Clinical Research in Occupational Therapy

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Clinical Research in Occupational Therapy
Daisy Celeste Alvarado, OTD-S
Rachel Hingst, MPH, OTR/L, CPRR | National Institutes of Health Clinical Center
Gustavo Reinoso, PhD, OTR/L | Nova Southeastern University, Department of Occupational Therapy

Introduction
- Clinical research in occupational therapy (OT) is the "systematic and objective study" of treatment methods or interventions to improve health, prevent illness, and develop or restore function (Bennett, 2017).
- Clinical research serves to develop skills applicable to the clinical research process and required for advancing the OT profession.
- The National Institutes of Health (NIH) Clinical Center was the ideal capstone site due to its intersection of research and clinical practice.

Literature Review
NIH Research Plan on Rehabilitation (2016) (Bennett, 2017)
- In 2016, the NIH organized the "Rehabilitation Research at NIH: Moving the Field Forward" conference to evaluate the status of rehabilitation research in response to a high disability rate.
- Collaborative research between regenerative medicine and rehabilitation medicine was found to be lacking.
- OT was linked to greater engagement, active time, and functional recovery.
- OTs reportedly had difficulty obtaining funding without a doctorate degree.
- The NIH, the National Advisory Board for Medical Rehabilitation Research, and the public identified six rehabilitation research focus areas:
  - Rehabilitation across the lifespan
  - Community and family
  - Technology use and development
  - Research design and methodology
  - Translational science
  - Building research capacity and infrastructure

2021 Update
- Suicide, Kennedy, Brown, National Institute on Child Health and Human Development, NIH, (Falk & Cohen, 2021)
- 49% increase in rehabilitation research funding
- The focus area of community and family remained less responsive in the research portfolio

Site Description
NIH Clinical Center (National Institutes of Health Clinical Center, 2003)
- Mission: "We provide hope through pioneering clinical research to improve health, prevent illness, and develop or restore function." (Dr. Gustavo Reinoso, Ph.D., OTR/L, for their mentorship throughout this capstone project.
- OT Section, Rehabilitation Medicine Department (RMD)
- Clinical Research in Occupational Therapy (Dr. Gustavo Reinoso, Ph.D., OTR/L, who believed in this goal two years before I ever set foot in the NIH, welcoming me into their community of inquiry at NIH. Lastly, this capstone project was approved by the NIH’s Institutional Review Board for Human Research.

Student Profile
Rachel Hingst, MPH, OTR/L, CPRR | National Institutes of Health Clinical Center
- Age: 42
- Gender: Female
- Nationality: American
- Field of study: Occupational Therapy
- Education: Bachelor’s degree in Public Health
- Work experience: 15 years in the field of occupational therapy
- Professional affiliations: American Occupational Therapy Association

Clinical Skills
- Observed/attended research participant intervention sessions
- Assisted in facilitating OT groups for inpatient units
- Conducted a scoping review on cooking and OT
- Participated in study design of biomarker identification study

Project Description
- 16-week clinical research internship at the NIH Clinical Center focused on gaining "entry-level skills for clinical research and an awareness of the practical issues which arise when one engages in systematic collection and analysis of data.” (National Institutes of Health Clinical Center, 2003)
- Engaged in theory development of a new model for cooking
- Collaborated with multidisciplinary, international team
- Conducted a scoping review on cooking and OT
- Participated in study design of biomarker identification study

Program Development
- Reviewed program logic model
- Drafted grant funding application for further research and sustainability
- Conducted a scoping review on cooking and OT
- Participated in study design of biomarker identification study

Theory Development
- Engaged in theory development of a new model for cooking
- Collaborated with multidisciplinary, international team

Coaching and Occupational Therapy: A Scoping Review
- Purpose: To map the current literature on OT and cooking and identify any existing gaps in knowledge

Multidisciplinary Model of Cooking for Health and Wellbeing
- Purpose: To describe the development, structure, components, and applications of a newly designed multidisciplinary model for cooking

Measuring Acute Stress during Cooking Behaviors: A Feasibility Study
- Purpose: To identify the feasibility of collecting objective salivary biomarkers and measuring HRV during a cooking task conducted within an experimental kitchen setting

Cooking with Confidence (CWC): Program Development and Evaluation
- Purpose: To assess outcome measures of CWC for the refinement and standardization of the program curriculum and increase probability of funding awards

Research Needs Assessment
- Dissociative Objective Perseverant
- Intellectual curiously
- Knowledgeable
- Self-critical
- Creative
- Integral

Availability of Clinical Research Opportunities for Students
- 77 reported students would benefit from participating in research during fieldwork
- Only 2 involved students in an active OT research opportunity

Learning Objectives
- Capstone Goals
  - Gain familiarity with current projects at the NIH Clinical Center
  - Improve understanding of the role of OT in clinical research
  - Increase competence of skills used in the clinical research process
  - Gain knowledge/skills in program development and evaluation
  - Develop learning tools for research and data analysis
- Develop a portfolio for future career opportunities

16-Week Overview
- 4 RMD research projects
- 2 mental health studies
- 5 rare disorders studies
- 5 cancer intervention studies

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Acknowledgments
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