

Advanced Neurorehabilitation For Neurodegenerative Conditions

CERTIFIED
NEURO SPECIALIST



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Abstract

The focus of this poster presentation are details regarding the doctorate student's capstone project which was to develop an advanced certification course on neurodegenerative conditions (Parkinson's disease [PD], Huntington's disease [HD], Lou Gehrig's disease [ALS], Multiple sclerosis [MS], and Guillain-Barre syndrome [GBS]) for The Neuro Specialist Institute, their Doctoral Capstone Experience (DCE) site.

Introduction

Purpose: To provide the global community of rehabilitation and health care specialists advanced certification to positively impact patient care and outcomes.



Description of DCE Site/Needs Assessment

The Neuro Specialist Institute is a continuing education and certification program provider. Three major areas of need at the DCE site were:

- 1) Current, evidenced-based practices
- 2) Ample time for hands-on participation/practice
- 3) Experts in the field to teach or guest lecture course

Individual Learning Objectives

- 1) Obtain academic skills in the teaching-learning process and learn how to develop curriculum for advanced certification courses for health care students and practitioners.
- 2) Obtain skills in creating educational materials for healthcare practitioners to support their learning.
- 3) Obtain the skills needed to develop a comprehensive evaluation that effectively assesses student's clinical competency.

Literature Review & Theoretical Frameworks

Literature Review

- A neurodegenerative condition tends to be chronic, progressive, generally incurable, and sometimes fatal (Preissner, 2014).
- People with a neurodegenerative condition face long-term changing levels of disability and thus must learn how to cope with and manage disability over time (Preissner, 2014).
- There are multiple rehabilitative protocols, techniques, and strategies that one can use to address a neurodegenerative condition with the goal of maintaining their safety and independence.
- There continues to be a gap in the literature related to occupational outcomes for people with neurodegenerative conditions (Foster, 2014).
- Certification is one major way to ensure increased competency. Other values of certification include perceived increased empowerment, personal value, professional development, and increased competency and skills, and recognition by others (Mauk, 2013).

Guiding Theoretical Frameworks

- Rehabilitative
 - Impairments unable to be remediated
 - Focus on remaining abilities
 - Adaptation, compensation, and environmental modifications (Gillen, 2014)
- Biomechanical
 - Remediation
 - Restore function and occupational performance
 - Specific neurodegenerative conditions (i.e. GBS)
 - Certain point of certain disease processes (McMillan, 2011)
- Rehabilitative Framework for Neurodegenerative Diseases
 - Stages of disease
 - Provides several intervention strategies
 - Maintain independence (Dal Bello-Haas, 2002)
- Multimodal Model for Online Education
 - Multiple theories and models
 - Diverse learning styles
 - Flexible and adaptive (Picciano, 2017)



Problem Statement

Taking into consideration the results of the literature review, there was a need to develop an advanced certification course on neurodegenerative conditions to address the following problem: **A lack of a consistent and specialized approach to treat individuals with neurodegenerative conditions.**

Project Plan & Process

Capstone Process

- 1. Literature review
- 2. Continuing education & additional certification
- 3. Interviews & networking
- 4. Teaching experience

Capstone Plan

Course participants will engage in online (self-study) and live (hands-on) practical content. Topics will include the following:

- Neurologic pathophysiology
- Therapeutic framework for neurodegenerative conditions
- Evaluation and other outcome measures
- Interventions, therapy, and treatments across systems
- Medical and pharmacological management
- Resources for patients, family, and caregivers



Evaluation and Project Outcomes

Evaluating the course with two forms:

- 1) Advanced Certification Course – Course Evaluation
- 2) Advanced Certification Course – Interview with Instructor

Project Outcomes:

- Modify course learning outcomes/assessment to meet AOTA Advanced Program Provider Guidelines
- Course author exceptional in: educator, advanced education, and continuing education criteria
- Top valuable topics: Intervention content on PD, MS, and ALS
- Outstanding content, background information, literature review
- Strongest part: Information from interviews



Discussion & Implications

- Continue to develop this course and include clinical and practical content
- Create and implement neuro-rehabilitative programs for patients within this population
- Continue to network and speak to healthcare professionals, university professors, and researchers
- The capstone student will be one of the instructors once the course is fully developed and published

Contribution to Profession & Conclusion

This course will contribute to the advancement of the occupational therapy (OT) profession by providing an opportunity for certified OT practitioners to advance their practice knowledge in neurology, specifically neurodegenerative conditions. Trained OT practitioners will have the opportunity to optimize evaluation, intervention, and discharge plans as well as the therapeutic outcome for those living with neurodegenerative conditions. The major takeaway from this capstone project is that in order to develop an advanced-level course, it is important to speak to patients and professionals and conduct an in-depth search on what the best practices are. In addition, including a hands-on portion where course participants can apply the interventions will be of even greater value.

References Available Upon Request