulty concentrating, and blurred vision. The client was seen weekly for 45-minute sessions aimed at addressing her visual deficits and functional balance. Activity accommodations (rest breaks, no more than one test per day, and avoid contact activities) were provided to minimize symptom exacerbation. Education was provided on task modifications (blue lens glasses and line guides) and compensatory strategies (visual fatigue, visual eye strain, and proprioceptive input) to improve self management of symptoms. Interventions methods involved aerobic exercise and neuromuscular re-education strategies to improve visual scanning, convergence, balance, somatosensory and gaze stabilization habituation, and reaction time. As a result, the client was able to manage her symptoms across various environments allowing her to return to optimal participation in academic and athletic related activities.

Teaching Experience:

The occupational therapy students enrolled in OCTH 721: Neurological Foundations of Occupation demonstrated an increase in knowledge on aspects related to concussion management following watching the online lecture.



THEORETICAL FOUNDATION

Person-Environment-Occupation (PEO)

- This environmental model examines the relationship between the client, environment, and occupation to assess the client's occupational performance (Law et al., 1996).
- The principals were applied to grade the occupation to minimize symptom exacerbation, provide the client with activity accommodations, environmental modifications, and implement impairment-specific interventions to enhance occupational performance (Law et al., 1996).

Dynamic Interactional Approach

- This approach is focuses on occupational performance in meaningful activities while bringing awareness to their cognitive and perceptual processing deficits (Toglia, 2018).
- The principals were applied to provide clients with limitation-specific interventions within their zone of proximal development to promote transfer of learning in multiple environments (Toglia, 2018).

IMPLICATIONS FOR OCCUPATIONAL THERAPY

- A proposed revision to PEO is to add a spirituality component to examine the impact symptom exacerbation has on perceived satisfaction and engagement in self-identify meaningful activities.
- Occupational therapists should obtain advanced education and training to address the unique challenges of each client (Finn, 2019b).
- With an expanded knowledge base on the underlying symptomology and occupational factors, occupational therapy can have an important role on the multi-disciplinary team to develop and/or expand concussion management programs.
- Occupational therapy can become more established in the area of concussion management as the number of practitioners become identified in this area (Finn & Waskiewicz, 2015).
- Further research on assessment and intervention is needed to develop best practice guidelines for the care of concussions in occupational therapy (Finn, 2019a).

Conclusions

- The strategies occupational therapists implement are effective in targeting areas of limitations to facilitate re-engagement and optimal participation in activity and optimize perceived quality of life.
- Adding concussion education to entry-level programs provides future practitioners with concussion management knowledge that can be expanded upon with additional education and skills training courses or clinical practice.

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