



2005

An Occupation-Based and Client-Centered Hand Therapy Protocol

Nathan Yeager
University of North Dakota

[How does access to this work benefit you? Let us know!](#)

Follow this and additional works at: <https://commons.und.edu/ot-grad>



Part of the [Occupational Therapy Commons](#)

Recommended Citation

Yeager, Nathan, "An Occupation-Based and Client-Centered Hand Therapy Protocol" (2005). *Occupational Therapy Capstones*. 321.

<https://commons.und.edu/ot-grad/321>

This Scholarly Project is brought to you for free and open access by the Department of Occupational Therapy at UND Scholarly Commons. It has been accepted for inclusion in Occupational Therapy Capstones by an authorized administrator of UND Scholarly Commons. For more information, please contact und.common@library.und.edu.

AN OCCUPATION-BASED AND CLIENT-CENTERED
HAND THERAPY PROTOCOL

by

Nathan Yeager

Advisor: Jan Stube, Ph.D., OTR/L

A Scholarly Project

Submitted to the Occupational Therapy Department

of the

University of North Dakota

In partial fulfillment of the requirements

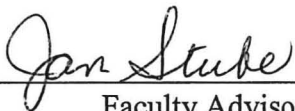
for the degree of

Master's of Occupational Therapy

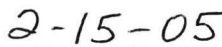
Grand Forks, North Dakota
May 2005



This Scholarly Project Paper, submitted by Nathan Yeager in partial fulfillment of the requirement for the Degree of Master's of Occupational Therapy from the University of North Dakota, has been read by the Faculty Advisor under whom the work has been done and is hereby approved.



Faculty Advisor



Date

PERMISSION

Title: An Occupation-based and Client-centered Hand Therapy Protocol

Department: Occupational Therapy

Degree: Master's of Occupational Therapy

In presenting this scholarly Project in partial fulfillment of the requirements for a graduate degree from the University of North Dakota, I agree that the Department of Occupational Therapy shall make it freely available for inspection. I further agree that permission for extensive copying for scholarly purposes may be granted by the professor who supervised my work or, in her absence, by the Chairperson of the Department. It is understood that any copying or publication or other use of this Scholarly Project or part thereof for financial gain shall not be allowed without my written permission. It is also understood that due recognition shall be given to me and the University of North Dakota in any scholarly use which may be made of any material in my Scholarly Project.

Signature  Date 2-1-05

TABLE OF CONTENTS

CHAPTER		
I.	INTRODUCTION.....	1
	Statement of the Problem.....	3
	Purpose of the Study.....	4
II.	REVIEW OF THE LITERATURE.....	6
	Holism.....	6
	Outcomes of Occupation in Hand Therapy.....	7
	Challenges to Occupation-Based Practice.....	11
	Summary.....	16
III.	METHOD.....	17
	Methodology.....	17
	Case Study.....	18
IV.	PRODUCT.....	19
	Seven Stages of the Occupational Performance Process Model.....	20
	Case Study Application.....	21
	Summary.....	26
V.	SUMMARY.....	27
	Clinical Applications.....	29
	APPENDIX.....	32
	REFERENCES.....	34

CHAPTER I

INTRODUCTION

The effects an upper-extremity injury has on someone's life are vast. Imagine the things that you could no longer do if you could no longer use one or both of your hands and/or arms. The use of our hands and arms is at the core of what we do and who we are. Hand therapists play a critical role in restoring function and alleviating pain. "A hand therapist is an occupational or physical therapist who, through advanced study, specializes in rehabilitating (clients) with problems affecting the hands and arms" (Dale, et al. 2002, p. 35). According to Case-Smith (2003) clients with upper-extremity injury hand therapy focuses on enabling the client to regain functional use of the traumatized arm and hand or both and return to pre-injury function. Traditionally, during a treatment session the therapist may address physiological issues like pain or scarring with the use of physical agent modalities, manual techniques, isolated exercise, and/or splinting. Ideally, therapists should individually design and utilize therapeutic occupations that focus on the client's functional goals (Case-Smith, 2003). According to Trombly and Radomski (2002) occupations are "activities in which the patient actively participates, identifies as purposeful and meaningful, uses real objects in natural environments"(p. 256). I became fascinated with this area of practice soon after I learned of its stunning complexities and functional capabilities. When you can restore the function that was lost, it provides a great sense of importance because we value our hands so greatly.

In order to provide occupation-based interventions you must first look at the bigger picture and embrace the theoretical constructs of holism and client-centered practice. Holism means to look at the person or client as a whole and not just in parts (Finlay, 2001). Trombly and Radomski (2002) define client-centered practice as an “approach to service delivery that emphasizes the client’s right to autonomy and choice and that focuses intervention on needs defined by the client” (p. 784). These two concepts relate in that to provide occupation-based interventions the therapist needs to look at the whole person and work with the client in developing interventions that are meaningful to that person and are ones that the clients choose to do. By using these concepts the client is empowered and becomes actively involved in the healing process (Frost & Stricoff, 1997). A theoretical model that brings these constructs together is the Canadian Model of Occupational Performance (CMOP). This model considers three dimensions of the client; the environment, occupation, and person (Canadian Association of Occupational Therapists, 1997). To develop interventions the creators of this model have developed a seven stage Occupational Performance Process. This process “leads to the best solutions to the issues that clients bring to occupational therapy” (Canadian Association of Occupational Therapists, 1997, p. 60)

However, in today’s economically driven healthcare system, hand therapists are often compelled to use reductionistic and technical therapies that are not occupation-based or purposeful. According to Burke and Cassidy (1991), hand therapists are often pressured by time constraints to use pre-packaged treatment protocols that are based on a diagnosis. When the therapy is not purposeful to the

client or does not engage the client in occupation one could argue that the therapy is not client-centered. Another barrier to providing occupation-based intervention is that hand therapists are “often unable to observe clients in their home and other community environments and need a method that captures physical, contextual, and psychosocial aspects of the rehabilitation process as they occur in the client’s actual lived environment” (Toth-Fejel, Toth-Fejel, & Hedricks, 1998, p. 381). Typically, with the utilization of reductionistic and technical approaches, the upper-extremity is broken down into component parts or systems and the therapist treats the specific dysfunction part in hopes of restoring function. By doing this occupational therapists are blurring the roles of physical therapy and themselves and, worst of all, not providing the best possible treatment for their clients. Another barrier to this practice is the fact that being client-centered and developing occupation-based interventions can require more time on the therapist’s end. Many therapists believe that the time it takes to develop these interventions takes time away from direct treatment. See the appendix for additional barriers to occupation-based interventions.

Statement of the Problem

By solely relying on the medical model, therapists and their clients are missing the proven benefits that added purpose, occupation-based, and client-centered practice bring. Many hand therapists currently use rote exercise as interventions when treating clients. Rote exercise is simplistic repetitive movements that are performed without meaning, for example, squeezing a hand exerciser. The performance of clients engaged in purposeful and meaningful treatments has been contrasted to those lacking purpose and meaning for many years. According to

Zimmer-Branum and Nelson (1995), “rote exercise is narrow in purpose, aloof or abstracted from the environment, and lacking in the sensory stimulation provided by most naturalistic occupation” (p. 398). Many hand therapists use rote interventions because they are purer, more reproducible, and more easily measured and compared than movements during occupation-based activity (Cooper, Paquette, Evarts, & Moorhead, 1998). In a study by Zimmer-Branum and Nelson (1995) a statistically significant number of the participants chose to do occupation-based interventions over rote exercise. By doing interventions that clients like it enhances the quality of performance and fosters the long-term sense of self-efficiency. Occupation-based interventions result in increased range of motion, better-organized motion, greater accuracy of movement, and longer involvement in tasks (Thomas, 1996). Purposeful occupation-based interventions are also believed to produce adaptive responses that are not provided by isolated exercise (Cooper, et al., 1998). According to Pierce (2001) “if the intervention accurately targets an occupational outcome desired by the client, even the most mechanistic approach to intervention can be considered occupation-based” (p. 257). When the interventions are not occupation-based the skills that are learned and the advances that are made in therapy do not generalize into daily activities, and therefore fail (Cooper, et al., 1998).

Purpose of the Study

In the following chapters, I review this and other literature while more closely examining these issues. I will describe the method that I used to navigate through this information and develop my final product. The product presented within this project is one that will guide hand therapists through over-coming the previously mentioned

barriers and developing effective and powerful occupation-based interventions. I hope this project will inspire and educate future therapists in utilizing methods and ideas that will facilitate client-centered and occupation-based practice.

CHAPTER II

REVIEW OF LITERATURE

To gain a more detailed understanding of hand therapy and occupation-based intervention current literature was reviewed and analyzed. This literature focuses on holism, outcomes of hand therapy, the importance and effectiveness of occupation-based practice, overcoming the difficulties in utilizing occupation-based therapy, and the implementation of occupation-based hand therapy.

Holism

A phenomenological qualitative study by Finlay (2001) focused on what extent occupational therapists value holism and the degree to which they utilize holistic treatment. The author conducted a review of the literature and it explored the definition of holism and occupational therapy's foundation in holism. The review detailed four assumptions of the holistic approach and indicated that today more occupational therapists are obligated to use reductionistic protocols and are moving away from holistic and individualized care. Twelve occupational therapists from the United Kingdom were selected through convenience sampling to participate in the study. Of the participating therapists, three worked in a physical hospital setting, one worked in a large psychiatric hospital, and the others worked in the community. The researchers used semi-structured interviews, field diaries, and observation to gather the data over a four-week time span. The data was then collected, analyzed, and sorted into three themes. The themes that emerged were "The Celebration: Valuing Holism", "The Search: Working out What Holism Means for Practice", and "The Struggle: Tensions of Applying Holism in Practice" (Finlay, 2001, pp. 271-272).

Through these themes, the author found that the participants did in fact value holism and identified it as a major priority. However, it was also found that the participants provided varying explanations/ definitions of holism, indicating a general misunderstanding of the term and its application in practice. Under the third theme, participants were noted using reductionistic methods and treatment and reported environmental constraints as the cause of this. This supports the notion that therapists seek to pursue holistic practice but the current health care systems are unsupportive of these priorities. The author concluded by stating that therapists should use clinical judgment when deciding whether or not to use holistic treatment and that holism means different things at different times to different people.

Outcomes in Hand Therapy

Occupational therapists practicing in the hand therapy setting should also base their practice in holism and client-centeredness to facilitate optimum treatment outcomes. A descriptive quantitative study by Case-Smith (2003) focused on measuring the outcomes after outpatient occupational therapy for clients with upper-extremity dysfunction. A review of the literature was completed and the researcher found that there had been numerous outcome studies of hand therapy done in the past, but none of them had measured the client's goals. Thirty-three participants with upper-extremity dysfunction were selected through convenience from the Ohio area. The study indicated that one method of developing client-centered goals and incorporating them into treatment was to use the Canadian Occupation Performance Measure (COPM). The clients were pre- and post-tested with the COPM, Disabilities of the Arm, Shoulder, and Hand (DASH), and the Short Form 36 Health Survey (SF-

36) with approximately eight weeks of treatment in-between. The results of the study indicated that hand therapy was effective and that participants demonstrated statistically significant improvement in functional performance on all three previously mentioned measures. The participants, on average, doubled their scores on the COPM, gaining about four points in satisfaction and perceived performance. The results of this study showed that the participants identified ADLs as a priority for treatment, 18 of the 33 indicating that driving was the top priority. This information may have been missed without the COPM. This study also showed that client-centered hand therapy was effective, which leads us to question the effectiveness of treatment that is not client-centered. However, this study was limited by the small sample size, the variety of diagnoses, the method of sampling used, and the lack of randomization.

To achieve positive outcomes the occupational therapist plans or uses the occupational form that brings out, directs, or structures the person's occupational performance (Thomas, 1996). A quantitative study by Thomas (1996) focused on measuring the effect of various occupational forms on the participants. Thomas (1996) found that material-based and purposeful tasks enabled participants to complete more repetitions and demonstrate increased range of motion. The author sought to further generalize these results by involving healthy independent women in the current study. Forty-five elderly women were selected through convenience and randomly assigned into three different groups. The women in the materials-based group were positioned in a chair and cued to kick a balloon as long as they could. The women in the imagery-based group were positioned in a chair and cued to

pretend as though they were kicking a balloon and do this as long as they could. The rote-exercise group was also positioned in chairs and cued to straighten one leg as many times as they could. Each group was allowed as much of a break as they needed and then asked to complete another round of repetitions. The participants were observed and the dependant variables were recorded. The results showed that, on average, the participants in the materials-based group performed three times as many repetitions as the rote-exercise group and four times the repetitions of the imagery-based group. This supported the premise that varying occupational forms elicit different performance from clients. The difference in heart rates was not significant and the materials-based group required more rest between repetitions. More rest may have been needed because they completed twice to ten times the number of repetitions as the other subject groups.

Hand therapists are often required to choose between involving the client in purposeful occupational forms or isolated rote exercise. Cooper, Paquette, Evarts, and Moorhead (1998) discussed the merits and weaknesses of purposeful activity and isolated exercise. Cooper et al. (1998) indicate that hand therapy is reductionistic and based on the medical model due to the focus on “component parts” (Cooper et al., 1998, p. 1) and the remediation of symptoms in these areas. Concerns that hand therapists are becoming “paraphysical therapists” (Cooper et al., 1998, p. 1) were stated in this article. They believe this to be true based on research that indicates hand therapists are replacing purposeful activities with physical agent modalities like whirlpool, paraffin, and electrical stimulation (Cooper et al., 1998). The authors go on to define purposeful activity and isolated exercise. Through these definitions, it

was stated that purposeful activity produces unique adaptive responses. However, the authors also report that exercise itself can be purposeful because it is voluntary and goal oriented. It all comes down to the client and where they place their priorities and what they value as effective treatment. The authors also presented the idea that purposeful activity and isolated exercise are not polar opposites; they may be two ends of a continuum. Six criteria to help practitioners justify their choice between the two were presented, each of them correlated with the idea that these two treatment options are ends of a continuum. The authors believe that isolated exercise is not more effective than purposeful activity in hand therapy.

Other studies have also been conducted to determine if added purpose in treatment produces better client performance than rote exercise. A classical experimental quantitative study by Rice (1998) focused on examining the effectiveness of materials-based and rote exercise on cross transfer in a forearm supination and pronation task. A literature review was conducted and explained that materials-based exercise is when the client attaches purpose to the treatment using materials. The literature review went on to explain that cross transfer is demonstrated when an untreated limb improves its function when the opposite limb is treated. Thirty-six healthy participants were selected through convenience and randomly assigned to a group. The participants of each group were timed on the supination/pronation task of screwing wing nuts on and off bolts. The materials-based group was given a practice device that was similar to the test device. By doing this the participants were able to feel a sense of purpose for the exercise that they were doing, knowing that the post-test would be similar to what they were doing. The

rote exercise group was simply instructed to supinate/pronate their forearm a given number of times per day. The control group was not assigned any exercise or practice. The results indicated that the group that received the materials-based practice improved their performance in the trained and the untrained limb by a statistically significant amount over the rote exercise and control groups. This study clearly indicated that healthy clients respond better to treatment that they can place any amount of purpose upon. This study did not test mental imagery-based treatment as a way to link purpose to treatment, nor did it sample persons with functional impairment.

Challenges to Occupation-Based Practice

As reported by Finlay (2001) many occupational (hand) therapists indicate that they value occupation-based, client-centered, and purposeful intervention but they do not practice these concepts due to internal and external constraints. A qualitative study by Dale, Fabrizio, Adhlakha, Mahon, McCraw, Neyenhaus, Sledd, and Zaber (2002) investigated the strategies that hand therapists used to provide holistic treatment in an environment that is focused on cost containment. A literature review was conducted which found the environment encouraged a reductionistic approach to treatment that focused on solely reducing the problematic symptoms of the client's condition. The authors used purposive sampling to select five hand therapists who specialized in holistic practice in India. Each of the participants were interviewed and observed in a clinical setting. Using the grounded theory approach the data was coded, sorted, and analyzed. The results of the study identified three major strategies that the participants utilize to ensure client-centered/holistic

treatment. These included adapting, educating, and strategizing. Using these tactics, the therapists were able to learn new skills and refine existing skills. The article provides examples of how the participants utilized these approaches in their practice. The four principles of holism are also detailed in this article. The authors reported that for any of these strategies to be effective, therapists must keep the concept of holism in mind as the demands that are placed on hand therapists change.

In order to overcome these and other constraints or challenges hand therapists must develop and use plans to create holistic and occupation-based interventions. Pierce (2001) identified that increasing value is being placed on functional outcomes and other professions are claiming occupational therapy areas of expertise as their own. To meet this challenge the author suggested that occupational therapists translate their growing understanding of occupation into occupation-based practice. She offered “Three bridges to build” (Pierce, 2001, p. 250) to be successful in this translation. The bridges are a generative discourse on the use of occupation in practice, practice demonstration sites, and educating sophisticated practitioners to use knowledge of occupation in practice (Pierce, 2001). She provided and described tools to facilitate the completion of these bridges. These tools include occupational appeal, intactness, and accuracy (Pierce, 2001). With the concepts it was proposed that occupational therapists and/or hand therapists link the foundational theory of the importance and power of occupation to everyday practice and create, powerful interventions that will help clients reach their functional goals effectively. The article was also meant to assist occupational therapists in developing occupation-based

interventions using the occupational design approach. A diagram of this approach was provided within the article.

Cooper and Evarts (1998) indicated that therapists need to focus on implementing, teaching, and researching occupation-based interventions just as much as designing the interventions. Cooper and Evarts (1998) identified that occupational therapy practice, research, and education in hand therapy focus less on purposeful activity and more on physical agent modalities. They believe that by doing this, therapists are aligning themselves with a reductionistic medical model and blurring the difference between occupational therapy and physical therapy (Cooper and Evarts, 1998). They also believe that solely including purposeful activity into hand therapy is not enough. They think that therapeutic occupation is essential in creating treatment that is more relevant to real-life situations. This article also identified a need in the profession to build “bridges” between the theories and foundations of occupational science and hand rehabilitation (Cooper and Evarts, 1998, p. 19). The authors provided two case studies in which purposeful activity and therapeutic occupation were utilized. One case study shared the story of a client with RSD that was noncompliant with the home exercise program. Upon further investigation by the therapist, it was discovered that by using a purposeful activity the client became more compliant because she felt as though there was a point to what she was doing. The authors discussed the benefit of a treatment environment that is welcoming and warm over one that is high-tech. By creating an environment that is comfortable and familiar clients are more accustomed to generalizing treatment to their everyday lives and feel as though the treatment they are receiving is client-centered. Cooper and

Evarts (1998) stated, “best practice in upper-extremity rehabilitation is achieved when occupational therapists place therapeutic occupation and individualized attention to the needs of the occupational human at the center of their intervention” (p. 18).

The current focus or trend in health care and rehabilitation of functional performance emphasizes the importance of occupation-based interventions in hand therapy. An article by Bhavnani (2000) reported that the importance of occupation-based practice has been well documented. She stated that hand therapy traditionally emphasizes the use of physical agent modalities to alleviate painful symptoms with the hope that the clients will generalize skills and techniques learned into their everyday lives to prevent further complications. The article also stated that the American Occupational Therapy Association (AOTA) mandates that physical agent modalities be used in preparation for or adjunct to purposeful activity. To assist in the utilization of occupation-based practice she developed The Hand Therapy-ADL Evaluation. This evaluation is based on the COPM and lists the most common occupations that result in problems for clients experiencing upper-extremity injuries. The client scores performance areas on a four-point scale before, during, and after treatment. This in turn directs and redirects therapeutic treatment and functional goals, allowing for client-centered and occupation-based care. The evaluation also assists the client in identifying priorities. The article included a case study and a chart in which the evaluation was used. The data from the chart indicated that after nine weeks of treatment perceived performance of the clients improved minimally. However, satisfaction of performance improved dramatically. The evaluation is limited because it is not standardized and has not been researched. However, it fills

the AOTA requirement that was previously mentioned and it is one way in which hand therapists can begin to direct their treatment into a more occupation-based approach.

In order to be effective hand therapists must apply occupation-based intervention designed to specific clients and diagnoses. Frost and Stricoff (1997) created and utilized a client-centered treatment in a hand therapy setting that was studied in an ethnographic qualitative approach. Specifically, they worked with clients that were diagnosed with repetitive strain injury. The authors defined this as a biopsychosocial disorder, in the area of cumulative trauma disorders, involving chronic pain of the upper extremity. A thorough literature review was conducted and it was found that clients were not responding to treatment because the medical community was inappropriately and inadvertently over treating the symptoms. The authors further explored the specifics of the diagnosis and then began to detail their treatment strategy. Each patient was seen for twelve sessions over an eight-week period. Their treatment process began with an evaluation using the COPM and they developed goals from that. The authors chose this method because they believed that it empowers the client to become actively engaged in the treatment process. The article continued by elaborating on each treatment session, describing the goals of each session and activities used to meet them, however the efficiency of the outcomes were not reported. The authors concluded that clients are best treated by an approach that focuses on the whole person versus the particular symptoms. They closed by stating that clients must assume responsibility for what is happening to them.

Summary

In conclusion, holism and client-centered practice have long been at the foundation of occupational therapy in all of its practice settings including hand therapy. In order to provide the best care to the clients hand therapists must consider the whole person and ensure that the treatments are client-centered with occupation-based interventions. Holism and client-centered practice are valued concepts among today's hand therapists, however, they have struggled implementing and utilized them.

Some of the problems in utilizing occupation-based interventions have been within the healthcare system. Economically driven healthcare systems highly value reimbursement for services, cutting down on time the therapist has to get to know the client and work with them to develop meaningful goals and interventions. Another barrier is the focus on the medical model and component parts. With this focus therapists solely look at the problem and approach it with pre-packaged treatment protocols in an attempt to cure the injury.

To overcome these challenges hand therapists and the healthcare systems in which they work need to adopt a model of practice or systematic way of evaluating the client's needs and developing client-centered treatment and occupation-based interventions. By doing this hand therapists can efficiently manage their time and allow adequate reimbursement. In the following chapters a case study is presented to demonstrate the utilization of a systematic approach that produces client-center and occupation-based interventions for occupational (hand) therapy practice.

CHAPTER III

METHODOLOGY AND CASE STUDY

Methodology

The development of this protocol began with my interest in hand therapy. I then asked a member of the occupational therapy faculty, Dr. Jan Stube, with her experience and expertise in the area of physical dysfunction to help guide this process. After receiving information from my advisor and exploring the current literature I noted this controversial issue of occupation-based hand therapy. I began analyzing professional opinion papers and clinical research studies on the value and effectiveness of occupation-based intervention, current method of intervention development, and how other professionals are integrating occupation into treatment. After conducting an extensive literature review, my advisor and I discussed the best way to present the information and develop a product that would be beneficial to hand therapists. A case study methodology was chosen because it would provide an example of practical application of information, would allow for application of a conceptualized process, and best support the use of evidence-based intervention. The following case study is used to exemplify the application of the information and apply the process to a simulated client in order to provide a clear understanding of what the process entails as well as provide the reader with possible occupation-based interventions. The appendix is a compilation of various barriers to client-centered and occupational-based practice as well as solutions to those barriers by Sumion and

Smyth (2000). It was discovered during the review of literature and implemented into the product as an additional resource for therapists to utilize.

Case study

Mrs. Smith, an elderly woman, sustained a distal radius fracture in her right arm necessitating an external fixator. She developed severe pain in her hand and arm, which has gone untreated. Before this event, she had tended to her husband for four years after his stroke and had lived independently with him in their home. She was proud of her independence and thus found it extremely frustrating to have to depend on her friends for assistance with errands, chores, and driving. She stated that her main concern and problem was the inability to drive. She also reported that she missed doing household chores like ironing and meal preparation. She stated that it was stressful for her to watch the pile of clothes that needed to be washed and ironed pile up. The client was motivated to regain the function that she lost; however, she did not like doing exercise. She was much more interested in using meaningful activity to improve her range of motion or strength.

CHAPTER IV

PRODUCT

In this chapter, the creation of occupation-based intervention will be demonstrated through the use of the Occupational Performance Process Model (Canadian Association of Occupational Therapists, 1997). This model was developed as a method to ensure the use of client-centered principles and intervention through occupation. This product will guide the therapist through the entire process of client treatment with the use of occupation-based interventions through identifying issues to evaluation of the process.

Each of the seven stages is presented and explained in a manner that is easy to follow, understand, and apply to therapy. The model is also applied to the previously mentioned case study and the treatment based on that client is provided as an example for other therapists to follow. Therapists may use the example as a guideline; but each stage should be customized to each client. As this is done variations in treatment will become evident; however, the product of the process should still be occupation-based interventions.

A list of possible barriers to client-centered and occupation-based interventions is provided in the appendix with possible methods of overcoming these barriers. These methods are not related to the Occupational Performance Process; they are simply a way to identify and overcome difficulties in the process of creating occupation-based interventions.

Seven Stages of the Occupational Performance Process Model

Stage #1: Name, Validate and Prioritize Occupational Performance Issues

- Occupational performance issue(s) related to self-care, productivity and leisure occupations are named, validated and prioritized with the client. When no issues are identified, the process ends.

Stage #2: Select Theoretical Approach(es)

- When an occupational performance issue is named, validated and given priority, the occupational therapist selects, with the client input, one or more theoretical approach(es) that will guide the remaining stages of the process.

Stage #3: Identify Occupational Performance Components and Environmental Conditions

- The occupational therapist and client identify the occupational performance components (affective, cognitive, and/or physical) and environmental conditions that are contributing to the occupational performance issue(s).

Stage #4: Identify Strengths and Resources

- The strengths and resources that the client and the occupational therapist bring to the Occupational Performance Process are identified.

Stage #5: Negotiate Targeted Outcomes, Develop Action Plan

- The client and the occupational therapist negotiate the client outcomes to be targeted in occupational therapy, and develop action plans. The plans specify what the client and occupational therapist will do to resolve or minimize limitations to occupational performance in order to achieve the targeted outcomes.

Stage #6: Implement Plans Through Occupation

- Plans are implemented, reviewed, and modified on an ongoing basis. The plans address occupational performance issues by taking action to remove or reduce limitations in the occupational performance components and/or environmental conditions.

Stage #7: Evaluate Occupational Performance Outcomes

- The outcomes of the occupational performance process are identified. If the targeted outcomes have been achieved, services are completed. If the targeted outcomes have not been achieved, the targets are reviewed. If continuation of the process is perceived to be beneficial to the client, parts of the process are repeated.

(Canadian Association of Occupational Therapists, 1997, pp. 62)

Case Study Application

Stage #1: Name, Validate, and Prioritize Occupational Performance Issues

Mrs. Smith identified the following occupational performance issues in order of priority on the Canadian Occupational Performance Measure (COPM): 1) Inability to drive to transport herself and her husband to doctors appointments and run errands;

inability to iron and wash clothes; 2) inability to prepare meals; and 3) inability to write as she was right handed. For the purposes of this case study the application of the process for the occupational performance issues of meal preparation and household chores follows. Mrs. Indicated that her goal was to be independent in meal preparation and housekeeping for herself and her husband.

Stage #2: Select Theoretical Approach(es)

To address the issue of being unable to prepare meals biomechanical, environmental, and adaptive approaches were used. These approaches guided the occupational therapist in determining what to assess and selecting assessments that would measure those areas. Planning and implementation were consistent with these approaches, incorporating the instrumental activity of daily living of meal preparation, housekeeping, related tasks, and activities as a main focus.

Stage #3: Identify Occupational Performance Components and Environmental Conditions

Within the affective performance component, Mrs. Smith is feeling significant pressure to resume her functional status because of the needs of her husband. Since she is unable to complete the necessary tasks to do this her friends have provided some temporary assistance; however, Mrs. Smith feels guilty for burdening her friends in such a way and often rejects their assistance. She is unaware of any other possible solution to this problem. Assessment also revealed that Mrs. Smith is unable to perform minimal activity for extended periods of time due to the increased pain in her hand and arm that arises soon after she engages in activity.

The client does not have any problems in the cognitive performance component due to the fact that she possesses the necessary mental functions that are required of her to be successful in this occupational performance issue.

In the physical performance component Mrs. Smith is inhibited by poor strength and endurance in her wrist and hand and poor range of motion. All of these problems combined made it difficult for her to prepare food and maintain her home to the standards that she has for herself.

The environment in which she lived was insufficient to support Mrs. Smith's successful completion of the activities she valued. There was no equipment, such as pot and bowl stabilizers, that would allow her to prepare meals with one hand. She was also not utilizing community and social support that was available to her.

In summary, the assessments revealed that the occupational performance issue of the client's inability to prepare meals to feed herself and her disabled husband as well as perform household chores was related to multiple issues. One problem was her lack of knowledge and in using one-handed techniques to open containers of food, mix ingredients, cook food, serve it to her husband, as well as laundering cloths, general home cleaning. Lack of muscle strength in her right hand and wrist and decreased activity tolerance due to increased pain also made it difficult for her to perform these tasks of meal preparation and home maintenance. Possible lack of an adapted environment and a supportive social environment at her home is also a concern.

Stage #4: Identify Strengths and Resources

Mrs. Smith was highly motivated to return to her previous level of function and independence. Caring for her husband was also highly important to her and it is another reason she was willing to fully participate in therapy and do what it takes in order to achieve her potential. She was also practical in knowing that she needed time and accommodations in order to ensure that she could complete these tasks safely. As a retired nurse and with her years of experience Mrs. Smith was knowledgeable and equipped to continue care for her husband. Her adult children were supportive; however, they live a significant distance away from them. There are community organizations, which can assist her by delivering meals to their home while she is unable to prepare meals. The hand therapist had experience working with people who have sustained this type of injury and the available resources.

Stage #5: Negotiate Targeted Outcomes, Develop Action Plan

Targeted Outcome: Within 2 weeks Mrs. Smith will have prepared a meal and maintained the home for herself and her husband.

Criteria for measuring success from Mrs. Smith's perspective:

- Identify acceptable safe methods of meal preparation (e.g. gathering and mixing ingredients, cooking, and serving with one hand).
- Ability to maintain up to 20 minutes of physical activity with her right hand while experiencing minimal pain.
- Ability to open food containers.

Plans for occupational therapy action:

- The hand therapist will increase Mrs. Smith's strength and range of motion in her right hand and wrist.

- The hand therapist will demonstrate one-handed skills and adaptive equipment for opening food containers, mixing and cooking food, cleaning, and taking care of her husband; and coach Mrs. Smith in practicing these techniques.
- Mrs. Smith will identify and contact community resources that can assist her with the problem areas until she can resume her independence with these tasks. Support Mrs. Smith in accepting assistance.
- Mrs. Smith and the hand therapist will work together to identify potential physical and environmental barriers as well as devise strategies to overcome these issues.
- The hand therapist will use physical agent modalities to reduce Mrs. Smith's perceived pain in her arm.
- A splint will be created to provide support, protection, and stabilization to her wrist.

Stage #6: Implement Plans Through Occupation

The plans were accomplished. Mrs. Smith increased the strength and range of motion in her right hand and wrist with the use of occupation-based interventions. These interventions included activities like simulated ironing, washing windows, and stirring. The therapist demonstrated one-hand techniques and the client practiced them as she engaged in the activities such as preparing a small meal for her self. Mrs. Smith also arranged for community support services that she needed. As interventions like the application of physical agent modalities took place the therapist talked to Mrs. Smith about potential problems that may arise and problem-solved solutions to them. Once the external fixator was removed she wore a splint as she

performed the previously mentioned activities and interventions. Mrs. Smith's progress was regularly documented throughout her treatment process. It is important to mention that she was allowed to complete these activities with familiar methods and techniques and in an environment that closely matched that of her own.

Stage #7: Evaluate Occupational Performance Outcomes

After substantial progress Mrs. Smith was re-evaluated with the COPM. The measure showed that her perceived performance and satisfaction with performance issues of meal preparation and housekeeping increased significantly. The targeted outcome of independence of meal preparation and housekeeping had been achieved and she was satisfied with the treatment that she had received from the hand therapist. Unable to identify any further occupational performance issues the process was ended and Mrs. Smith was discharged from therapy.

Summary

This product has provided an outline and brief description of the Occupational Performance Process Model (Canadian Association of Occupational Therapists, 1997) and a case study that has been applied to this model as an example of how the process functions and as an illustration of how the model can be applied to enhance hand therapy. In addition, this project has brought occupation-based interventions into hand therapy through identification of barriers and solutions in the appendix.

CHAPTER V

SUMMARY

The preceding protocol was developed for the hand therapist providing upper-extremity rehabilitation services through interventions that are client-centered and occupation-based. It started with my interest in hand therapy and was guided by Jan Stube, Ph.D., a member of the occupational therapy faculty, who has noted experience and knowledge regarding physical dysfunction. An extensive literature review was then conducted in which significant issues were seen. It was found that many hand therapists today are simply using biomechanical approaches to treatment and they are not developing or utilizing occupation-based interventions. Consequently, there are unmet needs of the upper-extremity injury client related to daily occupations. Further, research has been conducted on the effectiveness of occupation-based activities as compared to those of a rote nature and overall recommendations for hand therapy clinical practice; but this information had not been integrated into a protocol that could be widely used by hand therapists.

This information was combined with additional literature in the areas of holism, client-centered practice, and barriers to the utilization of occupation-based and client-centered intervention techniques. It was found in a study by Thomas (1996) that occupation-based tasks enabled participants to complete more repetitions and demonstrate increased range of motion. The results of a study conducted by Rice (1998) indicated that a group that received occupation-based practice of a skill improved their performance in the trained and the untrained limb by a statistically significant amount over the rote exercise and control groups. These results indicated that this type of intervention is considered valuable to clients as well as practicing clinicians. For this reason occupation-based intervention was the focus of this hand therapy protocol for occupational therapists.

In the past hand therapists have strayed from occupation-based interventions and relied on other methods and techniques to treat clients. Cooper et al. (1998) indicated that hand therapy is historically reductionistic, based on the medical model, and focuses on the remediation of symptoms in “component parts” (p. 1). They believe this to be true based on research that indicates hand therapists are replacing purposeful activities with physical agent modalities like whirlpool, paraffin, and electrical stimulation. Physical agent modalities are proven treatment techniques. They should not be abandoned or avoided; instead, they should be used in conjunction with or in preparation for more occupation-based interventions. This is why they were utilized within the protocol’s case-study along with occupation-based interventions.

Assessment and intervention were further guided by the evidence and current occupational therapy practice in Canada. A study by Case-Smith (2003) study indicated that an effective method of developing client-centered goals and incorporating them into treatment as well as measuring progress was to use the Canadian Occupation Performance Measure (COPM). Due to these findings the COPM was selected as an effective assessment method in the case-study application of the protocol. Through the development of client-centered goals the Occupational Performance Process Model (Canadian Association of Occupational Therapists, 1997) guides the hand therapist through planning and implementing interventions through occupation.

The studies represented in this scholarly project are diverse in the type and quality of the research. Most of the studies had a large sample size but a few had small sample sizes. The results may not be representative of all clients with upper-extremity dysfunction. Some of the literature that was reviewed was professional opinion which is not backed up with clinical research and/or data that supports the claims being made. Therefore, therapists should assess their own methods and treatment strategies to determine their effectiveness and how occupation-based they are and apply this approach according.

Clinical Applications

Clinical applications of this scholarly project include the need for educating hand therapists about how they can follow a stage-by-stage process in developing occupation-based interventions that is easily adapted to different clients and diagnosis. The appendix will assist the therapist in identifying barriers to utilizing

client-centered and occupation-based interventions as well as provide possible solutions for the remediation of such barriers, however, the therapist may still encounter administrative barriers that will require additional time and resources to overcome. Education about the benefits that occupation-based interventions can offer to their clients is also an anticipated result. It is also anticipated that this occupation-based protocol will improve functional outcomes among clients and spur the increased development and use of occupation-based interventions in hand therapy contexts.

APPENDIX

Appendix

Barriers and Solutions to Client-centered Practice (CCP)

and Occupation-based Interventions

Order of Barriers		Order of Methods to Resolve Therapist Barriers	
The therapist and client have different goals.	1	Case examples showing how to practice in a client-centered fashion.	1
The therapist's values and beliefs prevent them from accepting the client's goals.	2	Management and peer support for use of CCP.	2
The therapist is uncomfortable letting the client choose their own goals.	2	Involvement of all staff in CCP training.	2
		Staff education time to learn how to practice in a client-centered fashion.	2
The intervention is dominated by the medical model.	3	More explanation and elaboration of CCP.	3
The therapist has difficulty taking risks in order to support client goals.	4	Education about CCP while a practicing therapist.	4
The therapist has difficulty facilitating the client's identification of their own goals.	4	A clear definition of CCP.	4
		Educate about how to grade CCP for different client capabilities.	4
		Client involvement in evaluating services.	4
The therapist thinks CCP is too demanding for the client.	5	Educating about CCP while still a student.	5
The therapist does not know enough about CCP.	6	Training to increase self-knowledge.	6
		Client involvement in planning services.	6

The therapist does not know enough self-knowledge.	7	Negotiation training.	7
The therapist has difficulty assessing the client's ability to choose their own goals.	8	Interpersonal skills training.	8
The therapist is short of time	9	Involving people with disabilities in training to increase disability awareness.	9
CCP is too great a change from current practice	9		
The therapist's level of stress is high.	9		
The therapist is under financial pressure.	10	Educating which in not disease centered.	10
The therapist and client are of different cultures.	11	Education to increase knowledge of other cultures.	11
The therapist and client are of different genders.	12	Assertion training.	12

(Sumion & Smyth, 2000, pp. 19)

REFERENCES

- Bhavnani, G. (2000). Toward occupation-based practice in hand rehabilitation. *OT Practice*, 23, 1-2.
- Case-Smith, J. (2003). Outcomes in hand rehabilitation using occupational therapy services. *American Journal of Occupational Therapy*, 57, 499-506.
- Cooper, C., & Evarts, J.L. (1998). Beyond the routine placing therapeutic occupation at the center of upper-extremity rehabilitation. *OT Practice*, 18-22.
- Cooper, C., Paquette, L., Evarts, J.L., & Moorhead, J.F. (1998). Purposeful activity versus isolated exercise in hand therapy. *OT Practice*, 21, 1-2.
- Dale, L. M., Fabrizio, A. J., Adhlakha, P., Mahon, M. K., McGraw, E. E., Neyenhaus, R. D., Zaber, T. S., & Zaber, J. M. (2002). Occupational therapists working in hand therapy: the practice of holism in a cost containment environment. *Work*, 19, 35-45.
- Finlay, L. (2001). Holism in occupational therapy: Elusive fiction and ambivalent struggle. *American Journal of Occupational Therapy*, 55, 268-276.
- Frost, L., & Stricoff, R. (1997). Repetitive strain injury; a new definition and treatment strategy based on the client center-practice. *Work*, 8, 1, 45-53.
- Pierce, D. (2001). Occupation by design: dimensions, therapeutic power, and creative process. *American Journal of Occupational Therapy*, 55, 249-259.
- Rice, M.S. (1998). Purposefulness and cross transfer in a forearm supination and pronation task. *Scandinavian Journal of Occupational Therapy*, 5, 31-37.

- Thomas, J.J. (1996). Materials-based, imagery-based, and rote exercise occupational forms: effect on repetitions, heart rate, duration of performance, and self-perceived rest period in well elderly women. *American Journal of Occupational Therapy*, 50, 783-788.
- Trombly, C. A., & Radomski, M. V. (2002). *Occupational Therapy for Physical Dysfunction*. (5th Ed.) Baltimore, Maryland: Lippincott Williams & Wilkens.
- Sumison, T., & Smyth, G. (2000). Barriers to client-centeredness and their solutions. *Canadian Journal of Occupational Therapy*, 67, 15-21.