

# Effectiveness of an Evidence-Based Orthotic Manual for Occupational Therapy Students

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### **DCE Site**

High Five Hand Therapy and Rehabiliation (HFHTR) is a Los Angeles and Orange County-based rehabilitation clinic started by Danny Kang, OTR/L, CHT. Danny partnered with Andrew Dyjak MS, OTR/L, LMT and together opened a second location in Los Angeles. HFHTR clinics provide hand therapy services and specialize in instrument-assisted soft tissue mobilization (IASTM).

### **Needs Assessment**

- The first area of need was for custom orthotic fabrication manual.
- Another area of need is to have an IASTM protocol for therapists to follow for different diagnoses.
- Creating more occupation-based interventions.
- Improving the home exercise programs (HEPs).

## **Literature Review**

- Occupational therapy students believe that more time should be devoted to orthotic design and fabrication in school (Schofield and Schwartz, 2020).
- Orthotic fabrication is viewed as a valued part of OT education and an essential skill for occupational therapists and OT assistants (Schofield and Schwartz, 2020).
- The literature states that orthotics are some first options of conservative treatment for many hand injuries and are proven to be effective for some of the most common hand injuries.

# **Learning Objectives**

- 1. By the end of 14 weeks, the student will create a custom orthosis manual for the members of High Five Hand Therapy to use as a resource to improve clinical practice skills.
- 2. By the end of 14 weeks the student will present the orthosis manual and provide pre and post tests to assess for students comprehension.
- 3. By the end of 14 weeks the student will add to the clinic's Google Drive storage with videos on how to fabricate the different custom orthoses.
- 4. By the end of 14 weeks, the student will have advanced his clinical practice skills in the hand therapy setting.

# Project Description & Implementation

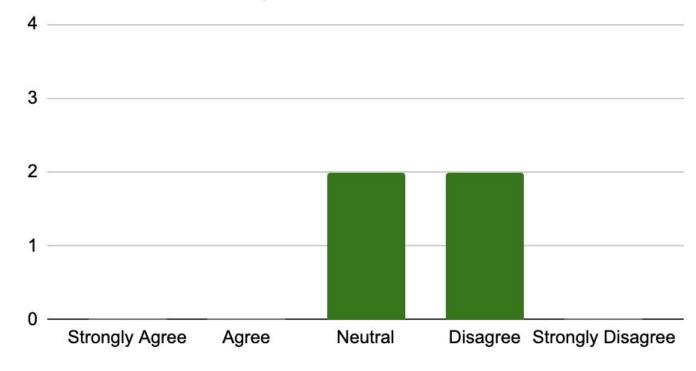
- To create resources to assist students in custom orthotic fabrication of common designs seen in the hand therapy setting.
- A custom orthotic manual going over all information needed to fabricate a custom orthoses.
- Video resources giving visuals on how to fabricate different orthotic designs.
  Including how to trace and mold design onto a patient.

### Results

- 4 OT students were present for the orthotic manual presentation.
- 9 question pre-test and post-test was administered before and after the presentation
- Pre-test average score: 4.5/9
- Post-test average score: 8/9

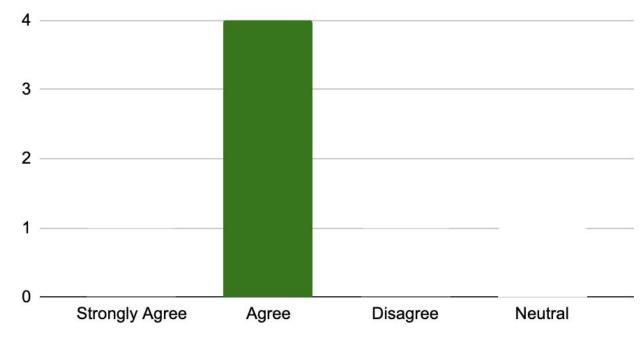
#### Figure 1: Pre-test survey

I have a strong understanding of the custom orthotic fabrication process.



#### Figure 20: Post--test survey

I have a strong understanding of the custom orthotic fabrication process.



### **Discussion**

- There was a significant difference between the pre-test and post test scores.
- These results correlate with the literature review that more time needs to be devoted to educating students on the custom orthotic fabrication process.
- Having more study resources in the curriculums and fieldworks can increase student knowledge in this skill.

## **Implication & Conclusion**

- The sample size was a limitation in this study.
- Future studies should use a larger sample size to gain more data.
- Besides knowledge, clinical practice skills of fabricating different orthotic designs should be tested as well.
- These orthotic resources were a success in increasing the knowledge of fieldwork students in the orthotic fabrication process.

# Scholarly Deliverables & References

- Includes a Google Doc of the orthotic manual that goes over the foundation of orthotic fabrication.
- Also includes links to the video resources of fabricating and molding the designs.

