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# Exploring the Knowledge and Perception of the Role of Occupational Therapy in Concussion Management in an Interdisciplinary Sports Medicine Center

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## Introduction

- Capstone focus areas were education and advocacy within the population of athletes who are suffering from post-concussion related symptoms.
- Evaluate the helpfulness of an interdisciplinary educational (IPE) demonstration on the role of occupational therapists (OTs) in the management of concussion symptoms to increase understanding of scope of practice and services.
- Focused on answering the question, “Does the implementation of an interdisciplinary educational demonstration increase understanding of the scope and role of the occupational therapy profession in the assessment and management of sport-related concussions?”



## Site Description

### New York Institute of Technology- Occupational Therapy Department

- Located in Long Island, New York
- Hosts both masters and doctoral candidate students of occupational therapy
- Students enrolled in OCHT 750-Interventions in Physical Dysfunction

### Nova Southeastern University- Sports Medicine Clinic

- Located in Ft. Lauderdale on Davie Campus
- Sports medicine clinic evaluates and treats all active students and staff participating in sports related activities that suffer concussion or musculoskeletal injuries.
- Interprofessional team consists of three sports medicine physicians, one physical therapist, one neuropsychologist, athletic trainers, and student interns.

## Summary of Needs Assessment

- Research supports the valuable role OTs can play in aiding clients who are suffering the effect of TBIs.
- The largest contributors to occupational disruption is a generalized lack of understanding of the signs, symptoms, and long-term risks associated with concussions.
- It is essential to provide education and training regarding the impact of symptoms on occupational performance and participation to not just athletes, but health professionals.
- To support OTs involvement, I identified a need for the use of an IPE demonstration to advocate and educate practitioners and graduate students on the valuable role OTs can offer in concussion management.
- Utilizing a pre-survey, it was determined 100% of sport medicine physicians at the NSU clinic were agreeable to an IPE demonstration to increase knowledge on the role of OT in concussions management.

## Literature Review Summary

### Concussions

- A type of brain injury that stems from an external blunt force sustained to the head or body in a rapid manner. The brain collides with the skull in a back-and-forth motion which can create chemical changes to brain cells (What is a concussion?, 2019).
- Thirty percent of athletes report symptoms interfere with their ability to work, engage in social or physical activities, participate in school, or maintain attention (Finn, 2019a).

### Role of Occupational Therapy

- In accordance with concussion protocols, OTs can assist in return to play/school protocols created to protect players following concussions (McCroy et al., 2018).
- Work to address occupational dysfunction or imbalance and offer approaches to care surrounding symptom presentation in areas of cognition, work/school accommodations, vestibular retraining, memory, performance skills/patterns, etc. (Finn, 2019b).
- Generalized lack of knowledge and perception of occupational therapy within sports limits ability to establish presence within concussion clinics amongst other health professionals.

### IPE Demonstrations

- According to the literature, one of the most effective methods in addressing the lack of knowledge for professionals is through the implementation of IPE demonstrations.
- Aimed to promote a collaborative and shared learning opportunity for clinical practitioners to enhance understanding of occupational therapy discipline in order to increase patient outcomes (Allen et al., 2006).

## Capstone Project Description

- Develop two IPE demonstrations for graduate students and sports-medicine physicians to educate and advocate for the role of occupational therapy in concussion management.
- Conduct a pre-post IPE demonstration survey to sports-medicine physicians to evaluate the success of an educational demonstration to increase understanding of OTs role in concussion management and as a part of an interdisciplinary team member.

Table 1: Pre-IPE Demonstration Survey Results

Theme	Frequency	Comments
Experience	2/7 or 29%- No Experience with OT 5/7, 71%- Experience with OT	“Worked and co-treated with OT in an inpatient rehabilitation hospital setting with an emphasis on patient ADLs/IADLs”
Interventions	6/7 or 86%- Able to identify any intervention offered by OT 1/7 or 14%- unable to identify interventions	“Intervention in patients who require assistance with activities of daily living involving the upper extremities (i.e., cooking, cleaning, eating, writing, typing”
Benefit	7/7 or 100%- Active caseload would benefit from OT services	“Especially patients living with chronic issues (chronic back pain and how to lift things/function safety, torn rotator cuff without repair and how to do their daily tasks).”
Limitations	7/7 or 100%- identified occupational limitation of current patients	“Return to learn activities such as reading, attention, concentration, and completing school work in a timely manner.”
Services	3/7 or 43%- unsure of OT services for concussion management 4/7 or 57%- identified OT services in concussion management	“Assisting with the return to learn/work process of patients expressing persistent symptomatology.”
Acceptance	7/7 or 100%- specified interest in an IPE demonstration	“Absolutely, because I know OTs play an instrumental role in the recovery of moderate to severe TBIs and can likely pick up on subtleties not evaluated in mild TBIs in the clinical setting.”
Referrals	7/7 or 100%- Never directly referred patients to OT within the clinic	“We refer our student athletes to the NSU Sports med clinic and have the physicians refer from there”

Note: This table depicts pre-presentation survey results of N=7 physicians working at the NSU Sports Medicine Concussion Clinic. Not all comments are included in this table, please refer to Appendix D in capstone paper for additional comments.

Table 2: Post-IPE Demonstration Survey Results

Theme	Frequency	Comments
Effectiveness	5/5, 100%- demonstration effectiveness	“Presentation gave a nice overview of OTs role within an interdisciplinary setting
Perception	5/5, 100%- agreement in increase in perception of OT practice	“Better grasp of services offered and role within an interdisciplinary team.”
Interest	4/5, 80%- identified new interest in OT services following presentation 1/5, 20%- no response given	“Reminder of the breadth of integral services OTs provide”
Referrals	5/5, 100%- more inclined to refer for OT 1/5, 20%- more inclined to refer for musculoskeletal needs	“Knowing all of the services OT provides inclines me to refer patients more to OT”
Role	5/5, 100%- identified a role for OT in concussion management	“I think the role of OT for concussions would be largely determined based on patient symptomatology and reported concerns. I think OT would be extremely valuable regarding patients with prolonged symptom duration and a post-concussive syndrome presentation.”

Note: This table depicts post-survey results of N=5 physicians working at the NSU Sports Medicine Concussion Clinic. Not all comments are included in this table, please refer to Appendix E in capstone paper for additional comments.

- Participants were asked to complete an 11-question survey with demographics and qualitative questions regarding knowledge and perception of the discipline of occupational therapy.
- Qualitative responses were coded for themes and agreement was calculated to analyze descriptive data.
- Results were used to guide the development of a student led IPE demonstration for sports-medicine physicians.
- Overall, results demonstrated a lack of experience, knowledge, and limited perception of the scope and role of occupational therapy in managing concussions.
- Demonstrated agreement across all participants that current clients are in need of services and are experiencing occupational dysfunction, yet there are no referrals being made to OTs.
- Identified that IPE demonstration needed to address scope of practice, areas of practice, services/interventions for concussions, occupational dysfunction, referrals, potential role in clinic, and community resources.

- Participants were asked to complete an eight question qualitative survey which included demographics and question regarding effectiveness of the IPE demonstration.
- Results were coded for themes and analyzed for agreement using the descriptive data.
- Overall, Four out of five questions showed 100% agreement in effectiveness, perceptual change, inclination of referrals, and identified role of OTs in concussion management.
- Results suggest the helpful use of an IPE demonstration to educate and advocate for role of occupational therapy as a part of an interdisciplinary team.

## Learning Objectives Achieved

1. Alongside my mentor, facilitated a successful learning environment for current OTD students at the New York Institute of Technology by assisting in the development and implementation of OCHT 750-Interventions in Physical Dysfunction.
2. Conducted two IPE demonstrations on the role of occupational therapy in the management of sports related concussions to advocate for clinical involvement and awareness to graduate students and sport-medicine physicians.
3. Administered a pre and post clinical education survey to explore the effectiveness of an IPE demonstration provided to sports medicine physicians.
4. Compiled all literature, educational flyers, intervention/assessment information, and relevant documents to create an accessible electronic database for the NSU Sport Medicine clinic on concussion management from the scope of occupational therapy to continue education and advocacy following completion.

## Implications for OT Practice

This project served to prove there is a need for occupational therapy to be involved in concussion clinics and symptom management, the value of the use of IPE demonstrations, and future research opportunities for students and practitioners.

### OTs in Concussions

- Pre-survey results showed that 100% of physicians treating concussion agreed that athletes suffering from concussion symptoms would benefit from additional occupational therapy services.
- Due to a lack of knowledge, 100% of physicians reported non-use of outside referral prior to IPE demonstration. Following the demonstration, 100% reported being more inclined knowing depth of services offered.
- 100% of physicians also supported the inclusion of OTs as a part of an interdisciplinary team following advocacy efforts.

### IPE Demonstrations

- Use of IPE demonstrations in graduate school to allow students opportunities to educate and advocate for skills and services to other health professions prior to clinical experience.
- Results demonstrated the value of use and implications for continued use of IPE demonstrations amongst health professionals to educate and advocate on each disciplines to promote positive patient outcomes.

### Research

- Future research can be used to demonstrate the value of OTs in the management of occupational dysfunction in concussions as a part of an interdisciplinary team.
- Identify if there is a gap in knowledge of occupational therapy based on age, years of practice, and exposure to the skills and services of the profession in clinical practice or within academia at the graduate level.

## REFERENCES & ACKNOWLEDGMENTS

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References Available Upon Request