

OCCUPATION-CENTERED PRACTICE IN SKILLED NURSING  
FACILITIES: MYTH OR REALITY?

A DISSERTATION  
SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS  
FOR THE DEGREE OF DOCTOR OF PHILOSOPHY  
IN THE GRADUATE SCHOOL OF THE  
TEXAS WOMAN'S UNIVERSITY

SCHOOL OF OCCUPATIONAL THERAPY  
COLLEGE OF HEALTH SCIENCES

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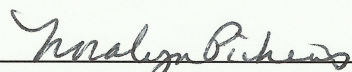
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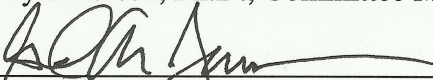
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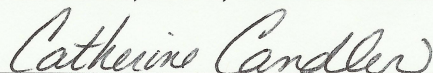
I am submitting herewith a dissertation written by Vanessa D. Jewell entitled "Occupation-Centered Practice in Skilled Nursing Facilities: Myth or Reality?" I have examined this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy with a major in Occupational Therapy.

  
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## ACKNOWLEDGMENTS

I am forever grateful to all of the people who contributed to this dissertation and those who supported me along the way. First and foremost, I would like to thank my dissertation chair, Dr. Noralyn Pickens, for all of her guidance, support, timely feedback, and encouragement along the way. I would like to thank my committee members, Dr. Gayle Hersch and Dr. Gail Jensen, for their encouragement and valuable feedback on this project. This dissertation would not have been possible without the guidance of Shelly Burns, health science librarian, and the occupational therapy graduate assistants who completed our research team. A special thank you to all of the participants in the research studies who all offered valuable insights into occupational therapy practice. Finally, I would like to thank my family for their patience, understanding, and love while I completed my dissertation.

## ABSTRACT

VANESSA D. JEWELL

### OCCUPATION-CENTERED PRACTICE IN SKILLED NURSING FACILITIES: MYTH OR REALITY?

MAY 2015

The purpose of this dissertation was to explore *occupation-centered* practice within the context of a skilled nursing facility for short term rehabilitation clients. Additionally, methodological research was conducted to examine the validity, utility, and reliability of the Occupation-Centered Intervention Assessment (OCIA), an assessment tool designed to capture *occupation-centered* practice within skilled nursing facilities. The Occupational Therapy Intervention Process Model provided theoretical guidance throughout the dissertation. Study one provided a systematic review of the published literature from 1991-2014 that described or examined occupational therapy practice with clients who receive short term rehabilitation services in skilled nursing facilities. Of the sixteen identified research studies, eleven of the research studies described or examined the effectiveness of interventions that utilized occupation as the intervention, focused on occupation as the therapeutic modality, or did both while eleven research studies described or examined the effectiveness of interventions that included exercise, rote practice, or a passive intervention (some studies described multiple interventions). Study

two involved measurement of content validity, utility, and inter-rater reliability of the OCIA. Overall, it was determined that with increased clarity of the manual, minor changes to the personal relevance continua, and adequate training before using the tool, the OCIA demonstrated strong inter-rater reliability and good content validity. Study three involved observing and rating occupational therapy treatment sessions at skilled nursing facilities. A total of 57 interventions were observed, scored with the OCIA and supplemented with field notes and schematics. Overall, exercise and rote practice was found to be the most common intervention category administered to the short term rehabilitation clients in skilled nursing facilities. While upper body exercises, functional mobility, standing/stepping/walking, and basic self-care activities were the four most common interventions provided to these clients. The combined results of this dissertation indicated that a wide range of interventions, both occupation-centered and non occupation-centered, are provided to short term rehabilitation clients within the context of skilled nursing facilities and more research is warranted to determine the effectiveness of occupation-centered interventions.

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## CHAPTER I

### INTRODUCTION

It is no surprise that *occupation* is what separates occupational therapy from other health care professions. The philosophical base and core concepts from occupational therapy theories and practice are all grounded in *occupation* (e.g., American Occupational Therapy Association [AOTA], 2011; Fisher, 2009; Schkade & Schultz, 1992). Not only is the profession grounded in occupation from a theoretical perspective, but the profession is encouraged to provide interventions that are centered both in occupation and on the client's specific needs and preferences (AOTA, 2011; Fisher, 2013; Gillen, 2013). The AOTA's Standards of Practice dictated that "an occupational therapy practitioner...delivers occupational therapy services that reflect the philosophical base of occupational therapy and are consistent with the established principles and concepts of theory and practice" (p. S107) confirming the importance of occupation to the profession.

Client-centered practice in occupational therapy involves a collaborative approach that acknowledges the client's desires, goals, and needs (Law & Mills, 1998). Occupations are the activities of everyday living that hold purpose, meaning, and relevance to an individual; involve a series of observable actions; include active engagement; and result in a tangible or intangible product (Fisher, 2006; Law, Polatajko,

Baptiste, & Townsend, 1997). Humans are occupational beings, indicating that humans derive meaning and purpose from their daily activities. In order to remain client-centered occupational therapists must combine their knowledge of occupations and ability to collaborate with the client to identify challenging occupations and then address these concerns through the therapeutic process that is centered on occupation. *Occupation-centered* practice is the perspective or lens through which occupational therapy practice occurs and guides the clinical reasoning process (Fisher, 2013).

Not only do the profession's philosophical base and theoretical concepts support *occupation-centered* practice, but current research also supports the *occupation-centered* paradigm and demonstrates the effective use of occupation in the clinical environment (Buddenberg & Schkade, 1998; Hubbard, Parsons, Neilson, & Carey, 2009; Orellano, Colon, & Arbesman, 2012; Rensink, Schuurmans, Lindeman, & Hafsteinsdottir, 2009; Ward, Mitchell, & Price, 2007). However, a gap exists between the profession's theoretical base and empirical evidence to support *occupation-centered* practice and what actually occurs in clinical practice. Research continues to demonstrate that the majority of sessions are spent on preparatory and pre-functional activities and are not indicative of *occupation-centered* practice (DeJong, et al., 2009; Smallfield & Karges, 2009; van den Heever, 2014).

A wake up call has been issued to occupational therapists to return to *occupation-centered* practice and shift away from the mechanistic paradigm that continues to hold strong roots in many areas of practice (Fisher, 2013; Fleming-Castaldy & Gillen, 2013;

Gillen, 2013). This paradigm shift toward *occupation-centered* practice, initiated in the early 1960's (Reilly, 1962), has yet to become common in clinical practice as 91% of fieldwork students report *not* observing the use of occupation in clinical practice (van den Heever, 2014). Kielhofner identified this discrepancy between the profession's philosophical base and current practice as a scholarship-practice gap (2005).

Of the limited research available, most involved adults with various physical disabilities at inpatient rehabilitation facilities. However, very little is known about occupational therapy in skilled nursing facilities (SNFs) despite the large percentage of occupational therapists working in SNFs, the growing number of older adults receiving care in such facilities, and the high demand for high quality rehabilitation services (Jewell & Schultz, 2010). Does the same scholarship-practice gap exist in occupational therapy practice with older adults receiving care in skilled nursing facilities?

Through this dissertation, the researcher aimed to identify, describe, and examine the effectiveness of occupational therapy interventions provided to short term rehabilitation clients in skilled nursing facilities. An occupational lens, or a "profession-specific perspective" where occupation is the "central organizing framework" (Fisher, 2013, p. 2), was applied throughout the research process. The researcher engaged in three studies to systematically examine occupational therapy practice with older adults receiving short term rehabilitation services in skilled nursing facilities. The overarching aim of the proposed dissertation was to explore *occupation-centered* occupational therapy

practice within the skilled nursing facility environment. The individual aims for each phase are listed below:

- Study I: Systematically review the published literature that describes or examines occupational therapy practice with clients who receive short term rehabilitation in skilled nursing facilities.
- Study II: Examine the content validity, utility, and inter-rater reliability of the Occupation-Centered Intervention Assessment.
- Study III: Describe occupational therapy interventions utilized with short term skilled nursing facility clients through an occupational lens.

## CHAPTER II

### BACKGROUND AND SIGNIFICANCE

There is a documented need to bridge the gap from scholarship to clinical practice in the occupational therapy profession (Fisher, 2013; Fleming-Castaldy & Gillen, 2013; Gillen, 2013; Kielhofner, 2005). Throughout the history of the profession a clear link existed from the philosophical and theoretical perspectives to clinical practice and with the advent of increased quality and rigor of clinical research in the last twenty years, an even stronger link exists. In 2007, the American Occupational Therapy Association (AOTA) declared a ten year vision for the profession stating that “occupational therapy is a powerful, widely recognized, science-driven, and evidence-based profession with a globally connected and diverse workforce meeting society’s occupational needs” (p. 614) setting the stage for *occupation-centered* practice to become widely accepted and used, transforming *occupation-centered* practice from an ideal to a reality, supported by science, in every clinic and community practice.

#### **Occupation-Centered Practice**

The core tenant of occupational therapy is the belief that participation in a balanced routine of occupations promotes health and well-being. This is consistent with the World Health Organization’s (WHO) International Classification of Functioning, Disability and Health (ICF), which is a structure for describing and organizing health and health-related factors, such as the influence of the environment and person factors. The



ICF provides a framework that classifies participation as being a determinant of health (WHO, 2001). The use of occupation in interventions and as an end goal is an ideal for all of occupational therapy practice. *Occupation-centered* practice is defined as a professional perspective or an occupational lens that allows clinicians to “[relinquish a] bottom-up lens that places person factors and body functions at the core of what [occupational therapists] do and adopt an occupational lens” (Fisher, 2013, p. 5-6). This professional perspective guides the reasoning process through development and refinement of the entire occupational therapy process. Occupation may be used as the therapeutic medium, may be the focus of the session, or may be the end goal of the intervention(s). Until 2013, *occupation-centered*, *occupation-focused*, and *occupation-based* were used somewhat interchangeably. A deeper understanding of occupation led to differentiation and clarification of the three terms.

In their review, Doucet, Woodson, and Watford (2014) found 42 rehabilitation research intervention studies published in the American Journal of Occupational Therapy (AJOT) over the past five years. Of those 42 intervention effectiveness studies only two utilized an *occupation-centered* approach and both were single-subject case reports. The first research study by Jack and Estes (2010) described a 51 year old female after hand surgery for lupus-related arthritis. After receiving a biomechanical approach to intervention with limited results, the occupational therapist switched to the Occupational Adaptation model of practice and monitored improvements in adaptation and motivation. Although the results were not generalizable, the researchers documented clinical

improvements in overall occupational performance. The second study is discussed in the next section as the occupational therapist utilized *occupation-based* interventions.

### **Occupation-Based**

*Occupation-centered* refers to a perspective or guide for clinical reasoning, while *occupation-based* and *occupation-focused* refer to how interventions are designed and provided to clients. *Occupation-based* involves active engagement or participation in one or more occupations during the intervention in order to address a rehabilitation goal (Fisher, 2013). In other words, the client is actively engaged in *doing* an occupation. The end goal may be improved occupational performance or improvement of a performance skill, impairment, or client factor.

Skubkik-Peplaski, Carrico, Nichols, Chelette, and Sawaki (2012) completed a single-subject case report with a 55 year old male who survived a cerebral vascular accident with the primary interventions involving *doing* and active engagement in occupation. All interventions were performed in an outpatient clinic and motor function, neuroplasticity, and occupational performance were measured before and after the *occupation-based* interventions. Although not generalizable, improvements were noted in neuroplasticity, motor function, and occupational performance.

### **Occupation-Focused**

*Occupation-focused* interventions place occupation at the center of the intervention or in other words, occupation remains the focus of the intervention (Fisher, 2013). However, the client may or may not be actively engaged in *doing* an occupation.

The end goal of the intervention is improved occupational performance. Although no research studies were published in AJOT over the past five years that utilized *occupation-focused* intervention(s) (Doucet, et al., 2014), a search of the literature yielded one intervention study with the well elderly population from the past five years (Zingmark, Fisher, Rocklov, & Nilsson, 2014). The researchers completed an exploratory randomized control trial that compared four groups. The overarching research question was to see which *occupation-focused* interventions provided the best results. The individual *occupation-focused* intervention and discussion group yielded the least amount of overall decline and self-care and leisure activities compared to the activity and control groups. It is important to note that none of the *occupation-centered* intervention studies (from the AJOT review of this literature review) were completed with short term rehabilitation clients in skilled nursing facilities. There is a demonstrated need to identify not only *what* and *how* occupational therapy interventions are provided with the older adult population that receives rehabilitation services in skilled nursing facilities, but also the effectiveness of these interventions.

### **Occupational Therapy Interventions in Skilled Nursing Facilities**

Occupational therapy has a vast scope of practice that is clearly laid out in the Occupational Therapy Practice Framework (AOTA, 2014). Interventions may “include occupations and activities, preparatory methods and tasks, education and training, advocacy, and group interventions to facilitate engagement in occupations to promote health and participation” (AOTA, 2014, p. S29). Although the scope is large, it is clear

that the end goal should always be to improve occupational performance, increase engagement and participation, and promote health and well-being. There are a number of books and reports which provide guidance for occupational therapists working with older adults in skilled nursing facilities. However, a review of the literature provided nominal support for current practice trends. More details are found in Chapter III of this dissertation.

The lack of research and description of the interventions actually provided in rehabilitation is referred to as the “black box” (Ballinger, Ashburn, Low, & Roderick 1999; Bode, Heinemann, Semik, & Mallinson, 2004; Conroy, Hatfield, & Nichols, 2005; DeJong, Horn, Conroy, Nichols, & Heaton, 2005; DeJong, Horn, Gassaway, Slaving, & Dijkers, 2004). A review of the literature revealed that occupational therapy interventions are frequently referred to as “standard,” “typical,” or “traditional” (Jewell, 2011) or are grouped into generic billing codes such as “therapeutic exercise” or “therapeutic activities” (Erhart, Delehanty, Morley, Pickens, & Greene, 2005). These generic descriptions leave the reader wondering what interventions are *actually* completed and how these are interventions are performed.

### **Scholarship Gap**

Multiple scholars and curricula for occupational therapy programs promoted *occupation-centered* practice as the gold standard of practice (Fisher, 2013; Fleming-Castaldy & Gillen, 2013; Gillen, 2014; Hooper, 2010; Wood, Nielson, Humphry, Coppola, Baranek, & Rourke, 2000). Occupational therapy educational programs use

terms such as *client-centered*, *meaningful*, *purposeful*, and *occupation-based* and students are encouraged to model their fieldwork and clinical practices after these ideological concepts. However, little focus is given on *how* to incorporate these concepts into practice when traditional approaches maintain a stronghold in clinical practice. This mismatch from classroom to clinic may leave occupational therapy students with minimal knowledge on how to integrate classroom knowledge to current practice trends (van den Heever, 2014). These students then become clinicians, and although a few clinicians master the ability to execute *occupation-centered* practice, many continue the cycle of mismatched theory and practice that leads to a blurring of professional identity (Rogers, 2007; Smallfield & Karges, 2009). The mismatch between theory and practice may lead to occupational therapy clients with unmet needs upon discharge (Brauer, Hay & Francisco, 2011; Duxbury, DePaul, Alderson, Moreland, & Wilkins, 2012). *Occupation-centered* practice may be difficult to achieve in all clinical settings, however, without a shift in attitude toward *occupation-centered* practice and clinical practice standards the profession may not achieve their *Centennial Vision* of becoming a “powerful, widely recognized, science-driven, and evidence-based profession...meeting society’s occupational needs” (AOTA, 2007, p. 614).

The following interlinked three research studies described in this dissertation is the initial string of a line of research intended to help bridge the scholarship gap. In order to initiate steps to change the traditional approaches and professional identities that exist

within skilled nursing facility practice with older adults, we must first understand current practice trends.

*Overarching research question:* How do occupational therapists utilize *occupation-centered* practice in skilled nursing facilities? *Study-specific research questions:* *I)* What interventions do occupational therapists use in skilled nursing facilities with short term rehabilitation clients and how effective are they? *II)* What is the validity, utility, and inter-rater reliability of the Occupation-Centered Intervention Assessment? *III)* What types of interventions are provided to short term rehabilitation clients in skilled nursing facilities with neurological, cardiovascular, and general deconditioning diagnoses?

CHAPTER III  
IDENTIFICATION AND EFFECTIVENESS OF OCCUPATIONAL THERAPY  
INTERVENTIONS USED WITH OLDER ADULTS IN SKILLED NURSING  
FACILITIES: A SYSTEMATIC REVIEW

A Paper to be Submitted for Publication in the  
*American Journal of Occupational Therapy*

Vanessa D. Jewell

This systematic review was the first part of a larger three-part study that examined *occupation-centered* practice in skilled nursing facilities. *Occupation-centered* practice is defined as the professional perspective in occupational therapy which emerges by “relinquishing [a] bottom-up lens that places person factors and body functions at the core of what [occupational therapists] do and adopt an occupational lens” and utilizes an occupational therapy model of practice to guide professional reasoning (Fisher, 2013, p. 5-6). The use of an occupational therapy practice model allows occupation to be placed at the center of the entire occupational therapy process, including the evaluation, intervention, re-evaluation, and discharge.

Two approaches in occupational therapy practice are commonly used when designing interventions. The first is a bottom-up approach which seeks to discover the underlying factors and conditions that affect an individual’s occupational performance. The bottom-up approach holds an assumption that if a person can improve their underlying factors or impairments (e.g. strength, range of motion, memory) then the

individual will be able to fully participate and engage in every day occupations (e.g. cooking, dressing, money management). This approach is frequently seen in rehabilitation settings (e.g. inpatient rehabilitation, skilled nursing, outpatient) (Gillen, 2013; Smallfield & Karges, 2009; Spencer, Hersch, Eschenfelder, Fournet, Murray-Gerzik, 1999). The second is a top-down approach and is congruent with *occupation-centered* practice. A top-down approach seeks to discover the individual's performance context through examination of the individual's life roles, occupational performance strengths and limitations, and takes careful consideration of what the individual considers important and meaningful in his or her life. It is only after complete analysis of the individual's performance context that consideration is given to the underlying factors or causes of impairment.

A debate exists among occupational therapists on whether a top-down or bottom-up approach is more effective when treating individuals in a rehabilitation setting (Fisher, 1998; Gillen, 2013; Weinstock-Zlotnick & Hinjosa, 2004; Wood, 1998) and if *occupation-centered* practice is relevant to contemporary practice (Fisher, 2013; Gillen, 2013). However, before the effectiveness of *occupation-centered* practice can be assessed, it is imperative to first understand what occupational therapists are currently using for interventions. There are a variety of adult rehabilitation settings and although some evidence exists for inpatient rehabilitation settings (Brauer, Hay, & Francisco, 2011; DeJong et al., 2009; Smallfield & Karges, 2009), very little is known about what



occupational therapy interventions are provided in skilled nursing facilities (SNFs) with short term rehabilitation clients.

Rehabilitation services are frequently offered to clients who are discharged from an acute hospital to a SNF, as one way of providing a continuum of quality care for those who need additional time to heal and therapies to improve the skills necessary for individuals to return home. Occupational therapists serve an important role in the SNF rehabilitation process as the overarching goal for those receiving occupational therapy services are to “achieve health, well-being, and participation in life through engagement in occupation” (American Occupational Therapy Association [AOTA], 2014, p. S2).

The AOTA provides documents that identify interventions that occupational therapists are able to provide within a SNF (AOTA, 2014; Washkowiak et al., n.d.). A few examples include self-care training, remediating or enhancing home management skills, and assessment and recommendation of potential home modifications to improve occupational performance once the client is discharged home. Official documents from AOTA, along with research to support best practice, indicate *occupation-centered* practice is not only preferred but is more effective (e.g., AOTA, 2011; AOTA, 2014; Hubbard, Parsons, Neilson, & Carey, 2009; Rao, 2011; Rensink, Schuurmans, Lindeman, & Hafsteinsdottir, 2009). Yet, traditional approaches that lack evidence to support effectiveness still remain the dominant practice trends, especially within neurological practice settings (Crist, Brown, Fairman, Whelan, & McClure, 2007; Fleming-Castaldy & Gillen, 2013; Natarajan et al., 2008). Still, there is a paucity of research to examine

specifically what interventions are *actually* done with the older adult population receiving occupational therapy services within a SNF.

Scholars have documented a gap between best practice and what actually occurs in practice (Fisher, 2013; Fleming-Castaldy & Gillen, 2013). The AOTA, along with the American Occupational Therapy Foundation (AOTF), produced a research agenda that maps research priorities for the occupational therapy profession in order to meet the desire to produce a “powerful, widely recognized, science-driven, and evidence-based profession ...meeting society’s occupational needs” (AOTA & AOTF, 2006). This research agenda further identified “that the salient elements (or active ingredients) of occupational therapy interventions be identified” (AOTA & AOTF, 2006, p. 1) indicating the need for research to identify interventions that are *actually* completed within occupational therapy practice.

A systematic review was conducted to identify these “active ingredients.” This systematic review provides a synthesis of the existing research literature to provide a foundation for what occupational therapy interventions are provided to skilled nursing facility rehabilitation clients and describe the effectiveness of those interventions. The specific purpose of this systematic review was to identify, examine, and synthesize existing literature in order to answer the following focused research questions:

1. What interventions are used by occupational therapists in skilled nursing facilities with short term rehabilitation clients?

2. What is the effectiveness of occupational therapy interventions used in skilled nursing facilities with short term rehabilitation clients?

### **Method**

The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) (Liberati et al., 2009) was used to guide and implement the systematic review. The review process was documented with the Research Instruction Guide Review (RIGOR), a comprehensive guide and documentation system developed by Foster, a medical sciences library professor at Texas A&M University (2013).

### **Process**

The first step of the systematic review involved defining and planning the systematic review including identification of the research team members and their roles, identification of software, development of a plan to share and store data, identification of the research questions, and identification of the inclusion and exclusion criteria. The research team included the primary researcher, research mentor, health science librarian, and an occupational therapy graduate student. The research questions were developed based on the need to identify the “active ingredients” in SNF occupational therapy practice and to understand the literature and current status of research in the area of *occupation-centered* practice in skilled facilities, in order to identify areas for future research for improvement in practice.

**Inclusion and exclusion criteria.** The following inclusion and exclusion criteria were applied to the results of the search.

***Inclusion criteria.*** The study included articles published in a peer reviewed journal between 1991 and February 24, 2014, and which described occupational therapy interventions provided in SNFs with older adults receiving short term rehabilitation. The research team decided to search for research studies as far back as 1991 as this was the time when occupational science and the study of occupation initially became more widely accepted. Occupational science, developed as a basic science, studies the “form, the function, and the meaning of human occupation” (Zemke & Clark, 1996, p. vii). The development of this interdisciplinary academic discipline allowed for freedom to study human occupation without concern of clinical application. Although occupational science does not exist for direct clinical application, the academic discipline was developed with hopes for clinical implication. The clinical implications include broadening the views and understanding of human occupation and helping to explore the various modes and meanings of occupation (Zemke & Clark, 1996). Through a more thorough understanding of occupation, occupational therapists will be better able to develop more individualized and client-centered treatment interventions.

***Exclusion criteria.*** Articles were excluded if not written in English and were Level VII evidence on Fineout-Overholt’s Hierarchy of Evidence for Intervention Studies (Fineout-Overholt, Melnyk, Stillwell, & Williamson, 2010). This hierarchical scale was chosen over other scales as it was more encompassing for intervention research, observational studies, and ranked qualitative studies, which provided valuable descriptions about occupational therapy interventions. See Table 1 for the Hierarchy of

Evidence for Intervention. A full explanation of both the inclusion and exclusion criteria is provided in Appendix A.

Table 1

*Hierarchy of Evidence for Intervention Studies*

<u>Type of Evidence</u>	<u>Level of Evidence</u>	<u>Description</u>
Systematic review or meta-analysis	I	A synthesis of evidence from all relevant randomized controlled trials.
Randomized controlled trials	II	An experiment in which subjects are randomized to a treatment group or control group.
Controlled trial without randomization	III	An experiment in which subjects are non-randomly assigned to a treatment group or control group.
Case-control or cohort study	IV	Case-control study: a comparison of subjects with a condition (case) with those who don't have the condition (control) to determine characteristics that might predict the condition. Cohort study: an observation of a group(s) (cohort[s]) to determine the development of an outcome(s) such as a disease.
Systematic review of qualitative or descriptive studies	V	A synthesis of evidence from qualitative or descriptive studies to answer a clinical question.
Qualitative or descriptive study	VI	Qualitative study: gathers data on human behavior to understand why and how decisions are made. Descriptive study: provides background information on the what, where, and when of a topic of interest.
Expert opinion or consensus	VII	Authoritative opinion of expert committee.

*Note.* Taken directly from Fineout-Overholt, Melnyk, Stillwell, & Williamson (2010, p.48). Used with permission.

## **Search Strategy**

PubMed and the Cumulative Index of Nursing and Allied Health Literature (CINAHL) were deemed most appropriate for searching as they cover the bulk of occupational therapy literature in medical practice areas. Search terms used in the database searches centered on two themes: skilled nursing facilities and occupational therapy interventions. For the purpose of this systematic review, skilled nursing facilities were defined as freestanding, hospital-based, or other comparable post-acute geriatric facility that provides skilled care, or daily care that can only be provided by a healthcare professional (nurse, doctor, and rehabilitation staff) after a qualifying three day acute hospital stay. The literature used many names for skilled nursing facilities and at times could be difficult to distinguish if the facility provided daily care from a healthcare professional after a three day hospital stay. A combination of the following Medical Subject Headings (MeSH) and keywords were used in order to try to encompass all possible SNF settings: SNF, skilled rehabilitation, short term rehabilitation, post-acute, transitional unit, and geriatric rehabilitation. Fifty-two MeSH and keywords were used in the PubMed database to encompass interventions provided by occupational therapists. The Occupational Therapy Practice Framework II was used as a guide to define interventions (AOTA, 2008). See Appendices B and C for the specific PubMed and CINAHL search strings, respectively.

## Results

The PubMed search yielded 1128 articles and the CINAHL search yielded 218 articles (Figure 1). The database search was supplemented by hand-searching and three articles were added for review. After internal and external duplicates were removed, 1321 articles remained. This flowchart provides an overview of the selection process.

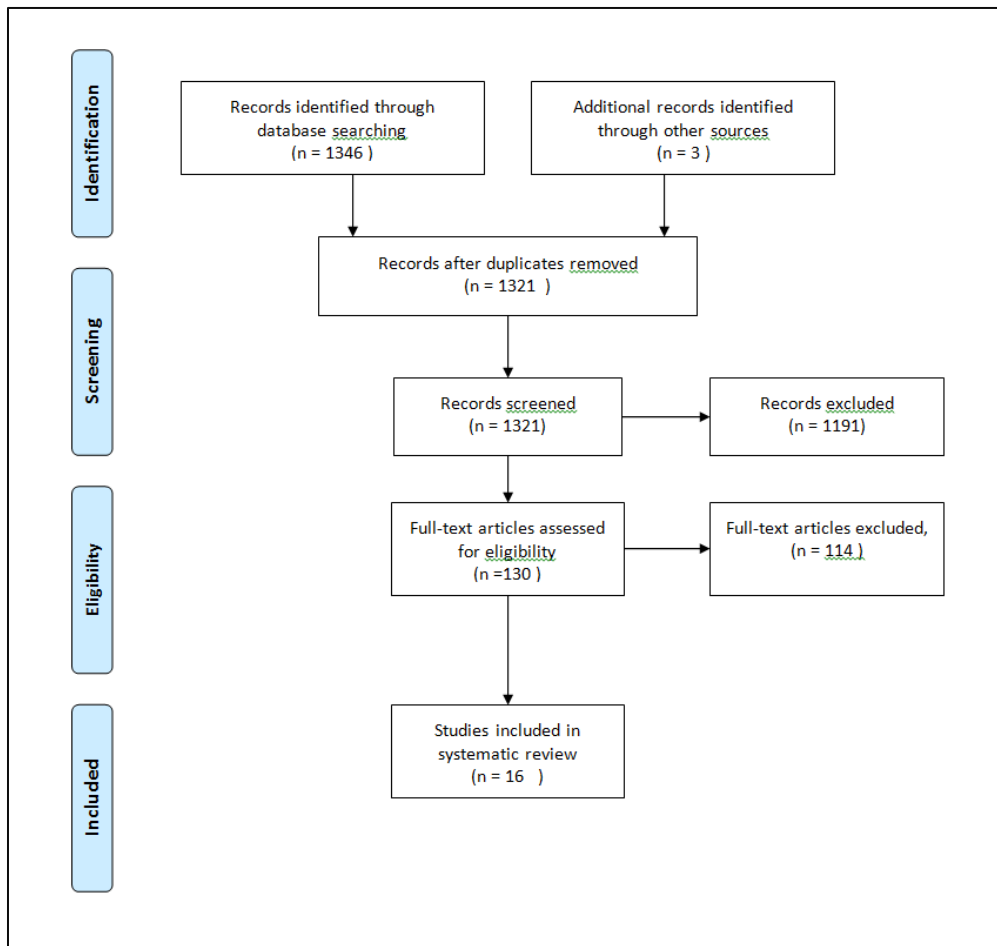


Figure 1. Flow chart for article selection process.

### **Primary Screening**

The primary screening of the 1321 articles from the databases and hand searches were screened by title and abstract using a list of yes/no/maybe questions developed by the research team. The questions were scaled hierarchically for quick review. The list of questions is provided in Appendix D. The primary researcher along with two members of the research team completed the primary screening. Once the research team completed the primary screening, the PI selected a final “yes” or “no” for full text review where there was disagreement. Of the 1321 articles, 130 were selected for full text review (Figure 1).

### **Secondary Screening**

Two members of the research team (primary researcher and research mentor) completed a full text review and coded “yes,” “no,” or “maybe” using the same questions listed in the primary screening to code the rationale for inclusion or exclusion. The members of the research team discussed all articles that did not have 100% agreement for a final decision of “yes” or “no.” The process resulted in a total of 16 articles for this systematic review (Figure 1).

### **Data Abstraction**

The identified interventions were categorized by the type of intervention provided by the occupational therapist(s). As a research study may include multiple interventions, there are a few of the studies listed in multiple categories. For the purpose of this systematic review, interventions are categorized as: *occupation-based* (OB), *occupation-*



*focused* (OF), both OB and OF, exercise/rote practice, and passive. If interventions were provided by an interdisciplinary team, when able the reviewer carefully extracted the intervention that was specifically applied by the occupational therapist. Only the outcome measures and results of occupational therapy specific interventions are reported as the purpose of this systematic review is to identify and report the effectiveness of occupational therapy specific interventions.

### **Categorization of Intervention Approaches**

The Occupation-Centered Intervention Assessment (OCIA), the Occupational Therapy Intervention Process Model (OTIPM), and Fisher's distinction among *occupation-centered*, *occupation-focused*, and *occupation-based* (Fisher, 2013) were used as a framework to identify intervention categories that describe the range of interventions provided in occupational therapy practice. The OTIPM provides a process model for occupational therapists to provide a top-down, *occupation-centered* approach to evaluation, re-evaluation, and intervention implementation (Fisher, 2009). The OCIA is an assessment used to rate interventions in relation to personal relevance, contextual relevance, and occupational relevance (Appendix E). The OCIA is further discussed in Chapter IV of this dissertation. The definitions of the categories are provided:

**Occupation-based.** The intervention involves active engagement of one or more occupations during the intervention in order to address an occupational therapy goal (Fisher, 2013). An example of an *occupation-based* intervention would be engaging a client in an upper body dressing task to improve spatial neglect. In this example, the

client is engaged in an occupation (dressing), but the focus is on improving an underlying impairment or body function (spatial neglect).

A total of four research studies described interventions that are categorized as *occupation-based* (Figure 2). The occupational therapists designed a variety of treatment sessions to include the following areas of occupation: instrumental activities of daily living, activities of daily living, leisure, social participation, and play. Specific examples of the occupations used as interventions included: pet care, cooking, discussion of current events, playing games, arts and crafts, and listening to music (Table 2). The use of the above occupations focused on restoration of an impairment (e.g. stress reduction, decrease depressive symptoms, standing tolerance, and the ability to name everyday items).

**Occupation-focused.** The *occupation-focused* intervention is designed to allow the client's occupation as the focus or center of the intervention; it is proximal and clearly identified as the main topic of the intervention (Fisher, 2013). An example of an *occupation-focused* intervention would be providing tips and strategies to improve lower body dressing independence. Since the client is not engaged in *doing* or engaged in lower body dressing, it is not *occupation-based*. However, the focus of the intervention is on occupation (lower body dressing) and therefore is categorized as *occupation-focused*.

Only one research study exclusively used an *occupation-focused* approach as an intervention (Figure 2). Brayford et al. (2002) examined occupational therapist

perceptions of occupational therapy practice within SNFs after the implementation of the Prospective Payment System. Although not the main purpose of the study, the researchers mentioned that occupational therapists provide adaptive equipment to improve occupational performance as one intervention provided to older adults in a SNF (Table 2).

**Occupation-based and occupation-focused.** There are times when an intervention can be labeled as both *occupation-based* and *occupation-focused* when the client is both engaged in the act of *doing* that is focused on occupation. For example, if a client completes total body dressing with the goal to improve independence with dressing, the intervention is both OB and OF.

Six of the research studies describe at least one intervention that is both based and focused on occupation (Figure 2). The occupational therapists utilized the following areas of occupation during the interventions: activities of daily living, instrumental activities of daily living, leisure, and social participation. The following are examples of occupations used as both the intervention and the end goal of the treatment: life skills training, cooking, dressing, quilting, going out to eat, self-care retraining, woodworking, pottery, transfers, and community participation (Table 2). Two of the research studies in this category utilized an occupational therapy model of practice (Occupational Adaptation) as the theoretical guide for intervention design. Additionally, three of the articles described the importance of the client's input on preference and selection of the interventions.

**Exercise/rote practice.** Although exercise and rote practice are one category, separate definitions are provided. Both exercise and rote practice does not involve occupation during implementation of the intervention. However, occupation may (or may not) be the end goal of the intervention, but in most cases the focus of the intervention is on remediation of an impairment or disability. Eight of the articles describe either exercise and/or rote practice as the intervention (Figure 2).

**Exercise.** A physical activity designed to improve strength and/or health and may involve a movement or series of movements (Merriam-Webster, 2014). An example of an exercise-based intervention would be engaging a client in free weight exercises designed to improve upper body strength. This systematic review revealed six studies that reported exercise or therapeutic exercise as the primary intervention approach (Figure 2). However, the study authors do not provide specific examples of the exercise interventions.

**Rote practice.** Repetition of an individual skill needed to complete an occupation. An example of rote practice would be practice using adaptive equipment (e.g. long handled reacher) to pick up items off the floor. Four of the articles in Exercise/Rote Practice category mention rote practice intervention(s). Examples of this intervention included: bedside education on fall prevention; instruction, education, and prevention to decrease shoulder pain; and controlled breathing and visualization exercises to decrease depressive symptoms.

**Passive.** This intervention requires no engagement or involvement of the client while the therapist provides the occupational therapy intervention. An example of a passive intervention is having the occupational therapist complete an electrical stimulation on a client's shoulder in order to improve strength and decrease pain.

In this systematic review, three of the articles described passive interventions (Figure 2). Passive interventions described in this systematic review include the occupational therapist making decisions on the use of hip protectors, monitoring vitals, providing education on cardiac precautions and risks, and management of elbow orthotics (Table 2). In all of the above examples, the occupational therapist provided the intervention to the client, requiring no active engagement on the part of the client.

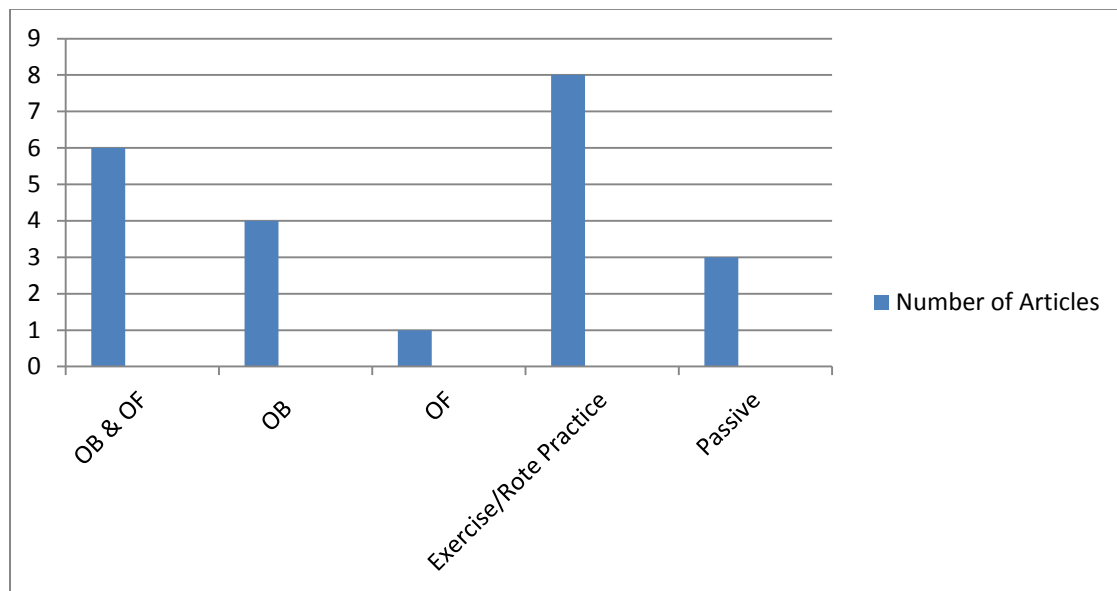


Figure 2. Number of articles per category.

Table 2.  
Occupational Therapy Interventions in SNFs

Author/Year	Study Design/Level of Evidence/ Participants	Interventions Identified	Outcome Measures	Results
<b>Occupation-Focused and Occupation-Based</b>				
Bakker, Duivenvoorden, van der Lee, & Schudel (2004)	One group, prospective observational Level IV Older adults admitted to a psychiatric SNF	Life skills training	NA*	NA*
Buddenberg & Schkade (1998)	Two group quasi-experimental Level III Female older adults with a hip fracture admitted to a SNF	<i>Intervention:</i> OT intervention based on OA Pt involved in intervention planning Examples: cooking, dressing, quilting, going out to eat, and functional mobility.  <i>Control</i> (See also Exercise/Rote Practice) ADL retraining	Relative mastery (subjective rating) Functional recovery (FIM) Institutionalization post discharge (frequency counts)	Relative mastery and functional recovery were statistically significant. Institutionalization =10%
La Cour, Josephsson, & Luborksy (2005)	Qualitative Level VI SNF clients with life threatening illnesses	Creative activities: woodwork, pottery, silk painting, soap making, knitting, and gardening.	NA	Created connections to life

Munin et al. (2010)	One group, prospective observational Level IV SNF clients with hip replacement due to hip fracture	Lower body dressing Transfers (tub, toilet, and chair)	Type of intervention (Frequency)	Third and fourth most common interventions provided.
Spencer, Hersch, Eschenfelder , Fournet, & Murray- Gerzik (1999)	Longitudinal qualitative Level VI Hospital-based SNF clients with deconditioning diagnoses	Protocol based: ADL retraining (See also Exercise/Rote Practice) OA based: individually tailored interventions focused on occupational performance, role fulfillment, and community participation.	Goal completion (frequency)	100% met goals
Vincent & Vincent (2008)	Retrospective, exploratory; case- control Level IV SNF clients with cardiovascular or pulmonary disease	Self-care activities	Type of intervention (Frequency)	Third most common intervention provided.
<b>Occupation-Based</b>				
Darrah (1996)	Descriptive Level VI SNFs in South Dakota and California	Animal facilitated therapy	Social interaction subjective report (frequency)	Some/significant improvement = 97-100%

Hoppes (1997)	Controlled trial without randomization Level III SNF clients	Standing while completing a playful or non-playful occupation. Examples: dominoes, Triominoes, tic-tac-toe, reading, having a conversation, or folding towels	Time (amount)	Standing time was significantly greater when engaged in playful occupations vs. non-playful.
Lewis (2002)	Descriptive Level VI SNF client	Engagement in occupations while focusing on naming ability (e.g. cooking, crafts, and grooming).	Naming accuracy (frequency)	Baseline = 25% After 10 sessions = 75%
Sood, Cisek, Zimmerman, Zaleski, & Fillmore (2003)	Randomized control trial Level II SNF clients	Client selected pleasurable activity to decrease depressive symptoms. Examples: current event discussion, listening to music, reminiscing, and art projects (See also Exercise/Rote Practice)	NA*	NA*
<b>Occupation-Focused</b>				
Brayford et al. (2002)	Descriptive Level VI OTs who work in SNFs	Adaptive equipment training	NA*	NA*
<b>Exercise/Rote Practice</b>				
Buddenberg & Schkade (1998)	Two group quasi-experimental Level III Female older adults	OT intervention based on BM Th controlled interventions. Examples: strengthening exercises, activity tolerance, and standing	Relative mastery (subjective rating) Functional	Relative mastery and functional was statistically significant.



	with a hip fracture admitted to a SNF	tolerance	recovery (FIM) Institutionalization post discharge (frequency counts)	Institutionalization = 30%
DeJong et al. (2009)	Observational cohort Level IV SNF clients with hip or knee replacement	Exercise Functional mobility	Types of interventions (frequency)	Two most common interventions
Haines, Bennell, Osborne, & Hill (2004)	Randomized control trial Level II Hospital-based SNF	Bedside education on fall prevention (See also Passive)	NA*	NA*
Munin et al. (2010)	Observational cohort Level IV SNF clients with hip replacement	Exercise Functional mobility	Type of interventions (frequency)	Two most common interventions
Snels, Beckerman, Lankhorts, & Bouter (2000)	Descriptive Level VI OTs who treat a SNF client with a hemiplegic shoulder	Physiotherapy Prevention/instruction/education	Types of interventions (frequency)	Two most common interventions

Sood, Cisek, Zimmerman, Zaleski, & Fillmore (2003)	Randomized control trial Level II SNF clients	Controlled breathing Visualization exercise	NA*	NA*
Spencer, Hersch, Eschenfelder , Fournet, & Murray- Gerzik (1999)	Longitudinal qualitative Level VI Older adults with deconditioning diagnoses at a hospital-based SNF	Protocol-based: exercise	Goal completion (frequency)	91% met goals
Vincent & Vincent (2008)	Retrospective, exploratory; case- control Level IV SNF clients with cardiovascular or pulmonary disease	Therapeutic exercise Functional mobility	Type of intervention (frequency)	Two most common interventions
<b>Passive</b>				
Dolansky et al. (2012)	Descriptive Level VI SNF clients with a cardiac condition	Monitored vitals Education on cardiac precautions and risks	NA*	NA*

Haines, Bennell, Osborne, & Hill (2004)	Randomized control trial Level II Hospital-based SNF	Hip protectors	NA*	NA*
Nuismer, Ekes, & Holm (1997)	Controlled trial without randomization Level III SNF clients with LLPS orthotic	LLPS elbow orthotic	ROM (goniometry)	Increase in ROM for 4/4 participants

*Note.* SNF= skilled nursing facility; OA = Occupational Adaptation; BM = Biomechanical; OT= occupational therapy; NA= Not Applicable; RQ = Research Question; Pt = patient; Th = therapist; LOS = length of stay; FIM= Functional Independence Measure; MDS = minimum data set; LLPS= low-load prolonged stretch.

NA indicated a qualitative study

NA\* indicated a research study that included an interdisciplinary study that did not report the specific outcome for the occupational therapy intervention(s).

## **Effectiveness of Occupational Therapy Interventions**

Six of the sixteen identified articles examined the effectiveness of the provided occupational therapy intervention(s). All six of the research studies had results indicative of improved occupational performance. The research studies ranged from a two group quasi-experimental study (Level III) to descriptive survey research (Level VI). The systematic review process did not yield any systematic reviews, meta-analyses, or randomized control trials.

Two of the research studies compared the effectiveness of occupational therapy interventions embedded within the Occupational Adaptation (OA) model of practice to the standard occupational therapy protocols, which focused more on exercise and basic self-care training. In the first study Buddenberg and Schkade (1998) utilized a quasi-experimental design to compare occupational therapy interventions from two different theoretical approaches with females 75 years and older status post hip fracture. The researchers found that both groups had a statistically significant increase in relative mastery (relative mastery is defined as a client's self-report on satisfaction, effectiveness, and efficiency of an activity) (Schkade & Schultz, 1992). Both groups improved functional independence and there was no difference in incidence of institutionalization. However, the OA group achieved greater generalization of activities than the biomechanical group. Generalizations may be observed when a client spontaneously masters or completes a novel functional task without any prompting from the therapist or caregiver. Overall, both the *occupation-centered* interventions and preparatory methods

were found to be effective, with the OA group achieving slightly greater functional outcomes. In the second study Spencer, Hersch, Eschenfelder, Fournet, and Murray-Gerzik (1999) tracked eight elderly persons with various deconditioning diagnoses and their rehabilitation outcomes while receiving skilled nursing care. The researchers provided *occupation-centered* interventions based on the OA model of practice and reported the percentage of met therapy goals for both the OA group and the protocol-driven group. Of the clients receiving the *occupation-centered* interventions based on the OA model of practice, 100% of the identified goals were met while 91% of goals were met for the clients who received the protocol-driven interventions.

Three research studies identified *occupation-based* interventions and their effectiveness. Darrah (1996) surveyed SNF administrators and found that 97-100% of SNF clients who received animal facilitated therapy had some or significant improvement in social interaction. Hoppes (1997) examined the amount of time SNF clients were able to stand while engaged in playful occupation(s) and non-playful occupation(s) finding that the SNF clients were able to stand for a significantly longer time while engaged in a playful occupation compared to a non-playful occupation. Finally, Lewis (2002) completed a descriptive case study to explore and describe collaboration between a speech language pathologist and an occupational therapist. Lewis discovered that the individual SNF client had an improvement from 25% to 75% naming accuracy of everyday items after ten sessions. Lastly, Nuismer, Ekes, and Holm (1997) examined a

passive intervention (the use of low-load prolonged stretch splints) with SNF clients and found that four out of the four clients had some improvement in range of motion.

This systematic review process revealed articles that supported use of occupational therapy interventions that involved the use of occupation, focused on occupational performance, used exercise and rote practice, and passive interventions. There was a wide range of interventions provided by occupational therapists to patients in SNFs who received short term occupational therapy rehabilitation services. Due to the nature of the study design, it is unclear if the occupational therapy interventions described in the research studies match current practice trends.

## **Discussion**

### **What Does the Research Say?**

Theoretical foundations, evidence for best practices, and occupational therapy curricula all support *occupation-centered* practice (Fleming-Castaldy & Gillen, 2013). The philosophical base of occupational therapy stated that “the focus and outcome of occupational therapy are individuals’ engagement in meaningful occupations that support their participation in life situations” (AOTA, 2011, p. S65). Theoretical foundations, such as the OTIPM and the Occupational Adaptation practice model, place occupation at the very core of the frameworks and strongly encourage an *occupation-centered* approach (Fisher, 2009; Schkade & Schultz, 1992).

Evidence exists and continues to grow for *occupation-centered* interventions implemented within inpatient rehabilitation facilities with clients with neurological

disorders and diseases (Hubbard, Parsons, Neilson, & Carey, 2009; Rao, 2011; Rensink, Schuurmans, Lindeman, & Hafsteinsdottir, 2009; Smallfield & Karges, 2009). However, this systematic review indicated that although the effectiveness studies demonstrated that both *occupation-centered* interventions and traditional protocol-based interventions were effective, the evidence was weak and limited.

### **What is Actually Done in Practice?**

Despite the evidence for best practices, theoretical foundations for the occupational therapy profession, and *occupation-centered* curricula, a gap continues to exist in clinical practice (Fleming-Castaldy & Gillen, 2013). This systematic review revealed that eleven out of the sixteen studies at least mentioned the use of occupation and eleven out of the sixteen articles mentioned not using occupation as the primary intervention. In five of the research studies, occupational therapists and researchers either compared or utilized both occupation and non-occupation intervention approaches. However, it is difficult to ascertain if the occupational therapy interventions reported in the research studies are a true indication of current clinical practice trends, as only four of the eleven research studies that mentioned *occupation-centered* interventions used a naturalistic methodology (e.g. observation or record review). The other seven research studies were controlled research studies.

Surveys of occupational therapy students found that a dismal 7% of students observed the use of occupation in clinical practice (van den Heever, 2014). Additionally, two observational cohort studies that examined frequency of specific occupational

therapy interventions reported exercise and functional mobility (neither involved occupation) as the two most common interventions provided by occupational therapists in SNFs (DeJong et al., 2009; Munin et al., 2010). Although the evidence is limited in SNF occupational therapy practice, it is becoming increasingly clear that traditional approaches of exercise, rote practice, and passive interventions remain embedded within the culture of occupational therapy clinical practice.

### **Limitations**

One difficulty encountered in the selection and review of the articles was that some research articles included interdisciplinary studies that did not separate out interventions provided by the different disciplines. For example, Buddingh, et al. (2013) examined both physical therapy and occupational therapy interventions in a Canadian long term care facility for clients diagnosed with both a hip fracture and dementia. As the interventions were examined together, and not by separate disciplines, it is difficult to discern which interventions were provided by the individual disciplines. In other articles the occupational therapy interventions were only mentioned as a piece of an interdisciplinary study. Although the researchers identified occupational therapy interventions, the frequency, duration, effectiveness, and efficiency were unidentifiable. There continues to be a lack of clarity on how specific occupational therapy interventions are provided and at what frequency (DeJong et al., 2009).

Another limitation of the study was use of multiple terminologies for skilled nursing facilities in the literature. It was challenging to discern if the occupational



therapy interventions were provided to short term rehabilitation clients or long term residents in skilled nursing facilities. The results of the identified research studies that examined the effectiveness of occupational therapy interventions in SNFs should be interpreted with caution. All of the identified studies were small case studies, descriptive studies, or small quasi-experimental studies and have limited generalizability.

### **Conclusions**

This systematic review provides an in-depth examination of *what* occupational therapy interventions are provided to short term rehabilitation clients who receive rehabilitation within hospital-based and/or free standing skilled nursing facilities and the effectiveness of these interventions. Occupational therapists are aware that it is not just *what* interventions are provided, but *how* the interventions are provided that can truly make a difference in functional outcomes. One means to evaluate the effectiveness of *how* therapy interventions are provided is Enhanced Medical Rehabilitation developed by Lenze et al, (2012). In this program, both physical and occupational therapists are trained to utilize behavioral skills that are designed to increase patient engagement in the therapy sessions and to increase the intensity in which the therapy interventions are performed. The Enhanced Medical Rehabilitation methodology emphasizes an interactive, patient-directed approach, with frequent feedback on client performance. Future clinical studies may examine *what* occupational therapy interventions are provided along with *how* these interventions are provided (such as the Enhanced Medical Rehabilitation or Taylor's therapeutic use of self [Taylor, 2008]). Not only is further research needed to identify

current practice trends and the effectiveness of *occupation-centered* interventions, but additional research needs include examination of potential barriers to implementation of best practices and how to advocate and shift outdated practice paradigms.

It is no surprise that an in-depth knowledge and application of “occupation” is what separates occupational therapists from other professions. Despite this knowledge, a gap continues to exist between education and practice. A wake up call was issued to occupational therapists to implement *occupation-centered* practice (OCP) and shift away from the mechanistic paradigm that continues to hold strong roots in many areas of practice (Fisher, 1998; Gillen, 2013). This paradigm shift toward OCP, initiated in the early 1960’s (Reilly, 1962), has yet to become common in clinical practice as 93% of fieldwork students report not observing the use of occupation in clinical practice (van den Heever, 2014). If research, theory, and education all support OCP, then what barriers continue to exist that prevent OCP? Lack of creativity, passivity, pressure from the medical model, time and role expectations, inability to describe the value of occupational therapy, budget concerns, and lack of resources are all reasons cited for road blocks preventing OCP (Che Daud, 2014).

The next chapter in this dissertation will introduce a guide to OCP, titled the Occupation-Centered Intervention Assessment, as one potential solution to the gap in clinical practice and provide a resource to overcome potential clinical barriers for *occupation-centered* practice. In this study, the development of the OCIA as means to evaluation *occupation-centered* practice is evaluated. Chapter V will provide an

observational account of occupational therapy interventions provided to short term rehabilitation clients in skilled nursing facilities through an occupational lens. Once current practice trends are identified, it is then that future research can identify potential barriers and offer practical solutions to increase *occupation-centered* practice in clinical settings.

CHAPTER IV

THE OCCUPATION-CENTERED INTERVENTION ASSESSMENT: A TOOL  
TO CAPTURE OCCUPATION-CENTERED PRACTICE

**Introduction**

The occupational therapy profession holds the assumption that occupation is in the core of the profession and the belief that engagement in occupation influences health and wellbeing (American Occupational Therapy Association [AOTA], 2011). The founders of the occupational therapy profession in the early 20<sup>th</sup> century believed that engagement in occupation is healing and can assist with the connection between the mind and body (Gordon, 2009; Meyer, 1922). After a shift toward a mechanistic, component-driven approach to practice in the 1940s, there was a call for the profession to return to occupation in the latter half of the century (Kielhofner, 2009). Due to dissatisfaction with a mechanistic approach, scholars pushed toward a paradigm that centered in occupation over the last fifty years (Fisher, 2013; Gillen, 2013; Molineux, 2004; Wood, 1998), leading to a renewed interest in an *occupation-centered* approach in clinical practice, theory development, and research.

**Occupation-Centered Practice**

*Occupation-based*, *occupation-centered*, and *occupation-focused* were all terms used interchangeably. However, with the development of occupational science, increased knowledge and understanding of the complexity of human occupation, and increased

evidence to support the effectiveness of *occupation-centered* practice created an even greater shift away from the mechanistic approach. Fisher further clarified differences among *occupation-centered*, *occupation-based*, and *occupation-focused* (2013).

*Occupation-centered* practice is a professional perspective which emerges through “relinquishing [a] bottom-up lens that places person factors and body functions at the core of what we do and adopt an occupational lens” and utilize an occupational therapy model of practice to guide our reasoning (Fisher, 2013, p.5-6). *Occupation-based* involves active engagement of one or more occupations during the intervention in order to address an occupational therapy goal (Fisher, 2013). *Occupation-focused* is when the intervention is designed to allow the client’s occupation as the focus or center of the intervention; it is proximal (Fisher, 2013). *Occupation-centered* is considered a perspective or guides to the therapists’ reasoning process while *occupation-based* and *occupation-focused* are how and what interventions are designed and performed. The *occupation-centered* approach to practice is rooted in the original paradigm of practice, but is enhanced by the understanding of human occupation. Core beliefs of *occupation-centered* practice include viewing humans as occupational beings and that health and wellness are largely influenced by engagement in occupation (Molineux, 2004). More depth and discussion of *occupation-centered*, *occupation-based*, and *occupation-focused* interventions can be found in Chapter III of this dissertation.

## **Occupation-Centered Intervention Assessment Development**

Limited assessments exist that have the ability to capture occupational therapy interventions from an occupational perspective. The Occupational Therapy Practice Framework, 2<sup>nd</sup> edition (henceforth referred to as the “Framework”) provides examples of how to categorize interventions as preparatory methods, purposeful activities, and *occupation-based* interventions. However, it is explicitly stated that the Framework is neither an assessment nor taxonomy (AOTA, 2008, p. 625). The Occupational Therapy Taxonomy of Rehabilitation Interventions is a taxonomy, or classification system, and was developed to “name and frame the observable therapist actions that occur within treatment sessions as well as capture aspects of the patient’s response” (Schultz, Whisner, Geddie, & Shierk, 2012, p. 5). The purpose of this taxonomy is to “track components of intervention for a particular patient and identifying therapist’s intervention patterns” (p.5) and not necessarily provide an in-depth dissection of how occupation is used during an intervention.

Jewell (2012) developed the Occupation-Centered Intervention Assessment (OCIA) to address the absence of an assessment tool to fully capture occupational therapy practice from an occupational perspective. The OCIA attempts to capture the depth and complexity of the use of occupation within intervention design. The OCIA was developed through careful examination of historical and current occupational therapy and occupational science literature on the concepts of occupation and adaptation from the

late 1800's through 2013. Themes emerged from the literature that pertained to development of interventions that were authentic to the core of the occupational therapy profession. The three themes included: personal, contextual, and occupational relevance which then formed the three continua for rating *occupation-centered* occupational therapy interventions. Figure 3 is a schematic of the original version of the OCIA. The full description guide and revised version of the OCIA will be published as a separate manual. The three themes are aligned with the Occupational Therapy Intervention Process Model (OTIPM, Fisher, 2009), which was used as a theoretical guide for the OCIA. The OTIPM is a professional reasoning model that assists clinicians with designing the occupational therapy process that reflects a true top-down, *occupation-centered*, and client-centered perspective (Fisher, 2009).

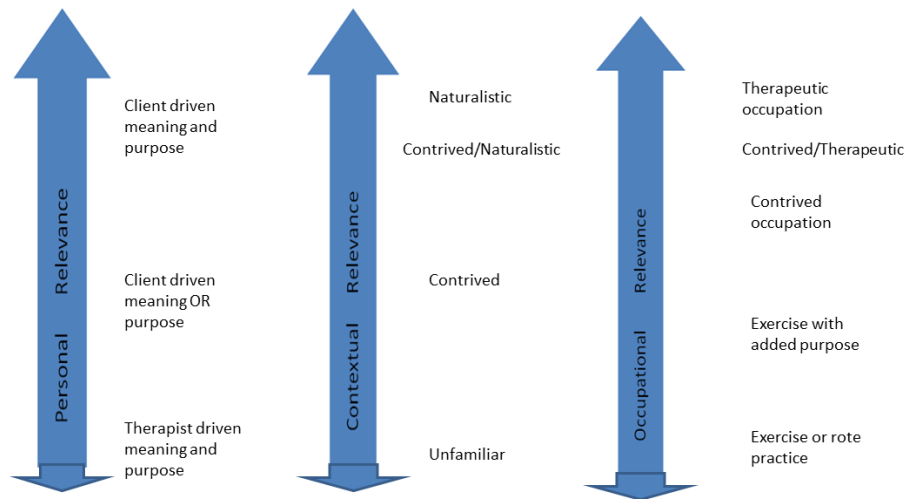


Figure 3. OCIA: Version 1.

The OCIA was originally developed as a tool for students and clinicians to reflect on, and assist in the development of *occupation-centered* interventions. Upon review, it appeared the assessment could be used to critically analyze current occupational therapy practice. The purpose of this study was to evaluate the validity, utility, and reliability of the OCIA for interventions used with short term rehabilitation clients in skilled nursing facilities.

The identified research questions for this study are:

1. Is the OCIA content valid for measuring occupation-centered practice of occupational therapists with their skilled nursing facility clients?  
(Phase I)



2. What is the utility of the OCIA in measuring occupation-centered practice of occupational therapists with their skilled nursing facility clients?

(Phase II & III)

3. What is the inter-rater reliability of occupational therapy students using the OCIA to observe occupational therapists treating older adults? (Phase

IV)

## **Methodology**

### **Phase I: Content Validity Development**

**Research design.** Methodological research design (Portney & Watkins, 2009) provided the backbone to all four phases of this study. Phase I incorporated a broad qualitative approach that allowed for concepts and elements to emerge from an online questionnaire. This process allowed the researcher to progress from basic description to organizing concepts into specific elements (Patton, 2002). Additionally, this design allowed for a systematic and creative approach to discovering knowledge (Patton, 2002). This phase of the study received Texas Woman's University and the University of Wisconsin-LaCrosse Institutional Review Board approval. All participants provided informed consent.

**Participants.** A review of recently published journal articles helped identify potential members for an expert panel of occupational therapists with experience conducting research and clinical practice with older adults. Inclusion criteria for the

expert panel required experience as an occupational therapist treating older adults, research experience, and at least one published peer reviewed article. The review resulted in twelve potential participants of which six responded affirmatively to the invitation. Two of the six declined before initiating the review, one due to time constraints and other ongoing projects and the other due to not actually meeting the identified inclusion criteria. Four participants agreed to be a member of the expert panel and to complete the online questionnaire. Three participants completed the questionnaire by the identified due date. Of the three participants, two work in academia and one in a hospital setting as an occupational therapist. The participants have clinical experience working with adults and older adults with physical disabilities in skilled nursing facilities and hospital settings, and have research experience with *occupation-centered* practice in a variety of settings. Following an offer of assistance, an additional reviewer was specifically invited to provide thorough feedback on the content, wording, and formatting of the description guide and to examine the amount of fit to the OTIPM due to her expertise with the OTIPM model. Thus the final panel included four experts in research and clinical practice with older adults.

**Procedures.** As noted above, an invitation and informed consent were emailed to twelve occupational therapists/researchers to request participation in the study. One follow up email was sent out one week after the initial request. Once the primary researcher received the consent form an email with a cover letter and the link to the

questionnaire (Appendix F), description guide, and two figures were sent to the participants who agreed to participate in the study.

The participants received the OCIA tool, description guide, two figures (one of the OCIA and one describing how the OCIA fits with the Framework), and a questionnaire about the assessment tool. Three open-ended questions were included on the questionnaire to gather the expert panel's opinions on the OCIA for content validity. The three questions prompted participants to reflect and comment on the completeness of the specifics included within the three continua and on the assessment as a whole. Additionally, participants were asked to provide feedback on how and if the assessment captured all aspects of *occupation-centered* practice. Participants were also given the opportunity to provide additional comments that may not have fit into the first three questions. The OTIPM expert was asked to provide feedback on the aforementioned content and also on the format, wording, and usability of the description guide and schematic.

### **Phase II and III: Utility and Content Validity**

**Research design.** A methodological research approach of gathering feedback on the utility and content validity of the tool was also used for both Phase II and Phase III of the study. Survey and focus group methodology were used for both phases. Written comments allowed for thoughtful and reflective responses, while focus groups fostered depth of thinking through facilitated challenging questions and prompts (Patton, 2002).

Institutional Review Board approval was received from both Texas Woman's University and the University of Wisconsin-LaCrosse for both phases, additional approval was obtained by a conference committee for Phase II data collection, and all participants signed an informed consent.

**Participants.** Participants were recruited in two separate phases; the first group was recruited during the 2013 Midwest Deans' Occupational Therapy Research Conference (MDOTRC) and the second phase occupational doctoral research meeting at Texas Woman's University (TWU) in March 2013.

**Phase II.** Participants were recruited during a workshop presentation at the Midwest Deans' Occupational Therapy Research Conference (MDOTRC) hosted at Saginaw Valley State University in March 2013. Convenience sampling was used as all participants who elected to attend the OCIA workshop were asked to participate in the study. It is important to note that in choosing to attend the workshop all participants expressed an interest in designing and critiquing *occupation-centered* interventions for occupational therapy practice. Inclusion criteria included: 18 years of age or older; occupational therapist or graduate occupational therapy student, and attendance at the workshop titled "Guide to Occupation-Based Practice" at the 2013 MDOTRC. (Note that the title of the assessment tool changed as a result of this study phase. The name change is discussed in the Results section of this chapter.). All attendees of the workshop were asked to participate in the study. All 23 attendees opted to participate in the discussion

group and/or complete the written questionnaire. Attendees were informed that they were allowed to stay for the workshop if they chose not to participate in the research study. Twenty-one of the participants were entry-level graduate students in a Midwestern occupational therapy program and two of the participants were occupational therapists. In order to control bias the researcher had no prior interaction with any of the attendees.

***Phase III.*** Participants were recruited during an occupational doctoral research meeting at Texas Woman's University (TWU) in March 2013. Inclusion criteria included: 18 years of age or older; occupational therapist, a Texas Woman's University occupational therapy doctoral student, and attendance at the Doctoral Research Accountability Group meeting at TWU. Convenience sampling was used as all attendees of the workshop titled, "Guide to Occupation-Based Practice" from the TWU doctoral research accountability group were asked to participate in the study. It is important to note that all participants were immersed in occupational therapy research and had knowledge and experience in research design. Of the six attendees, five attendees opted to participate in both the focus group and written questionnaire. One attendee declined to participate in the research study. Attendees were allowed to stay for the workshop if they chose not to participate in the research study. All five of the participants were occupational therapy PhD students at Texas Woman's University. Three attendees worked in a clinic setting, one in academia, and one was a full-time doctoral student.

***Procedures.*** The procedure for both Phase II and Phase III were identical. Participants received a written questionnaire to encourage thought and reflection on the questions during the presentation (Appendix F). The participants watched and listened to a 30 minute presentation about the OCIA, how to score the OCIA, and a three minute video clip of an occupational therapy session. The participants then individually scored the sample occupational therapy session using the OCIA. After the participants completed the scoring, the primary researcher led a focus group guided by three questions on the questionnaire received at the start of the workshop (Appendix F). The participants were allowed extra time at the end for additional comments. A research assistant took notes during the workshops to allow the primary researcher to focus on the presentation and leading the group discussion.

#### **Phase IV: Inter-rater Reliability**

**Research design.** Phase IV of the study also involved methodological research which allowed statistical analysis to determine the consistency of scoring among multiple raters (Portney & Watkins, 2009). Phase IV addressed inter-rater reliability of the OCIA. Institutional Review Board approval was received from both Texas Woman's University and the University of Wisconsin-LaCrosse and all participants provided assent.

**Participants.** Twenty-four second year graduate occupational therapy students were invited to participate in the inter-rater reliability study. The participants were a convenience sample of students from a Midwestern university. All 24 occupational

therapy students agreed to participate in the study though only 19 scoring forms were completed accurately enough for statistical analysis.

**Procedures.** An academic colleague of the primary researcher facilitated the training and scoring sessions in order to mitigate coercion to participate in the research study, as the participants were enrolled in an academic course and known to the primary researcher. The sessions were incorporated in to a university research methods class as a learning activity. Students were allowed to opt out of the research (not turning in forms), but still complete the class learning activity. The facilitator was trained on how to provide instructions and guide the participants through scoring the videos. Each participant was instructed to read the OCIA description guide and watch and listen to an online Power Point presentation about how to score and use the OCIA prior to scoring the ten videos. The participants had two days to complete the above tasks. The participants then gathered as a group in a classroom setting scoring ten video clips of occupational therapy interventions. All of video clips portrayed an occupational therapist who provided one intervention to an older adult either in a home or institutional setting (e.g. hospital or skilled nursing facility). The primary researcher and facilitator developed a script for the facilitator to use as a guideline when providing instructions and procedures to the research participants. See Appendix G for the typed script. All participants had access to an OCIA description guide, the OCIA, and score forms while scoring the videos. Additionally, the facilitator read a clinical scenario to the participants before showing the video clip to provide additional background about the clients in the videos (Appendix H).

Each video clip lasted between two to six minutes in length and included one occupational therapy intervention. The participants were allowed to watch the videos twice and then scored the OCIA (Version II) and transferred scores to one score form that was specifically developed for this study (Appendix I).

## Data Analysis

### Phase I-III: Utility and Content Validity

Phase I, II, and III results were compiled for analysis. Responses from the first three phases were organized into a table for thematic analysis. The thematic analysis contained space for clustered reviewer responses, identification of elements, the primary researcher's initial responses, and actions taken to improve content validity and utility of the OCIA. A sample of the thematic analysis is provided in Figure 4.

Cluster/Theme	Reviewer Response	Thoughts	Response/Action
Objective Data/Numbers	<ul style="list-style-type: none"> <li>Have numbers to give range – give levels</li> <li>Make more objective</li> </ul>	Initially resistant to adding numbers as it may not reflect a true continua/dynamic intervention. However, numbers provide a clear and easy way for raters to increase reliability with measurement and open the assessment tool up to statistical analysis.	Add a 1-5 numbers to each continua, with 1 being the lowest and 5 being the highest

*Figure 4. Thematic Analysis*

Similar comments were grouped together in the table in order to identify areas of concern, confirmation of concepts, and consistency of comments. Once all comments were grouped, the comments were analyzed for similarities and elements were developed.



Each comment was then reviewed for its impact on the OCIA scale. Initial thoughts and reactions to individual and grouped comments were then recorded under the *Thoughts* column. Finally, after reflection and discussion with the doctoral mentor the final responses and actions taken to reviewer comments were completed. Feedback yielded valuable information on the content validity and utility of the OCIA and prompted reflection for changes to the assessment.

#### **Phase IV: Inter-rater Reliability**

The data were analyzed using Statistical Package for the Social Sciences (Version 21). Inter-rater reliability was calculated for the OCIA as a whole and for the separate three continua (personal relevance, contextual relevance, and occupational relevance). Krippendorff's alpha was calculated as it is a flexible measure of reliability, can be used for ordinal data, and is suitable for content analysis (Krippendorff, 2007).

### **Results**

#### **Elements**

The identified common elements for reflection were two-fold based on content validity and utility. There were five elements around content validity: 1) *general support for the assessment*, 2) *support and changes for the contextual relevance continuum*, 3) *support and changes for the occupational relevance continuum*, 4) *support and changes for the contextual relevance continuum*, and 5) *Occupational Therapy Intervention*

*Process Model*. There were three elements around utility: 1) *objective data and numbers*, 2) *clarity of continua*, and 3) *level descriptions*. Overall, the need for increased clarity among continua and levels was identified. Additionally, suggestions were made to further develop the description guide, provide extra examples, and improve clarity with terminology. All of the above changes in addition to the name of the guide changing from the *Guide to Occupation-Based Practice* to the *Occupation-Centered Intervention Assessment (OCIA)* occurred after Phase III and were changed for Phase IV of the study.

### **Content Validity**

**1) *General support for the assessment.*** Participants reported that the OCIA included the full range of elements to consider when designing occupational therapy interventions. Participant feedback yielded confirmation of a complete assessment that captured the important elements of intervention design, specifically related to client-centered interventions. Due to the participants' feedback, all three continua remained (personal, contextual, and occupational) without any changes. However, as noted in the upcoming elements, changes were made to the individual continua to improve clarity and ease of scoring.

### **2) *Support and changes for the contextual relevance continuum.***

Recommendations for change on the contextual continua included further examination of the definition of contextual relevance. Suggestions included definition of how time and space are considered in an *occupation-centered* intervention session. Other suggestions

included how virtual, social, and economic contexts are assessed. One participant suggested changing the name of the continuum to “external contextual relevance” due to the heavy influence of the physical environment. Overall, the majority of participants cited favor of the current levels on the contextual relevance continuum stating that “each level describes the type of setting” of an intervention session and that “four levels are sufficient.” There was an overwhelming amount of favor toward the current levels.

After reflection about the suggestions for change and the comments about maintaining the first version of the contextual relevance levels, it was decided that the levels would remain the same in order to capture the various types of contexts for interventions. Improved descriptions of how time and space, as well as virtual, social, and economic relevance were updated in the description guide in order to improve the clarity of the contextual relevance continua.

***3) Support and changes for the personal relevance continuum.*** The first version of the OCIA had three levels along the personal relevance continuum. Levels were graded according to the meaning and purpose that the occupation had to the person, using Nelson’s definitions of meaning and purpose (1996). Participants stated that the levels were “sufficient” and “comprehensive.” However, some concern was stated that distinguishing between meaning and purpose can be very difficult and may be irrelevant. Suggestions were made to change the levels to therapist driven, therapist driven and client adopted, and client driven meaning and/or purpose. The new levels allowed

meaning and purpose to be included together and did not require the rater to distinguish between the two similar terms. After reflection, the new levels were adopted for the OCIA: Version II.

***4) Support and change for the occupational relevance continuum.***

Recommendations for change along the occupational relevance continuum were more varied than the other continua. One source of confusion for many of the participants was whether to consider the tools and materials as part of the occupation or part of the contextual relevance. After much reflection and discussion, it was decided to score the tools and materials used during an intervention session along the contextual relevance as these items are part of the physical context. The occupational relevance should be scored strictly if the intervention completed falls in the “areas of occupation” in the Occupational Therapy Practice Framework (AOTA, 2008).

Examination of additional feedback about how to score the use of modalities prompted a change in the levels. The first version, from lowest to highest levels, included: exercise/rote practice, exercise with added purpose, contrived occupation, contrived/therapeutic, and therapeutic occupation (see Figure 3). However, certain passive interventions were not included along the continuum, which created a dilemma for scoring. For this reason, “passive” is now included as the lowest level of occupational relevance in order to score interventions such as modalities and passive range of motion. “Passive” is scored as a “1” on the occupational relevance continuum.

“Exercise and/or Rote Practice” was moved to level “2.” Participants reported that this level was clear and did not need to change. Level “3” is titled “contrived” and represents occupations that are manipulated in some way. Examples include role play or putting away dishes on a contrived shelf. The final/top level is rated as a “5” and is titled occupation and includes all occupations that are listed under the “areas of occupation” in the Framework (AOTA, 2008). Therapeutic/Contrived was omitted from the occupational relevance continuum as the level did not add value to the assessment tool and the raters found this level confusing to rate.

**5) Occupational Therapy Intervention Process Model.** A few comments emerged from the expert panel regarding the closeness of fit to the OTIPM. Comments indicated that the OCIA was closely aligned to the OTIPM which provided confirmation of appropriate use of a theoretical model to guide the development of the OCIA. The OTIPM expert provided valuable input on the OCIA that led to many of the changes in the OCIA.

## **Utility**

**1) Objective data and numbers.** Feedback from the questionnaire and focus groups included participant recommendations to increase the objectivity of the OCIA. Suggestions included labeling the levels with numbers to allow for a single level selection during scoring opposed to scoring anywhere along the continua. The primary researcher was initially resistant to adding numbers due to fear that the assessment may

lose its dynamic and fluid qualities. However, numbers can provide a clear and easy way for raters to increase reliability with measurement and open the assessment tool up to statistical analysis. After reflection and discussion with the research mentor, it was decided to number the levels on each continua from one through five, with one indicating the lowest level of relevance and five indicating the highest level of relevance to the client.

**2) *Level Descriptions.*** Participants provided comments to improve the clarity of the levels on each continuum through inclusion of descriptions or examples of interventions at each level. Confusion on the part of the participants stemmed from lack of clarity on how and when to score between levels and a strong desire for less than five levels to improve ease with scoring. The primary researcher initially agreed with the need for increased clarity of the levels and providing examples in the description guide for each level in order to improve the scoring accuracy with the OCIA. Much thought and reflection was given on whether or not to score between levels, as the OCIA's continua were originally meant to be a continuous and not be limited to specific levels, and on the quantity of levels. The primary researcher and research mentor discussed the benefits and limitations to maintaining a fluid, continuous continua or making the levels objective and concrete. After reflection and discussion, it was decided that in order to improve scoring reliability of the assessment, the scoring would be limited to four or fewer levels and each level would be numbered.

**3) *Clarity of Continua.*** Recommendations for changes to the assessment as a whole primarily focused on how to differentiate the contextual and occupational relevance continua. One participant suggested collapsing the two continua, while others suggested that improved descriptions and clarity would allow improved scoring and the utility of the assessment tool. After reflection it was decided that the three continua would remain the same (personal relevance, contextual relevance, and occupational relevance) and additional examples would be added to the description guide. However, if Phase IV results of the inter-rater reliability study had found low inter-rater reliability then further development of the continua would have occur after Phase IV of the study was completed.

### **Inter-Rater Reliability**

In order to test the inter-rater reliability across the 19 raters for the assessment as a whole and across the three relevance domains (personal, contextual, occupational) covered in the ten video tapes reviewed, Krippendorff's alphas were calculated. Overall, Krippendorff's alpha indicated a substantial level of agreement (.756) for all ratings. Regarding the subdomains measure, alphas indicated moderate to substantial agreement ( $\alpha_{\text{person}} = .729$ ;  $\alpha_{\text{context}} = .683$ ;  $\alpha_{\text{occupation}} = .769$ ). Taken as a whole, what this suggests is that raters had an adequate level of agreement.

## Discussion

### OCIA: Research Tool

To measure the construct of *occupation-centered* practice, the OCIA was developed. Content validity, utility, and inter-rater reliability were measured to assess if this assessment tool fully measured *occupation-centered* practice, was easy to learn and use, and if ratings from two or more raters are consistent. Overall, it was determined that with increased clarity of the description guide and changes to the personal relevance continuum, the OCIA was a reliable, valid, and user-friendly assessment tool for research purposes.

**Content validity.** Overall, five elements emerged from the questionnaires and focus groups for the content validity of the OCIA. The elements included: *Occupational Therapy Intervention Process Model*, *support and changes for the occupational relevance continuum*, *support and changes for the contextual relevance continuum*, *support and changes for the personal relevance continuum*, and *general support the assessment*. Feedback from the participants yielded overwhelmingly positive remarks about the completeness of the inclusion of three continua (personal relevance, occupational relevance, and contextual relevance). However, due to feedback on the individual continua the personal relevance had the most significant changes with all three levels changed. The second biggest changes were on the occupational relevance



continuum with the *therapeutic/contrived* and *exercise with added purpose* levels deleted and the *passive* level was added moving the number of levels from five to four.

**Utility.** Participant comments indicated an overall agreement that full inclusion of elements to consider during development of and reflection on *occupation-centered* interventions existed, as noted in the content validity section. However, participants expressed a desire for more examples and definitions of the different levels on each continuum in order to improve ease of use and scoring accuracy. Participant comments such as “add key items/cues to move from 1 level to another” and “more explicit definition[s] to differentiate between occupation and context continua” provided clear feedback that more examples and clarity of definitions were required to improve the usability and scoring accuracy of the OCIA. Formatting suggestions were made to improve the utility of the tool. Due to the perceived ambiguity of scoring along a continuum, numbers were added to the levels. Finally, revisions were made to the description guide to improve clarity of the continua and levels.

**Inter-Rater reliability.** The Krippendorff’s alpha met our criteria for a substantial level of agreement between raters for the overall assessment ratings, personal relevance, and occupational relevance. However, the contextual relevance indicated a moderate level of agreement suggesting further clarification is needed for the levels. Many factors may account for the contextual relevance continuum result. First, the participants in the inter-rater reliability were graduate students in a classroom setting and

the assessment is meant to be scored individually in a clinical setting. Several students asked questions to the facilitator about the environment that indicated a contradictory rating than what was intended (for example, the intervention was completed in the client's home and a participant stated that the environment resembled an outpatient clinical setting). These comments may have caused confusion during the scoring period. Finally, watching a recorded occupational therapy session does not provide the full essence of watching a live occupational therapy intervention and nonverbal and environmental cues may be missed when watching a recording.

### **Limitations**

The online questionnaire provided to the expert panel and the discussion group at the Midwest Dean's Occupational Therapy Research Conference yielded limited feedback. Although the primary researcher completed two additional phases and specifically invited an additional member to the expert panel to improve and increase the amount of feedback on the OCIA, it is recommended to complete phone or in-person interviews, following actual use of the tool, in future studies on validity and utility of the assessment tool. The inter-rater reliability study had a small number of participants, limiting the confidence of the results. Additionally, the inter-rater reliability study was completed with use of videos instead of live therapy sessions, and with graduate students enrolled in an occupational therapy program. Although the occupational therapy students received training on the OCIA and were allowed to utilize the description guide

throughout the scoring period, it could be argued that occupational therapy students do not have the clinical reasoning skills to rate an intervention session as an experienced clinician.

Due to the anonymity of the questionnaire and not collecting any identifying information from focus group participants, member checking did not occur. One attempt to overcome this limitation was the completion of three phases of the study. Each phase consisted of a different group of occupational therapists or occupational therapy students that ranged from novice to expert with different specialty expertise (research design, practice areas, and clinical experience). To address reflexivity in the analysis process the primary researcher acknowledged that she was an active participant throughout the entire research process. The initial reactions and thoughts from the primary researcher were recorded in the thematic analysis in an attempt to augment the research findings, and debriefed with research mentor. Additionally, researcher triangulation occurred with the first three phases of the study as the primary researcher discussed reviewer comments with the research mentor before changes were implemented to the OCIA. Finally, methodological triangulation occurred in the first three phases of the study as participants completed both a questionnaire and participated in a focus group in phases II and III.

### **Future Research**

In the beginning stages of development, the OCIA demonstrated satisfactory levels of agreement for inter-rater reliability and adequate content validity and utility.

Future studies may include an expert panel review completed with phone or in-person interviews in order to allow for probing questions to generate more depth and clarity to the participant feedback. A second direction for future research includes studies to assess how and if the OCIA can assist occupational therapy students in development of and reflection on intervention designs that are grounded in occupation. Finally, future research studies should include live observations of occupational therapy interventions to provide a naturalistic observation of what actually occurs in occupational therapy practice.

### **Conclusion**

The aim of this study was to assess the content validity, utility, and inter-rater reliability of the Occupation Centered Intervention Assessment (OCIA). The OCIA is an assessment tool designed to capture and describe how occupation is used in occupational therapy interventions. The tool was originally designed to assist occupational therapy students in design and reflection of interventions grounded in occupation, with the ultimate goal to encourage occupational therapy students to think deeply about what makes an intervention both client and *occupation-centered*. A review of the literature revealed that outdated and ineffective interventions are still used in clinical practice (Fleming-Castaldy & Gillen, 2013) which then limits occupational therapists' ability to provide interventions that are effective, efficient, and promote health and well-being for clients. Assessment tools designed to capture the complexity of occupational therapy

practice are crucial to continue the shift away from a mechanistic paradigm and toward an occupational paradigm. Additionally, in order to develop leaders and advocates occupational therapist must be able to articulate the value of occupation and how *occupation-centered* practice promotes health and well-being for their clients. Due to a paucity of assessment tools designed to capture what actually occurs in occupational therapy practice through an occupational lens, it was decided that the OCIA should be tested to see if the OCIA could serve as an assessment tool to capture *occupation-centered* practice. The OCIA was developed from themes that emerged from the occupational science and occupational therapy evidence for the effectiveness of *occupation-centered* practices. The OTIPM was the theoretical guide and was used to refine the OCIA. This new assessment tool has potential to provide an objective means to measure how occupation is used in clinical practice.

As the concept of *occupation-centered* practice continues to evolve and the profession of occupational therapy continues to apply concepts from occupational science into occupational therapy practice, it is critical to have assessment tools designed to measure and capture *occupation-centered* interventions. The discussion groups and expert panel provided valuable insights into the validity and utility of the OCIA. The core elements of the OCIA remained intact (e.g. personal, occupational, and contextual relevance). However, changes and adaptations were made to the levels to improve clarity and improve scoring reliability. The results of this study demonstrate one assessment tool, the OCIA, with a satisfactory level of agreement for inter-rater reliability, and

adequate content validity and utility. In order to fully capture, describe, and measure current practice, occupational therapy researchers need to use assessment tools that capture *occupation-centered* practice. The next study in this dissertation is an observational study of occupational therapists working with short term rehabilitation clients in skilled nursing facilities and describes current occupational therapy intervention trends. A more detailed description of future research is described in Chapter VI of this dissertation.

CHAPTER V  
AN EXPLORATION INTO OCCUPATION-CENTERED PRACTICE  
IN SKILLED NURSING FACILITIES

**Introduction**

A central premise of moral treatment was the belief that participation in occupation and everyday activities could help restore a person's mind, body, and spirit (Kielhofner, 2009; Meyer, 1922). Proponents of moral treatment believed that a person's inability to adapt to everyday challenges, unhealthy habits, and disengagement from society were largely a result of poor adaptive strategies (Kielhofner, 2009; Meyer, 1922). Occupation was the central element of treatment and the occupational therapy profession evolved from the moral treatment paradigm in the early twentieth century. At this time there were five main constructs for the occupational therapy profession: 1) humans are occupational beings, 2) occupation consists of being, thinking, and doing, 3) a link exists between the body and mind, 4) a lack of occupation can bring disease or illness, and 5) occupation can be used as a curative tool (Kielhofner, 2009; Meyer, 1922).

Occupation remained as a core construct to the occupational therapy profession until the late 1940s, when the field of medicine began to criticize occupational therapy's lack of theory and research (Kielhofner, 2009). The mechanistic paradigm, which focused on the inner mechanisms or components of a person, flourished within the medical model. Occupational therapy began to change its focus from occupation and

emphasized the importance of improvement or compensation for limitations within the human body. Activity was used to strengthen and influence the internal structures and mechanisms of the human body replacing the emphasis on occupation as a therapeutic tool to influence the body and mind (Gordon, 2009; Kielhofner, 2009). Occupational therapy leaders in the late 1960's sparked the next shift in the profession's view of occupation.

The contemporary occupation paradigm, which began in the late 1960's, provided an increased interest in the use of occupation as a therapeutic modality in occupational therapy practice (Kielhofner, 2009). Although remnants of the mechanistic paradigm continue to exist in current practice, especially in occupational therapy settings that have a medical model focus, a resurgence of the use and acknowledgement of the importance of occupation continues to grow in both research and occupational therapy educational programs (Fleming-Castaldi & Gillen, 2013; Wood, Nielson, Humphry, Coppola, Baranek, & Rourke, 2000). Now is the time to bridge the gap from the philosophical and theoretical models centered on occupation into clinical practice. Occupational therapists are urged to shift away from the mechanistic paradigm toward occupation-centered practice and research (Doucet, 2013; Gillen, 2013).

Until recently, there was limited differentiation among *occupation-centered*, *occupation-based*, and *occupation-focused*. The emergence and sophistication of occupational science along with a strong call for the profession to support and use an



*occupation-centered* approach in clinical practice and research led to further classification among the three terms. Descriptions and definitions of *occupation-centered*, *occupation-based*, and *occupation-focused* were provided in the previous two chapters of this dissertation and will be used throughout this chapter for intervention categorization purposes along with more non-occupation-centered approaches such as exercise, rote practice, and passive interventions.

In order to develop strategies for a practice paradigm shift, we must first document and understand current practice trends as very little is known about current occupational therapy interventions. Chapter III of this dissertation presented a systematic review of all researched interventions from 1991-2014. Alarming, only a limited amount of research was conducted on the identification and effectiveness of interventions provided during short term rehabilitation for skilled nursing facilities clients and very little is actually known about *what* and *how* interventions are performed in clinical practice. The purpose of this third and final study of the dissertation is to identify current occupational therapy interventions engaged in with short term rehabilitation clients in skilled nursing facilities and to determine if occupation-centered practice was occurring. Two terms deserve clarification for the purpose of this dissertation. An occupational therapy *intervention* is defined as a single therapeutic modality provided within one session with a focus on one occupational therapy goal. A *session* is defined as a single or group of interventions that are provided within one continuous time frame. These interventions may focus on one or multiple occupational therapy goals.

The identified research question for this study was: Through direct observation of occupational therapists, what types of interventions are provided to short term rehabilitation clients in skilled nursing facilities with neurological, cardiovascular, and general deconditioning diagnoses?

## **Methodology**

### **Research Design**

This study was a prospective observational descriptive study intended to identify occupational therapy interventions used in short term rehabilitation in skilled nursing facilities in a small Midwestern city. The naturalistic design intended to capture what *actually* occurs in clinical practice. Observations allowed “insight into interactions between dyads ..., illustrate[d] the whole picture; capture[d] context/process; [and] informe[d] about the influence of the environment” (Mulhall, 2013, p. 307). Approval was received from Texas Woman’s University and the University of Wisconsin-LaCrosse Institutional Review Board (where the researcher was a faculty member). Additionally four skilled nursing facility administrators and their contract rehabilitation company provided letters of support to collect data at their respective facilities.

### **Participants**

Participants comprised of two groups: occupational therapists and skilled nursing facility clients. The first group was recruited through snowball sampling starting with

colleague leads. The primary researcher completed a face-to-face informational meeting with four occupational therapists who worked in skilled nursing facilities in a small Midwestern city. Inclusion criteria for the occupational therapists included: 1) were a licensed occupational therapist and 2) provided occupational therapy services at one or more of the approved sites. All interested occupational therapists signed an informed consent form prior to enrollment in the research study. Of the four occupational therapists that signed an informed consent and agreed to participate in the study, two dropped out of the study. One participant felt “overwhelmed” and did not think there was space in the therapy gym for an observer. The other participant had a job description change and was no longer the primary therapist at the approved site. Due to this attrition, two occupational therapists participated in the research study.

The second participant group comprised the skilled nursing facility clients of the two occupational therapist participants. The research team which included the primary researcher and three research assistants (masters-level graduate occupational therapy students) observed occupational therapists who worked with clients that met the following criteria: 1) were 65 years of age or older; 2) had a neurological, cardiovascular, and general deconditioning diagnoses as the admitting diagnosis; 3) qualified for Medicare Part A or a comparable private insurance as a payer source; and 4) previously lived in a lesser restrictive environment such as a house, apartment or assisted living facility. Three clients qualified for the research study and all signed an informed consent. Participants were all female and ranged in age from 73 to 95 years. Admitting diagnoses

to the skilled nursing facility included: general deconditioning, acute bi-ventricular heart failure, and babesiosis (a tick-borne parasitic blood infection).

## **Setting**

Four skilled nursing facilities in a small Midwestern city agreed to allow data collection to occur at their site. However, due to attrition of the occupational therapists, data were only collected at two facilities. Data collection occurred within the skilled nursing facilities in the clients' rooms or the shared rehabilitation gym. Figure 5 is a schematic of a client's skilled nursing facility room and Figure 6 is a representation of a rehabilitation clinic where occupational therapy interventions occurred for one client.

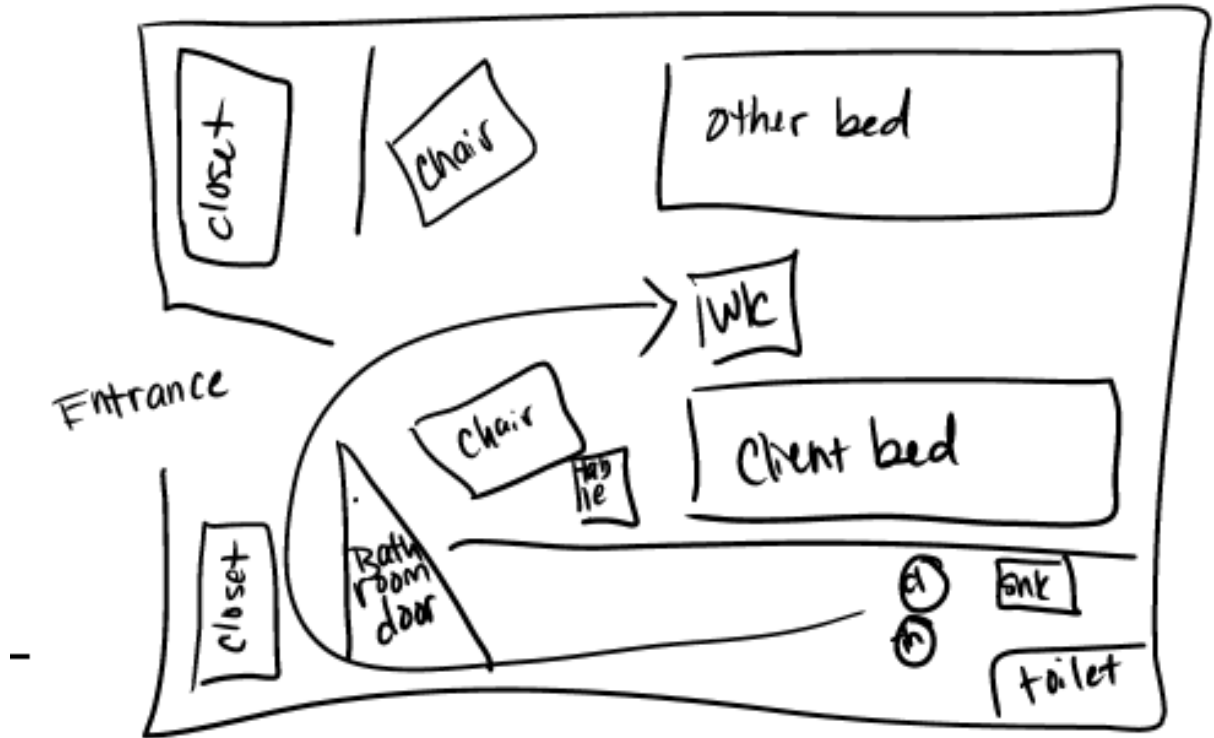


Figure 5. Client's Room.

Note. W/C = wheelchair; Cl= client; Th=therapist.

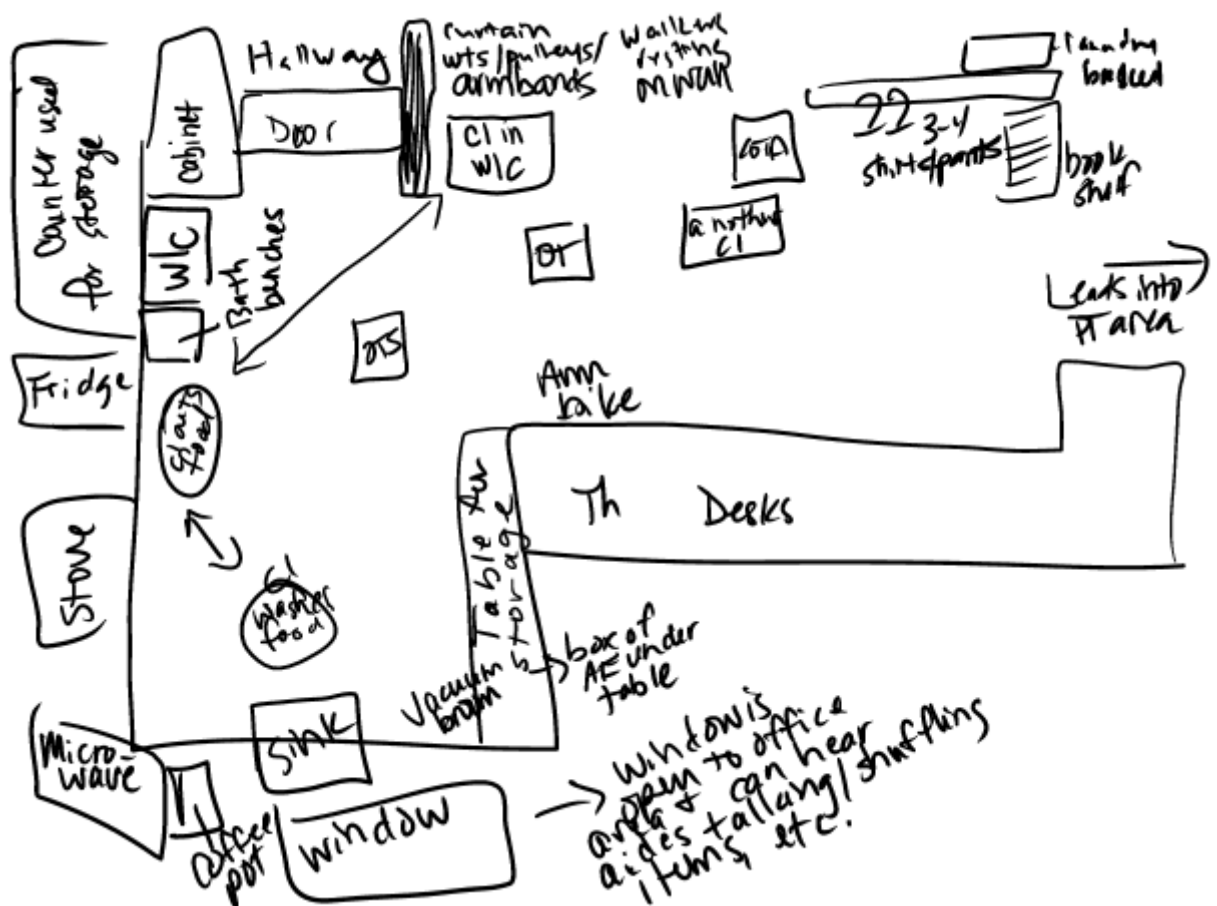


Figure 6. Therapy Clinic.

Notes. CI= client; W/C = wheelchair; OT = occupational therapist; OTS = occupational therapy student; COTA= certified occupational therapy assistant; PT = physical therapy.

### Observation Tools

The research team was instructed to use three forms of data collection: the Occupation-Centered Intervention Assessment (OCIA), field notes, and a schematic of

the physical environment at each therapy session observed. It was deemed that the use of field notes and a schematic drawing of the physical environment would adequately supplement the OCIA and provide in-depth, rich descriptions of the types of occupational therapist interventions used by the occupational therapists. Appendix J is the form that guided the research team in taking field notes. However, after training was completed on how to take field notes with the form, the research team opted to use a notebook for field notes to increase flow and ease during the observations.

The Occupation-Centered Intervention Assessment (OCIA) is an assessment tool designed to capture and rank occupation-centered interventions (refer to Chapter IV of this dissertation for a full description of the reliability, utility, and validity studies). The assessment includes three continua that examine the personal, contextual, and occupational relevance of interventions that are individually scored on an ordinal scale of one through five (Jewell, 2012). The assessment provided a concrete method for the research team to gauge the occupational therapist's ability to provide contextually relevant, client-centered, and occupation-centered interventions. The OCIA provided a consistent and reliable method to capture occupation-centered practice.

The research team was instructed to remain separated from the occupational therapy process to score the OCIA, observe, and write field notes without any interaction with the therapist or client. However, there were times when this was unavoidable and

the member of the research team would answer the therapist or client question and then proceed with a statement about only being an observer to the session.

## **Procedures**

The research team included the primary researcher along with three trained graduate occupational therapy students. The research assistants received in-depth training from the dissertation research mentor on how to observe occupational therapy treatment sessions, how to take field notes, and from the primary researcher, how to score the OCIA. To assure inter-rater reliability, the primary researcher and research assistants viewed ten treatment sessions on video and independently completed scoring of the OCIA. Scores were compared and a moderate level of inter-rater reliability was achieved ( $r=.483$ ) The occupational therapist participants notified the primary researcher of new admissions to the skilled nursing facility who met the above inclusion criteria as a client participant. The research team observed each therapist and client dyad up to three times a week until the client was discharged. The research team coded each session to ensure that a range of therapy times, session foci, and interventions were observed (Appendix K). The research team observed a total of 17 occupational therapy sessions, scored the OCIA for each intervention, wrote field notes, and completed a schematic drawing of the physical environment where the interventions occurred. Pseudonyms were used for all therapists, clients, and facilities.

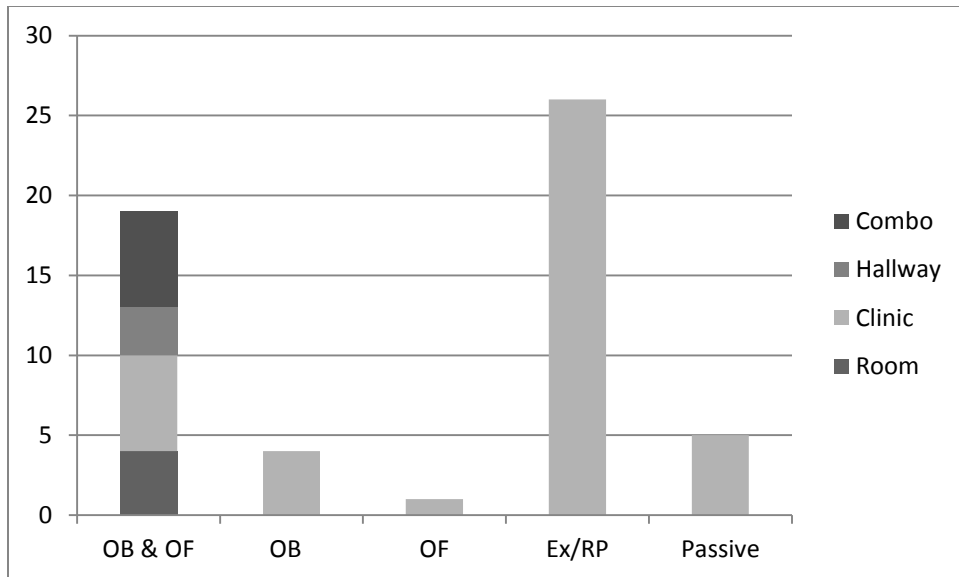


## **Analysis**

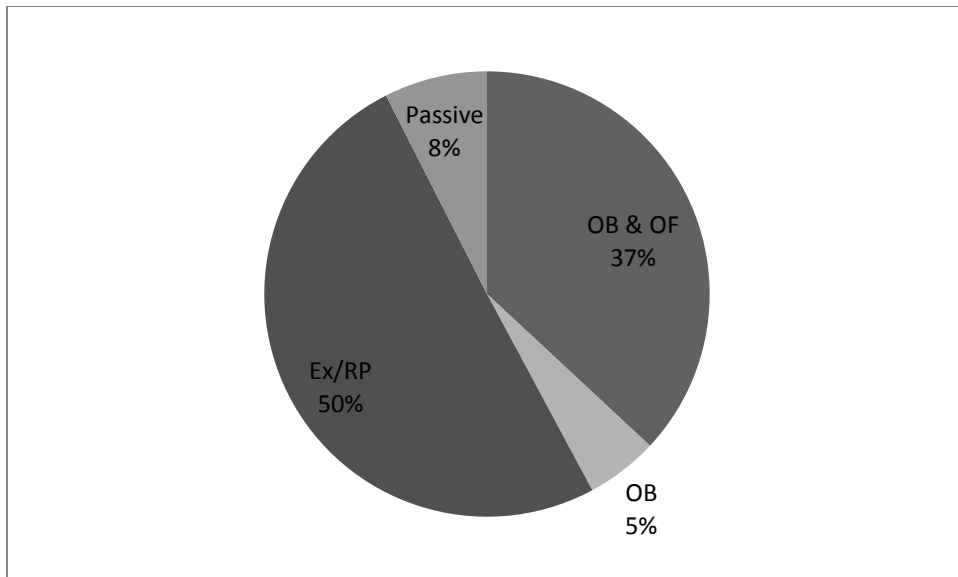
The OCIA allowed for descriptive statistics to identify frequencies and trends that occur in occupational therapy treatment sessions. Kielhofner (2009) stated that descriptive statistics are appropriate to use to identify and “depict naturally occurring events or characteristics of research participants” (p. 58). Field notes and schematic drawings supplemented the OCIA to provide in-depth and thick descriptions of the provided occupational therapist interactions, allowing increased depth and breadth about the personal, contextual, and occupational relevance of the provided interventions. The primary researcher used a broad qualitative approach and read all field notes, completing an a-priori analysis of the field notes using the OCIA continua as categories. Field notes related to the personal relevance, contextual relevance, and occupational relevance were carefully examined in order to determine if the individual intervention was one of the following five types of occupational therapy interventions: 1) occupation-based, 2) occupation-focused, 3) occupation-based and occupation-focused, 4) exercise or rote practice, or 5) passive. Descriptive statistics were completed for each of the five intervention categories (e.g. percentage of time spent in each intervention category, frequency of each category occurrence, averages of the total OCIA score per category). Overall, this process allowed for new insights to be generated into occupation-centered practices in skilled nursing facilities.

## Results

The research team documented and scored each occupational therapy intervention for a total of sixteen occupational therapy sessions and 57 individual interventions. The research team observed a seventeenth session, however, this session was not documented due to a client refusal to participate in occupational therapy. Overall, the number of interventions that involved the use of occupation or focused on occupation and the number of interventions that focused on non-occupational tasks such as exercise, rote practice, and passive interventions were roughly equal (Figure 7). However, a closer look at the time spent on each intervention category revealed that the majority of time was spent on non-occupational tasks (Figure 8). All interventions were completed in the clinic environment with the exception of interventions that are categorized as both *occupation-based* and *occupation-focused* (Figure 7). Detailed descriptions and definitions of the following intervention categories were provided in Chapter III of this dissertation. To increase clarity and readability, the definitions are provided in this section of the dissertation.



*Figure 7. Total Number of Interventions and Location of Interventions per Category.*  
 Note. OB= Occupation-based; OF= Occupation-Focused; Ex= Exercise; RP= Rote Practice; Combo=Combination of locations.



*Figure 8. Percentage of Minutes Spent on Each Category.*

Note. OB= Occupation-based; OF= Occupation-Focused; Ex= Exercise; RP= Rote Practice.

### **Occupation-Based**

“Occupation-based interventions are those where the occupational therapist uses engagement in occupation as the therapeutic agent of change” (Fisher, 2013, p. 3). The client is actively engaged in *doing* or completing an occupation as the primary modality of intervention. In one example, the occupational therapist planned an intervention that involved the client standing to complete a card game. The occupational therapist provided rationale for completing the intervention as, "we're going to do a standing task to see how long you can stand." According to the scoring of the OCIA, an intervention is ranked as an occupation when the intervention falls under an “area of occupation” listed in the Occupational Therapy Process Framework II (Framework) (AOTA, 2008).

Playing a game falls under the area of occupation, *play*, in the Framework and OCIA manual (AOTA, p. 632; Jewell, 2012). Play is defined as “any spontaneous or organized activity that provides enjoyment, entertainment, amusement, or diversion” (as cited by Parham & Fazio, 1997, p. 252). Since the intervention involved engagement in an occupation (playing a card game) and the goal or outcome of the intervention was to improve impairments (standing tolerance) and not focused on occupation, this intervention is an example of an *occupation-based* intervention.

The research team recorded a total of four occupation-based interventions that were all completed in the clinic. Of the four interventions, two were laundry and two were playing a game. The goal of all four interventions was to increase standing tolerance and endurance.

### **Occupation-Focused**

*Occupation-focused* interventions involve the ability to “focus one’s attention on occupation- to have occupation as the proximal (i.e. immediate) focus ...of the intervention” (Fisher, 2013, p. 6). During this research study, the research team observed one occupation-focused intervention. In this example, the occupational therapist and client discussed the client’s sleep habits and patterns, keeping occupation (sleep) at the center of the discussion. Since the client did not actively engage in the occupation of sleeping, this intervention is categorized as *occupation-focused* and not *occupation-based*. Interventions that are categorized as both are discussed in the next section. Due to an error, the total time spent on this intervention was not recorded in the field notes,

and therefore, is not presented in the graph of total time spent in each intervention category (Figure 8).

### **Occupation-Based and Occupation-Focused**

*Occupation-based* and *occupation-focused* interventions involve both active engagement in an occupation and an immediate focus on an occupation. Nineteen of the 57 observed interventions fell in this category. The occupational therapists provided these interventions in a variety of locations including the client's room, hallway of the SNF, the rehabilitation therapy clinic, or a combination of the three locations (Figure 7). All of the interventions completed in a combination of locations and two of the three interventions completed in the hallway focused on functional mobility and transfers. This was the only intervention category that had interventions occurring outside of the clinic. Of the interventions in this category, nine involved engagement and focus on functional mobility and transfers (e.g. walking to the client's room, standing up from a chair), five involved engagement and focus on basic self-care activities (e.g. dressing, hygiene, toileting), one focused and involved engagement in laundry, and three interventions involved engagement and focus on simple meal preparation (e.g. preparation of eggs and toast).

### **Exercise or Rote Practice**

In Chapter III of this dissertation, *exercise* was defined as “physical activity designed to improve strength and/or health and may involve a movement or series of

movements” (Merriam-Webster, 2014) and *rote practice* is the repetition of an individual skill needed to complete an occupation. Of the 57 total observed interventions, 26 interventions were categorized as *exercise* or *rote practice*. Seventeen of these interventions involved the client completing upper body arm exercises that involved the use of free weights, pulleys, a weighted dowel, Theraband™, or the arm cycle. The other seven interventions involved the client standing, stepping, or walking in the clinic. In one intervention the client stated to the occupational therapist, "I don't know how you keep sane" in reference to repetitiveness of exercises. A research team member noted a change in mood from “friendly banter to feisty” when the intervention switched from an occupation to upper body arm exercises.

### **Passive**

A passive intervention involves no active engagement of the client, as the occupational provides the therapeutic modality to the client. The research team recorded five interventions that are categorized as passive and all interventions occurred in the clinic. One example that was observed was massage or manual therapy provided to a client’s lower extremity due to swelling of the knee. The research team observed the following interventions: application of ice to the client’s knee, massage to the client’s lower extremity due to swelling, and fitting and application of a compression stocking.

## OCIA Total Scores

Overall, intervention categories that involved use or focus on occupation had higher average scores on the OCIA while interventions that included non-occupational tasks (exercise, rote practice, passive interventions) scored lower on the OCIA. See Figure 9 for a depiction of the average OCIA scores for each intervention category. For *occupation-based* interventions, the average total score on the OCIA was 10.25 points. The average personal relevance score was three, the average occupational relevance score was five, and the average contextual relevance score was a 2.5. For the one *occupation-focused* intervention, the total score on the OCIA was 15 (or the highest possible rating). For interventions categorized as both *occupation-based* and *occupation-focused* the average OCIA score was 13.42. The average personal relevance score was 4.79, the average occupational relevance score was 4.79, and the average contextual relevance score was a 3.89.

For the *exercise/rote* practice interventions, the average total OCIA score for interventions was 5.15. The average personal relevance score was 1.69, the average occupational relevance score was 2.04, and the average contextual relevance score was 1.42. For the *passive* interventions, the average total OCIA score was 5.4. The average personal relevance score was 3.4, the average occupational relevance score was 1.0, and the average contextual relevance score was 1.0.



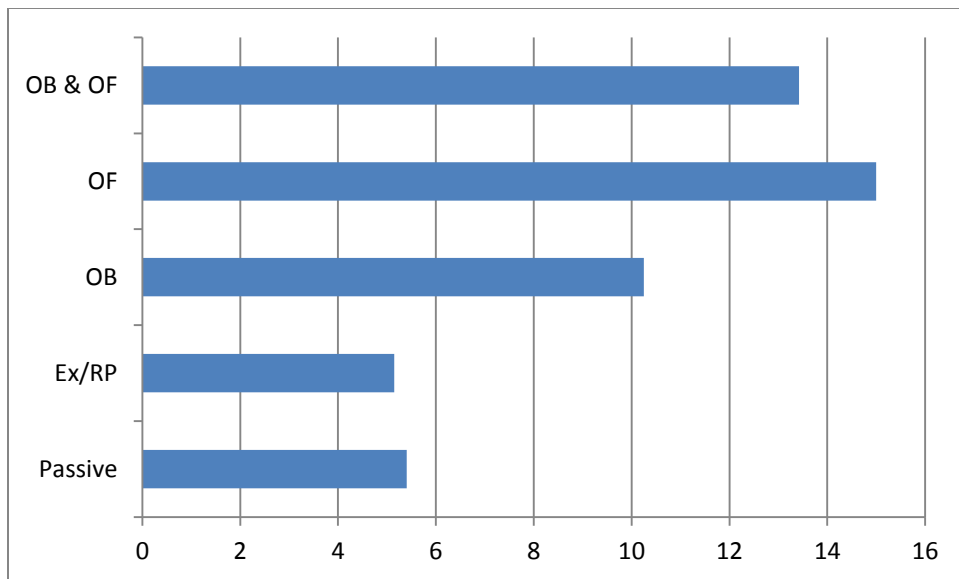


Figure 9. Average Overall OCIA scores.

Note. OB= Occupation-based; OF= Occupation-Focused; Ex= Exercise; RP= Rote Practice.

## Discussion

The primary purpose of this descriptive study was to identify the types of interventions provided to short term rehabilitation clients in skilled nursing facilities.

The most common category of intervention observed during the study was *Exercise/Rote Practice* followed by *Occupation-Based* and *Occupation-Focused* interventions. Within the two categories, upper body exercises (17 times), functional mobility (9 times), and standing/stepping/walking (7 times) in the clinic were the three most common provided interventions.

The majority of interventions were completed in the rehabilitation therapy clinic. The occupation-based, occupation-focused, exercise and rote practice, and passive interventions all occurred in the rehabilitation therapy clinic. The only time the client's room or hallway were utilized were when interventions were both occupation-based and occupation-focused. These findings corroborate the findings from Skubik-Peplaski, Rowles, and Hunter (2012) which found a relationship between the environment of where intervention occurs and the selection of interventions. When the environment contained tools and materials conducive to completion of occupation-based and occupation-focused interventions (e.g. bed, toilet, stove) the interventions were more likely to reflect occupation-centered practice. However, when the environment contained tools and materials that were conducive to exercise, rote practice, and passive interventions (e.g. free weights, arm cycle, pulleys) the occupational therapists were more likely to design interventions that did not focus on or involve the use of occupation as a treatment modality.

Although a preliminary finding, the intervention categories appear to have a relationship for their "level" or "rank" of being occupation-centered (Figure 4). The ability to rank interventions on being *occupation-centered* is a new concept that was first introduced with the development of the OCIA. Interventions that involve the client actively engaged and focused on occupation appear to have the highest level of being *occupation-centered*, the middle intervention approach is *occupation-based*, and the lowest intervention approaches are the *exercise or rote practice* and *passive* intervention

approaches. Due to only one observation of an occupation-focused intervention, it is too early to tell where this approach may fall along the continuum.

It is important to comment on two categories as they each provided a unique presentation. *Occupation-focused* was observed only once during data collection. It is unclear if occupation-focused interventions are not relevant to clients in skilled nursing facilities or if the occupational therapists are not skilled in providing these types of interventions, or if there is another reason for limited use of this intervention approach. All five occurrences of *passive* interventions occurred after a client sustained a knee injury after admission to the skilled nursing facility. As the knee injury was not the client's admitting diagnosis, the client remained in the study. However, after the client sustained the injury a paradigm shift occurred in the overall occupational therapy process from a focus on upper body exercise and self-care skills to a focus on the impairment of the client's knee, leading a focus on the impairment of the client's knee and related passive interventions. (In the planning of the research the researcher suspected that occupational therapists may provide more exercise and passive interventions to clients with orthopedic conditions and for this reason excluded clients with such diagnoses from this research study.)

One unexpected finding from this research study was the amount of interruptions and disruptions that occurred in the therapy rehabilitation clinics. The occupational therapists were frequently interrupted to answer the phone or discuss other clients with

other staff members. Additionally, the occupational therapists engaged in conversations that were not relevant to therapy with other staff members or clients, leaving the client to complete the intervention without direct supervision. The research team members noted that the client would complete the interventions with “poor form.” In one instance, the occupational therapist transported the client into the rehabilitation therapy clinic in a wheelchair and placed the client facing the wall while the occupational therapist attended to extraneous tasks. In another session, the occupational therapist seemed very aware of the frequent disruptions, turned to the researcher and stated, “Your notes will say solid interruptions.” The rehabilitation therapy clinic was frequently crowded with equipment, therapy students, physical therapists, rehabilitation aides, skilled nursing facility staff (e.g. nurses and housekeepers), and client family members (See Figure 6).

## **Limitations**

The results of this study have limited generalizability as it was completed in one geographic location with a homogenous sample in that both the occupational therapists graduated from the same occupational therapy program, and were same gender and approximate age) and that the occupational therapy clients were all women of similar age, though differing diagnoses. Although the minutes of each intervention were to be recorded, the research team occasionally missed the switch to a new intervention or neglected to record the time of each intervention. However, the total minutes for each session were recorded accurately. A final limitation of the study was the use of MOT

graduate students as data collectors and the possibility for inaccurate scoring of the OCIA. The research team participated in training on how to score the OCIA, take field notes, and how to draw a picture of the environment where the interventions occurred. However, it was noted that the primary researcher had field notes and drawings that contained a significant amount more depth of what occurred during the interventions.

### **Future Research**

Future research studies should include a heterogeneous sample of both occupational therapists and clients in order to improve the breadth of findings. It would be interesting to see how occupational therapists who self-identify as “occupation-centered” provide interventions with skilled nursing facility clients. An examination of skilled nursing facilities that have an *occupation-centered* environment and those that have limited occupation-oriented supplies may also inform future practice. Finally, replication of this study in different contexts of practice may inform the occupation-centered practice trends.

### **Conclusion**

Study three identified the various types of interventions provided to older adults with cardiovascular, neurological, and/or general deconditioning conditions receiving short term rehabilitation in skilled nursing facilities. The study used the OCIA to rank the level of *occupation-centered* practices for the occupational therapy interventions. Overall, the *Exercise/Rote Practice* category was identified as the most common

intervention approach utilized by occupational therapists followed by the *Occupation-Based and Occupation-Focused* intervention approach. Specifically, upper body exercises and basic self-care activities were commonly observed by the research team. However, when categorized by time, it was identified that the majority of time was spent on intervention approaches that did not utilize or focus on occupation, indicating that preparatory tasks are common interventions utilized with older adults in skilled nursing facilities. This pilot study provided a preliminary glance into *what* occupational therapy interventions are performed in clinical practice. However, more research is warranted to improve the generalizability of these findings.

## CHAPTER VI

### DISCUSSION AND IMPLICATIONS

#### Overview

This dissertation was comprised of three inter-related studies that described and identified occupational therapy interventions and their relationship to *occupation-centered* practice within the context of a skilled nursing facility. Additionally, an assessment tool designed to capture and rank occupation-centered practice was implemented and analyzed. In study one, the research team completed a systematic review that identified and examined the effectiveness of occupational therapy interventions provided in skilled nursing facilities for clients who received short term rehabilitation services. The research process revealed a total of sixteen research studies that either identified occupational therapy interventions or examined the effectiveness of the identified interventions. Of the sixteen articles, eleven articles identified an intervention that is categorized as utilizing an *occupation-centered* approach and eleven of the articles identified occupational therapy interventions that did not use an *occupation-centered* approach (several of the research articles identified more than one intervention). Of the studies that contained a naturalistic design with the intention to capture intervention trends, a significant amount of time spent on therapeutic exercise and functional mobility was reported. Several articles mentioned standard or typical

occupational therapy practice as utilizing a biomechanical approach which focused on exercise and self-care ability. Due to the limited rigor and quantity of research studies, the results indicated a high need for additional research to be completed in this area.

Study two involved further development of the Occupation-Centered Intervention Assessment (OCIA) through four different, but congruent phases in the study. Overall, the researcher aimed to identify the validity, utility, and inter-rater reliability of this assessment tool. The OCIA is an assessment tool designed to capture *occupation-centered* interventions used in clinical practice. Experts confirmed that the three subdomains were complete and captured the full essence and characteristics necessary to provide *occupation-centered* interventions. However, two of the three subdomains required changes to the individual levels in order to improve scoring ease and to fully capture the range of occupations and occupational therapy provided in skilled nursing facilities. The inter-rater reliability for the OCIA total score and subdomains was found to be adequate. However, in the third study of this dissertation, inter-rater reliability of the observation team indicated a moderate level of agreement

In the final study, the researcher aimed to describe occupational therapy interventions completed in a skilled nursing facility with short term rehabilitation clients having an admitting diagnosis of neurological, general deconditioning, or a cardiovascular condition. The study used natural observations in a variety of locations, times of day, and sequences in the length of stay. Overall, *Exercise/Rote Practice* was



found to be the most common intervention approach implemented (for both time and number of occurrences) with the clients. The four most common interventions included: upper body exercises, functional mobility, standing/stepping/walking in the clinic, and basic self-care activities. The observed intervention trends were similar to the intervention trends found in the systematic review.

### **Occupation-Centered Interventions**

The data collected in studies one and three of this dissertation identified and described occupational therapy practice trends in skilled nursing facilities with short term rehabilitation clients while study two further developed an assessment tool to capture and rank these intervention trends through an occupational lens. Due to our core value of occupation, occupational therapists have a professional and ethical obligation to provide interventions that are either occupation-based and/or occupation-focused, and when that is not possible to ensure that all interventions are *occupation-centered* and grounded in a theoretical model or philosophy that unambiguously connects the interventions to occupational performance. In order to continue progress toward the profession's *Centennial Vision* to become “a powerful, widely recognized, science-driven, and evidence-based profession” (American Occupational Therapy Association, [AOTA], 2007, p. 613), the profession must not only continue to provide evidence for occupational therapy interventions, but provide and research interventions that are grounded in occupation. Only a shift in practice away from mechanistic paradigms toward true

occupation-centered practice will bring about the Centennial Vision and demonstrate the power of occupation as a necessary ingredient for effective and efficient health promoting interventions.

The integration of *occupation-centered* theoretical foundations in to occupational therapy clinical practice will help to close the scholarship-practice gap. In order to identify ways to close this scholarship-practice gap, it is important to first identify current practice trends, specifically for older adults in skilled nursing facilities. Research in rehabilitation and pediatrics has demonstrated an increase in rigor and quality of intervention effectiveness studies over the past five years (Doucet, 2014; Kreider, Bendixen, Yu Yun Huang, & Lim, 2014). However, there is a paucity of research that exists for clients who receive short term rehabilitation services (e.g. Medicare A recipients) in either hospital-based or freestanding skilled nursing facilities.

This dissertation revealed a heavy reliance on upper body exercises as a therapeutic modality, and unless these exercises are explicitly linked to occupational performance they are not *occupation-centered*. Other areas of focus for occupational therapy interventions included functional mobility/stepping/walking and basic self-care activities. The Occupational Therapy Practice Framework provides a description of eight areas of occupation which include: activities of daily living (ADLs), instrumental activities of daily living (IADLs), rest and sleep, education, work, play, leisure, and social participation (2008). Combining the results from the systematic review and the observation study, we find that all areas of occupation (with the exception of education

and work) were addressed at some point in the occupational therapy process. Although six areas of observation were identified in either the systematic review or observation study, it is important to note that some of the research studies examined in the systematic review identified interventions that were closely aligned to *occupation-centered* theoretical models of practice and were not interventions that were a depiction of current practice trends. The third study identified ADLs, IADL, rest and sleep, and play as areas of occupation that were addressed in a naturalistic observation.

A closer look at these categories of occupation revealed very few occupations are ever addressed within these categories. ADLs and IADLs were the most common category (as categorized by the Framework) of provided occupational therapy interventions. For the purpose of this dissertation, one area of occupation will be dissected in order to illustrate the gap of service. IADLs are “activities to support daily life within the home and community that often require more complex interactions than those used in ADLs” (AOTA, 2014, p. S19) and are considered important occupations for a skilled nursing facility client to complete safely and effectively prior to returning home. The range of IADLs includes: care of others, care of pets, child rearing, communication management, driving and community mobility, financial management, health management and maintenance, home establishment and management, meal preparation and clean up, religious and spiritual activities and expression, safety and emergency maintenance, and shopping (AOTA, 2007). Though the data are limited, meal preparation and home management (only laundry) were the only IADL interventions

observed in study three. This service gap indicates a potential need for *occupation-centered* interventions in SNF practice in order to ensure the client returns home prepared to full engage and participate in his or her daily routines.

### **Impact on Occupational Therapy**

The revised version of the OCIA indicated adequate validity, utility, and inter-rater reliability. However, the results from both study two (development) and three (use of OCIA tool) indicated a clear and pressing need for improved definitions of terminology used in the OCIA manual, including additional examples of each level to improve ease of scoring. Additionally, the contextual relevance proved the most difficult for raters to score reliably; however, with clarification of terminology and additional examples, it is expected for the scoring reliability to improve. The research team agreed that researchers who wish to use the OCIA as an assessment tool may need to complete calibration before using the OCIA as an outcome measure.

The OCIA was originally designed as a tool to guide occupational therapy students and clinicians in the development and reflection of *occupation-centered* interventions. The tool allows the occupational therapist to thoroughly examine the personal, contextual, and occupational relevance of each intervention in order to provide and design interventions that are grounded in conceptual models of practice. A participant from the content validity study stated that the “guide made me see how interventions could be even more occupation-based.” Additional comments about

potential uses for the OCIA included “use for plan[ning] occupation-based interventions; as a personal check [on designing *occupation-centered* interventions]; and students [may] take to fieldwork supervisors and help get others to see how we can be more occupation-based.” Another participant stated that she could now see how to implement *occupation-centered* interventions in a hospital setting, indicating that the OCIA may be relevant outside of a SNF environment. Implementation of this guide into occupational therapy curricula and fieldwork settings may assist in discussion about how to provide interventions grounded in occupation and potentially begin to shift the traditional models of practice that focus on impairment and body functions to a paradigm centered in the core tenet of occupational therapy, or occupation.

### **Future Research**

The findings from the analysis of the OCIA study indicated sufficient validity, reliability, and utility for the assessment tool for evaluation of *occupation-centered* interventions for short term rehabilitation clients in skilled nursing facilities. However, the tool was originally designed to be used as a generic guide to *occupation-centered* practice. The next steps for further development of the OCIA include: 1) publication of the OCIA manual, 2) additional reliability and validity studies in other areas of practice including, but not limited to: inpatient rehabilitation, acute care, outpatient, mental health, pediatrics, and community-based practices, 3) comparison studies of confidence +levels and abilities of occupational therapy students and/or clinicians who are OCIA

trained to design high level *occupation-centered* intervention design, 4) identification of the “active ingredients” or interventions used in occupational therapy practice in a variety of settings and with a variety of populations.

Future studies to examine the effectiveness and identify the “active ingredients” may benefit from a variety of data collection methods. For example, study three may have benefited from a short interview with the occupational therapist after the session with the client was completed. The interview would allow further clarification of the purpose of the interventions and make scoring the *personal relevance* continuum of the OCIA much easier and more accurate. To address social validity, it would be of value to interview clients (and/or family members) to determine if they have the same understanding of the purpose of the interventions as the occupational therapists. Finally, in order to achieve the broad research aim to provide strategies to close the scholarship-practice gap, it would be useful to complete a study that identifies factors that influence *occupation-centered* practice. These factors could then be added to the OCIA manual as guidelines for *occupation-centered* practice.

## **Conclusion**

In conclusion, this dissertation offered an analysis of current practice trends and a description of occupational therapy interventions provided to short term rehabilitation clients in skilled nursing facilities. A systematic review of occupational therapy interventions completed with short term rehabilitation clients in skilled nursing facilities

revealed a heavy reliance on traditional interventions (e.g. upper body exercise and self-care activities) and an increase in experimental occupation-centered interventions.

Validity, utility, and inter-rater reliability were established for the OCIA. The OCIA was used to capture and rank *occupation-centered* interventions in skilled nursing facilities through an occupational lens. It was identified that in order to continue to progress on closing the scholarship-practice gap, the current practice trends must first be identified. This dissertation established a baseline of practice trends and developed an assessment tool with potential for assisting occupational therapy students, researchers, and clinicians with a guide for *occupation-centered* practice.

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## APPENDIX A

### Inclusion/Exclusion Criteria: SNF Systematic Review



## Inclusion/Exclusion Criteria: SNF Systematic Review

**Inclusion Criteria:** peer reviewed journal, contained occupational therapy interventions within the scope of practice as defined by the Occupational Therapy Practice Framework, research occurred within a SNF or comparable geriatric postacute facility, and involve older adults.

### Definitions:

1. Occupational therapy interventions: as defined by the Occupational Therapy Practice Framework (occupation-based intervention, purposeful activity, or preparatory methods, [AOTA, 2008]) or involve use of an occupation-based model of practice (e.g. Model of Human Occupation, Occupational Therapy Intervention Process Model, Person Environment Occupation, Ecology of Human Performance, etc).
  - a. Occupation-based intervention:
    - i. Purpose: client engages in client-directed occupations that match identified goals (AOTA, 2008)
    - ii. Examples:
      1. completes morning dressing and hygiene using adaptive devices
      2. purchases groceries and prepares a meal

3. utilizes the transportation system
4. applies for a job
5. establishes a pattern of self-care and relaxation activities in preparation for sleep

b. Purposeful activity

- i. Purpose: client engages in specifically selected activities that allow the client to develop skills that enhance occupational engagement (AOTA, 2008)

- ii. Examples:

1. Practices how to select clothing and manipulate clothing fasteners
2. Practices safe ways to get in and out of a bath tub
3. Practices how to prepare a food list and rehearses how to use cooking appliances
4. Role plays when to greet people and initiates conversation
5. Practices how to use adaptive switches to operate home environmental control system

c. Preparatory methods:

- i. Purpose: Practitioner selects directed methods and techniques that prepare the client for occupational performance. Used in

preparation or concurrently with purposeful and occupation-based activities (AOTA, 2008).

ii. Examples:

1. Provides sensory enrichment to promote alertness
  2. Administers physical agent modalities to prepare muscles for movement
  3. Provides instruction in visual imagery and rhythmic breathing to promote rest and relaxation
  4. Issues orthotics/splints to provide support and facilitate movement
  5. Implements a home-based conditioning or exercise program
  6. Provides hand strengthening exercises using therapy putty and theraband
  7. Provides instruction in assertiveness to prepare for self-advocacy
2. SNF: may be a freestanding, hospital-based, or other comparable postacute geriatric facility that provides skilled care, or daily care that can only be provided by a healthcare professional (nurse, doctor, rehab staff) after a qualifying 3-day acute hospital stay.

- a. Freestanding: A nursing facility with the staff and equipment to give skilled nursing care, and in most cases skilled rehabilitation services, and other health related services. The facility is separated from a hospital.
- b. Hospital-based/swing/comparable geriatric facility: “Medicare covers swing bed services in certain hospitals and when the hospital or critical access hospital (cah) has entered into a "swing-bed" agreement with the [Department of Health and Human Services \(HHS\)](#) , under which the facility can "swing" its beds and provide either acute hospital or SNF-level care, as needed. When swing beds are used to furnish SNF-level care, the same coverage and cost-sharing rules apply as though the services were furnished in a SNF” (Medicare.gov, 2014)

3. Older adults: 65 years and older

**Exclusion Criteria:** articles published prior to 1991, non-English articles, and unpublished data

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## APPENDIX B

### PubMed Search String

### PubMed Search String

(Skilled performance\*[tiab] OR Occupation\*[tiab] OR Activit\*[tiab] OR Self care[tiab] OR Home maintenance[tiab] OR Dress\*[tiab] OR Bath\*[tiab] OR Leisure[tiab] OR Recreation[tiab] OR Participat\*[tiab] OR Engage\*[tiab] OR Shower\*[tiab] OR Eat\*[tiab] OR Feed\*[tiab] OR Function[tiab] OR Functional[tiab] OR Functioning[tiab] OR Functions[tiab] OR Mobility[tiab] OR Mobile[tiab] OR Personal device\*[tiab] OR Hygiene[tiab] OR Groom\*[tiab] OR Sex\*[tiab] OR Toilet\*[tiab] OR Pet care[tiab] OR Financ\* management[tiab] OR Money management[tiab] OR Health management[tiab] OR Meal prep\*[tiab] OR Cook\*[tiab] OR Religio\*[tiab] OR Spiritual\*[tiab] OR Safety[tiab] OR Shop\*[tiab] OR Rest[tiab] OR Sleep[tiab] OR Volunteer\*[tiab] OR Occupational Adaptation[tiab] OR Person Environment Occupation[tiab] OR Person Environment Occupation Performance[tiab] OR "Occupations"[Mesh] OR "Human Activities"[Mesh] OR "Self Care"[Mesh] OR "Occupational Therapy" [Mesh] OR "Hygiene"[Mesh] OR "Sexual Behavior"[Mesh] OR "Sexuality"[Mesh] OR "Cooking"[Mesh] OR "Eating"[Mesh] OR "Baths"[Mesh] OR "Sleep"[Mesh]) AND (Skilled nursing[tiab] OR "SNF"[tiab] OR Skilled patients[tiab] OR Skilled placement[tiab] OR Skilled rehabilitation[tiab] OR Post acute[tiab] OR Short term rehabilitation[tiab] OR Transitional unit[tiab] OR Geriatric rehab\*[tiab] OR "skilled nursing facilities"[Mesh])

APPENDIX C

CINAHL Search String



### CINAHL Search String

((MH "Model of Human Occupation") OR (TI "Model of Human Occupation") OR (AB "Model of Human Occupation") OR (MH "Adaptation, Occupational") OR (TI "occupational adaptation") OR (AB "occupational adaptation") OR (TI "person environment occupation") OR (AB "person environment occupation") OR (TI "PEO") OR (AB "PEO") OR (TI "person-environment-occupation") OR (AB "person-environment-occupation") OR (TI "ecology of human performance") OR (AB "ecology of human performance") OR (TI "OTIPM") OR (AB "OTIPM") OR (MH "Occupation (Human)") OR (TI "occupation\*") OR (AB "occupation\*") OR (MH "Occupational Therapy") OR (TI "occupational therap\*") OR (AB "occupational therap\*") OR (MH "Occupational Therapy Practice, Research-Based") OR (MH "Occupational Therapy Practice, Evidence-Based") OR (MH "Research, Occupational Therapy") OR (MH "Occupational Therapy Practice") OR (TI "occupational therapy practice\*") OR (AB "occupational therapy practice\*") OR (MH "Occupational Therapy Service") OR (TI "occupational therapy service\*") OR (AB "occupational therapy service\*") OR (MH "Occupational Therapy Systematic Evaluation of Evidence") OR (TI "occupation based") OR (AB "occupation based") OR (TI "occupation focus\*") OR (AB "occupation focus\*") OR (TI "occupation cent\*") OR (AB "occupation cent\*") OR (MH "Human activities") OR (TI "human activit\*") OR (AB "human activit\*") OR (TI "activit\*") OR (AB "activit\*") OR (TI "activity based") OR (AB "activity based") OR (MH "Activities of Daily Living") OR (TI "adl") OR (AB "adl") OR (MH "Leisure Activities") OR (TI "leisure") OR (AB

“leisure”) OR (MH “hygiene”) OR (TI “hygiene”) OR (AB “hygiene”) OR (TI “IADL”) OR (AB “IADL”) OR (TI “instrumental activ\* of daily living) OR (AB “instrumental activ\* of daily living) OR (MH “Home Maintenance”) OR (TI “home maintenance”) OR (AB “home maintenance”) OR (MH “Dressing”) OR (TI “dressing”) OR (AB “dressing”) OR (MH “grooming”) OR (TI “grooming”) OR (AB “grooming”) OR (MH “Bathing and Baths”) OR (TI “bathing”) OR (AB “bathing) OR (MH “functional status”) OR (TI “function\*”) OR (AB “function\*”) OR (MH “Community Reintegration”) OR (TI “community reintegration”) OR (AB “community reintegration”) OR (MH “Social Participation”) OR (TI “social participation”) OR (AB “social participation”) OR (TI “showering”) OR (AB “showering”) OR (MH “Eating”) OR (TI “eating) OR (AB “eating) OR (TI “feeding”) OR (AB “feeding”) OR (MH “Physical Mobility”) OR (TI “physical mobility”) OR (AB “physical mobility”) OR (MH “Ambulation Aids”) OR (TI “ambulation aids”) OR (AB “ambulation aids”) OR (MH “Assistive Technology Devices”) or (TI “assistive technology devices”) OR (AB “assistive technology devices”) OR (TI “adaptive equipment”) OR (AB “adaptive equipment”) OR (MH “Physical Activity”) OR (TI “physical activity”) OR (AB “physical activity”) OR (MH “Sex”) OR (TI “sex\*”) OR (AB “sex\*”) OR (MH “Intimacy Positions”) OR (TI “intimacy”) OR (AB “intimacy”) OR (MH “Intimacy”) OR (MH “Sexuality”) OR (MH “Toileting”) OR (MH “Toilet Training”) OR (TI “toilet\*”) OR (AB “toilet\*”) OR (MH “Bowel and Bladder Management”) OR (TI “bowel and bladder”) OR (AB “bowel and bladder”) OR (MH “Pets”) OR (MH “Pet Therapy”) OR (MH “Human-Pet Bonding”) OR (TI “pet\*”) OR

(AB "pet\*") OR (MH "financial management") OR (TI "financial management") OR  
 (AB "financial management") OR (TI "money management") OR (AB "money  
 management") OR (MH "disability management") OR (TI "disability management") OR  
 AB "disability management") OR (MH "Wellness") OR (TI "wellness") OR (AB  
 "wellness") OR (MH "meal preparation") OR (TI "meal\*") OR (AB "meal\*") OR (MH  
 "Meals") OR (MH "cooking") OR (TI "cooking") OR (AB "cooking") OR (TI "baking")  
 OR (AB "baking") OR (MH "Religion or Religions") OR (TI "religio\*") OR (AB  
 "religio\*") OR (MH "Spirituality") OR (TI "spirituality") OR (AB "spirituality") OR (MH  
 "safety") OR (MH "home safety") OR (TI "safety") OR (AB "safety") OR (MH  
 "shopping") OR (TI "shop\*") OR (AB "shop\*") OR (MH "Social Skills Training") OR (TI  
 "social skill\*") OR (AB "social skill\*") OR (TI "volunteer") OR (AB "volunteer") OR  
 (MH "Therapeutics") OR (TI "Therapeutics") OR (AB "Therapeutics") OR (MH  
 "Rehabilitation") OR (TI "rehab\*") OR (AB "rehab\*")) AND (MH "Skilled Nursing  
 Facilities") OR (TI "skill\* nursing") OR (AB "skill\* nursing") OR (MH "Nursing  
 Homes") OR (MH "Nursing Home Patients") OR (TI "nursing home\*") OR (AB  
 "nursing home\*") OR (MH "Rehabilitation Patients") OR (MH "Rehabilitation") OR (TI  
 "rehab\*") OR (AB "rehab\*") OR (TI "postacute") OR (AB "postacute") OR (TI "post  
 acute") OR (AB "post acute") OR (TI "transitional unit\*") OR (AB "transitional unit\*")  
 OR (MH "Rehabilitation, Geriatric") OR (TI "geriatric rehabilitation") OR (AB "geriatric  
 rehabilitation") OR (MH "subacute care") OR (TI "subacute") OR (AB "subacute")

## Appendix D

### Abstract and Full Text Screening Questions

## Abstract and Full Text Screening Questions

### Questions

1. Published 1991 or later? (Yes or No)
2. Is it in English? (Yes or No)
3. Is it peer-reviewed? (Yes or No)
4. Is it Level I-VI evidence (Yes or No)
5. Does it involve older adults 65+? (Yes or No)
6. Does it contain OT interventions (see definition)? (Yes or No or Maybe)
7. Did the research occur in SNF or comparable (see definition)? (Yes or No or Maybe)

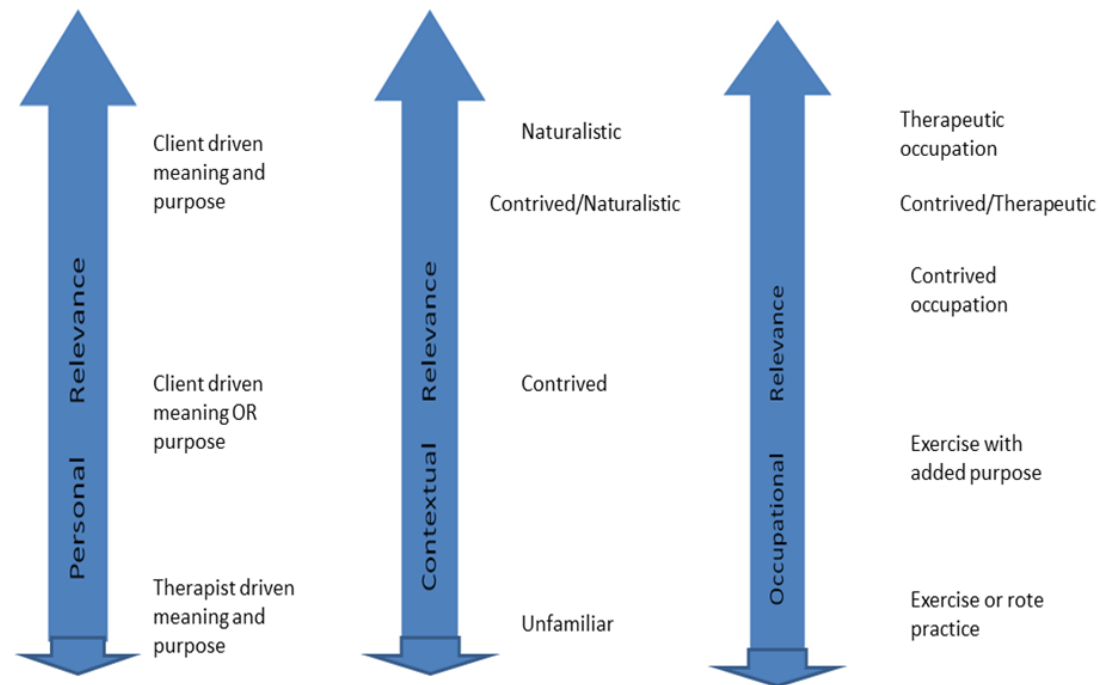
If no, why abbreviation:

1. no-date
2. no-lang
3. no-pr
4. no-ev
5. no-age
6. no-ot
7. no-snf

## Appendix E

### Occupation-Centered Intervention Assessment: Version 1

## Occupation-Centered Intervention Assessment: Version 1



## Occupation-Centered Intervention Assessment: Version 1

Appendix F  
Questionnaire



### Questionnaire

1. Do the three continua on the Guide to Occupation-Based Practice demonstrate the full range of items to consider when designing interventions for occupational therapy practice in skilled nursing facilities? Explain your response. If no, what would you add/delete.
  - a. Are there levels that you would add/delete from the personal relevance continuum? Please explain your response.
  - b. Are there levels that you would add/delete from the contextual relevance continuum? Please explain your response.
  - c. Are there levels that you would add/delete from the occupational relevance continuum? Please explain your response.
2. Do you feel that the tool is able to fully capture the most important elements of occupational therapy practice? Explain your response.
3. How would you envision yourself using this tool?
4. Other comments.

## Appendix G

### Typed Script

### Typed Script

Today we'll be using the Occupation Centered Intervention Assessment to score 10 videos. I will read a vignette, you will view a video of an occupational therapy session, and then you will have as much time as you need to score the session using the OCIA.

You should have 11 copies of the scoring sheets, 5 sheets copied on both sides, and one blue sheet. You should also have 1 copy of a summary score sheet, where scores from all 10 videos can be recorded. Please make sure that you put a checkmark inside the parenthesis, indicating that you know the data will be used for research, on all sheets, i.e. every single sheet. If you need to put an identifying mark or word on your summary score sheet, please use something other than your name.

Please do not talk to each other about how you score the videos. Additionally, it will be very important for you to NOT change your answers. I will not be answering any questions about the video or about the score sheet. If you wish to consult the guide, there are a couple of copies here at the desk.

Before each video, you will be instructed to put the number and name of the video on the top of the score sheet. A vignette will be read, you will view the video, and then score on one of the "arrow" score sheets. Then, you will enter the scores onto the summary score sheet in the appropriate box.

When we have finished the videos, please compile your score sheets in order from #1 through #10, and hand them in. Please also return your summary score sheet to (Deborah).

## Appendix H

### Clinical Scenarios

## Clinical Scenarios

### 1. Dementia Part 2: Doffing Socks

- a. Gladys is a 75 y/o woman who was previously living at home with her husband and is diagnosed with dementia. She had a sudden decline in functional status and ability to care for herself, so her family brought her to the hospital. She was there for three days and then discharged to a skilled nursing facility where she is receiving occupational therapy services. Gladys and her family indicated that they would like to bring her back home, however, they state that if she doesn't improve, she may need to stay at the SNF long term. Gladys' family stated that she needs to be able to do the following tasks in order to return home with her spouse: complete TB dressing w/ cuing, toileting w/ cuing, and complete transfers w/ min assist. Gladys has been in her w/c for the last year due to decreased balance and a history of falls at home, but was able to transfer herself with cuing from her husband. Her husband completes all of the home management tasks. Gladys really enjoys spending time with her family, quilting, and playing cards.

### 2. Hip Fracture Part 1: Self Care at Sink

- a. Trudy is a 79 y/o woman who was previously living alone at home, in a senior apartment. She was independent with all of her self cares, home management tasks, and community mobility. She fell on the ice while getting her mail and sustained a left femur fracture. She has been in the SNF for the past 3 weeks receiving occupational and physical therapy. She would like to return home in the next month. She needs her vitals monitored at this time due to occasional drops in O2 and increased HR and BP. Trudy completed the COPM with the OT at admission and reported these five tasks as the most important for her: completing her morning routine (dressing, bathing, toileting, grooming), cooking a simple meal, getting her mail, getting in/out of bed, and having coffee with her friends.

### 3. IADLs: Arranging Flowers While Standing

- a. Camille is an 82 y/o woman who had a stroke 3 months ago and is being seen by a home health OT. She was previously independent with all self cares, home management tasks, and was very involved with volunteering in the community and with her church. She has a lot of interests and hobbies, including tending to a large garden with lots of flowers. Now that Camille is home, she has is independent with her basic self cares from her w/c, but finds that she gets fatigued very easily and can only stand for short periods of time (up to 2-3 min) and has decreased balance. Camille would also like to use her left arm again for

functional tasks and is disappointed that she is unable to use her arm more. Camille completed the COPM and rated the following 5 items as the most important to her: volunteering at her church, typing emails to her family, using the oven to prepare meals, being able to walk in her home, and drive. In the video: you see the OT and Camille working on arranging flowers, this is very motivating to Camille, is not one of her primary goals and is being used to improve standing endurance and facilitate hand function.

4. IADLs: Making a Sandwich Part 1
  - a. George is a 73 y/o male who had a stroke 3 months ago and is being seen by a home health OT. He was previously independent with all self cares and home management tasks. His wife volunteers over the lunch hour in the community, so he has stated that he would really like to be able to prepare his own lunch. He also would like to improve his standing tolerance and hand function.
5. ICU Treatment Begins, Part 3: Sitting on the Edge of the Bed
  - a. Tom is a 44 y/o male who was in a car accident and had a traumatic brain injury. He got out of surgery yesterday and this is his first treatment session in the ICU. Tom was previously independent with all ADLs/IADLs and worked full time at a bank. Tom and his wife indicated that they would eventually like him to return home. His current goals are to: dress himself, toileting, feeding, and communicate w/ his children. The OT knows that before he can work on his goals that he needs to be able to sit up on the edge of the bed, so she asks him to get up for the first time during this video, and Tom agrees. The OT does not ask what Tom's bedroom at home looks like.
6. Radial Fracture, Patient Education Part 4: Strengthening and Edema
  - a. Katie is a 38 y/o female who lives independently in the community and is seeing an outpatient occupational therapist after a radial fracture repair. This session is 8 weeks post surgery. Katie is independent with all of her ADLs and IADLs but is struggling with grasping items due to hand weakness (e.g. opening jars, holding the steering wheel, and writing). The OT talked about occupation during the initial interview, but has not linked the exercise program to how that will improve her occupations that involve grasping objects.
7. Rotator Cuff Repair, Part 7: Scapular Mobilizations
  - a. Allison is a 52 y/o woman who lives independently in the community and works full time as an office manager. She is 7 weeks post rotator cuff repair. She is having difficulty with completing some of her tasks at work due to pain and limited shoulder ROM. She is tired of asking her co-workers to help her with tasks. The OT has not asked Allison about her job duties and tasks, but is aware

of Allison's shoulder pain and limited ROM. Allison reports that the scapular mobilizations are very useful and help decrease pain (OT directed).

8. Self Care, Part 2, Washing at Sink in Acute Care

- a. Bryan is a 25 y/o male who was previously independent with all ADLs/IADLs and worked full time at Target as a clerk. He had a CVA 1 week ago and is having a difficult time with adjusting. He prefers to lie in bed all day long and needs a lot of encouragement to participate in therapy. Bryan states that he just wants to go home and not do any of this "nonsense." His girlfriend states that Bryan enjoys going out for drinks with his friends, playing video games, and "messaging" with his motorcycle. Bryan is currently dependent with all of his self cares, and at this time needs a lot of encouragement to work on these tasks. Bryan used to wash his face in the shower only. The OT is trying to get Bryan to use his hand more and get him out of bed more.

9. Self Care, Donning Shirt

- a. Tom is a 49 y/o male who had a CVA 3 weeks ago. He was previously living at home independently and works FT as a supervisor at a printing factory. He is being seen as inpatient acute and is working with the OT on UB dressing. Tom would like to go home with his wife and reports the following tasks as his top priorities: morning routine (dressing, toileting, bathing), going up stairs so he can get to his bedroom, and driving. The OT asks Tom what he would like to work on today, and he said putting on his shirt.

10. One-Handed Shoe Tying

- a. This is Tom again (from video #9) for his second intervention of the day. Tom currently has his wife or the CNAs put on his shoes. However, when the OT suggested that he might need to be able to tie his own shoes, he agreed. These are Tom's boots that he wears to work.



Appendix I

Phase IV Score Forms

## Phase IV Score Forms

### Inter-Rater Reliability on the OCIA

Approximately how many times have you viewed the video lecture? \_\_\_\_\_

Approximately how many times have you read the OCIA guide? \_\_\_\_\_

Are you bringing your own notes with you in order to score the videos? \_\_\_\_\_

Video	Personal	Contextual	Occupational	Using Guide while Rating?
#1- Gladys				Y_____ N_____
#2- Trudy				Y_____ N_____
#3- Camille				Y_____ N_____
#4- George				Y_____ N_____
#5- Tom				Y_____ N_____
#6- Katie				Y_____

				N_____
#7- Allison				Y_____ N_____
#8- Bryan				Y_____ N_____
#9- Tom(a)				Y_____ N_____
#10- Tom(b)				Y_____ N_____

By checking ( ✓ ) the parenthesis I give assent for the data on this form to be used for research purposes ( ).

Appendix J  
Field Note Form

Field Note Form

**Event description:**

**Date/Time:**

**Therapist:**

**Client:**

Physical Setting: draw diagram of physical environment including placement of primary furniture and used objects. Using all senses, describe environment.

Social environment: Is anyone else present? What is the nature of the relationships of those present?

<b>Observations:</b> (quotes, relationships, activities, acts, objects) [CONSIDER NEEDS TO COMPLETE OCIA]	<b>Comments:</b> (feelings, interpretations). Ask yourself: How natural is the context? Who is “driving” therapy, what is the purpose of the task? How involved is the client?

## Appendix K

### Therapist/Client Dyad Checklist

### Therapist/Client Dyad Checklist

Please record the time of day, location, length of stay, observer initials, and date of observation for each observed session.

Data collection will stop for each dyad once all categories are checked (except for other location). Additional sessions will be added if more than 7 observations occur. A new chart will be created for every therapist/client dyad. Charts will be color coded by therapist (e.g. Therapist A= blue; Therapist B=pink). Each therapist will be observed with up to 5 clients.

\*Note –Identifying information is not included on this form.

Pseudonym: A1										
	Session #	1	2	3	4	5	6	7	8	9
Time of Day  (record  exact time  of session)	Early Morning	(7:03-  7:25)  (7:49-  8:10)						(7:00-  7:4  5)		(7:15-  8:0  1)
	Mid/Late  Morning		(9:01-  9:4	(9:05-  9:4	(10:00-  11:00)	(9:55-  10:45	(10:13-  11:00			

			5)	0)		)	)			
	Afternoon								(1:02-1:58)	
Location (specify as needed)	Room	X			X (started)	X (started)		X		X
	Clinic	X	X	X	X	X	X		X	
	Other									
Length of Stay (Session #)	Beginning (1-3)	3								
	Middle		7	9	11	13	15	17	21	
	Discharge (last 3 days prior to d/c)									22



Pseudonym: B1						
	Session #	1	2	3	4	5
Time of Day (record exact time of session)	Early Morning	6:47-7:41				
	Mid/Late Morning		10:34-11:25	9:25-10:15	10:27-11:23	9:47-10:40
	Afternoon					
Location (specify as needed)	Room	X				
	Clinic		X	X	X	X
	Other					
Length of Stay	Beginning (1-	1				

(client's session #)	3)					
	Middle		4	10	12	
	Discharge (last 3 days prior to d/c)					14

Pseudonym: B2				
	Session #	1	2	3
Time of Day (record exact time of session)	Early Morning (before breakfast)		6:48-7:29	
	Mid/Late Morning (after breakfast before lunch)	9:31-10:32		9:45-9:50 (client refused)

	Afternoon			
Location (specify as needed)	Room		X	X
	Clinic	X		
	Other			
Length of Stay (client's session #)	Beginning (1-3)	X		
	Middle		5	
	Discharge (last 3 days prior to d/c)			7 *readmitted to hospital

Appendix L  
IRB Approval Forms



**Institutional Review Board**

Office of Research and Sponsored Programs  
P.O. Box 425619, Denton, TX 76204-5619  
940-898-3378 FAX 940-898-4416  
e-mail: IRB@twu.edu

February 26, 2013

Ms. Vanessa Jewell

Dear Ms. Jewell:

*Re: Development of the Guide to Occupation-Based Practice (Protocol #: 17266)*

Your application to the IRB was reviewed and approved on 2/26/2013. This approval is valid for one (1) year. The study may not continue after the approval period without additional IRB review and approval for continuation. It is your responsibility to assure that this study is not conducted beyond the expiration date.

Any modifications to this study must be submitted for review to the IRB using the Modification Request Form. Additionally, the IRB must be notified immediately of any unanticipated incidents. If you have any questions, please contact the TWU IRB.

A request to close the study file must be submitted to the IRB at the conclusion of the study. If using a consent form, copies of the signed informed consent are to be submitted with this request before the study file can be closed.

The Institutional Review Board is pleased to acknowledge your sense of responsibility for ethical research. If you have any questions concerning this review, please contact me at (214) 689-6571 or email cbailey2@twu.edu.

Sincerely,

Dr. Catherine Bailey, Chair  
Institutional Review Board - Dallas

cc. Dr. Catherine Candler, School of Occupational Therapy - Dallas  
Dr. Noralyn Pickens, School of Occupational Therapy - Dallas  
Graduate School

UNIVERSITY *of* WISCONSIN  
**LA CROSSE**

To: Vanessa Jewell

From: Bart Van Voorhis, Coordinator  
Institutional Review Board (IRB) for the  
Protection of Human Subjects

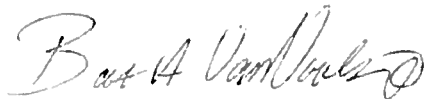
Date: May 31, 2013

Re: RESEARCH PROTOCOL REVISIONS SUBMITTED TO IRB

Your protocol revision, "**Development of the Guide to Occupation-Based Practice**", has been received, reviewed and approved under expedited review procedures in accordance with 45CFR46, 46.110(a)(b). You may proceed with your research.

Remember to provide participants a copy of the consent form and to keep a copy for your records. Consent documentation and IRB records should be retained for at least 3 years after completion of the project.

Good luck with your project!



cc: IRB File

**Graduate Studies and Research & Sponsored Program**  
220 Morris Hall, University of Wisconsin-La Crosse  
1725 State Street, La Crosse, WI 54601  
Phone (608)785-8124 and (608) 785-8007  
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**INSTITUTIONAL REVIEW BOARD**

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713-794-2480 (Houston)

<http://www.twu.edu/research/irb.asp>

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MAY 20 2013

RESEARCH & SPONSORED PROGRAMS  
TEXAS WOMAN'S UNIVERSITY

**STUDY MODIFICATION REQUEST**

**Principal Investigator:** Jewell, Vanessa    **Protocol #:** 17266    **Campus:** Dallas

**Title of Study:**  
Development of the Guide to Occupation-Based Practice

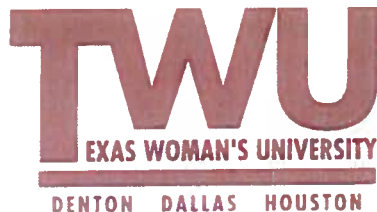
**Description of Modification Requested:**

Please see modification request with added Phase IV for an inter-rater reliability study. All details are described in the attached cover letter.

**List of Attachments:**

No Attachments

*5-20-13 approved  
Dr. Laraine Bailey*



**Institutional Review Board**  
Office of Research and Sponsored Programs  
P.O. Box 425619, Denton, TX 76204-5619  
940-898-3378 FAX 940-898-4416  
e-mail: IRB@twu.edu

July 15, 2013

Ms. Vanessa Jewell

Dear Ms. Jewell:

*Re: An Exploration into Occupational Therapy Practice in Skilled Nursing Facilities (Protocol #: 17373)*

Your application to the IRB was reviewed and approved on 7/15/2013. This approval is valid for one (1) year. The study may not continue after the approval period without additional IRB review and approval for continuation. It is your responsibility to assure that this study is not conducted beyond the expiration date.

Any modifications to this study must be submitted for review to the IRB using the Modification Request Form. Additionally, the IRB must be notified immediately of any unanticipated incidents. If you have any questions, please contact the TWU IRB.

A request to close the study file must be submitted to the IRB at the conclusion of the study. If using a consent form, copies of the signed informed consent are to be submitted with this request before the study file can be closed.

The Institutional Review Board is pleased to acknowledge your sense of responsibility for ethical research. If you have any questions concerning this review, please contact me at (214) 689-6571 or email cbailey2@twu.edu.

Sincerely,

Dr. Catherine Bailey, Chair  
Institutional Review Board - Dallas

cc. Dr. Catherine Candler, School of Occupational Therapy - Dallas  
Dr. Noralyn Pickens, School of Occupational Therapy - Dallas  
Graduate School



UNIVERSITY of WISCONSIN  
LA CROSSE

To: Vanessa Jewell

From: Bart Van Voorhis, Coordinator  
Institutional Review Board (IRB) for the  
Protection of Human Subjects  
[bvanvoorhis@uwlax.edu](mailto:bvanvoorhis@uwlax.edu)  
5-6892

Date: July 26, 2013

Re: RESEARCH PROTOCOL SUBMITTED TO IRB

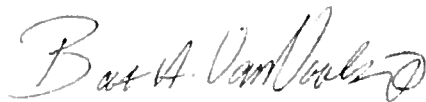
The IRB Committee has reviewed your proposed research project: *"An Exploration into Occupational Therapy Practice in Skilled Nursing Facilities"*

Because your research protocol will place human subjects at minimal risk, it has been approved under the expedited review category in accordance with 45CFR46, 46.110(a)(b).

Since you are not seeking federal funding for this research, the review process is complete and you may proceed with your project. Remember to provide participants a copy of the consent form and to keep a copy for your records. Consent documentation and IRB records should be retained for at least 3 years after completion of the project.

Please note that this approval is for a one year period only, from the date of this letter. If the project continues for more than 12 months, an IRB renewal must be requested using Attachment C on the IRB website. Please submit Attachment C one month prior to the date on this letter. Continued data collection beyond this date will place your project in non-compliance. The IRB is required to report instances of noncompliance to the Federal Office of Human Research Protections.

Good luck with your project!



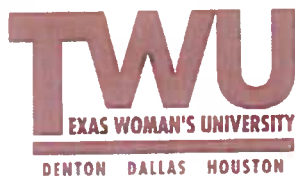
cc: IRB File

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**JUL 25 2013**

RESEARCH & SPONSORED PROGRAMS  
TEXAS WOMAN'S UNIVERSITY

**STUDY MODIFICATION REQUEST**

**Principal Investigator:** Jewell, Vanessa    **Protocol #:** 17373    **Campus:** Dallas

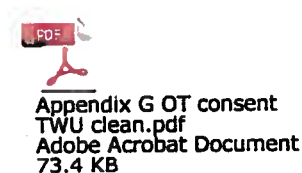
**Title of Study:**  
An Exploration into Occupational Therapy Practice in Skilled Nursing Facilities

**Description of Modification Requested:**

Requesting to remove the University of Wisconsin-La Crosse from the dual review process.

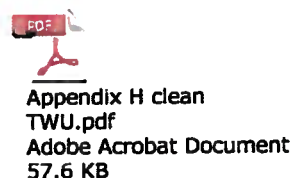
**List of Attachments:**

Occupational Therapist Consent F...



*Chapter 6 17-25-13  
Leanne Jewell (to add)*

Script



Client Consent Form

