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A Pilot Experimental Study of Adding the Copm To the Occupational Therapy Evaluation Process In the Swing-bed Division of A Rural Hospital Setting

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A PILOT EXPERIMENTAL STUDY OF ADDING THE COPM TO THE OCCUPATIONAL THERAPY EVALUATION PROCESS IN THE SWING-BED DIVISION OF A RURAL HOSPITAL SETTING

Presented in Partial Fulfillment of the
Requirements for the Degree of
Doctor of Occupational Therapy

Eastern Kentucky University
College of Health Sciences
Department of Occupational Science and Occupational Therapy

Sarah Durbin, MS, OTR/L
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EASTERN KENTUCKY UNIVERSITY

COLLEGE OF HEALTH SCIENCES

DEPARTMENT OF OCCUPATIONAL SCIENCE AND OCCUPATIONAL THERAPY

Certification

We hereby certify that this Capstone project, submitted by Sarah Durbin, MS, OTR/L, conforms to acceptable standards and is fully adequate in scope and quality to fulfill the project requirement for the Doctor of Occupational Therapy degree.

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This project, written by Sarah Durbin, MS, OTR/L under direction of Renee Causey Upton, OTD, MS, OTR/L, Faculty Mentor, and approved by members of the project committee, has been presented and accepted in partial fulfillment of requirements for the degree of

DOCTOR OF OCCUPATIONAL THERAPY

CAPSTONE COMMITTEE

Renee Causey-Upton 5/14/18

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Executive Summary

Background: Extensive evidence is available on the efficacy of occupation-based practice for improving patient outcomes in hospital settings. There were no studies that took place specifically in the swing-bed division of rural hospital settings regarding occupation-based practice prior to the implementation of this study.

Purpose: This study sought to determine whether the addition of the COPM would increase occupational performance and patient satisfaction for individuals treated in the swing-bed division of a rural hospital setting.

Theoretical Framework: The Canadian Model of Occupational Performance and Engagement is the primary theory supporting this study, due to the emphasis placed on client-centeredness, spirituality, and occupational performance and engagement.

Methods: The Capstone Project is a pilot experimental research design with a sample size of 4 participants who were randomly allocated to the experimental and control groups. Participants in the experimental group completed the COPM with treatment focused on goals identified in the COPM and participants in the control group received usual care. Outcome measures were administered during the initial encounter and prior to discharge comprised of the following: Barthel Index, patient satisfaction, and percentage of goals met. Participants in the experimental group participated in COPM assessment during the initial encounter and prior to discharge.

Conclusions: Improvements in performance and satisfaction COPM scores occurred for participants in the experimental group, but were not minimally clinically significant. Both groups were overall satisfied with the occupational therapy services provided, with the control group reporting slightly higher ratings. No differences in percentage of goals met occurred between groups, due to participants in both groups meeting 100% of their goals. There was a significant difference in Barthel Index change scores between groups, with the control group exhibiting a ten-point increase in change scores, that could partially be attributed to lower initial Barthel Index scores.

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Title of Submission: A Pilot Experimental Study of Adding the COPM To The Occupational Therapy Evaluation Process In The Swing-Bed Division Of A Rural Hospital Setting

Certification of Authorship: I hereby certify that I am the author of this document and that any assistance I received in its preparation is fully acknowledged and disclosed in the document. I have also cited all sources from which I obtained data, ideas, or words that are copied directly or paraphrased in the document. Sources are properly credited according to accepted standards for professional publications. I also certify that this paper was prepared by me for this purpose.

Student's Signature: Sarah Durbin, OTR/L

Date of Submission: 5-14-18

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Introduction

Occupational therapy focuses on helping individuals return to participation in meaningful occupations. Occupational therapists are continually challenged in various clinical settings to demonstrate the effectiveness of their services, secondary to reimbursement guidelines and current legislation, as well as to ensure that quality care is provided. According to the American Occupational Therapy Association (AOTA), "occupational therapy maximizes health, well-being, and quality of life for all people, populations, and communities through effective solutions that facilitate participation in everyday living" (AOTA, 2017). Effective solutions can be defined as services that are client-centered, occupation-based, and supported by empirical evidence.

Previous studies have demonstrated the effectiveness of occupational therapy treatment centered on occupation-based practice methodologies (Colaianni, Provident, DiBartola, & Wheeler, 2015; Schindlier, 2010; Toole, Connolly, & Smith, 2013;). Occupation-based practice methodologies include but are not limited to the following: obtaining a robust occupational profile, addressing client-identified meaningful occupations, collaborative goal setting, and using client-identified occupations as both a means and as an end to treatment. Occupational therapy that encompasses occupation-based practice principles has been shown to improve the performance of activities of daily living (ADL) for individuals with Alzheimer's Disease (Smallfield, 2017) and rheumatoid arthritis (Tonga, Dugar, & Karatas, 2015). Interventions that are occupation-based have been shown to decrease hospital length of stay, as well as increase patient functional outcomes, patient satisfaction, and patient adherence to treatment programs (Maitra & Erway, 2006), to facilitate healthy, independent living.

When occupation-based practice methods are not implemented the overall quality of patient care is compromised. Individuals who are not provided with opportunities to engage in meaningful occupations experience decreased health, wellness, and quality of life, due to lacking the physical, cognitive, and emotional benefits of occupational engagement (Gillan, 2013; Skubik-Peplaski, Howell, & Harrison, 2014; Tonga, et al., 2016). According to Nilsson, Blanchard, and Wicks (2013), "occupational engagement encompasses what people do, where and with whom they spend their time and the perceived level of competence and meaningfulness of their time use" (p. 485). One of the most significant studies in the field of occupational therapy demonstrated that preventative, occupation-based treatment can increase function, life satisfaction, medical outcomes, social functions, and general mental health for the community-dwelling elderly (Clark et al., 1997). Within that same longitudinal study, decreases in bodily pain, fewer role limitations attributed to health problems, and reduced role limitations attributed to emotional problems were also reported (Clark et al., 1997).

Increased life satisfaction has been highly correlated with increased levels of leisure participation amongst community-dwelling elderly individuals (Nilsson, Bernspang, Fisher, Lofgren, & Gustofson, 2007). Within the same study, as participation in leisure tasks decreased life satisfaction decreased as well (Nilsson et al., 2007). According to Arbesman, Lieberman, and Metzler (2014), when occupation-based principles are implemented patient satisfaction increases, health of populations improve, and healthcare costs are reduced.

Despite the many positive benefits of occupation-based approaches, several studies have demonstrated how little time is spent on occupation-based treatment within various hospital settings, with therapists spending more time utilizing biomechanical approaches (Britton, Rosenwax, & McNamara, 2015; Mulligan, White-Prudhomme, & Arthanat, 2014). Occupational

therapists are aware of best-practice methods, comprised of client-centered, occupation-based, and evidence-based practice, but do not implement them as often as needed for optimal patient care (Mulligan et al., 2014). It is essential for occupational therapists to increase the quality of care provided, within complex healthcare environments, to justify the continued need for occupational therapy services and to improve patient outcomes.

Problem Statement

An extensive amount of literature is available on the efficacy of occupation-based practice methods in hospital settings. However, there are currently no occupational therapy research studies that take place specifically in the swing-bed division of Critical Access Hospital settings. There are 1,332 Critical Access Hospitals in the United States, which serve individuals in rural areas (Rural Health Information Hub, 2017). There is a need to provide evidence regarding effective occupational therapy solutions to increase quality occupational therapy service provision and positive patient outcomes in Critical Access Hospitals. Recipients of occupational therapy services that are not occupation-based may experience decreased occupational performance, life satisfaction, as well as social participation, and may have an increased risk for hospital readmission, due to their decreased ability to perform functional tasks.

The problem this Capstone Project will address is to improve the quality of care provided by increasing the amount of time spent administering occupation-based methods. Quality of care will be assessed by measuring occupational performance and overall patient satisfaction. More specifically, this Capstone Project seeks to answer the following question: Will the addition of the Canadian Occupational Performance Measure (COPM) in the swing-bed division of a rural hospital setting lead to increased occupational performance and patient satisfaction? Studying effective interventions and treatment approaches will allow occupational therapists to tailor their

practice to best meet the needs of the individuals served in swing-bed settings of rural hospitals. Increasing the knowledge base for effective, occupation-based treatment approaches will also align with AOTA's Vision 2025 by determining effective solutions to increase patient participation in meaningful occupations (AOTA, 2017).

Purpose of Proposed Research

The purpose of this study was to determine whether the addition of the COPM to the evaluation process would increase quality of occupational therapy service delivery as measured by occupational performance and patient satisfaction, in the swing-bed division of a rural hospital setting. The COPM is a client-centered, occupation-based assessment that measures perceptions of satisfaction with occupational performance in the areas of self-care, leisure, and productivity. The COPM allows for clients to identify meaningful occupations they wish to address while in therapy and emphasizes collaborative goal setting.

Research Objectives

This research sought to determine whether the addition of the COPM would increase occupational performance and patient satisfaction for individuals treated in the swing-bed division of a rural hospital setting. This research will provide evidence for occupational therapists to enhance their ability to implement occupation-based practice that is evidence-based and client-centered, to improve the quality of patient care.

This research also sought to narrow the gap between ideal occupational therapy practice and current occupational therapy practice, by enhancing occupation-based practice in the swing-bed divisions of rural hospital settings. Occupational therapists must employ occupation-based methods to assist individuals with returning to meaningful activities they want and need to be able to do for themselves (Gillan, 2013). Occupational therapy that addresses meaningful, client-

identified occupations will increase patient enjoyment, patient satisfaction, quality of life, and occupational performance (Colaianni et al., 2015; Mulligan et al., 2014; Toole et al., 2013).

Theory

The Canadian Model of Occupational Performance (CMOP) is the primary theory supporting this research, due to the theory's emphasis on occupational performance (Law & Laver-Fawcett, 2013). CMOP was first introduced by The Canadian Association of Occupational Therapists in 1983 (Law & Laver-Fawcett, 2013), and has been revised several times since the theory's conception. CMOP is now referred to as the Canadian Model of Occupational Performance and Engagement (CMOP-E) to cover an individual's performance and engagement in meaningful occupations. This model emphasizes client-centeredness and spirituality while taking into consideration the environment to maximize occupational performance and engagement. The Canadian Occupational Performance Measure (COPM) is an assessment that aligns with this theoretical framework and was utilized throughout this study to identify client-centered goals that are focused on the participant's meaningful occupations, as well as for guiding treatment planning. Previous research has shown that using the COPM has increased occupational performance and patient satisfaction for a variety of patient populations (Dahlhauser, Theuer, & Hollman, 2017; Roberts et al., 2008; Watterson et al., 2004; Wressle et al., 2002).

The biomechanical frame of reference also applies to this study, secondary to its current use in the setting in which the research occurred. According to Holt (2005), biomechanical treatment focuses on patient weaknesses including strength, endurance, ROM, and other limitations within the central nervous system and musculoskeletal system. This frame of reference utilizes a bottom-up approach, which means that treatment is focused on remediation

of joint movements, strength, and endurance with the idea that improvements in body structures and body movements will lead to improvements in occupational performance. Additionally, performance skills comprised of neuro-musculoskeletal, muscle functions, movement functions, and preparatory interventions fall under this theory.

Study Significance

This research provides information on whether the addition of the COPM in the swing-bed division of a rural hospital setting would lead to increased occupational performance and greater patient satisfaction. There is currently no literature specifically on occupational therapy practice in the swing-bed division of Critical Access Hospitals. Furthermore, there is no current evidence on occupation-based practice in the swing-bed division of rural hospital settings. This limits the availability of occupation-based literature to guide practice, specifically in the swing-bed setting. This study provides occupational therapists working with individuals in swing-beds with knowledge for implementing occupation-based practice for improved patient outcomes.

Additionally, this study provides occupational therapists working in similar settings with information pertaining to whether the use and implementation of the COPM would lead to improved occupational performance and increased patient satisfaction, as compared to individuals receiving usual care. This study also enhances the quality of occupational therapy service delivery in the swing-bed setting, by improving occupation-based practice throughout the occupational therapy process, from evaluation to discharge.

Summary

This research sought to determine whether the addition of the COPM would increase occupational performance and patient satisfaction for individuals treated in the swing-bed division of a rural hospital setting. The COPM was not previously used in the setting that was

studied. It was hypothesized that implementing the COPM would increase occupation-based practice and lead to improved occupational performance and greater patient satisfaction. This study provides literature for occupational therapists treating individuals in the swing-bed setting of Critical Access Hospitals that is occupation-based and client centered, to enhance the quality of occupational therapy service delivery to improve patient outcomes.

SECTION TWO: REVIEW OF LITERATURE

Introduction

Occupation-based practice is defined as a best-practice standard for occupational therapists, consisting of client-centered care that focuses on utilizing the individual's meaningful occupations throughout the occupational therapy process (Skubik-Peplaski, Howell, & Harrison, 2014). Occupation-based practice utilizes a top-down approach which may lead to increased patient satisfaction, compliance with therapy recommendations, increased patient participation in the occupational therapy process, improved self-efficacy, and improved functional outcomes (Baum & Law, 1997). This is in contrast to a bottom-up approach, which addresses impairments of the individual, with the theoretical claim that remediation of impairments will lead to an improvement in function (Weinstock-Zlotnick & Hinojosa, 2004).

Occupation-based treatment approaches consider the person holistically, the occupation the individual identifies as meaningful, and the contexts in which that occupation is performed. Context is defined by AOTA (2014) as the cultural, personal, temporal, and virtual aspects of occupational performance that are internal and external to the individual. The physical context of the study is a 25-bed rural hospital setting with private and semi-private rooms. Treatment sessions typically occur in the patient rooms, bathrooms, hallway, outdoors, and in a simulated kitchen. The social context involves one-on-one treatment sessions with and without patient family members present. Treatment context can affect whether interventions will be occupation-based, purposeful, or preparatory, further emphasizing the significance of context to occupation-based practice (Skubik-Peplaski, Rowles, & Hunter, 2012). Preparatory treatment methods focus on impairment-based factors such as range of motion, strength, endurance, and other factors to enhance occupational performance (AOTA, 2014). Purposeful treatment approaches focus on

aspects of occupations that hold meaning to the individual that are used to "support the development of performance skills and performance patterns" to increase participation in meaningful occupations (AOTA, 2014, p. S29).

Patient/client satisfaction is defined as the match between an individual's perceived expectations and actual circumstances or experiences (Custer, Huebner, & Howell, 2015). Patient satisfaction is an indicator of quality service provision, due to the obtainment of patient perception of services provided. Applying principles focused on client-centeredness has been found to improve patient satisfaction (McKinnon, 2000) and empowers patients to increase self-efficacy for managing their own care (Ya-Hsin, Rogers, & Polatajko, 2002).

Benefits of Occupation-Based Practice

A systematic review reported that strong evidence supports the use of occupation-based practice for improving participation in daily activities for individuals with Alzheimer's Disease (Smallfield, 2017). Occupational therapy that implements occupation-based strategies has led to increased occupational performance in the areas identified on the COPM (focused on vocational and academic pursuits), and client satisfaction with occupational performance for individuals attending college with psychiatric diagnoses (Schindler, 2010). Client-centered, occupation-based treatment has also been shown to decrease pain, increase activity performance, increase patient satisfaction, and increase quality of life for individuals with rheumatoid arthritis (Tonga, Dugar, & Karatas, 2015). Occupational therapy that is occupation-based and client-centered has also been found to increase functional outcomes, improve patient satisfaction, decrease hospital length of stay, and increase patient adherence to treatment programs (Maitra & Erway, 2006).

According to Norberg, Boman, Lofgren, and Brannstrom (2014), there is a need for more information on holistic and client-centered occupational therapy treatment approaches for

individuals with congestive heart failure (CHF). Individuals in the study who were living with CHF were interviewed on how their disease process had limited their ability to participate in meaningful occupations. Conducting a study that is client-centered and focused on patient-identified occupations may potentially help individuals living with CHF as well as other diagnoses by giving occupational therapists more knowledge regarding which treatment approach yields better functional outcomes for improving participation in meaningful occupations.

In an evidence-based review about utilizing occupation-based interventions to improve occupational performance and patient satisfaction for individuals who experienced a stroke, seven studies focused on occupational therapy service delivery in the inpatient hospital setting (Wolf, Chuh, Floyd, McInnis, & Williams, 2015). Within those studies, researchers concluded that occupation-based interventions improve ADL performance for patients in inpatient hospital settings. The current research will contribute to the desired knowledge regarding the effectiveness of occupation-based practice in the swing-bed setting and would lay the foundation for more extensive studies that utilize larger sample sizes. There are multiple barriers and supports to occupation-based practice implementation.

Supports and Barriers to Occupation-Based Practice

Occupation-based practice is strongly supported in the literature, due to the impact an individual's level of occupational engagement can have on their health (Connor, Wolf, Foster, Hildebrand, & Baum, 2014). Occupational engagement enhances an individual's overall life satisfaction, due to the meaning attached to participation in meaningful activities (Law & King, 2014). Engagement in meaningful occupations has been linked to positive health outcomes and increased well-being (Ward & Price, 2007). Thus, it is no surprise that adopting occupation-

based strategies within occupational therapy treatment settings is a best practice standard to promote health, well-being, and quality of life for individuals being served. The supports discussed in this paragraph identify that occupational therapists must adopt occupation-based methods to provide services that are most effective and beneficial.

Several barriers to occupation-based practice have been identified in the literature that are external and internal to the occupational therapist (Nielson et al., 2005). One barrier is that the therapeutic use of meaningful occupations is not widely understood by clients and other health care professionals, who may perceive that occupational therapy treatment is not therapeutic without the use of biomechanical methods (Nielson et al., 2005; Rogers, 2007). Other barriers include therapists' lack of knowledge with reimbursement and billing occupation-based treatment, time constraints, and lack of physical environments to simulate occupational performance (Nielson et al., 2005; Rogers, 2007).

Supports that can overcome barriers to occupation-based treatment focus on what the patient/client identifies as meaningful and important to address. Thus, constructing a robust occupational profile that includes the patient's/client's prior level of function, habits, roles, supports, and what the patient is concerned about performing will assist the practitioner with establishing a plan of care that is client-centered and occupation-based. Fully utilizing the treatment setting to address participation in meaningful occupations is also a support, and when used creatively can provide additional opportunities for engagement (Roberts, 2007). Therapists could also have patient family members bring in items from home for additional occupational engagement, such as clothing with buttons, wood working supplies, or hair rollers to create more meaning and value to treatments (Roberts, 2007). Creating kits for specific areas of occupational

performance would also increase occupation-based practice, due to having equipment and supplies readily available (Roberts, 2007).

Current Use of Occupation in Practice

The implementation of occupation-based practice requires occupational therapists to advocate for the benefits and effectiveness of its use in daily practice (Pierce, 2014). Client-centeredness and participation in meaningful, client-identified occupations are the primary focus of occupation-based practice. The performance of purposeful movements have been compared to the performance of rote movements in several studies with results demonstrating that meaning attached to an activity can have a significantly greater impact on function than rote movements alone (Pierce, 2014).

One systematic review sought to determine what intervention types were effective for increasing daily activity performance for elderly, community-living individuals with low vision. The researchers found that strong evidence supports the use of interventions focused on patient-identified goals to increase positive, patient outcomes (Liu, Brost, Horton, Kenyon, & Mears, 2013). Occupational therapists treating the deconditioned elderly in an acute rehabilitation hospital setting, reached a consensus on typical interventions implemented within the treatment setting including bathing, dressing, adaptive equipment provision and training, light meal preparation, and home assessments (Timmer, Unsworth, & Taylor, 2015). Within that same study a significantly lower percentage of time was reported implementing interventions addressing other areas of occupational performance such as laundry, full meal preparation, telephone use, and sleep (Timmer et al., 2015). Studies have shown that treatment focused on IADL performance for community-dwelling elderly adults was effective in improving

independence with light housework, indoor mobility, car transfers, and increased efficacy with light meal prep (Orellano, Colon, & Arbesman, 2012).

Canadian Occupational Performance Measure

Evaluative measures must also be occupation-based, to assist the occupational therapy practitioner with understanding the individual's current and prior level of occupational performance for effective treatment planning. Occupation-based, standardized assessments focus on client priorities, with the client being heavily involved in goal establishment and treatment. The Canadian Occupational Performance Measure (COPM) is a tool available for occupational therapists to guide client-centered services.

The COPM is an assessment conducted in interview format that measures occupational performance from the following: a participant's perceived need for help in patient identified areas of occupation, level of importance, perceived ability to perform the activity, and level of satisfaction with current occupational performance. The participant identifies the top five areas that he or she wishes to improve upon and goals are made from those areas. For individuals with chronic obstructive pulmonary disease (COPD), the COPM has been found to be a reliable measure (Sewell & Singh, 2001). The COPM has also been found to be a reliable measure for individuals with stroke (Cup et al., 2003), schizophrenia (Pan et al., 2003), outpatients with various diagnoses (Eyssen et al., 2005), and ankylosing spondylitis (Kjeken et al., 2005). Simmons, Crepeau, and White (2000) found that the use of the COPM with the Functional Independence Measure (FIM) in a physical disability rehabilitation setting increases the prediction of outcomes. The COPM is a well-established and reliable measure of patient perceptions of occupational performance as well as patient satisfaction with performance.

Patient Satisfaction

The literature is mixed on the general perceptions of patient satisfaction with healthcare. In environments where elderly individuals relied on healthcare staff to assist with patient needs, family members and recipients of care reported low levels of satisfaction with the quality of care provided (Boldy, Davison, & Duggan, 2015). Participants within the same study attributed their low levels of satisfaction to ineffective communication between the staff member and the care recipient, care not being individualized, and poor cleanliness of the facility (Boldy et al., 2015). Patient satisfaction has been strongly correlated with an increase in functional status, particularly in ADL performance (Custer, Huebner, & Howell, 2015). Patient satisfaction has been shown to increase due to positive personal attributes of occupational therapists, such as competency, empathy, and communication sensitive to the patient's needs. (McKinnon, 2000).

The use of Likert scales are efficient tools for measuring patient satisfaction, secondary to ease of administration and ease of patient comprehension. Within the COPM, a Likert scale (1-10) is used to measure patient satisfaction with their current level of occupational performance with 1 indicating "not satisfied at all," to 10 indicating "extremely satisfied." Having a visual scale to reference assists individuals with reporting their perceived experiences in satisfaction or others, such as pain. The visual analogue scale is a common tool used in a variety of medical settings to quickly measure a patient's perceived level of pain.

Patient satisfaction has been measured in the form of individualized questionnaires specific to the treatment setting and in the form of Likert scales to capture patient perception of satisfaction with healthcare services. Individualized questionnaires have been used previously to measure patient satisfaction with end of life care in a long-term care setting (Nadin et al., 2016), critical care in the intensive care unit (Clark, 2016), and overall life satisfaction (Lovereide &

Hagell, 2016; Lolle & Andersen, 2015). Thus, patient satisfaction can be measured subjectively in the form of questionnaires or Likert scales in a variety of health care settings and for many different diagnoses.

Conclusion

Patients should be given the opportunity to articulate what areas of occupation, in addition to ADLs, they would like to address when working with occupational therapy to improve their ability to live as independently and safely in their homes. Occupational therapists that implement occupation-based evaluative measures and treatment practices will be best equipped to meet the occupational needs of patients served. Research has shown that occupation-based practice methods lead to improved functional outcomes and improved patient satisfaction (Baum & Law, 1997; Maitra & Erway, 2006; Schindler, 2010; Smallfield, 2017; Tonga, Dugar, & Karatas, 2015). Many barriers to occupation-based practice exist. However, with creativity from the occupational therapist for utilizing the supports in place, such as the physical environment, many of those barriers can be overcome. Within this study, the researcher will utilize occupation-based evaluative measures and treatment approaches for participants to improve occupational performance and patient satisfaction.

SECTION THREE: METHODS

Research Design

This research was a pilot experimental design that measured occupational performance and patient satisfaction between the experimental and control group. After informed consent was obtained, participants were randomly assigned to the experimental and control groups, based on order of referral, with every other participant assigned to the control and experimental groups. Quantitative measures included measuring the overall percentage of goals met and changes in Barthel Index scores for participants in both groups. Additional quantitative measures included tracking COPM scores in the experimental group and patient satisfaction amongst participants in both groups.

The control group received usual care consisting of determining prior level of function, range of motion testing, manual muscle testing, neurological screening, cognitive screening, and assessment of current occupational performance of self-care activities via the Barthel Index. The occupational profile was also obtained to determine participant-identified goals, concerns, and other information to frame barriers and supports to the participant's occupational performance. Treatments occurred two times a day, with one treatment in the morning focused on self-care, and the other treatment in the afternoon focused on therapeutic exercise or therapeutic activity to address patient goals. Patient goals were focused on increasing safety and independence with self-care activities, strength (if warranted), range of motion (if warranted), and any other areas of occupational performance the patient identified as a priority during the evaluation.

The experimental group received usual care, as stated above, with the addition of the COPM during the evaluative process. The specific occupations identified in the COPM were the focus of patient goals in the experimental group. Patient goals were focused on increasing safety

and independence in the areas of self-care, productivity, and leisure. Treatments for the experimental group were also two times a day, with one treatment in the morning focused on self-care and the afternoon treatment focused on an area of occupation identified as a patient priority in the COPM.

Setting

The study occurred in the swing-bed division of Breckinridge Memorial Hospital in Hardinsburg, Kentucky. Breckinridge Memorial Hospital is a 25-bed facility that offers acute and swing-bed services. Patients are admitted to a swing-bed setting after being in an acute care setting for a minimum of 72 hours. Patients admitted to swing-bed require a longer period of hospitalization due to not yet being safe to return home for medical or functional reasons. Conducting a study in a swing-bed setting will assist occupational therapy practitioners with identifying occupation-based methodologies that may increase their ability to implement occupation-based practice for improved patient outcomes when working with individuals in a swing-bed setting.

Occupational therapy is provided to individuals of swing-bed status two times per day with one treatment occurring in the morning and another occurring in the afternoon. Individuals of swing-bed status also receive physical therapy two times per day and speech therapy as warranted. Occupational therapy provided to individuals in the swing-bed setting is focused on increasing the individual's independence and safety with occupational performance. Average length of stay for individuals in the swing-bed setting is approximately 10-14 days.

The setting discussed was optimal for the study, due to increased feasibility and accessibility of conducting the research. Additionally, information gleaned from this study will

assist occupational therapists with ways to enhance occupation-based practice, while improving patient occupational performance and satisfaction in similar practice settings.

Participants

Study participants included patients within the swing bed division who granted informed consent to participate. Participants were adult individuals, 18+ years of age, secondary to this being the primary population typically served within the swing bed division of Breckinridge Memorial Hospital. Participants that granted informed consent and met inclusion criteria were recruited for the research. Participants were recruited in the order in which they were referred to occupational therapy, randomly allocated to the experimental and control groups in an alternating order. Informed consent was obtained prior to the initial evaluation. Inclusion criteria included the following:

- The participant must be medically stable and cleared by the physician to participate in occupational therapy.
- The participant must have a swing-bed status.
- The participant must be 18+ years of age.
- Informed consent must be obtained.

Exclusion criteria included the following:

- The participant must not have any admitting diagnosis or history of cognitive impairment. The patient must be alert and oriented to person, time, and place.
- The patient must not be on palliative care or comfort measures.

- Participants referred to occupational therapy on a Friday who were not evaluated on that day will be excluded from the study, due to the potential that the patient might discharge over the weekend.
- Individuals referred to occupational therapy younger than 18 years of age will be excluded from the study

Data Collection and Instrumentation

This pilot experimental study sought to collect quantitative data to measure occupational performance specific to self-care via the Barthel Index and overall percentage of goals met for both groups. Other quantitative data was collected in the form of overall patient satisfaction with occupational therapy services via a Likert scale at the end of each occupational therapy treatment in both groups. COPM data was collected at baseline and at discharge for participants in the experimental group.

Treatments occurred two times a day, with one treatment occurring in the morning and the second treatment occurring in the afternoon for participants in both groups. Morning treatments focused on ADL retraining for participants in both groups. Afternoon treatments in the experimental group were focused on the meaningful occupations identified in the COPM consisting of bed making, sleep hygiene, peeling potatoes, manipulating fasteners and buttons, opening containers, and pacing activities. Afternoon treatments for the usual care group focused on therapeutic activities and therapeutic exercise to address underlying issues that negatively impacted occupational performance. Perceived satisfaction was measured at the end of each treatment for participants in both groups via a five-point Likert scale. Participants were instructed to rate their level of satisfaction with treatment on a scale of one to five, with one being “very unsatisfied” and five being “very satisfied.” Participants had a pictorial

representation with a description of the satisfaction scale as a reference. All participants were provided with the patient satisfaction Likert scale and an un-marked envelope at the end of each treatment session. Each participant was instructed to rate their perceived satisfaction with the treatment provided and were informed that their results would be kept with participants in the same group. The participants were also informed that the researcher would read the anonymous surveys at a later date. Those instructions were given to provide anonymity to each participant to help the participants feel comfortable with answering honestly.

Outcome measures consisted of the COPM, The Barthel Index, perceived satisfaction, and the overall percentage of goals met. The COPM was administered during the evaluation and prior to discharge for the experimental group to measure perception of satisfaction with occupational performance. The Barthel Index was administered at baseline and prior to discharge for both groups to measure independence with self-care activities. Perceived satisfaction with occupational therapy services provided was measured after each treatment session for both groups. Percentage of long-term goals met were measured for both groups to compare differences between groups. Daily SOAP notes were written for each participant to collect the following data: duration of treatment, treatment modality (ADL retraining, Therapeutic Activity, Therapeutic Exercise, etc.), and progress toward patient goals.

The Barthel Index (0-100) scale measures an individual's level of independence with the following ADLs: feeding, bathing, grooming, dressing, bowel management, bladder management, toilet use, transfers (bed to chair and back), mobility (on level surfaces), and stair use. Scores range from 0 to 100, with 0 indicating the individual is totally dependent, and 100 indicating the individual is independent in all measures listed. Within each ADL category, various levels of independence are delineated and the rater chooses which level the individual

currently represents. For example, under “Bathing” the options are presented as “dependent” or “independent,” and under “Toileting” the individual can present as “dependent,” “needs some help, but can do something alone” or “Independent.” The Barthel Index has adequate predictive validity for individuals with traumatic brain injury (Liu, 2004). This measure has excellent inter-rater and intra-rater reliability for individuals with neurological disorders (Rollnik et al., 2011). Additionally, this measure exhibits excellent internal consistency and excellent construct validity for individuals with neurological disorders (Hobart, 2001). For the elderly population, this measure has fair to good inter-rater and intra-rater reliability (Richards et al., 2000).

The COPM is an occupation-based assessment that provides quantitative measurements on client-identified occupations by categorizing occupations into their level of importance and level of satisfaction with current occupational performance (Law & Laver-Fawcett, 2013). The COPM has been utilized for successful identification of meaningful, occupational goals for patients with cancer, with self-care identified by patients as the most significant area to address in their treatment (Watterson et al., 2004). The COPM also increases client motivation and participation in the rehabilitation process for the geriatric population, individuals who experienced a stroke, and individuals receiving home health, due to treatment focusing on client-identified goals (Wressle et al., 2002).

For community-dwelling elderly adults, significant increases in occupational performance and patient satisfaction on the COPM were exhibited after occupation-based occupational therapy interventions were complete (Roberts et al., 2008). For patients with functional movement disorder (FMD), increased reports of perceived change in occupational performance and increased satisfaction occurred after receiving two weeks of intervention, as measured by the COPM (Dahlhauser, Theuer, & Hollman, 2017). Overall, the COPM is sensitive

to change in occupational performance and patient satisfaction for individuals with various occupational performance problems and occupational performance needs.

Data Analysis

Research data was analyzed in the form of descriptive statistics to assess change in Barthel Index scores, percentage of goals met, patient satisfaction, and COPM scores. Changes in Barthel Index scores, percentage of goals met, and patient satisfaction were analyzed between groups to measure differences between participants in the experimental and control groups. Due to the small sample size of the study and guidance from a statistician at Eastern Kentucky University, inferential statistics were not performed.

Ethical Considerations

The student researcher collected data and administered all treatments for participants in the study, which one could argue may influence the evaluation process, treatments, and outcome measures for both groups. The researcher was not blinded to participant group allocation, which could also bias study results. The researcher hypothesized that the experimental group would exhibit greater change in Barthel Index scores, increased perception of satisfaction with overall occupational therapy treatments, and increased percentage of long-term goals met compared to the control group, as well as increased perceived satisfaction with current level of occupational performance by a clinically significant change score of 2 or more on the COPM. The researcher was aware of potential biases and controlled for those biases by establishing and maintaining detailed reports of participant evaluations, treatments, and outcome measures.

Timeline of Project Procedures

The research was initiated after IRB approval, on January 15th, with data collection ending on March 5th 2018. Data analysis was conducted throughout the data collection process and after participant recruitment ended. The study lasted for a total of seven weeks.

SECTION FOUR: RESULTS AND DISCUSSION

Description of Results

Four participants, with a mean age of 72 completed the study. There were more males than females in the study and all participants were Caucasian, indicating that the participants were not fully representative of the population of Breckinridge County. Table 1 outlines participant demographics.

Table 1

Participant Demographics

Group	Age	Average Age	Gender	Race
Experimental	66	65.5	Male	Caucasian
	65		Female	Caucasian
Control	72	78.5	Male	Caucasian
	85		Male	Caucasian

For the two participants in the experimental group, the average change score on the COPM for performance was 1.85 and the average change score in satisfaction was 1.63, indicating that overall performance and satisfaction improved, but not significantly. However, when analyzing scores individually, Participant 3 did elicit clinically significant change scores in both performance and satisfaction, with a performance change score of 2.7 and a satisfaction change score of 3.0. Table 2 outlines COPM results for participants in the experimental group.

Table 2

COPM Results for Experimental Group

	Initial Average Performance Score	End Average Performance Score	Performance Change Score	Initial Average Satisfaction Score	End Average Satisfaction Score	Satisfaction Change Score
One	7	8	1.0	7.25	7.50	0.25
Two	5.6	8.3	2.7	6.2	9.2	3.0

No differences in percentage of goals met were observed between each group, due to all participants meeting 100% of their goals. The average Barthel Index change score for the participants in the experimental group was 25 and the average Barthel Index change score for the participants in the control group was 35. The higher Barthel Index change score for participants in the control group could be attributed to the lower Barthel Index start scores, which leaves more room for improvement. See Table 3 for Barthel Index score. Results could also be partially skewed due to the lowest start score of 35 belonging to Participant 2 in Table 3.

Table 3

Barthel Index Scores

Group	Start Score	Average Start Score	End Score	Average End Score	Change Score	Average Change Score
Experimental	65	65	100	90	35	25
	65		80		15	
Control	35	47.5	80	82.5	45	35
	60		85		25	

The average patient satisfaction score for participants in the experimental group was 4.5, indicating that participants in the experimental group were overall “satisfied” with the occupational therapy services provided. The average patient satisfaction score for participants in the control group was a 5, indicating that participants in the control group were “very satisfied” with the occupational therapy services provided. Table 4 outlines the average treatment satisfaction scores for participants in both groups.

Table 4

Treatment Satisfaction Scores

Group	Average Satisfaction Score	Group Average Satisfaction Score
Experimental	4	4.5
	5	
Control	5	5
	5	

Interpretation of Results

While there were no overall minimal clinically significant changes in COPM scores for participants in the experimental group, both participants experienced improvements in performance and satisfaction. However, when analyzing individual COPM scores, participant 3 demonstrated minimal clinically significant change scores in both performance and satisfaction. For participant 1, decreased improvements could be attributed to underlying depression with the participant declining intervention from both the primary researcher and the physician that would have directly addressed depression symptoms. Additionally, participant 1 had difficulty identifying problems with occupational performance during completion of initial COPM assessment, which may indicate that COPM-based goals were not truly occupation-based. If goals and interventions are not truly occupation-based, positive health outcomes are less likely to occur (Ward & Price, 2007). Treatments in the morning for participants in the experimental group focused on ADL performance, such as bathing, dressing, grooming, and toileting. Treatments in the afternoon for participants in the experimental group focused on occupations identified by participants in the COPM such as sleep hygiene, pacing activities, tub transfers,

managing fasteners/buttons/tying shoes, opening containers, bed making, and peeling potatoes for cooking tasks.

Both groups exhibited improved functional gains, per Barthel Index scores and percentage of goals met. Participants in the control group had a change score 10 points higher than was exhibited in the experimental group, which could be attributed to lower start Barthel Index scores, which leaves more room for improved ADL performance. Also, participants in both groups were "satisfied" and "very satisfied" with the quality of occupational therapy services provided. Satisfaction scores could be attributed to client-centered care provided to both groups of participants.

Overall, participants in the control group reported higher levels of satisfaction with the occupational therapy services provided. A total of three participants from both groups reported being "very satisfied" with the services provided, but participant number one reported being "satisfied" with the occupational therapy services provided. The lower satisfaction score reported for participant 1 may be attributed to goals not being truly occupation-based, due to difficulty identifying problems with occupational performance as well as depressive symptoms exhibited by that participant. Occupational engagement enhances an individual's overall life satisfaction, due to the meaning attached to participation in meaningful activities (Law & King, 2014), and if participant 1 had no meaning attached to the identified occupational problems, then satisfaction is compromised.

There are several factors that could have attributed to the non-minimal clinically significant improvement COPM change scores in performance and satisfaction for participant 1 in the experimental group. Treatments for the participant in the experimental group were focused on participant-identified occupation-based goals. However, participant 1 in the experimental

group had difficulty establishing problems in occupational performance, which may indicate that the goals identified were not meaningful. The patient in the experimental group exhibited signs of depression but politely declined any intervention from the patient's physician and the primary researcher, which could have attributed to patient's non-clinically significant improvement in COPM outcome measures.

Discussion

Many studies have found that when occupation-based practice methods are implemented, improvements in occupational performance and occupational engagement occur (Baum & Law, 1997; Maitra & Erway, 2006; Smallfield, 2017; Tonga et al., 2015). However, it is reported in a scoping review that approximately 63 percent of occupational therapy treatment time is spent utilizing biomechanical treatment approaches within hospital settings (Britton et al., 2015). Within that same scoping review, another study reported that therapists within a hospital setting utilized occupation-based theoretical frameworks to guide their practice only 33 percent of the time.

While there were no significant differences in occupational performance for participants in the experimental group, occupational performance did improve for participants in both groups, as exhibited by all participants meeting their client-centered goals and an overall Barthel Index change score of 30 points. Improved occupational performance can be attributed to client-centered care and occupation-based practice that was implemented with participants in both groups. Within this pilot study, the improved occupational performance that occurred in both groups can also be attributed to the meaning attached to the treatment activities, due to meaning having a significantly greater impact on function than rote movements alone (Pierce, 2014).

While participants in the control group did participate in exercise in the afternoon, morning sessions were occupation-based and focused on typical areas of patient concern related to ADLs.

Occupational therapists perceive the implementation of occupation-based practice methods as time consuming (Colaianni & Provident, 2010; Nielson et al., 2005; Rogers, 2007). Therapists value the use of occupation-based methods but report implementing biomechanical treatment methods more frequently in medical settings (Mulligan et al., 2014). However, within this study utilizing the occupation-based, evaluative measure (COPM) was feasible to utilize with the COPM taking approximately 25 minutes to administer, which left sufficient time for other necessary information to be obtained. Also, occupation-based treatment sessions that occurred for individuals in the experimental group in the afternoon took no longer than the biomechanical treatments administered for the usual care group, indicating that within this study, occupation-based methods are no more time consuming than other treatment approaches.

Therapists perceive that there is a lack of physical context to support the culturally diverse meaningful occupations of patients (Nielson et al., 2005; Rogers, 2007). According to Skubik-Peplaski (2012), the physical context that supports and simulates the home environment can positively impact an individual's ability to perform IADL tasks and speed up recovery. The hospital context within this study supported bed making tasks, sleep hygiene tasks, and meal preparation tasks for participants in the experimental group. To overcome contextual barriers to occupation-based practice implementation, the primary researcher utilized the hospital context in a creative way to address difficulty with bed making (Rogers, 2007). The researcher also brought items from home to simulate peeling potatoes and capitalized on patient resources by using the participant's personal items to address opening containers (Rogers, 2007).

The use of the COPM was a valuable outcome measure to utilize in the study, due to the organization the assessment provided for identifying problems in occupational performance and assessing the participants' perceptions and satisfaction with their level of occupational performance (Law & Laver-Fawcett, 2013). There were differences between groups regarding ease of identifying problems with occupational performance. Problem identification for participants in the control group was overall more challenging when compared to the participants in the experimental group, due to the reliance on interviewing skills, which was less organized when compared to the COPM.

Treatment sessions for participants in the experimental group focused on participant-identified goals, which increased participant motivation, due to the meaning attached to the treatment sessions (Watterson et al., 2004). This was evident within the study when participants from the experimental group were performing activities such as bed making, peeling potatoes, and exploring sleep hygiene techniques because participants observably enjoyed treatment focused on improving their ability to perform those tasks. The participants in the experimental group also had more of an active role in their care, due to their participation in the COPM that provided the patients with an organized method for problem identification (Roberts et al., 2008).

When occupation-based methods for the community-dwelling elderly are implemented, improvements in IADL performance occur for individuals who experienced a stroke (Nielsen et al., 2017). One participant in this study had residual left-sided weakness from a stroke she experienced approximately three years ago. Exploring modified methods for IADL performance, while capitalizing on the participant's strengths, led to minimally clinically significant change scores on the COPM in the areas of occupational performance and patient satisfaction. Short-term effects on IADL performance are also noted for elderly individuals with chronic health

problems when occupation-based or occupation-focused methods are implemented (Nielsen et al., 2017). All participants in the study had chronic health conditions that negatively affected their occupational performance. For participants in the experimental group, increased independence with meal preparation tasks, house-keeping tasks, and sleep hygiene occurred, as exhibited by those participants meeting 100% of their goals, with some of those goals being IADL focused. Treatment focused on IADL performance for community-dwelling elderly adults has reportedly been effective in improving independence with light housework, indoor mobility, car transfers, and increased efficacy with light meal prep (Orellano et al., 2012).

Implications for Occupational Therapy

Occupational therapists can spend more time utilizing occupation-based methods by utilizing more occupation-based evaluative measures, such as the COPM. Occupational therapists can also overcome barriers to occupation-based practice implementation by capitalizing on the patient's resources, using the treatment context creatively and optimally, and allowing the patient to guide treatment based on their occupational needs (Nielson et al., 2005; Rogers, 2007). Making changes to occupational therapy service provision that is focused on increased time spent implementing occupation-based methods can lead to several positive patient outcomes, including decreasing the average length of stay for individuals in a hospital setting, reducing hospital readmission rates, improved life satisfaction, increasing patient self-efficacy with health management, and overall improved occupational performance (Baum & Law, 1997; Law & King, 2014; Maitra & Erway, 2006; Schindler, 2010; Smallfield, 2017; Tonga et al., 2015; Ward & Price, 2007).

Limitations

This pilot experimental study has a small sample size that makes it difficult to generalize results to a large population with a variety of demographics and diagnoses. Conducting a study with a larger sample size would make the research more powerful and more generalizable to individuals treated in swing-beds of rural hospital settings. There was another participant recruited for the study, but had to be excluded from participating, due to the primary researcher being out of the facility and unable to treat the participant; additionally the same participant was discharged prior to the anticipated discharge date. Another limitation is the limited time-frame of the study because this Capstone study took place within a seven-week timeframe that made it difficult to recruit a large sample size.

During study implementation there were a total of 19 individuals admitted to a swing-bed with only four participants who completed the study. One participant politely declined to participate in the study, nine participants had confusion or cognitive impairment, two participants were excluded from the study due to the primary researcher being unable to treat one while the other participant discharged the next day, and three individuals were unable to participate in the study due to time constraints from large caseload at that point in time. A large number of individuals were excluded from the study, due to having a history of Alzheimer's Disease, dementia, or documented confusion during their hospital stay. Thus, another limitation of the study is that individuals with a cognitive impairment were not included in the research, which makes the results of the study non-generalizable and not inclusive of that population.

Lastly, the use of the Barthel Index may be a limitation, due to the decreased sensitivity to change in ADL performance. There is a risk that scores are not completely representative of functional improvements, due to the large gap in possible scores. For example, for grooming

tasks an individual can be rated a zero (dependent) or a 5 (independent), which leaves no options for individuals who require partial assistance with grooming tasks. For other items such as bathing and dressing there is one additional option, but is still not reflective of the varying levels of assistance one may need.

Future Research

A longitudinal study that replicates this study design is needed to collect data on a larger sample size to make the results more generalizable to the swing-bed setting. Replicating this study on a larger scale will allow more diverse participants to be included in the study with a wide variety of demographics, diagnoses, and occupational performance problems. Including individuals with a cognitive impairment is also warranted to meet the occupational needs of these individuals and their caregivers. After analyzing the individuals admitted to a swing bed during the study, over 50% of those potential participants had a cognitive impairment. Caregiver report is a useful method to utilize when working with individuals who have cognitive deficits. Assessing whether the COPM is a useful tool, based on both patient and caregiver report, is an important area of research.

Conclusion

The Capstone Project sought to determine whether the addition of the COPM would increase occupational performance and perceived satisfaction for individuals in the swing-bed division of a rural hospital setting. There are currently many studies supporting the use of occupation-based practice in rehabilitation settings and hospital settings to improve occupational performance (Guzelkucuk et al., 2007; Ward, Mitchell, & Price, 2007), reduce hospital readmissions (Arbesman, Lieberman, & Metzler, 2014), and to improve patient safety and independence in the home. However, no current literature had been specifically conducted in

swing-bed settings for enhanced occupation-based practice. The use of the COPM did not lead to greater improvements in occupational performance and patient satisfaction for individuals in the experimental group compared to participants in the usual care group. However, the COPM was a feasible tool to use as an organized method of identifying problems in occupational performance, assessing perceived occupational performance, and assessing patients' perceived satisfaction. Both groups exhibited improvements in occupational performance per the average Barthel Index change score of 30 points and as evidenced by participants in both groups meeting 100% of their goals. Participants were "satisfied" or "extremely satisfied" with the occupational therapy services provided. Occupation-based treatments occurred for participants in both groups with increased overall motivation levels observed with participants when addressing COPM-based goals. This Capstone project provides new knowledge regarding the implementation of occupation-based practice in a swing-bed setting for increased occupational performance and perceived satisfaction.

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