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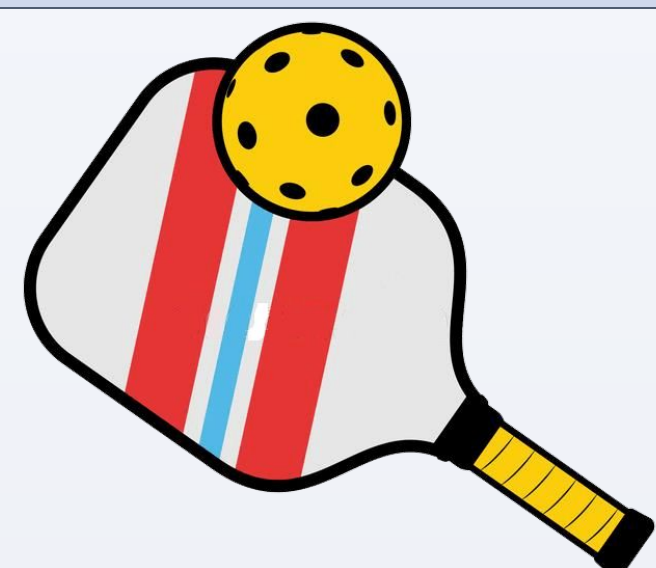
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# Understanding Occupational Therapy's Role in Injury Prevention for Pickleball Players and Communities

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## Introduction

- Pickleball is the nation's fastest growing sport and is loved by individuals of all ages.
- Appeal of pickleball comes from the fact that it is low impact and easy to learn compared to other racquet sports.
  - However, the sport becomes deceptively demanding as its involves high-impact motions such as quick stops, backwards motions, reaching outside base of support, and lunging and twisting.
- All of these factors can lead to loss of balance, repetitive stress to joints, and overuse injuries.

## Capstone Site Description

- Select Physical Therapy located in South Tampa, FL.
- Outpatient therapy provider that offers both physical therapy and occupational therapy (OT) services to assist an individual regain strength and mobility to the extremities, reduce pain, improve activity level and increase independent function in daily activities.
- Typical occupational therapy caseload involves developing treatment plans and interventions for hand, wrist, arm, elbow and shoulder injuries/pathologies for individuals of all ages.



(Select Physical Therapy, 2024)

## Summary of Needs Assessment

- There are approximately 13.6 million pickleball players in the United States.
- In 2020, estimated 16,360 injuries in racquet related sports. In 2022, estimated 21,730 injuries. Associated injuries include strains and tears of knees, lower back, feet, shoulders
- Although more and more individuals are becoming interested in playing pickleball due the social and physical benefits it offers, many of these individuals are lacking the physical preparedness to engage safely in the sport and may not have adequate balance, mobility, strength and/or coordination needed to participate safely.
  - This has led to an increase in pickleball related injuries as noted within the literature review.
- Individuals lack knowledge of the importance of injury identification so that more chronic and long-term pain can be prevented altogether.

## Literature Review Summary

- Many adults who consider themselves physically capable of participating in pickleball may not be as prepared as they believe based on their experience with cardiovascular exercise, strengthening, flexibility and overall conditioning of the body to participate in the demands of pickleball.
- Injuries that were reported by the CPSC and NEISS were only representative of injuries that were seen in emergency departments and do not specify the exact types of injuries that were seen
  - It does not account for the injuries that can be classified as non-orthopedic, such as muscle strains, bruising, concussions and many others.
- Current literature also mentions the areas of the body that are most susceptible to injury, but the exact incidence rates of injury to these areas across the population is unknown. It also uncertain whether or not these injuries were classified as an orthopedic and/or non-orthopedic injuries.

	2020	2023
15-24	1,650	3,627
25-64	6,254	7,384
65+	6,880	7,621

Figure 1. Age Group Comparison of Pickleball Related Related Injuries (CPSC, 2020; 2023).

## Capstone Project Description & Outcomes

- This capstone project aims to further explore the injuries that pickleball players are experiencing by developing a survey that will analyze subjective and objective data regarding the impact pickleball has on one's well-being and the specific injuries that individuals are experiencing that may hinder participation in the sport
  - Help develop client-centered interventions to address independent participation in the sport for all individuals by giving them the confidence and resources they need to play safely.
- An injury prevention website was developed so that players can easily reference injury prevention strategies to help maximize their participation in the sport.
- Survey results may provide more in-depth understanding of the injuries that are occurring within the pickleball community



Figure 2. Recruitment Flyer



Figure 3. Developed Components for Injury Prevention Website

## Capstone Goals Achieved

1. Developed a preventative screening tool to assist individuals in their safe participation in pickleball
2. Developed a research survey to gain insight into the specific types of injuries that are occurring as a result of pickleball so that client centered interventions can be created
3. Created a injury prevention website that includes an UE screen, proximal strengthening, injury prevention, fall prevention, etc. that can be accessed by pickleball players in order to improve their safe participation in the sport
4. Advocated for OT's role in injury prevention during pickleball
5. Remained up-to-date in relevant research on pickleball injury incidence rates.

## Pickleball Specific PNF Patterns



Figure 4. Proprioceptive Neuromuscular Facilitation Pattern Description; Created for Injury Prevention Website

## Implications for OT Practice

- OT's play a vital role in promoting health and wellness through injury prevention strategies as well as through rehabilitative services
  - Addressing physical, cognitive and psychosocial factors through injury prevention strategies
- Experts in providing client-centered care and activity analysis to better understand the demands, both physical and environmental, that pickleball presents
- Through the identification of the risks pickleball poses on the development of injuries, more client-centered interventions can be implemented to reduce risk of injury

## References & Acknowledgements

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References available upon request.