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# **The Development of Culturally-Appropriate Educational Materials to Facilitate Comprehension and Adherence to Occupational Therapy Interventions**

Tyler Friefeld

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**THE DEVELOPMENT OF CULTURALLY-APPROPRIATE EDUCATIONAL  
MATERIALS TO FACILITATE COMPREHENSION AND ADHERENCE TO  
OCCUPATIONAL THERAPY INTERVENTIONS**

by

Tyler Friefeld

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A Capstone Project Presented to the  
FACULTY OF OCCUPATIONAL THERAPY  
GEORGIA STATE UNIVERSITY

In Partial Fulfillment of the  
Requirements for the Degree  
OCCUPATIONAL THERAPY DOCTORATE

April 2024

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Tyler Friefeld

## CAPSTONE FINAL PAPER APPROVAL FORM

The Capstone Final Paper is the final product that the OTD students need to complete to report his/her Capstone Project and his/her Capstone Experience.

<b>Student's Name</b>	Tyler Friefeld
<b>Degree Sought</b>	Occupational Therapy Doctorate (OTD)
<b>Department</b>	Occupational Therapy
<b>Program</b>	Occupational Therapy Doctorate (OTD)

We, the undersigned, recommend that the Capstone Final Paper completed by the student listed above, in partial fulfillment of the degree requirements, be accepted by the Georgia State University.

**Dr. Pey Shan Wen**



**4/26/2024**

Faculty Mentor's Printed Name

Faculty Mentor's Signature

Date

**Christine Kappel**

*Christine Kappel*

**4/12/24**

Site Mentor's Printed Name

Site Mentor's Signature

Date

**Dr. Carolyn Podolski**

*Carolyn Podolski*

**4/26/2024**

Capstone Coordinator's Printed Name

Capstone Coordinator's Signature

Date

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## **Abstract**

**Title:** The Development of Culturally-Appropriate Educational Materials to Facilitate Comprehension and Adherence to Occupational Therapy Interventions

**Purpose:** The purpose of this capstone project is to enhance the engagement of the Hispanic population with occupational therapy (OT) services by developing translated educational resources that will support their ability to understand and implement their plan of care in a hospital.

**Methods:** A literature review supported the need for improved access of culturally-appropriate healthcare material for the Hispanic community. A needs assessment served to interview staff members at the capstone facility to gain knowledge about the current practices and available resources offered intended to enhance the engagement of the Hispanic population with OT services. All handouts were developed in English, utilizing best practices of educational handout development, as described in literature review. The translation process involved a multi-step process and interprofessional collaboration with WellStar Language Access Department and Georgia State World (GSU) Language and Culture Department.

**Results:** Four department binders were established for this doctoral capstone project. A total of fifteen educational handouts were developed in English covering a wide spectrum of topics. Of the fifteen developed handouts, eleven were translated into Spanish; the remaining four documents will be translated as part of the sustainability plan. The student delivered a presentation to the staff at the capstone facility and obtained feedback about the finalized materials, and it was evident the staff was enthusiastic about the outcome of the doctoral capstone project. The doctoral capstone project established interprofessional collaboration and fostered the relationship for continued partnership between WellStar and GSU.

**Conclusion:** The doctoral capstone project addressed a gap in culturally-appropriate OT resources for Hispanic patients at the capstone facility. The development and translation of educational handouts represents a contribution to improving patient care and communication access within the hospital system.

## TABLE OF CONTENTS

List of Tables	i
List of Figures	ii
Summary      Specific Aims	Page 1
Chapter 1      Literature Review	Page 5
Chapter 2      Needs Assessment	Page 14
Chapter 3      Capstone Plan and Process	Page 22
Chapter 4      Results (Output)	Page 37
Chapter 5      Discussion and Impact	Page 44
Limitations	Page 45
Sustainability Plan	Page 46
Conclusion	Page 48
References	Page 49
Appendix 1      Learning Objectives	Page 54
Appendix 2      Supervision Plan	Page 60

## **LIST OF TABLES**

Table 1	Needs Assessment Questions for Facility Department	Page 17
Table 2	Therapeutic Education Materials Developed in English and Translated in Spanish	Page 38
Table 3	Therapeutic Education Materials Developed in English (will be translated in part with Sustainability Plan)	Page 39

## **LIST OF FIGURES**

Figure 1	WellStar Cobb Occupational Therapy Departments & Associated Interventions	Page 20
Figure 2	Educational Development and Multi-Step Translation Flowchart	Page 31
Figure 3	Chronological and Successive Rounds of Educational Development	Page 35
Figure 4	Flyer Distributed to WellStar Staff	Page 41



## **Introduction**

Occupational therapists serve an increasingly diverse population, which includes patients who may or may not be proficient in the English language. There are persistent barriers for patients and caregivers with limited proficiency in the English language, particularly regarding the availability and accessibility of appropriate educational materials. The gap in availability of culturally-appropriate healthcare-related materials is distinct among Hispanic patients, who face an increased risk for adverse health outcomes across a wide variety of health conditions due to disparities in access to healthcare.

### **Background**

Hispanic patients have a higher risk of adverse health outcomes across various conditions such as: stroke, hip fracture, spinal cord injury (SCI), traumatic brain injury (TBI), pain management, Parkinson's Disease (PD), cancer, cardiovascular disease (CVD), and diabetes (Flores et. al., 2019). Research indicates that patients with limited English proficiency report poor patient satisfaction and high mistrust in healthcare providers, which leads to worse health outcomes and an increased risk of readmission (Escobedo et al., 2023). Cultural insensitivity, health illiteracy, and low employment rates of Spanish-speaking healthcare practitioners make these barriers significant and hinder this population's access to quality healthcare-related services and resources (Velasco-Mondragon et. al., 2016). To address communication barriers and to reduce readmission rates in hospitals, healthcare facilities are beginning to shift focus to improving patient instructions and improving culturally-competent care (Polster, 2015).

### **Existing Problem and Research Question**

Despite the efforts, health promotion and educational materials from healthcare organizations are predominantly delivered in the English language, which creates additional

barriers for non-English preference patients (Chen et. al., 2016). The Agency for Healthcare Research and Quality (AHRQ) recognizes the importance of providing linguistic and cultural sensitivity for healthcare delivery and advocates for immediate action to prevent adverse health events among high-risk non-English preference patients, including the distribution of translated materials in patient's preferred language and the utilization of the "teach-back" approach to ensure patient understanding (AHRQ, 2012; AHRQ 2023).

During previous clinical rotations in OT, the principal investigator recognized the lack of therapeutic education provided in alternative languages. The observation of the lack of culturally and language-appropriate educational materials further emphasizes the importance and relevance of this doctoral capstone in order to fill this crucial gap for the underserved Hispanic population. Through conducting the literature review, it becomes evident that a gap exists in the literature when it comes to addressing the unique requirements of the Spanish-speaking population within the realm of OT educational materials.

Research Question: *"Among Spanish-preference patients in a hospital setting, does the development and implementation of translated culturally-appropriate OT educational resources lead to improved understanding and adherence to OT interventions?"*

- Population (P): Spanish-preference patients receiving occupational therapy services in hospital settings
- Intervention (I): Development and implementation of culturally-appropriate translated OT educational resources
- Comparison (C): Standard OT educational resources in English
- Outcome (O): Improved understanding and adherence of resources among Spanish-preference patients in hospital settings

### Purpose Statement

The purpose of this capstone project is to enhance the engagement of the Hispanic population with their OT services by developing and implementing a set of translated educational resources that will support their ability to understand and implement their plan of care. The project's focus will encompass various aspects, including: activities of daily living (ADLs) training, health management, durable medical equipment (DME), adaptive equipment, surgical precautions, safety awareness, therapeutic exercises, etc., with the ultimate goal of promoting effective and culturally-appropriate OT resources for the Hispanic community.

### Specific Aims

The specific aims for the doctoral capstone project include:

1. *The student will craft and develop translated occupational therapy patient materials in Spanish at designated capstone facility (through the utilization of best practices).*
2. *The student will implement therapeutic educational handouts for Spanish-preference patients at designated capstone facility.*
3. *The student will demonstrate clinical program development skills by establishing a sustainability plan and presenting to the designated capstone facility.*

### Methodology

The methodology for the capstone project consisted of two primary components: 1) conducting a needs assessment to identify specific requirements for the proposed solution, such as specific content for program development; 2) developing a program aimed to address critical priorities in the capstone facility, which would be identified through the needs assessment.

### Output and Brief Significance

The output of the doctoral capstone project will consist of translated educational materials for Spanish-preference patients, therefore the outcome of the project intends to enhance the engagement of the Hispanic population with occupational therapy services at the designated capstone facility. The significance of this study addresses critical gaps in access to healthcare and health-related outcomes for Hispanic patients with limited proficiency in English. Through the development and implementation of culturally-appropriate educational resources for occupational therapy services, this study aims to enhance patient engagement, comprehension, and adherence to a patient's plan of care within a hospital setting.

### Conclusion

The author of this paper utilized first-hand experiences obtained from previous clinical rotations in occupational therapy, reviewed the literature extensively, and developed a needs assessment in order to initiate the doctoral capstone process. The paper continues as follows: Chapter I reviews the literature, Chapter II presents a needs assessment, Chapter III follows the capstone process and plan, Chapter IV discusses the output and results of the final product, *The Development of Culturally-Appropriate Educational Materials to Facilitate Comprehension and Adherence to Occupational Therapy Interventions*, and Chapter V reviews the significance of the project, discussion, and conclusion of the doctoral capstone experience.

## **CHAPTER 1**

### **Literature Review**

#### Hispanic Population and Healthcare Disparities

The Hispanic population constitutes the largest ethnic minority group in the United States, with projections indicating this group will account for approximately 29% of the total population by 2060 (Velasco-Mondragon et. al., 2016). There are various socio-economic and environmental factors that contribute to health disparities among the Hispanic population, including language, culture, demography, and health literacy (Funk et. al., 2022; Velasco-Mondragon et. al., 2016). Additionally, on a larger scale, the economic impact of racial and ethnic healthcare disparities is substantial, with one model estimating costs of nearly \$93 billion in excess medical care and \$42 billion in lost productivity (Peters et. al., 2021).

Language proficiency is a significant challenge among the Hispanic population, with research suggesting this population is 20 times less likely to speak proficient English than non-Hispanic whites (Velasco-Mondragon et. al., 2016). Hispanic patients have a higher risk of adverse health outcomes across various conditions such as: stroke, hip fracture, SCI, TBI pain management, PD, cancer, CVD, and diabetes (Flores et. al., 2019). Studies indicate that Hispanic patients often receive inadequate post-hospitalization and rehabilitation care, which leads to worse health outcomes (Flores et. al., 2019). In addition, language and cultural barriers contribute significantly to worse health outcomes among Hispanic Americans, with around 45% attributing their poor health outcomes to these barriers (Funk et. al., 2022).

Education and occupational factors are also contributors to health disparities within the Hispanic population. Hispanics are four times less likely to graduate high school when compared to non-Hispanic whites (Velasco-Mondragon et. al., 2016). Additionally, Hispanics are often

employed in high-risk occupations (such as construction, repair service, etc.), resulting in increased mortality rates, due to occupational hazards in the workplace environment (Velasco-Mondragon et. al., 2016). Disparities in access to health insurance and preventative medical care are additional contributors that persist among this population (Funk et. al., 2022).

### Importance and Implications Associated with Communication Barriers

The U.S. Department of Health, developed the initiative of Healthy People 2030, which emphasizes the importance of improving health communication among diverse, multilingual populations (Healthy People, n.d.). Effective communication between healthcare providers and patients is essential for patient safety and quality of care, particularly in high-risk situations such as medication reconciliation, hospital discharge, and surgical care (AHRQ, 2012). Patients with non-English preference often experience adverse health events due to communication barriers, which leads to longer hospital stays, higher medical bills, and increased risk of infections (AHRQ, 2012; Flores, 2005). Language barriers result in reduced patient satisfaction and quality of care among non-English preference patients (Al Shamsi et. al., 2020).

Strategies to mitigate communication barriers include providing translated materials in patients preferred languages, utilizing qualified interpreters, and employing the “teach-back” method to ensure patient understanding (AHRQ, 2012). Addressing communication barriers is crucial for improving clinical outcomes and reducing readmission rates in hospitals (AHRQ, 2012; Polster, 2015).

### Factors Influencing Spanish-Preference Patients’ Ability to Understand Resources within a Hospital System

#### *Linguistic Factors*

The language barrier between English-speaking healthcare providers and Spanish-preference patients presents a significant barrier to effective communication (AHRQ, 2023). Despite efforts to provide translated materials and interpretation services, there are challenges associated with accurately conveying medically complex concepts and ensuring understanding between patients and providers (Ortega et. al., 2021). Additionally, the Spanish language can fluctuate depending on an individual's country of origin (Velasco-Mondragon et. al., 2016). Research indicates that relying on English materials can lead to misunderstanding and hinder patients' outcomes (Chen et. al., 2016). Utilizing professional translation services and language concordant healthcare staff are essential strategies to reduce linguistic barriers and improve communication quality (Escobedo et al., 2023).

#### *Health Literacy Barriers*

Limited health literacy impacts Spanish-preference patients' ability to understand and utilize healthcare resources effectively (Chen et. al., 2016; Velasco-Mondragon et. al., 2016). Educational materials are often written at too high of a literacy rate, hindering comprehension and retention of the vital healthcare information (Krontoft, 2021). The literacy rate should be written at the lowest possible level that still projects the information accurately (i.e., fifth to sixth grade reading level) (Hoffmann et. al., 2004). Previous studies utilized the Flesch-Kincaid Grade Level Scale to assess the readability level of educational materials (Chen et. al., 2016). To enhance the accessibility and comprehensibility of healthcare materials for Spanish-preference patients, simplify the language, utilize plain language, and incorporate visual aids (Hoffmann et. al., 2004). Additionally, culturally-appropriate educational interventions are crucial for addressing diverse learning needs and promoting health literacy within this population (SAM, 2008). The National Library of Medicine identified an evidence-based checklist, the Health

Education Materials Assessment Tool, to ensure materials are easy to read (Health Education Materials Assessment Tool, 2020).

### *Cultural Elements*

Cultural beliefs and values significantly influence Spanish-preference patients' perceptions of health and healthcare delivery (Polster, 2015). The concept of “familism” is significant among the Hispanic population, which recognizes the importance of family support in healthcare-related decisions (Velasco-Mondragon et. al., 2016). Additionally, faith and religious beliefs have the ability to influence healthcare decisions among this population, which emphasizes the need for enhanced culturally-appropriate resources within hospitals (Escobedo et al., 2023). Recognizing and respecting cultural diversity is essential for providing client-centered care and building trust between a patient and provider (Escobedo et al., 2023). Engaging patients as active participants in their plan of care and incorporating culturally relevant content into educational materials can enhance patient engagement and promote positive health outcomes (Chavarria et. al., 2021).

### *Design and Layout Elements*

Effective use of design and layout elements in healthcare materials are critical for maximizing comprehension and usability among patients (Center for Medicare & Medicaid Services, 2023). Clear organization, user-focused language, and attention to visual elements are all essential factors to consider when enhancing readability and accessibility of educational resources (Hoffmann et. al., 2004). In addition, an active voice, concise format, and culturally-appropriate images can facilitate information retention and promote engagement (Hoffmann et. al., 2004). Research recommends the use of 12-point serif type font with upper/lower case



lettering, as well as adjusting font size based on the target population's needs (Hoffmann et. al., 2004). Additionally, maximizing the contrast of the text and background colors improve legibility, displayed as dark print on a light background (Hoffmann et. al., 2004). Furthermore, involving key stakeholders, including patients and providers, in the development and evaluation of educational materials ensures relevance and effectiveness in addressing patients' needs and preferences (Hoffmann et. al., 2004).

### *Visual Elements*

Research suggests that the use of key visual elements from adult learning styles, such as larger fonts, colorful pictures, and bulleted key points, will increase the likelihood of information retention (Polster, 2015). However, it's essential to balance visual elements with relevant content, ensuring illustrations contain essential information (Hoffmann et. al., 2004). Most adults are visual learners, so incorporating visual learning strategies can enhance comprehension and engagement with healthcare materials (Polster, 2015). This can include multi-modal approaches such as videos, demonstrations, models, pictographs, etc. (Polster, 2015). Among patients in the emergency department, providers utilized pictographs for discharge instructions to overcome health literacy barriers and received positive patient feedback (Winokur, 2019).

### *Educational Factors*

As a part of a client-centered education approach, healthcare providers must assess patients' background, reading level, and learning style to select appropriate educational interventions (Marcus, 2014). Different educational strategies including role-playing instructions, simulation practice, and the "teach-back" method; these methods enhance patients' understanding and adherence to their healthcare instructions (AHRQ, 2012; Polster, 2015). However, research suggests that text-based educational materials are preferred by nearly 90% of

patients (Krontoft, 2021). Written healthcare materials complement verbal education, reinforcing information and facilitating message consistency, reusability, and refreshment of memory (Hoffmann et. al., 2004).

### *Accessibility and Availability*

Enhancing accessibility and availability of healthcare resources, particularly in patients' preferred languages is essential for promoting health equity and improving patient outcomes (AHRQ, 2023). Patient education plays a critical role in the carryover of healthcare-related knowledge, patient satisfaction, psychological outcomes, adherence to treatment, and disease self-management (Hoffmann et. al., 2004). Evidence suggests that of the available translated materials in the Spanish language (from online resources, such as: radiologyinfo.org), these materials are written at too high of a readability level (Novin et. al., 2019). Previous research conducted emphasizes the importance of providing educational materials in patients' preferred language, however, the gap exists in the availability and readability of Spanish-language resources, highlighting the need for expansion and further attention to linguistic and cultural considerations.

### Occupational Therapy and Culture

Occupational therapy (OT) is a healthcare field that emphasizes holistic, client-centered care (Occupational Therapy Practice Framework—fourth edition (OTPF-IV), 2020). Cultural factors play a significant role in shaping an individuals' beliefs, attitudes, and behaviors related to health and wellness, and occupational therapy interventions must consider these contributing factors (OTPF-IV, 2020). Occupational therapy interventions have the ability to facilitate active engagement through participation in meaningful occupations (OTPF-IV, 2020).

## Prior Work and Gaps in the Literature

After conducting the literature review, it becomes evident that a gap exists in the literature when it comes to addressing the unique requirements of the adult Spanish-speaking population within the realm of occupational therapy educational materials.

While there has been some efforts to translate other healthcare material, such as a study conducted that ‘trans-created’ (i.e., adapted English to Spanish translations, based on message and significance, rather than verbatim translation) educational materials for fertility preservation of the pediatric Hispanic oncology population (Murphy et. al. 2014). For the development of the materials, the researchers utilized a learner verification approach (method of creating materials through inclusion of targeted population) in order to enhance the suitability of the completed educational brochure; this study measured the design, readability, likelihood to read, and overall opinion of the ‘trans-created’ brochure (Murphy et. al. 2014). While these efforts have demonstrated positive outcomes in various areas, such as, the use of the learner verification approach, understanding of the materials, and preferred visual elements (i.e., actual patient photos and vivid colors) for educational materials, there are various limitations for this study, including the targeted population, educational methods utilized, and the patient’s ability to implement or carry through with the materials provided.

Additionally, a research study conducted in Canada, developed and evaluated hypertension educational materials for the Indo-Asian population (Jones et. al., 2011). The evidence for this study suggests the following process for educational material development: assessing the readability level in English, involving the target population in the process of development (i.e., learner verification and revision), translating with interpreters and back translation with bilingual practitioners for verification, and the adaptation of the finalized

materials (Jones et. al., 2011). While there were positive outcomes noted within this study, such as a protocol for development and the participants' improved understanding of hypertension, there were various limitations, including the projected targeted population and the methodology of including members of the project team who were fluent in both English and Indo-Asian languages (Jones et. al., 2011).

While there are several occupational therapy resources translated to Spanish on the Internet (such as: Tools to Grow OT, The OT Toolbox, etc.), these materials are not evidence-based and have not undergone evaluations related to usability, understanding, implementation, and follow through. Additionally, these products have not been tailored to a specific hospital's population. The current research literature lacks evidence of material that are specific to facilitating understanding and adherence to occupational therapy training and intervention. The observation of the lack of culturally and language-appropriate educational materials further emphasizes the importance and relevance of this doctoral capstone in order to fill this crucial gap for the Hispanic population.

### **Terminology**

- Hispanic: refers to an individual or group of people who have ancestry from a country who's primary language is Spanish; however, not all Hispanics speak Spanish or are Spanish-preference (Alexander, 2022)

- Latino/Latinx: refers to an individual or group of people who have ancestry from Latin American and/or the Caribbean; however, not all Latinos speak Spanish or are Spanish-preference (Alexander, 2022)

- non-English preference or limited English proficiency: term(s) used to describe individuals who speak a language fluently, other than English

- Spanish-preference: term used to define individuals who prefer to speak Spanish as their primary language

## CHAPTER 2

### Needs Assessment

#### Staff Interviews to Inform Development of Culturally Appropriate Resources to Facilitate Comprehension and Adherence to Occupational Therapy Interventions

During the initial three weeks of the doctoral capstone experience, the needs assessment was conducted on-site at WellStar Cobb Hospital, the student principal investigator's (PI) designated capstone facility. The needs assessment aimed to interview staff members to gain insights about the current practices and available resources intended to enhance the engagement of Spanish-preference patients with occupational therapy services. Additionally, the interviews formed the foundation for developing the therapeutic educational materials. The ultimate goal of the doctoral capstone project was to develop effective and culturally-sensitive occupational therapy resources for Spanish-preference patients. The needs assessment comprised of a four-part process:

- Part 1: Schedule 15 – 30 minute interviews with WellStar Cobb staff
- Part 2: Conduct one-on-one interviews with selected WellStar Cobb staff
- Part 3: Analyze and transcribe interview data from WellStar Cobb staff
- Part 4: Summarize interview findings from WellStar Cobb staff

#### Conducting Interviews

The initial staff interviews conducted were semi-structured and aimed to provide the student PI with insights into the existing services and resources available to support Spanish-preference speaking patients at WellStar Cobb Hospital. The duration of each staff interview varied based on the depth of the discussion but typically ranged from 15 to 30 minutes per interview. All interviews were all conducted in-person.

## Participant Recruitment

The student PI's capstone site mentor, Christine Kappel, introduced the student PI to different occupational therapists and departments at WellStar Cobb Hospital. Upon meeting the occupational therapists at WellStar Cobb Hospital, the student PI scheduled interviews with the designated staff for a time that worked best for their schedule. The participants were recruited to participate in the interviews by word of mouth.

### *Inclusion Criteria*

Participant recruitment for the WellStar Cobb Hospital employee interviews included occupational therapists, certified occupational therapy assistants (COTAs), and therapy directors and/or coordinators. Within the facility, all occupational therapists and/or COTAs from different departments/units were included to understand the patient populations treated most at the capstone facility. The occupational therapists selected for this study were either full time or part time employees.

### *Exclusion Criteria*

Participants employed as the following: physical therapists, physical therapy assistants, speech-language pathologists, respiratory therapists, and/or therapy technicians were all excluded from participating in the study.

### *Sample Size*

The student PI scheduled and conducted 8 total qualitative staff interviews from the occupational therapy rehabilitation staff at WellStar Cobb Hospital. The sample included occupational therapists and COTAs working in specific units, such as: acute care, inpatient rehabilitation, trauma/burn unit, and neonatal intensive care unit (NICU). There were no therapy

directors and/coordinators included in the initial formal interviews for this study, due to scheduling conflicts.

### IRB and Informed Consent

Prior to completing the staff interviews, the needs assessment research was submitted and approved by Georgia State University's (GSU) Institutional Review Board (IRB). Additionally, prior to conducting the interviews, the student PI ensured all participants fully comprehended the purpose of the interviews and voluntarily agreed to participate in the study. The informed consent information was provided to each participant on a printed handout, as well as on an electronic tablet, and each participant signed electronically on a secured Qualtrics platform. With the provision of their explicit consent, interviews were audio recorded utilizing voice memo app to ensure precise data capture. All audio was unidentifiable and transferred to secure, GSU OneDrive.

### Semi-Structured Interview Guide

The interviews were structured to identify recommendations for improvement to support the development of culturally appropriate resources, which aimed to enhance comprehension and adherence to occupational therapy interventions (*see table 1 below for interview questions*). This encompassed determining specific content for the program's development, including occupational therapy domains and interventions, along with common diagnoses, injuries, and conditions seen at the capstone facility.

The interview consisted of open-ended questions, enabling to explore various areas such as the range of current occupational therapy services provided, strategies utilized to assist Spanish-speaking patients in comprehending occupational therapy services, details regarding



translation or other linguistic support services available at the facility, and identification of possible gaps or needs in the existing services or programs.

***Table 1: Needs Assessment Questions for Facility Department***

Interview Questions:

1. What are the most common diagnoses, injuries, and conditions seen among Spanish-preference patients at this facility?
2. According to you, what are the most important educational therapeutic takeaways for those most common diagnoses, injuries, and conditions seen among Spanish-preference patients at this facility (*i.e., precautions, therapeutic exercises, ADL/IADL training, health management, social participation, safety, etc.*)?
3. What do the current patient materials and educational resources (e.g., fact sheets, videos, care instructions, etc.) look like for English-preference speaking vs. Spanish-preference speaking patients?
  - a. Do you have any handouts/resources available in Spanish?
  - b. If so, which resources do you have pre-translated?
4. Are there specific guidelines and rules/regulations to follow for handout development at this facility?
5. What are ways you ensure a Spanish-preference patients receives the same level of care as an English-preference speaking patient?

Analysis and Transcription Process

During the interviews, the student PI took detailed notes to capture the participants' responses accurately; the interviews were also transcribed on Microsoft Word utilizing the secure GSU OneDrive. The student PI corrected the mistakes from the transcription process. Thematic

analysis served to summarize the transcribed data, identifying the most common themes and insights collected from the staff interview process of the needs assessment.

The responses collected from the facility department interview did not contain any personal identifiable information. The interview responses collected from occupational therapists and COTAs were stored in a secure, GSU OneDrive.

### Summarized Themes from Staff Interviews

Within WellStar Cobb Hospital, there are different units where occupational therapists evaluate, assess, and treat patients. These include departments such as: acute care, inpatient rehab, trauma/burn unit, and neonatal intensive care unit (NICU). The patient population treated by each occupational therapist is determined by their assigned unit of employment. In terms of Spanish-preference patients at this facility, staff responses revealed a diverse range of diagnoses, injuries, and conditions encountered including strokes, brain injury, orthopedic issues, trauma, amputations, chronic conditions with comorbidities, burns, and prematurity.

Regarding the most valuable therapeutic takeaways, the responses varied depending on the unit where the occupational therapists were employed within WellStar Cobb.

- For acute care occupational therapist(s)— activities of daily living (ADLs), bed mobility, precautions, weight bearing status, sitting balance/base of support, safe transfers, energy conservation, and durable medical equipment (DME)
- For inpatient rehab occupational therapist(s)— safety awareness, safe transfers, and home exercise program (HEP)
- For burn unit occupational therapist(s)—upper extremity range of motion (ROM) and ‘welcome to the hospital’ and ‘communication guide’

- For NICU occupational therapist(s)—the Developmental Care Guide, NICU discharge information, positioning and equipment, feeding, head shaping

Regarding readily available translated materials in Spanish, most occupational therapists reported being unaware if handouts were to currently exist, uncertain about their location if they did exist, or outright denied having any pre-translated materials. However, few occupational therapy staff members mentioned the availability of pre-translated orthopedic hip precautions. Some occupational therapists reported the use of Google Translate as a tool to assist with translations if needed. Specifically, the occupational therapist working in the NICU noted that there are a few resources offered in Spanish for caregivers (such as The Sense Programs, Initial Education, and WellStar’s Discharge NICU videos), however, the most valuable therapeutic takeaways for the population were only available in English.

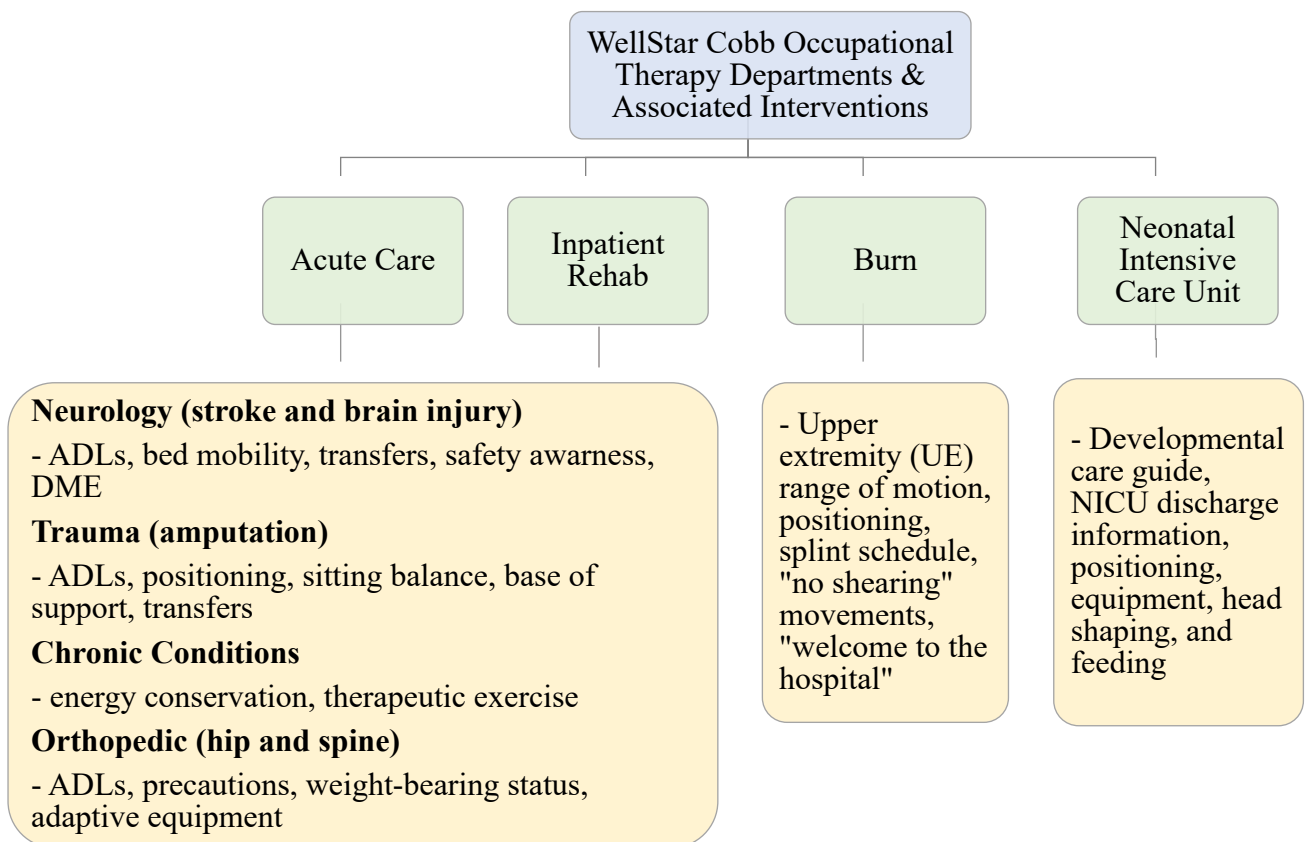
The majority of occupational therapists at WellStar Cobb Hospital were unsure regarding the guidelines or regulations for developing handouts at this facility. However, most agreed that before providing educational material to patients, they ensure the resources are credible and reliable. One occupational therapist emphasized the importance of including copyright information on patient educational materials, while another highlighted the existence of “preferred” handouts for specific diagnoses or interventions, such as therapeutic exercises or positioning patients with right vs. left hemiparesis.

Across the board, occupational therapists at WellStar Cobb Hospital strive to ensure that Spanish-preference patients receive equitable care compared to English-preference patients. They achieve this by utilizing interpretation services offered by the facility, including in-person interpreters or through the Martti video application. Some therapists mentioned using family members for interpretation, while others avoided this practice.

## Initial Layout for Development of Handouts Based on Responses from Needs Assessment

Following conducting the needs assessment interviews, the student developed the figure below (*figure 1*) to organize the responses collected from the staff interviews, along with the different departments within the capstone facility.

***Figure 1: WellStar Cobb Occupational Therapy Departments & Associated Interventions***



## Conclusion from Needs Assessment

After conducting the needs assessment through qualitative staff interviews, the student PI (along with the capstone site mentor) determined that WellStar Cobb would benefit from the development of Spanish occupational therapy educational materials for these specific patient populations: neurology (strokes and brain injury), orthopedic (hips and spine), trauma (burn and

amputee), chronic conditions, and premature babies' caregivers. Additionally, the needs assessment interviews informed the student of potential resources offered by the facility and opened the door for new learning opportunities to shadow and dive deeper into specialty areas of OT practice at the capstone facility.

## CHAPTER 3

### Capstone Experience Protocol

#### Development Plan for Therapeutic Educational Materials

The purpose of the doctoral capstone project was to enhance the engagement of the Spanish-preference population with occupational therapy services. This was achieved through developing a set of translated educational resources. The ultimate goal was to promote effective and culturally sensitive occupational therapy interventions for the Spanish-preference community in the designated capstone facility. Through the needs assessment, the student PI identified a consistent theme: *occupational therapy staff feedback highlighted the lack of culturally appropriate therapeutic educational materials within the capstone facility*. The identified needs included:

- Utilizing the ‘best practices for handout development,’ develop therapeutic educational materials tailored to the most common diagnoses, injuries, and/or conditions encountered by the occupational therapy staff at WellStar Cobb Hospital
- Providing accurate translations and developing reliable educational materials to facilitate comprehension of health-care related information
- Ensuring all occupational therapy staff are equipped with the ‘best practices’ for working with Spanish-preference patients and providing access to relevant resources within the hospital

#### Orientation to Facility

Prior to conducting the needs assessment interviews, the student PI spent the first day on-site at WellStar Cobb Hospital. During this time, the student PI was oriented to the facility and

acute care rehabilitation department. The student shadowed the designated capstone site mentor, Christine, throughout the morning rounds in the acute care unit, specifically focusing on the neurology floor that day. This observation in the acute care setting allowed for the student PI to gain insight into common therapeutic techniques utilized at this specific facility. Additionally, it provided an opportunity to learn more about the culture of WellStar Cobb Hospital and the population it serves.

#### Description of Facility—WellStar Cobb Hospital

The doctoral capstone experience was conducted at WellStar Cobb Hospital in Austell, Georgia, a prominent trauma center. WellStar Cobb Hospital's specialization services extend from critical care to severe burns and chronic wound management, through utilizing a multidisciplinary approach to address various health conditions (WellStar Health System, n.d.). The hospital operates in collaboration with Joseph M. Still Hospital, which is the largest burn center in the United States, and the facility offers specialized care across four centers in the Southeast (Joseph M Still Burn Centers, n.d.). Patients travel across states to seek treatment at WellStar Cobb Hospital due to its reputation as a center of excellence (Joseph M Still Burn Centers, n.d.).

The hospital's dedication to healthcare services is reflected within their mission statement, *"to enhance the health and wellbeing of every person we serve,"* and the vision, *"to deliver world-class healthcare to every person"* (WellStar Health System, n.d.). Additionally, the health system holds high values of: serving with compassion, pursuing excellence, and honoring every voice (WellStar Health System, n.d.). The WellStar Hospital System provides vast amounts of uncompensated healthcare services, totaling nearly \$1.2 billion in charity care in a previous calendar year (WellStar Health System, n.d.).

There are numerous WellStar facilities located throughout metropolitan Atlanta (WellStar Health System, n.d.). Specifically, WellStar Cobb Hospital, is situated in Cobb County and serves a diverse population. Patients seek healthcare services from surrounding counties such as: Fulton, Douglas, Paulding, Bartow, and Cherokee (U.S. Census Bureau, 2020; WellStar Health System, 2022). WellStar Cobb Hospital has the highest Hispanic population out of all WellStar facilities, with nearly 13% of patients identifying as Hispanic and about 7.3% of patients presenting with limited proficiency in the English language (WellStar Health System, 2022). Additionally, the Hispanic community in Georgia has experienced significant growth, outpacing the national average, with Cobb County reflecting this trend (U.S. Census Bureau, 2020).

Insights into burn and trauma demographics, along with uninsured populations, will further inform the delivery of care, ensuring that WellStar Cobb Hospital remains responsive to the needs of its diverse patient population. Burn survivors, who identify as Hispanic, have worse outcomes with wound healing and are less likely to be integrated into the community after receiving a burn injury (Peters et. al., 2021). Additionally, for trauma patients who have undergone surgery, research suggests that Latinx populations have less access to rehabilitation services (Peters et. al., 2021). The lack of health insurance and access to healthcare is relevant among Hispanic immigrants; in fact, undocumented residents might avoid seeking health services due to the fear of being deported (WellStar Health System, 2022).

WellStar Health System released top healthcare-related needs for their targeted population. The healthcare entity identified the topic area of access to appropriate healthcare, specifically mentioning a need for more culturally responsive and relevant services within their facilities (WellStar Health System, 2022).

## **Methods**



### Observation Opportunities to Investigate Further

Alongside conducting the needs assessment, the student PI sought to comprehend the interaction between Spanish-preference patients and English-speaking practitioners. Likewise, the student PI desired to gain additional knowledge about specialty areas of OT practice within the capstone facility. To achieve this goal, the student PI observed and shadowed multiple occupational therapists (OTs) across the various departments at WellStar Cobb Hospital.

### Burn/Trauma Unit

To gain insight into valuable therapeutic practices, particularly in the burn and trauma unit of the hospital, the student PI shadowed an OT specializing in this unit. This experience focused on understanding essential therapeutic techniques specific to this specialty area, such as: positioning, splinting, activities of daily living (ADLs), and upper extremity (UE) range of motion. During these observations, the student witnessed instances where the OT utilized WellStar's video interpretation service, provided via Martti video application, to communicate with Spanish-preference patients. However, it was noted that at the end of the session, the OT was unable to provide therapeutic information or educational resources to these patients, as all available resources were solely in English. Additionally, it was observed that the 'large burn positioning' handout, which was prominently displayed in all trauma/burn patient rooms was only accessible in English.

Through informal discussions with the burn/trauma OT, the student learned of the need to develop or incorporate a 'welcome to hospital' and 'communication guide' for the project in Spanish. This suggestion arose from recognizing that a significant portion of the patient population treated in this department often finds themselves in critical condition, which emphasizes the importance of accessible information in their preferred language.

### Neonatal Intensive Care Unit (NICU)

In addition to shadowing in the burn/trauma unit, the student PI had the opportunity to observe the OT specializing in the neonatal intensive care unit (NICU) at WellStar Cobb Hospital. This experience provided valuable insights into the role of an occupational therapist in the NICU, encompassing practices such as the developmental care approach, infant massage, head shaping, positioning, types of bottles and feeding, swaddled bathing, etc.

Given the specialized nature of the NICU within occupational therapy practice, the NICU OT shared pre-existing educational resources tailored for this population's caregivers with the student PI. These resources included essential information of NICU discharge guidelines, along with other important resources that were exclusively available in the English language.

### Pre-Existing Resources

In addition to these learning opportunities, the student PI took proactive steps to gather the current preferred handouts in English from all other occupational therapy departments within the capstone facility, including acute care, inpatient rehabilitation, and burn/trauma unit. Upon further investigation, it was discovered the only handout available in Spanish pertained to total hip replacement precautions.

The student PI recognized the importance of language accessibility in healthcare, especially for diverse patient populations. The student PI then reached out to and connected with WellStar's Language Access Department after identifying gaps in translated resources during observations at the capstone facility.

### Meeting with WellStar's Language Access Department

Concurrently with the needs assessment data collection period, the student PI convened with Debbie Lesser, the director of WellStar's Language Access department, and Connie

Hincapie, a qualified and certified medical interpreter, translator, and department supervisor.

This meeting aimed to examine the role of interpretation and translation services offered across all WellStar facilities. Although Debbie and Connie oversee the Language Department for all WellStar facilities, their office is located off-site.

The primary objective of this meeting was to provide the student PI with insights into the qualifications and certifications necessary to become an interpreter (for verbal communication) or translator (for written communication). Additionally, the meeting served to explain the current available resources for interpretation/translation services within all WellStar facilities, along with specific legal requirements outlined by the Affordable Care Act Section (ACA) 1557, the Americans with Disabilities Act (ADA), and Joint Commission standards.

The ACA Section 1557 acts to prohibit discrimination (against race, color, national origin, age, disability, or sex) within covered health programs (OCR, 2023). ACA Section 1557 requires healthcare entities to provide effective communication and reasonable modifications to combat discrimination (OCR, 2023).

The meeting highlighted the importance of the accessibility of language services between occupational therapy disciplines and the Language Access Department of the WellStar Hospital System. Furthermore, it provided the student PI with an opportunity to advocate for the topic of the deficiency and necessity for medically accurate, precisely translated, and easily comprehensible therapeutic educational materials within WellStar Cobb Hospital. This discussion highlighted the importance of adopting a multi-step approach, as translation is a meticulous process.

During the meeting, the student PI and WellStar Language Access Department formulated a plan of action to ensure accurate translations of finalized occupational-therapy

related materials. The plan involved initiating contact with Georgia State University's (GSU) Department of World Languages and Culture to explore the possibility of collaborating on the initial round of handout translations from English to Spanish. This collaboration would involve engaging students seeking practice in medical translation proficiency, graduate and teaching assistants, or proficient native speakers in GSU's Department of World Languages and Culture who are willing to assist. Once the initial round of translations were completed by GSU, WellStar's certified and licensed medical translators would then verify the translations to ensure accuracy, based on translation message, rather than verbatim translation

Following this, the student PI met with WellStar Cobb's on-site qualified medical interpreters and translators, Javier Pintado Mendez and Adriana Muller, to inform them of the doctoral capstone project, as Debbie and Connie primarily operate from a different WellStar facility.

#### Georgia State University's World Language and Cultural Department Involvement

Following the meeting with WellStar's Language Access Department, the student PI reached to GSU's Department of World Languages and Culture, to explore the potential collaboration for the initial translation phase of the developed resources. This collaboration would involve engaging in assisting with the translation process, and WellStar's commitment to ensuring language accuracy of all translated documents would facilitate an inter-professional collaboration between GSU and WellStar entities.

Dr. Annette Cash, Principal Senior Lecturer and Professor at GSU, promptly responded to the inquiry with enthusiasm and expressed in participating. Dr. Cash even offered class time for the student PI to present the capstone project to her undergraduate-level class, recognizing the significance and impact.

### Presentation to World Language Class at Georgia State University

Upon contacting Dr. Annette Cash, the student PI developed and delivered a PowerPoint presentation to an undergraduate-level Spanish course at GSU. The presentation aimed to educate students on occupational therapy, the requirements of the doctoral capstone experience, the purpose and significance of the capstone project idea, and the current progress of the project.

During the presentation, students engaged by asking relevant questions about the translation process, which the student PI addressed comprehensively. The presentation served to provide the students with insight into real life scenarios and potential career opportunities, while also advocating for the importance of providing accurate translated healthcare materials to Spanish-preference patients.

### Georgia State University's Center for International Resources and Collaborative Language Engagement (CIRCLE) Involvement

Following the engagement with GSU's Department of World Languages and Culture, the student was introduced to Dr. Marta Galindo Parra, the Director of GSU's Center for International Resources and Collaborative Language Engagement (CIRCLE). The CIRCLE at GSU aims to help students reach their language goals through providing resources to aid in success, including tutoring offered in seven languages (CIRCLE, n.d.). Dr. Galindo collaborated alongside the CIRCLE to find volunteer students in the department to assist in the initial translation assistance for the therapeutic healthcare materials.

The student PI will serve as a liaison between the occupational therapy staff at WellStar Cobb Hospital, WellStar's Language Access Department, and Georgia State University World Language and Culture Department. This collaboration effort aims to ensure accurate and

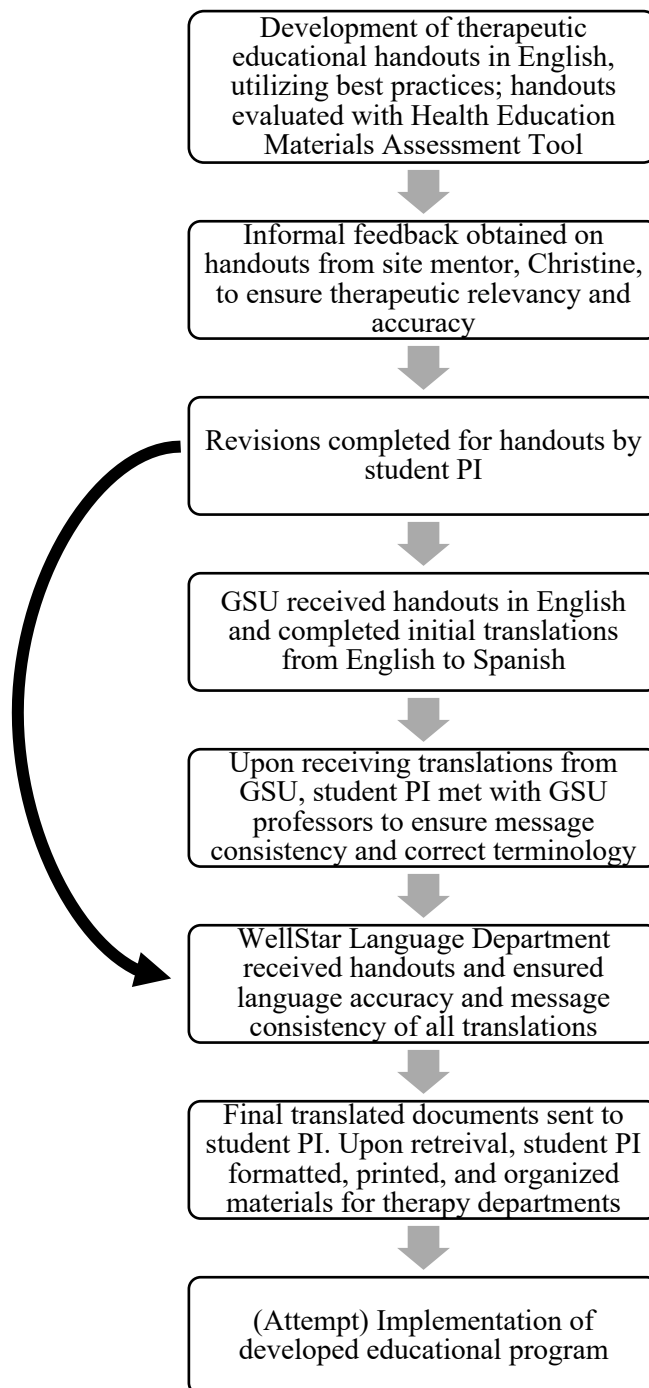
culturally appropriate translation of materials, benefiting both the Spanish-speaking patient population and the occupational therapy staff employed by WellStar Cobb Hospital.

### **Proposed Intervention**

The proposed intervention for the doctoral capstone project involves the creation of culturally-appropriate educational materials tailored to address the most common diagnoses, conditions, and injuries seen among Spanish-preference patients at WellStar Cobb Hospital. All developed therapeutic educational materials will undergo a rigorous process to ensure adherence to best practices in handout development (as described in literature review) and translation accuracy/message consistency (*see figure 2 below*).

This intervention aims to enhance the engagement of the Spanish-preference patient population with occupational therapy services and support their ability to comprehend and adhere to their occupational therapy plan of care. Ultimately, the capstone project seeks to promote effective and culturally sensitive occupational therapy interventions for the Spanish-preference community. Through this doctoral capstone experience, the project endeavors to bridge gaps in healthcare access and improve health outcomes for Spanish-speaking patients at WellStar Cobb Hospital.

**Figure 2: Educational Development and Multi-Step Translation Flowchart**



### **Handout Development in Preparation for Translation Process**

Neonatal Intensive Care Unit (NICU) Translations—WellStar Language Access Department

For materials related to the neonatal intensive care unit (NICU), the student PI adapted the existing handouts received in English from the NICU OT. These materials were initially provided to the student PI in a handout form, which were then scanned and uploaded into a PDF format before being transferred into Microsoft Word documents. Microsoft Word was chosen as the preferred platform for all materials due to its ease of editing and accessibility.

The original NICU materials included detailed pictures, eliminating the need for modifications in the visual component. To enhance comprehension and lower the literacy rate, the student PI made adjustments to the NICU content, changing terms such as “*patty cake*” into “*play with hands*.” While efforts were made to lower the literacy rate, essential medical terminology terms (for example, developmental milestones) required a higher level of complexity in translation.

The student PI submitted a total of 45 modified pages on a Microsoft Word document of NICU-related materials directly to WellStar’s Language Access Department for translation (*represents the arrow in figure 2 above*). Due to the intricate nature of medical terminology in these specific documents, WellStar’s Language Access Department was chosen instead of GSU’s World Language Department for translation services. Furthermore, the student PI submitted these materials to WellStar’s Language Access Department (prior to beginning the development of therapeutic materials in English) to establish a timeline for accurate translations. This step was essential for planning and to ensure a timely completion for the rest of the developed handouts in the future. After modifying the NICU-related materials, the student PI embarked on the development process of therapeutic educational handouts tailored to address the most common diagnoses, injuries, and conditions seen among the Spanish-preference patients at WellStar Cobb Hospital.



### Development Process for Remaining Handouts in English

The figure below (*figure 3*) outlines the chronological order and successive rounds of handout development completed each week. Each week, the student PI selected a diagnoses, injury, or condition to develop handouts for, based on the results from the needs assessment staff interviews. Using Microsoft Word, the student PI crafted handouts with a focus on adhering to best practices for handout development established through the previously conducted literature review.

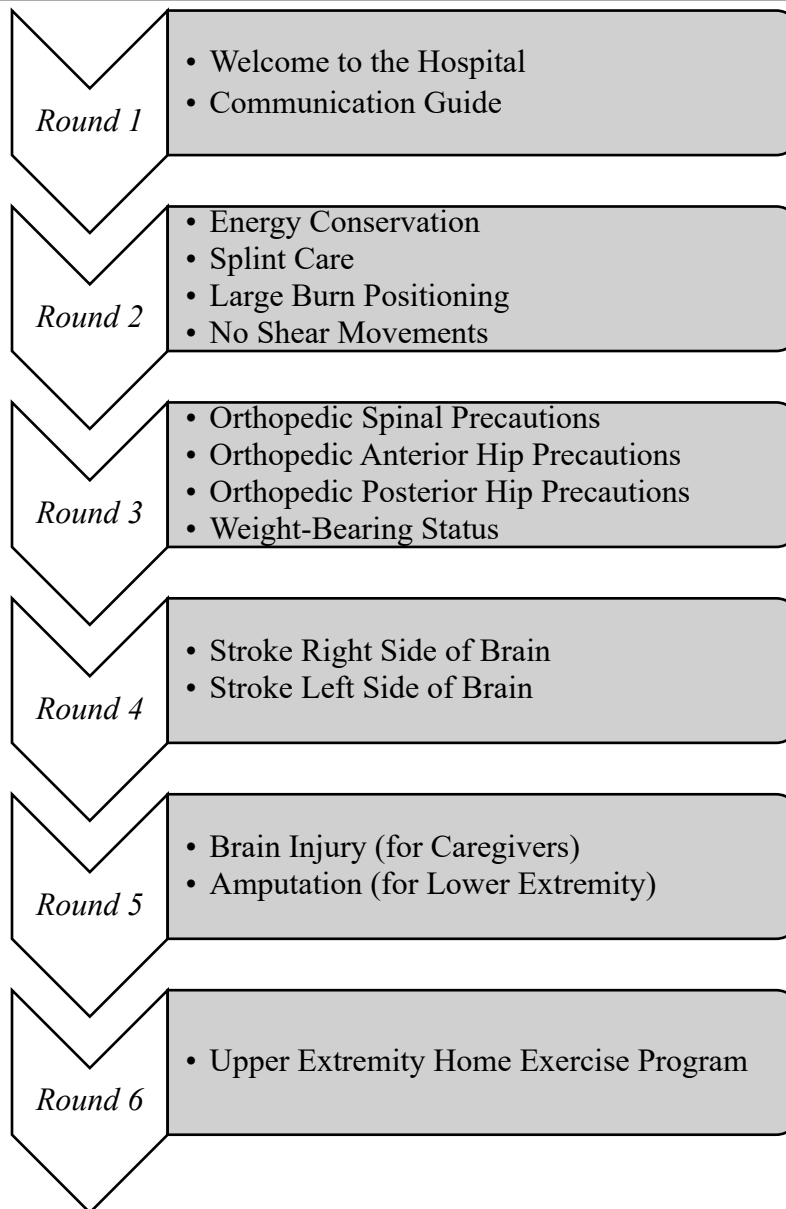
All handouts developed by the student PI incorporated simple and basic English terminology. Additionally, they featured visual aids, ample white space, active voice, clear title headings, large font sizes, and bullet points. Furthermore, certain handouts, such as the upper body home exercise program (HEP), adopted a multi-modal approach. These handouts included verbal instructions along with a QR code and link to a corresponding video demonstration on Vimeo, which showcased the correct execution of upper body therapeutic exercises through a silent instructional video. To ensure the quality and effectiveness of the developed handouts, the Health Education Materials Assessment Tool was utilized to evaluate the completed materials. Additionally, the Flesch-Kincaid readability scale, provided through Microsoft Word, assessed the readability level of educational materials. The average Flesch-Kincaid reading level for the developed materials was a 5.3, which is equivalent to an elementary school level; the highest recorded document received a score of 7.9, which is a middle school reading level.

Prior to submission for the translation process, all handouts underwent review by the site mentor, Christine, to verify the therapeutic relevance and accuracy. The student PI incorporated all feedback received from the site mentor into the handouts. Once the handouts were approved by the site mentor, each round of materials was forwarded to Dr. Cash and Dr. Galindo from

GSU. This comprehensive approach aimed to provide culturally appropriate and effective educational resources for Spanish-preference patients at WellStar Cobb Hospital.

The stroke handouts (*round 4*) developed by the student PI underwent a similar process to the NICU-related materials, due to the intricate nature of medical terminology in these specific documents, WellStar's Language Access Department was chosen over GSU's World Language Department for translation services of these specific documents. Additionally, the upper body HEP (*round 6*) went directly to WellStar's Language Access Department, due to time constraints.

***Figure 3: Chronological and Successive Rounds of Educational Development***



### Management and Organization of Two-Step Translation Process

Before submitting the initial translations to WellStar Language Access Department, the student PI collaborated with GSU professors, Dr. Cash and Dr. Galindo, to ensure message consistency of the provided translations. Any necessary revisions were made to the initial translations. Subsequently, the student PI forwarded the initial round of translations to WellStar

Language Access Department for verification of translation accuracy of the therapeutic educational materials.

Throughout the capstone experience, the student diligently oversaw the management and organization of the translation process, benefiting from the invaluable guidance provided by GSU World Language Department and WellStar Language Access Department. The student PI established a checklist on Microsoft Excel to stay organized and to keep track of the translation timeline each week.

## CHAPTER 4

### Output & Results

By the end of the doctoral capstone experience, the student PI developed a total of fifteen educational handouts in English covering a wide spectrum of diagnoses, injuries, and conditions over a span of six weeks/rounds. Out of the fifteen developed handouts, eleven were finalized and translated into Spanish as a part of the doctoral capstone project (the final count does not include the NICU materials, these handouts were developed by the NICU OT). The remaining four documents, though developed, will be translated as part of the comprehensive sustainability plan (discussed further in depth). A total of four designated department binders (acute care, inpatient rehab, burn/trauma unit, and NICU) were established for this doctoral capstone project.

#### Finalized NICU and Stroke Materials Completed

At the midpoint of the doctoral capstone experience, the student PI received the final translated NICU and stroke materials from WellStar's Language Access Department. These materials were meticulously formatted, printed, and organized by the student PI into department binders for easy access and reference across the hospital. The finalized materials included 2 distinct versions: Spanish and English.

#### Finalized Translated Materials

*Table 2* presents the materials that reached completion by the end of the doctoral capstone project, available in both English and Spanish. The table outlines the various rounds of development, therapeutic education topics, and collaboration efforts and entities involved. While the NICU material was not developed by the student PI, modifications were applied to the materials to ensure adherence to best practices of handout development.

**Table 2: Therapeutic Education Materials Developed in English and Translated in Spanish**

<b><u>Topic</u></b>	<b><u>Collaboration Efforts</u></b>	<b><u>Collaboration Entities</u></b>	<b><u>Status</u></b>
Neonatal Intensive Care Unit (NICU)	Jennifer Morreale, Adriana Muller, Connie Hincapie	WellStar Hospital ( <i>due to medically complex</i> )	Completed
(1)Welcome to the Hospital	Christine Kappel, Marvin Center, Marta Galindo Parra, Annette Grant Cash, Adriana Muller, Connie Hincapie	WellStar Hospital, Georgia State University	Completed
(1)Communication Guide	Christine Kappel, Marvin Center, Marta Galindo Parra, Annette Grant Cash, Adriana Muller, Connie Hincapie	WellStar Hospital, Georgia State University	Completed
(2)Large Burn Positioning	Christine Kappel, Sara Parra Cadavid, Marta Galindo Parra, Annette Grant Cash, Adriana Muller, Connie Hincapie	WellStar Hospital, Georgia State University	Completed
(2)No Shear Movements	Christine Kappel, Annette Grant Cash, Adriana Muller, Connie Hincapie	WellStar Hospital, Georgia State University	Completed
(3)Orthopedic Anterior Hip Precautions	Christine Kappel, Marta Galindo Parra, Annette Grant Cash, Kheyyam Obel Du-Bois, Adriana Muller, Connie Hincapie	WellStar Hospital, Georgia State University	Completed
(3)Orthopedic Posterior Hip Precautions	Christine Kappel, Sara Parra Cadavid, Marta Galindo Parra, Annette Grant Cash, Adriana Muller, Connie Hincapie	WellStar Hospital, Georgia State University	Completed
(3)Weight-Bearing Status	Christine Kappel, Sara Parra Cadavid, Marta Galindo Parra, Annette Grant Cash, Adriana Muller, Connie Hincapie	WellStar Hospital, Georgia State University	Completed
(4)Stroke Right Side of Brain	Christine Kappel, Adriana Muller, Connie Hincapie	WellStar Hospital ( <i>due to medically complex</i> )	Completed
(4)Stroke Left Side of Brain	Christine Kappel, Adriana Muller, Connie Hincapie	WellStar Hospital ( <i>due to medically complex</i> )	Completed
(5)Amputation (for Lower Extremity)	Christine Kappel, Marta Galindo Parra, Annette Grant Cash, Adriana Muller, Connie Hincapie	WellStar Hospital, Georgia State University	Completed
(6)Upper Extremity Home Exercise Program (HEP)	Christine Kappel, Adriana Muller, Connie Hincapie	WellStar Hospital ( <i>due to time constraints</i> )	Completed

### Developed Materials Requiring Translation

*Table 3* includes the materials that were developed in English, as a part of the doctoral capstone project, but will be translated through the sustainability plan (will be discussed later). Given the project's continuity beyond the capstone project, efforts will persist to translate the remaining developed handouts in order to ensure the provision of comprehensive and culturally-appropriate resources for Spanish-preference patients at WellStar Cobb Hospital.

<b><i>Table 3: Therapeutic Education Materials Developed in English</i></b>			
<b><u>Topic</u></b>	<b><u>Collaboration Efforts</u></b>	<b><u>Collaboration Entities</u></b>	<b><u>Status</u></b>
(2)Energy Conservation	Christine Kappel,	WellStar Hospital	In progress
(2)Splint Care	Christine Kappel,	WellStar Hospital	In progress
(3)Orthopedic Spinal Precautions	Christine Kappel,	WellStar Hospital	In progress
(5)Brain Injury (for Caregivers)	Christine Kappel,	WellStar Hospital	In progress

### Implementation Phase Initiation and Timeline Adjustments

As the implementation period approached, the student aimed to initiate this phase of the doctoral capstone project to gather preferences and opinions of the targeted population. However, at this point in the capstone project, the only readily available translated materials were for the NICU (caregivers) and stroke populations, as these materials were completed upon the midpoint of the capstone project. In close communication with the site mentor, WellStar Cobb Hospital, reportedly lacked Spanish-preference NICU caregivers and stroke patients during this three-week period.

Maintaining regular communication with GSU World Language Department and WellStar Language Access Department, the student PI ensured ongoing coordination of the

remaining materials. Nonetheless, unforeseen limitations outside the student's control required adjustments to the project timeline. Delays in the translation process were inevitable, given the documents were undergoing a rigorous process through GSU and WellStar Language Departments. The remaining finalized translations were completed by week 13 of the doctoral capstone project. This will be discussed further in the limitations portion of the study.

#### Receiving Finalized Materials

Upon eventual receipt of the remaining materials, the student PI promptly took initiative of formatting, printing, and arranging the materials into designated department binders, ensuring accessibility and organization for occupational therapy staff at WellStar Cobb Hospital.

#### Presentation to WellStar Occupational Therapy Department(s)

The student conducted two presentations for the WellStar Occupational Therapy Department in the final two weeks of the capstone project. The presentations were scheduled a month in advance with assistance from the capstone site mentor, Christine. The student PI created and distributed flyers (*see figure 4 below*) to occupational therapists at WellStar Cobb Hospital.



***Figure 4: Flyer Distributed to WellStar Staff***



The student PI delivered an in-depth PowerPoint presentation to the OT staff at WellStar Cobb Hospital. The objective of this presentation was to explain the capstone project purpose, summarize the needs assessment results, outline the capstone plan, detail the developmental process, and educate the staff on best practices for working with Spanish-preference patients. Additionally, the presentation served to showcase the final developed culturally-appropriate therapeutic educational materials and to provide resources to the staff regarding the WellStar Language Access Department.

Attendees of the presentation received a printout of the associated PowerPoint slides and provided informal feedback on the finalized product. The final product contained four department binders (acute care, inpatient rehabilitation, burn/trauma, and NICU), each paired with pocket dividers for different topic areas. Each topic area included original color copies in both English and Spanish versions, as well as copies provided in black and white.

### Obtained Informal Feedback from Staff

At the end of the presentation, the student was provided with informal feedback from the department staff (consisting of occupational therapists, physical therapists, and rehabilitation department managers). Overall, it was evident that the staff was enthusiastic about this doctoral capstone project idea, expressing immense interest and asking relevant questions about the developmental process, which the student PI answered thoroughly. Additionally, the staff requested to have alternative forms of access to the project's finalized documents on a shared drive for their future reference. Managers expressed eager interest in expanding similar initiatives to more diagnoses, injuries and conditions, as well as into other healthcare fields within WellStar facilities. Furthermore, the managers were interested in a potential collaboration in the future to extend the project's scope to include translations into the Haitian-Creole language, as this is a common population encountered at the hospital.

### GSU World Language Department and WellStar Language Access Department—Future Collaboration and Partnership Meeting with Human Resources

Through the interprofessional collaboration efforts between GSU World Language Department and WellStar Language Access Department, the student was invited to participate in a meeting that was aimed at exploring opportunities for continued partnerships beyond the doctoral capstone experience. This meeting established key initiatives for the ongoing collaboration and partnership of both departments, including the addition of the GSU department to an addendum. Additionally, discussions in this meeting revolved around the development of an internship program specifically for GSU World Language Department students within WellStar facilities. There were strong efforts made from both parties to initiate and solidify a

long-term partnership between the two entities, which ensures the continuation beyond the scope of the doctoral capstone project.

## **CHAPTER 5**

### **Impact, Discussion, and Conclusion**

#### Important Results

The outcomes of this study have future implications for addressing the identified gaps in occupational therapy educational resources for Spanish-preference patients within a hospital setting. The doctoral capstone project highlights the need and importance of culturally appropriate and language accessible materials to enhance patient comprehension and engagement in a hospital setting.

#### Significance to OT

The significance of the doctoral capstone project to occupational therapy is described in the profession's core values of client-centered care and cultural competence. Through ensuring and advocating for educational materials to be accessible and relevant to Spanish-preference patients, OT practitioners can improve their ability to communicate effectively with diverse patient populations. Furthermore, the project highlights the importance of interdisciplinary collaboration between healthcare providers, language experts, and academic institutions in addressing the unique needs of patients receiving care in a hospital system. Overall, the development and implementation of culturally appropriate resources have the potential to improve health outcomes, promote patient engagement, and facilitate diversity, equity, and inclusion (DEI) within occupational therapy practice.

#### Impacts

Short-term impacts of the doctoral capstone project include the development of culturally-appropriate resources, which can lead to improvements in patient education and

health-related outcomes at the capstone facility site. Healthcare practitioners can facilitate improved communication, understanding, and adherence to therapeutic interventions for Spanish-preference patients through the use of culturally appropriate materials.

When considering medium-term, the capstone project can contribute to positive impacts throughout the hospital system(s) and potentially beyond. Improving patient education may potentially lead to a more efficient healthcare delivery, reduced health disparities for underserved populations, and improve patient satisfaction. Additionally, establishing a mixed-methods protocol to address the unique needs of Spanish-preference patients, the capstone site might act as a model for other healthcare facilities with similar challenges, thus influencing the best practices for developing culturally-appropriate therapeutic materials for diverse populations.

Delving into the long-term, the impacts extend far beyond a specific site or individual patients. Diversity, equity, and inclusion (DEI) and cultural competence within the healthcare system can lead to systemic change and community benefits. The initiative in this study may contribute to greater equity in access to healthcare services and improved health outcomes among Spanish-preference patients, as well as other underserved populations. By initiating and establishing the groundwork for future collaborations and initiatives, such as developing resources in additional languages for multiple healthcare-related fields, the study has the potential to improve patient care and promote health equity.

### Limitations

Limitations for the doctoral capstone project included constraints on the sample size for the staff interviews, as the interviews were limited based on the hospital's specific departments, the final product was tailored to meet the needs of the designated capstone facility's occupational therapy departments. Due to the project's 14-week timeline, the selection of site specific most

common diagnoses, injuries, and conditions was limited. Time management issues were inevitable and arose from partnering with third parties to assist with translations; however, this can be improved in the future by developing less materials if there is a time limit for completion. Furthermore, unforeseen challenges included the need for correction of translations provided by GSU students and re-formatting the documents in Microsoft Word post-translation. Additionally, the deadline for completed translations from GSU coincided with the university's designated spring break. The student PI lacks proficiency in Spanish, which added complexity to the translation process, given the languages' nuances and along with country variations. Finally, during the designated implementation portion of the doctoral capstone project, there was a lack of Spanish-preference patients in the facility for the select diagnoses, injuries, and conditions, which resulted in a lack of patient feedback during the implementation portion; future studies should attempt to gather insight from the targeted population as soon as possible.

### Sustainability Plan

To ensure the sustainability of the occupational therapy documents developed during the doctoral capstone project, several measures will be implemented. All documents requiring translation into Spanish will be compiled and resent by the student to facilitate the translation process. The documents were developed by the student during the capstone project and include topics such as: energy conservation, splint care/wear, spinal precautions, and brain injury (for caregivers). An updated checklist will be prepared and shared with key stakeholders including site mentor Christine, GSU professors Dr. Cash and Dr. Galindo, as well as WellStar Language Access Department director and supervisor Debbie and Connie.

The collaboration between GSU World Language Department and WellStar Language Department will persist, employing a two-step translation process. Dr. Cash will oversee the

correction of translation errors (verbiage and language) before submission to WellStar, while Dr. Galindo will manage the documents' organization and ensure the proper formatting and inclusion of all visuals in associated Microsoft Word documents.

Once all materials are formatted, organized, and verified, they will be sent to Connie Hincapie and Adriana Muller to ensure translation accuracy. Following this, Connie will send all finalized documents to Christine for distribution.

This comprehensive approach aims to sustain the availability and accessibility of translated OT resources, facilitating effective communication and care for Spanish-preference patients at WellStar Cobb Hospital. Additionally, this inter professional collaboration will strive to expand its scope by incorporating additional healthcare-related domains in multiple languages. By broadening the range of languages covered, the project aims to enhance accessibility and inclusivity for diverse patient populations. This aligns with the overarching goal of promoting effective communication and culturally-appropriate care across various linguistic backgrounds within the healthcare setting. Through ongoing collaboration and innovation, the project seeks to establish a sustainable framework for addressing the diverse linguistic needs of underserved patients within the healthcare system.

### Discussion

The doctoral capstone project addressed the critical need for culturally-appropriate therapeutic educational materials for Spanish-preference patients receiving occupational therapy services at WellStar Cobb Hospital. By developing and translating handouts into Spanish, the project aimed to bridge the language and communication barrier to enhance patient understanding and promote engagement. Despite the limitations, such as time management and lack of implementation, the project successfully produced a comprehensive set of translated

therapeutic materials covering various diagnoses, injuries, and conditions commonly encountered at the capstone facility.

The collaboration with GSU World Language Department and WellStar Language Access Department provided reliable translations, despite some hurdles. The involvement of occupational therapy staff feedback from the capstone site ensured the final materials met the department's needs. Future work can investigate the outcome of the doctoral capstone project on the patient population, delve deeper into the expansion of the project into other healthcare-related fields, or even continue development for alternative languages in patient healthcare materials.

### Conclusion

In conclusion, the doctoral capstone project addressed the gap in occupational therapy culturally-appropriate resources for Spanish-preference patients at WellStar Cobb Hospital. The development and translation of educational handouts represents a contribution to improving patient care and communication in the healthcare system. Through ongoing collaboration and innovation, the project seeks to establish a sustainable framework for addressing the diverse linguistic needs of underserved patients within the healthcare system.



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Capstone Goals	Learning Objectives	Action Steps
The student will create and develop pre-translated occupational therapy patient education in Spanish at WellStar Cobb Hospital by the end of week 9.	<p><b>1a.</b> The student will conduct a needs assessment with OT staff at Wellstar Cobb Hospital to identify common medical conditions seen at the facility and to identify the need for creating bilingual educational materials based on the population by end of week 4.</p>	<p>-Scheduled, conducted, analyzed, and summarized interviews with 8 occupational therapists at Wellstar Cobb facility.</p> <p>-Gained insight and shadowing experiences for different OT departments within the hospital (i.e., acute care, inpatient reha, burn unit, neonatal intensive care unit)</p>
	<p><b>1b.</b> The student will collaborate with Wellstar Cobb Hospital Language Access Department, as well as Georgia State University's (GSU) World Language Department to assist with qualified, accurate translations for the educational materials by the end of week 9.</p>	<p>-scheduled, met with, and collaborated alongside Wellstar language access director, Debbie, and qualified/certified interpreter/translators (Connie, Javier, Adriana) in order to assist with translation accuracy</p> <p>-participated in an in-class presentation to a graduate level GSU class to explain the importance of the doctoral capstone project idea</p> <p>-remained in close contact with GSU World Language department to find volunteers for initial translations into Spanish</p>
	<p><b>1c.</b> The student will complete an iterative process for handout development (i.e., development in English, formatting, illustrations, language, and accuracy) by end of week 9.</p>	<p>-developed handouts in English with low literacy rates, transferable language, and visual aids</p> <p>-obtained informal feedback from site mentor prior to sending for translation process</p> <p>-sent initial Spanish handouts to certified/qualified translators/interpreters to ensure language accuracy from GSU</p>

		world language dpt. Student volunteers
The student will implement educational handouts for Spanish-preference patients by the end of week 10.	2a. Collaborate with interpreters/translators and occupational therapists to ensure Spanish-preference patient can understand and implement patient education presented to them	In close communication with site mentor to see if there were Spanish-preference patients at the capstone facility for the complete materials
	2b. Collaborate with patients/caregivers to determine patient preferences and opinions of the educational program resources provided	Unable to complete, d/t lack of Spanish-preference patients at facility upon implementation portion of project
3. The student will demonstrate clinical program development skills by completing a sustainability plan for the educational program by end of week 14.	3a. Complete materials and present to rehab staff on how to utilize translated patient education materials and inform the staff on the 'best practices'	Completed 2 PowerPoint presentations to OT staff at WellStar Cobb
	3b. Gather feedback regarding final project from employees at Wellstar Cobb and patients	Presented to the staff, at the end of presentation, the staff presented with valuable feedback
	3c. Establish a partnership between GSU world language department and Wellstar for future translations of healthcare related materials	Meeting on 2/23 to discuss partnership and future collaboration efforts between the two entities

## GSU OTD Supervision Plan WellStar Cobb Acute Care

### Scheduled Meetings

The student and site mentor will complete a weekly, 30-minute meeting to determine the progress made on the capstone project. The student will be held responsible for turning in associated deliverables to the site mentor 2-3 hours before the scheduled meeting. The student will keep track of the meetings in the detailed log below. The student may interact with and meet with the site mentor additionally throughout the week, as necessary.

### Communication Methods

The student and site mentor will communicate in various ways (in-person, email, phone, text message, and online virtual meetings). The student will be responsible for initiating and maintaining communication with site mentor when on and off-site.

### Resolving Conflict

In the event of a conflict, as perceived by any party involved, including differences in quality expectations or unanticipated modifications to project timelines, the concerned party should promptly initiate an open discussion. The party should document the concern and notify in writing both the capstone coordinator and faculty mentor, outlining the steps taken to address the problem and suggesting a solution. If the conflict persists or a fair resolution is not achieved within a reasonable timeframe, the capstone coordinator will step in as a mediator to facilitate conflict resolution. They will document the agreed-upon solution. It's also essential for the student to keep monitoring progress and use the same process for any new issues that may come up.

### Specific Requirements of the Project

The student is expected to complete a 14-week capstone experience in which no more than 20% of the time can be completed outside of the mentored practice setting. A total of 560 hours must be completed. A time log will be developed by the student to track achievement of the required hours. This time log will be initialed by the student and the site mentor at the end of each week. The total hours completed will be documented at the bottom of the chart at the completion of the capstone experience and both the mentor and the student will sign off on the completed hours.

The student is also expected to produce deliverable materials as part of the capstone experience. The students will develop a timeline in which deliverables are expected to be submitted for review by the site mentor. Each deliverable will be expected to be completed on the Friday of the assigned week. The student and site mentor will initial this log upon the completion of each deliverable item and sign the bottom of the log in the final week of the capstone experience. At the completion of the capstone experience, the student is expected to disseminate these deliverables in accordance with the policies of GSU's OTD program.

### Timeline of Deliverables



Week	Deliverable(s)	Progress	Student Initials	Mentor Initials
1- 1/8	<p>Begin needs assessment <u>part 1</u> (<i>determine scheduling in order to set-up 10-15 minute interviews with OTs, OTAs, and therapy directors at Wellstar Cobb</i>); ✓</p> <p>Begin needs assessment <u>part 2</u> (<i>conduct one-on-one interviews with Wellstar Cobb OTs, OTAs, and therapy directors</i>) ✓</p>	<p>Below expectation</p> <p>Meets expectations</p> <p>Exceeds expectations</p>		
2- 1/15	<p>Continue with needs assessment <u>part 1 and 2</u>, as needed ✓</p> <p>Begin needs assessment <u>part 3</u>, if feasible (<i>analyze gathered interview data from Wellstar Cobb OTs, OTAs, and therapy director</i>); ✓</p> <p>Collaborate with GSU &amp; Wellstar for translation accuracy ✓</p> <p>Shadow/observe in specialty OT units (i.e., burn and NICU) to understand the most valuable therapeutic takeaways ✓</p>	<p>Below expectation</p> <p>Meets expectations</p> <p>Exceeds expectations</p>		
3- 1/22	<p>Continue with needs assessment <u>part 2 and 3</u>, as needed ✓</p> <p>Begin needs assessment <u>part 4</u>, if feasible (<i>summarize interview findings</i>) ✓</p> <p>Shadow/observe in specialty OT units (i.e., burn and NICU) to understand the most valuable therapeutic takeaways ✓</p> <p>Prepare for GSU in class presentation (create PowerPoint on overview of capstone project) ✓</p> <p>Meet with GSU faculty mentor on <u>1/25/24</u> (to understand amendment to IRB application for week 5)</p>	<p>Below expectation</p> <p>Meets expectations</p> <p>Exceeds expectations</p>		
4- 1/29 Eval #1- 2/2 ✓	<p>Complete all parts (1-4) of needs assessment; ✓</p> <p>Summary of needs assessment interviews from staff at Wellstar Cobb; ✓</p> <p>Explain the need for the project at Wellstar Cobb ✓</p>	<p>Below expectation</p> <p>Meets expectations</p>		

	Begin <u>iterative process</u> (i.e., <i>content development, formatting, visual aids/illustrations, language, accuracy</i> ) of <u>program development</u> (based on responses collected from needs assessment) ✓	Exceeds expectations		
5- 2/5	Continue with <u>iterative process</u> (i.e., <i>content development, formatting, visual aids/illustrations, language, accuracy</i> ) of <u>program development</u> (based on responses collected from needs assessment) ✓  GSU involvement (for more basic translations)? <ul style="list-style-type: none"> <li>Meeting with GSU 2/8/24 at 2:15 ✓</li> </ul> Submission and obtaining approval for IRB amendment (create interview questions to gather feedback from stakeholders regarding educational program) ✓	Below expectation  Meets expectations  Exceeds expectations		
6- 2/12	Continue with iterative process (i.e., <i>content development, formatting, visual aids/illustrations, language, accuracy</i> ) of program development; ✓  Seek feedback on progress of current program development, make refinements as necessary ✓	Below expectation  Meets expectations  Exceeds expectations		
7- 2/19 Midterm Eval- 2/23 ✓	Continue with iterative process (i.e., <i>content development, formatting, visual aids/illustrations, language, accuracy</i> ) of program development; ✓	Below expectation  Meets expectations  Exceeds expectations		
8- 2/26	Continue with iterative process (i.e., <i>content development, formatting, visual aids/illustrations, language, accuracy</i> ) of program development; ✓  WellStar involvement (for more in depth translations)? ✓	Below expectation  Meets expectations  Exceeds expectations		
9- 3/4	Continue with iterative process (i.e., <i>content development, formatting, visual aids/illustrations, language, accuracy</i> ) of program development; ✓	Below expectation		

		Meets expectations		
		Exceeds expectations		
10- 3/11	<p>Continue to work on iterative process (management of translations, formatting and revising translations from GSU &gt; Wellstar) ✓</p> <p>Begin draft for sustainability plan ✓</p> <p>Create PowerPoint to train staff on how to utilize the program and importance of providing language-appropriate care to Spanish-preference patients (draft PowerPoint);✓</p> <p>Schedule staff training presentation (for capstone sustainability plan) ✓</p>	<p>Below expectation</p> <p>Meets expectations</p> <p>Exceeds expectations</p>		
11- 3/18 Eval #3- 3/22	<p>Begin to share project with patients via “teach-back method” with translator present</p> <p>Seek feedback on program development- Obtain preference(s) and/or opinion(s) from Spanish-preference patients regarding patient education material <i>(originally from week 2/3, moved later in order to provide Pt. 's with examples)</i></p> <p>Staff feedback interviews after use of the program ✓</p>	<p>Below expectation</p> <p>Meets expectations</p> <p>Exceeds expectations</p>		
12- 3/25	<p>Continue to share project with patients;</p> <p>Finalize PowerPoint presentation / sustainability plan ✓</p>	<p>Below expectation</p> <p>Meets expectations</p> <p>Exceeds expectations</p>		
13- 4/1	<p>Continue to share project with patients</p> <p>Present final project -- Presentation #1 to OT department – April 4<sup>th</sup> at 12:00 ✓</p>	<p>Below expectation</p> <p>Meets expectations</p>		

		Exceeds expectations		
14- 4/8 Final Eval- 4/12	Present final project -- Presentation #2 to OT department – April 9 <sup>th</sup> at 12:00 ✓	Below expectation  Meets expectations  Exceeds expectations		

Student Signature: \_\_\_\_\_

Mentor Signature: \_\_\_\_\_

#### Expertise Desired from Site Mentor

- First-hand experience serving Spanish-preference patients

#### Capstone Student Roles and Responsibilities

- Understand and abide by the GSU program policies and procedures relative to the capstone.
- Complete the 14-week (560 hour) capstone experience, with no more than 20% of the time completed outside the mentored practice setting. Student is responsible to ensure that missed hours are made up appropriately at the discretion of the site mentor and the capstone coordinator.
- Complete tasks assigned by the site mentor to ensure success of the learning experience, alignment with chosen focus areas, and outcome of capstone.
- Take initiative to communicate with the site mentor, occupational therapy faculty, and doctoral capstone coordinator when expected to do so or as needed to ensure success.
- Demonstrate respectful interaction and communication with faculty, site mentor, doctoral capstone coordinator, and other individuals who may be part of the capstone experience.
- Provide appropriate feedback to the site at the formal midterm and final evaluation.
- Utilize constructive feedback from faculty, site mentor, and doctoral capstone coordinator for personal and professional growth.
- Demonstrate a professional approach to the capstone, including but not limited to time management, observing deadlines, and maintaining communication with the capstone team.

- Be self-directed throughout the capstone process, including developing, planning, and completing the capstone experience and project.
- Take initiative to finalize all documentation with the site mentor, faculty mentor, or doctoral capstone coordinator.
- Complete and disseminate a culminating capstone project within the time frame determined by the academic program.

#### Site Mentor Roles and Responsibilities

- Orient student to capstone site, policy and procedures, expectations, other personnel, and stakeholders.
- Assist student as needed to perform specific learning activities consistent with the student's learning objectives.
- Provide evidence of expertise in given area (documentation of terminal degree, current CV or resume, verification of completed specialty training / certification, or experience).
- Collaborate with capstone team to create specific mentorship responsibilities.
- Provide supervision / mentorship through the duration of the experience.
- Provide insightful, constructive feedback on student's performance during the experience.
- Collaborate with capstone team to develop and maintain system for documenting student's experiential hours on-site and track tasks and activities accomplished during that time.
- Collaborate with capstone team to guide the capstone student through needs assessment component of the project proposal.
- Provide guidance on the logistics of the completing the work-related requirements at the capstone site, which could include workflow at site, general hours of operation, and access to workspaces.
- Proactively communicate with capstone team regarding any potential concerns.
- Provide formal evaluative information on students' performance and ability to achieve the learning objectives throughout the experience (midterm and final at the minimum).
- Regularly communicate with capstone team either in-person, virtually, by phone or email, for feedback on implementation and documentation.
- Provide meaningful and timely feedback on drafts of the capstone project as needed.