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THE UNDERSTANDING AND UTILIZATION OF OCCUPATIONAL THERAPY SERVICES BY  
MEDICAL DOCTORS IN ACUTE HOSPITAL SETTINGS

By

Naina Jamani

A Thesis  
Submitted to the  
Faculty of The Graduate College  
In Partial fulfillment of the  
Requirements for the  
Degree of Master of Science  
Department of Occupational Therapy

Western Michigan University  
Kalamazoo, Michigan  
June 2004

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# THE UNDERSTANDING AND UTILIZATION OF OCCUPATIONAL THERAPY SERVICES BY MEDICAL DOCTORS IN ACUTE HOSPITAL SETTINGS

Naina Jamani, M.S.

Western Michigan University, 2004

The purpose of this study was to determine what medical doctors working in the Canadian healthcare system know about occupational therapy, and if this understanding of occupational therapy is deemed valuable by the rate of referrals generated by these practitioners. This study will examine the relationship between physician's knowledge level and referrals to occupational therapy. The study instrument was a survey that consisted of eight questions, seven multiple choice and one open-ended response. The study took approximately five minutes to complete. A total of forty surveys were distributed at three different acute hospital settings. A total of fourteen or thirty-five percent of surveys were completed and returned. Questions were related to how information about occupational therapy was accessed, if the physicians felt they had a good understanding of occupational therapy, and their referral patterns to occupational therapy. Physicians were asked to select occupational interventions from a possible list of sixteen rehabilitative interventions to determine if what they perceived occupational therapy to be was accurate. The results indicate that eighty-six percent of respondents felt that occupational therapy was important or very important to the rehabilitation of their patients, however when asked to select occupational therapy interventions the results show that respondents were not aware of all the areas that occupational therapists are involved in.

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## Introduction

Today, many individuals fall victim to various physical and psychological disabilities creating hurdles that prevent them from getting back to what mainstream society would call a normal life. To facilitate this transition, medical physicians play a key role in identifying basic patient needs and matching them with the appropriate medical services available. As the initial and primary patient caregiver, it is crucial that they are aware of all the patient services available, and are knowledgeable about how and when these services should be prescribed. It is then up to the appropriate prescribed service care giver(s) to aid in the successful integration of that patient back to mainstream society whereby they can continue their daily activities. It is this process which has formed the basis of this thesis.

To set the framework of the thesis, it is important to accurately define the three key medical services that are being observed and reported on. As defined by Mosby's Medical, Nursing, and Allied Health Dictionary (fourth edition), the three key services are:

Medical care is the provision by a physician of services related to the maintenance of health, prevention of illness, and treatment of illness or injury. It is under their care that patients are referred to the appropriate medical services that are best suited to meet their needs.

Occupational therapy is the use of purposeful activity with individuals who are limited by physical injury or illness, psychosocial dysfunction, developmental or learning disabilities, poverty and cultural differences, or the aging process to maximize independence, prevent disability, and maintain health. The practice encompasses evaluation, treatment, and consultation.

Physical therapy is the treatment of disorders with physical agents and methods, such as, massage, manipulation, therapeutic exercises, cold, heat (including short-wave, microwave, and ultrasonic diathermy), hydrotherapy, electric stimulation, and light to assist in rehabilitating patients and in restoring normal function after illness or injury.

While each of the above services can be easily defined, it is less clear in practice when and how these services are to be prescribed. This statement is based on two observations. First, occupational and physical therapists study many of the same core subjects, use many of the same clinical terms, work in common populations, and are employed in similar work settings. (Brown and Greenwood, 1999). Therefore, it is possible to confuse these differences when prescribing the correct therapy. Second, there is question as to whether medical practitioners can clearly delineate between the two services and prescribe accordingly. Confusion about the roles of occupational therapy and physiotherapy has been repeatedly stated in the literature and in the clinical settings (Brown and Greenwood, 1993). Many times it is occupational therapists that are referred to as physiotherapists. As the profession of occupational therapy we need to ensure that our profession is recognized and valued on its own, rather than an extension of another profession.



The research articles cited here come from a broad spectrum of resources. The variety of research reviewed has occurred in many different settings and in many different geographical locations. Much of the literature reviewed looked at how medical doctors were educated about the area of rehabilitation. However, this research includes how doctors utilize what they were taught and apply it into practice. While completing the literature review two prominent themes emerged from the research articles. The first is information known about occupational therapy and rehabilitation, and the second is how rehabilitation, occupational therapy is applied in practice. Articles have been organized by each theme, having the most recently published articles appearing first.

### Literature Review

#### Theme 1: Knowledge of occupational therapy and rehabilitation.

Jamnadas, Burns, and Paul (2001) examined whether nursing students and PA students had a sufficient overview about the role of occupational therapy and its implications in the healthcare system. The survey had two parts. Part one assessed how much information nursing students and PA students felt they had about the profession of OT. Part two provided a list of responsibilities and domains of concerns of OT, PT, and nursing. Study participants were asked to select items that fell under the OT domain of practice. Part one and two of the surveys were analyzed differently. Part one indicates what the participant's perceived occupational therapy to be, whereas, part two assessed whether their perception of occupational therapy was accurate. Fifty-six nursing students in their last year of schooling and 28 PA students in their first semester participated in the study. PA students defined OT as solely responsible for activities of daily living. This indicates a need to further educate allied health professionals about the scope of OT practice. Forty-four percent of PA students correctly identified 70% of the 14 direct occupational therapy activities listed in part two. Twenty percent of nursing students correctly identified 70% of the occupational therapy activities listed in part two. These results indicate that nursing students' understanding of OT is less than that of the PA students, and that both groups show a lack of correlation between self-perceived knowledge and actual knowledge of the philosophy, roles, and services of OT.

Crotty, Finucane, and Ahern (2000) found that medical students that used a hands on approach to rehabilitation retained more information and were better able to identify additional resources that were available to their patients. The researchers studied the impact of a new four-week course available to second year medical students at Flinders University of South Australia. The course consisted of four main learning activities. They were as follows:

1. Students will follow a patient in an inpatient rehabilitative setting and learn about the interdisciplinary approach.
2. The students had visited two individuals in the community who had a disability and assessed their physical, mental, functional, and social status.
3. The students had to visit a service that supports those individuals in the community.
4. Lastly, the students had to simulate having a disability, which was allotted to them.

Much of the work for the course was independent study; however tutors were available for a designated time period. To receive the maximum benefit from this course the students needed to take the initiative to educate themselves. Of the 146 students that participated in the course, one hundred participants responded to the questionnaire. Ninety-three percent of the students agreed that this course was relevant to their needs. An additional three percent of the participants agreed that the experience was worthwhile even if it was not relevant to their course work. This type of learning provided students with an opportunity to witness first hand what an individual with a disability is entitled to, and what resources are available to them. The research indicates that in medical schools there remains a lack of understanding of the domain of concern for rehabilitation and the role of the rehabilitation providers.

This research indicates that 69% of the participants rated the therapist's explanation of their roles and approaches to patient assessment and management as valuable or highly valuable. This statistic indicates that therapists are able to provide an explanation of their role and services. However, it does not necessarily mean that the explanation given is accurate.

Another study that examined physicians knowledge base of occupational therapy was by Kahton, Inman, Haines, and Holland (1994). Twenty-four medical schools in the United Kingdom were approached to complete a survey discussing their methods of teaching disability and rehabilitation. Twenty-three schools participated in the project. The objective of the research was to determine what teaching was being offered on the topic of rehabilitation in all the different schools. This information would allow the researchers to determine how practitioners were educated about rehabilitation and if their education led to accurate referrals to these healthcare providers. Detailed surveys were distributed and interviews of those involved in the teaching were recorded. Interview topics included methods of teaching, rehabilitation disciplines involved with the teaching, content, aims and objectives, and future plans in the area. Those participants in this research project mentioned a variety of different approaches to teaching this topic; they include the following:

1. Home and support group visits
2. Simulation of a patient
3. Use of adapted equipment in a realistic setting
4. Self-directed learning
5. Group work and presentations

All twenty-three schools had some form of teaching, "however in many cases the teaching appeared fragmented and inadequate," (p. 386) The completion of the surveys did not include all professionals involved in teaching about disability and rehabilitation, therefore there may be more variety in the teaching methods than were included in the study. Very few schools included disabled individuals from the community as additional resources to the students. These individuals would have provided a more accurate presentation of what a disability entails. Lastly, it appeared from the article

that the medical schools isolate themselves from each other. Very little too no communication occurred among the schools about successes and failures that occurred with the different teaching approaches.

A good sample size of institutions had been utilized. However the information obtained seemed to be disorganized. The research indicates the need to have a more organized approach to teaching disability and rehabilitation that is uniform among all schools. Students require a strong foundation in the area of disability to appropriately treat their clients, and the universities that teach these students to become medical doctors should provide this foundation.

Deitch, Gutman and Factor (1994) were interested in assessing “sources of physician education concerning occupational therapy and to determine whether these sources influenced occupational therapy referral rates and types of patients whom they referred” (p. 1014). More specifically, information was sought to find out whether resident knowledge about the occupational therapy profession was gained through primary education (classroom lectures) or secondary education (interaction with a therapist). Furthermore, the researchers were interested in looking at how the formality of the education affects the resident’s knowledge base and referral patterns.

One hundred fifteen medical residents representing eleven different resident programs from Thomas Jefferson University responded to the surveys. The resident programs included, dermatology, emergency medicine, family medicine, internal medicine, obstetrics and gynecology, orthopedics, physical medicine and rehabilitation, radiology, psychology, neurosurgery, and urology. The average age for respondents was between 29-32. Sixty three percent were males, 35% were females and 2% were unknown. The survey included 12 close-ended questions and two likert scales. Results indicated that most residents learnt about occupational therapy through secondary contact with a therapist, and not through the formal classroom atmosphere, literature, or formal presentations. When asked how they preferred to understand the profession the majority of respondents said through inter-active workshops where residents learn about the different domains of practice for an occupational therapist.

Occupational therapists may need to become more active in educating residents and physicians about the professions role in patient care. This study cannot be generalized to the entire population of medical residents. The participation numbers per resident program were not large enough to make universal conclusions. The results of this study may be skewed due to lack of some residency programs ability to interact and work with occupational therapists. It would have been more beneficial to have surveyed a group of residency students from the same program; particularly a program that has contact with occupational therapists.

Marshall and Haines (1990) examined how much time was spent teaching about the area of disability and rehabilitation at twenty-five different medical schools. The methods of teaching were also of interest to the researchers. They wanted to find out if patients diagnosed with physical disabilities and their practitioners, such as occupational therapists were included in the educational training of these graduates.

A survey was sent to twenty-five medical school deans in England, Scotland, and Wales. Twenty-one completed surveys were returned. Five schools reported that no structured teachings occurred at their institutions, and that very little patient led teaching occurred in any departments. At the schools that did provide rehabilitative training, the students were given the opportunity to follow clients from the hospital setting back into the community. These students had an opportunity to view first hand the roles of different healthcare professionals such as occupational therapists and physical therapists.

Many of the returned questionnaires showed serious gaps in the teaching of disability and rehabilitation. These lessons were learned after the formal education ended. Many deans responded that the limited time in the curriculum made it difficult to include all that should be addressed.

This study included all medical schools in England, Scotland and Wales. More research needs to occur here in North America to determine if these results would be consistent here, and if they are accurate other means of educating those who will be in the position to refer to these rehabilitative services (such as occupational therapy) needs to be determined.

Busuttill (1985) wanted to find out whether general practitioner trainers (professors) and general practitioner trainees (students) in South Hampton and Southwest Hampshire health districts were educated in the use of occupational therapy in the community facilities for disabled individuals. Twenty-one professors and 21 students responded to a detailed questionnaire covering various aspects of community care. The two groups were not randomly selected but chosen from a list of 48 possible participants (24 professors and 24 students). The researcher interviewed both groups of participants and recorded their responses. These recording were later used to fill in a seven-page questionnaire. Interviews lasted 40 minutes.

The results indicated a significant difference between general practitioner trainers and general practitioner trainees. Out of 41 questions the professors got a 38.6 correct whereas the students got 28 correct responses. The students stated that they were not aware of what services were available. A few professors stated that the occupational therapy job description was not clear therefore limiting the number of referrals they made. Many respondents in the professor group said that the limited use of occupational therapy services was due in part to the delay in getting patients seen. Limited occupational therapy practitioners and limited adaptive equipment / supplies appeared to be a concern for the majority of respondents. The occupational therapy department at this facility may need restructuring so that patients are seen in an appropriate time block to allow for treatment to be effective, and so that their services can be recognized as valuable to patient care. The research reported in this article occurred in Great Britain, the delivery of occupational therapy services may be different in Europe than it is in North America. The research numbers are small and include a single community setting. This research cannot be generalised until more research is completed. More information about the physicians area of speciality would have provided additional information about this groups need for occupational therapy services.

## Theme 2: Use of occupational therapy in the practice setting.

Moseley (1996) was interested in determining the effectiveness of rehabilitation in long term nursing facilities, particularly those residents who had been affected by a stroke. Physical and occupational therapy intervention were used with 801 residents living in Virginia nursing homes. According to Moseley, some medical staff believe residents are too frail to benefit from rehabilitation. Others believe that rehabilitative care should focus on maintenance of health care and quality of life. Eight hundred and one residents were included in the study, however residents were not randomly assigned to treatment, therefore a selection bias may have affected the results.

Rehabilitative interventions were measured by both occupational therapists and physical therapists. The variables that were assessed included medical condition, psychiatric status, continence, delay between stroke and onset of rehab, physical impairments, physical function, and sensory status. Those residents who had received occupational therapy and physical therapy were compared to those residents who had not. Physical therapists receive more referrals due to a better understanding of what the role of a physical therapist is. Only physical therapy results were included in the study due to the limited number of residents being treated by an occupational therapist. Of the 801 residents in the study, 86% of the study participants required assistance with activities of daily living (ADL). Eight percent of the residents received physical therapy, while only one percent received occupational therapy. The results indicated that 4 times more residents receiving physical therapy improved in function (especially in the area of independent eating). The results indicated a statistical significance on ADL's, however it did not show a clinical significance. This research should have included much more occupational therapy involvement. Areas that were being assessed are areas within the occupational therapy domain of practice. The lack of occupational therapy involvement may be due to a lack of information regarding occupational therapy services and may have contributed to the limited clinical significance.

Moseley did not indicate what the intensity and quality of physical therapy intervention had been. It was not indicated how long treatment sessions lasted and how often they occurred. More research regarding occupational therapist's contributions to this population need to occur to get accurate data. For more research to occur regarding the benefits of occupational therapy intervention, referral sources need to increase.

Another study that examines occupational therapy use in practise was completed in January 1981. Ostrow and Kuntavanish addressed concerns regarding a lack of occupational therapy referrals for patients with ADL deficiency in acute care community hospitals. The focus of the study is on the outcomes related to occupational therapy referral and the referral process. The examiners were interested in obtaining reliable and valid accountability methods for referring to occupational therapy. Due to the low numbers of referrals being made, the benefits of occupational therapy services were not being realised. The study involved reviewing 100 medical charts of patients 65 years and older. The study population were those judged to be at a high risk for both ADL deficiency and poor referral to

occupational therapy. The patient population that were being reviewed had diagnoses of hip fractures, lower limb amputations, and abdominal surgery. It excluded however, CVA, cancer and chronic brain syndromes. The initial measurement found that 71% of patients requiring referrals did not receive it.

“Possible factors related to low occupational therapy referrals in the acute setting were thought to be:

1. Physician’s focus in acute care facilities did not include functional rehabilitation.
2. Limited awareness of nurses and physicians of existing occupational therapy services directed at functional restoration to augment ADL skills for patients 65 and older.
3. Lack of defined and structured (systematic) referral process from primary physician to the occupational therapy department.
4. Inconsistent occupational therapy participation in the nursing orientation program and no participation in the physician orientation program.” (p. 389-390)

To address the above factors, Ostrow and Kuntavanish established a plan for improvement. The plan had four stated objectives, which include educating nurses and physicians about the role of occupational therapy.

To assess the effectiveness of the plan, Ostrow and Kuntavanish reviewed 50 medical charts of patients six months after the plan was implemented. The patient population met the same criteria as the initial sample. The measurements indicated that missed referrals had decreased from 71% to 27%. The changes in outcomes were implied to be linked to the plan of improvement. More patients were being referred to occupational therapy and an increase in communication between healthcare practitioners had been established. A 27% non-referral rate still remains quite high. The stated objective was to reach a 15% or lower number of non-referrals.

Much of the research that has occurred has looked at a specific sector of care. Research has been limited in comparing how different geographical locations approach similar healthcare concerns.

#### Research Question

Do medical doctors in the Canadian healthcare system understand the role of the occupational therapist on the healthcare team? Furthermore is this understanding deemed valuable, and if so is it apparent in their referral methods.

#### Need for the Study

Occupational therapy services cannot be utilized efficiently if its focus is not clearly understood by those team members who generate referrals. To provide holistic care to patients the medical team should be aware of each other’s distinct expertise. Many allied health professionals have overlap in some treatment areas. However, for the most part each discipline is unparalleled in its approach to care. It is the role of physicians to make accurate referrals, and it is the responsibility of occupational therapists to ensure that their domain of care is understood and appreciated. The purpose of this study is to determine what medical doctors working in the Canadian healthcare system know about occupational therapy, and if this understanding of occupational therapy is deemed valuable by

the rate of referrals generated by these practitioners. This study will examine the relationship between physicians knowledge level and referrals to OT

### Methods

Medical doctors practicing in areas of physical disability who are likely to refer to occupational therapy were chosen for this study. Surveys were distributed to 40 medical doctors from three large hospital settings in an urban Canadian city. Each hospital had a minimum of 350 available beds to be used for patient care. A minimum of four full time occupational therapists were employed at each setting, and the hospitals were located at different geographical locations within the urban city. Consent forms were included with the survey.

### Subjects

The subjects in this study include medical doctors who refer to occupational therapy. For the purpose of this study physician who work in the physical disability arena with the following conditions: CVA, TBI, SCI, degenerative diseases, Hand injury/ peripheral nerve injury, rheumatoid arthritis, burns, amputations, hip fractures/ hip replacements, and splinting are requested to participate. Occupational therapy has a broader array of patient conditions. However, this study is limited to the patient population listed above.

### Instrument

A study specific survey was generated for this research project. The survey has seven multiple-choice questions and one open ended question. Biographical information regarding gender, medical specialty, type of education, and years of practice were included. Time to complete the survey took approximately five minutes.

### Procedure

A total of 40 surveys were placed in physician mailboxes among the three hospitals. One hospital received a greater amount of surveys secondary to the larger amount of possible participants working at that setting. Initially, eight surveys were completed and returned. After a second distribution a total of 14 completed surveys were returned to the secure drop boxes that were available by the physician mailboxes. Having the survey at three different facilities had allowed for more participation and had been intended to increase the generalization of the results.

### Data Analysis

Data was analyzed using the Statistical Package for the Social Sciences (SPSS) program. The analysis of the survey includes both descriptive statistics of individual variables and of combined variables.

Individual variables that were assessed included gender, patients that would benefit from occupational therapy referrals, patients that would benefit from occupational therapy intervention, study participants years of practice in the medical field, time devoted to the understanding of occupational therapy in coursework, source of occupational therapy information, those participants that have referred to occupational therapy in the past, and the reason for why some study participants have

never referred to occupational therapy. In addition to the aforementioned, combined variables were also analyzed.

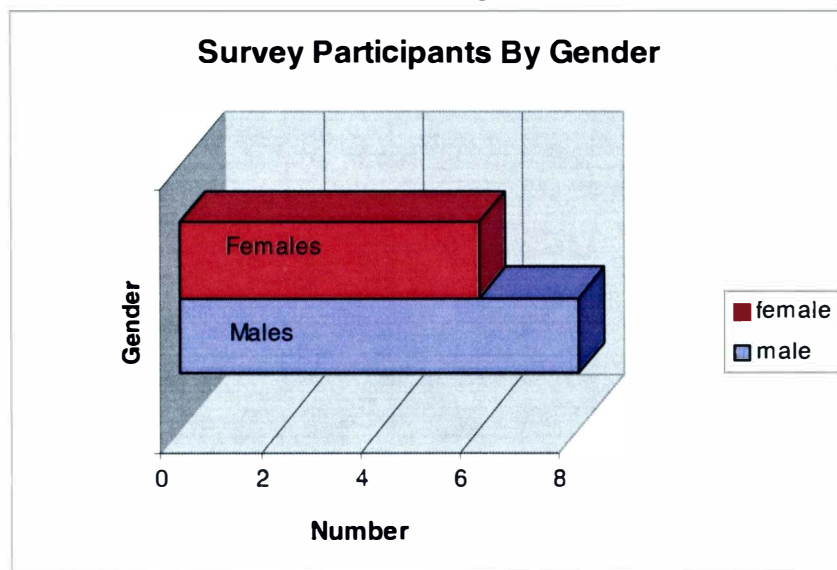
Combined variables that were assessed included the following:

- Gender and having referred a patient to occupational therapy
- Referring a patient to occupational therapy and the amount of time spent in coursework understanding the role of occupational therapy.
- Importance of OT in rehab patients and sources of occupational therapy information.

#### Results

A total of 40 surveys were distributed to physicians at three different acute hospital settings. Of the 40 distributed, 14 surveys or 35% were completed and returned. The surveys included both multiple-choice questions and an open-ended response. However, only two respondents replied to the open-ended questions regarding medical specialty with the medical specialties stated as a neurologist and general practitioner. Of those that responded, zero provided additional comments when asked. Six respondents or 43% were female and eight or 57% were male. In addition, all respondents indicated that they were medical doctors. (see figure 1).

Figure 1



Of all respondents, 50% had practiced five years or less. The second largest group of respondents was those that had been practicing between ten and twenty years representing 29%. The remainder of respondents indicated years of practice as either five to ten years, or twenty to thirty years amounting to 21%. The years of practice in an acute hospital setting for the respondents has been summarized in the table below. (see table 1)



Table 1

Years of Practice in an Acute Care Hospital Setting			
		Frequency	Percent
Valid	0-5	7	50.0
	5-10	1	7.1
	10-20	4	28.6
	20-30	2	14.3
	Total	14	100.0

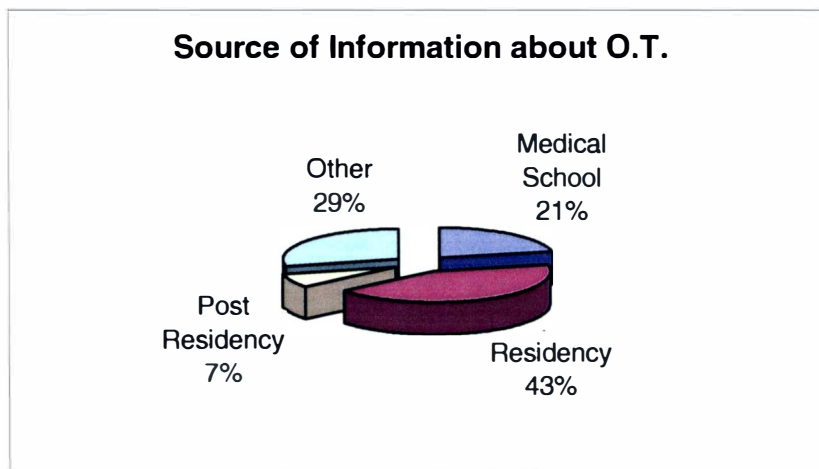
Of the multiple questions posed, the first question asked the respondent the amount of time that was devoted to the understanding of occupational therapy in course work. Possible response options included: no time, 1 hour, 1-2 hours, or no answer provided. Of all respondents surveyed, 50% stated to have had some discussion tailored around the role of the occupational therapist on the health care team. Another 43% of respondents indicated that no time was spent understanding occupational therapy in their course work. The remaining seven percent of respondents did not provide a response. The table below captures the results of this question. (see table 2).

Table 2

Amount of Time Devoted in Course Work to Understanding Occupational Therapy			
		Frequency	Percent
Valid	no time	6	42.9
	1 hour	5	35.7
	1-2 hours	2	14.3
	no answer provided	1	7.1
	Total	14	100.0

Respondents were asked to indicate their source of information about occupational therapy. The choices included: medical school lectures, residency, post-residency, and other. Results of the survey indicated that 79% of respondents state that their main source of information had occurred after formal education was attained. The second largest group of respondents indicated other as their response, but specified work experience as being their largest source of information about occupational therapy. This group represented 29% of all respondents. The remaining 21% of respondents indicated that they received information through medical school (class experience). The following pie chart illustrates these findings. (see figure 2).

Figure 2



When asked if the respondents had referred patients to occupational therapy in the past, 86% stated that they had. The remaining 14% of respondents did not refer patients to occupational therapy. Instead, these respondents referred them to physical therapy assuming that physical therapy encompasses all rehabilitation.

Respondents were then given a list of 16 possible interventions and asked which of them an occupational therapist would most likely be involved in. More than one choice of intervention was permitted. The interventions selected have been tabulated and summarized in the table below. (see table 3).

Table 3

Frequency of Participants Response to Possible Occupational Therapy Services		
	Valid	Percent of Respondents %
Activities of daily living	10	71
Strengthening	5	36
Bed mobility	1	7
Home safety	1	7
Crutch training	1	7
Splints	4	29
Massage	0	0
Visual-perceptual	0	0
Gait training	0	0
Functional mobility	1	7
Coordination	1	7
ROM to BUE	1	7
Adaptive equipment	8	57
Sensory integration	0	0
Cognitive retraining	2	14
Dysphasia	0	0

Of the possible 16 choices, the five most frequently selected occupational therapy interventions are: activities of daily living (71%), adaptive equipment (57%), strengthening (36%), splints (29%), and cognitive retraining (14%). The next six intervention choices each recorded a seven

percent response. These choices included: bed mobility, home safety, crutch training, functional mobility, co-ordination, ROM to BUE. The remaining five choices of interventions were not selected.

In a follow up question, respondents were asked how many of their patients would benefit from the list of 16 interventions listed above. Survey results indicate that 86% of respondents felt that their patients would realize some benefit from one or more of the 16 interventions listed. The remaining 14% of respondents were uncertain if any benefit would be received by their patient from the interventions. Responses to this survey questions have been summarized in the table below. (see table 4).

Table 4

Respondent's Perception of Benefits Received From List of Interventions			
		Frequency	Percent
Valid	25%	6	42.9
	50%	4	28.6
	75%	2	14.3
	don't know	2	14.3
	Total	14	100.0

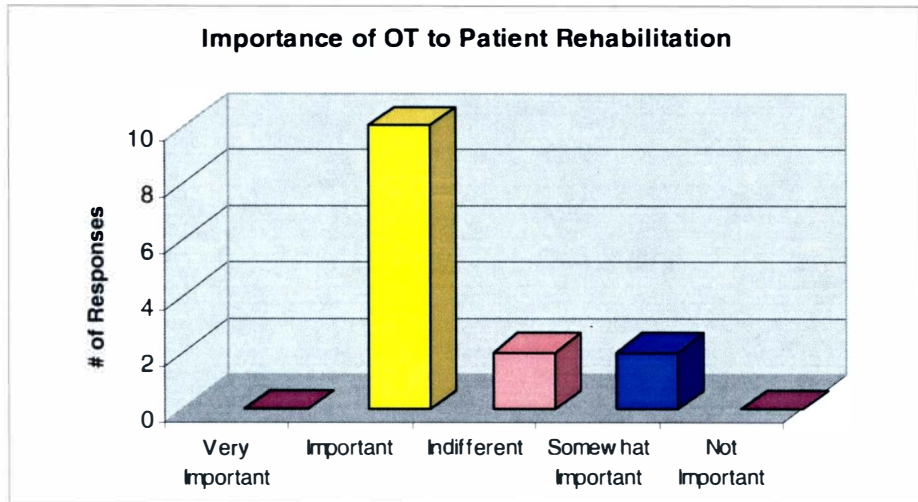
Similarly, respondents were then asked how many of those who benefited from the list of interventions would also benefit from occupational therapy specifically. Again, 86% of respondents indicated that occupational therapy would specifically provide some sort of benefit to patients. The remaining 14% of these respondents indicated that they were unsure if any benefit would be received. These results are illustrated in the table below. (see table 5).

Table 5

Respondent's Perception of Benefits Received Specifically From Occupational Therapy			
		Frequency	Percent
Valid	25%	9	64.3
	50%	3	21.4
	don't know	2	14.3
	Total	14	100.0

The last forced choice question asked respondents for their personal opinion as to whether they felt occupational therapy is important to the rehabilitation of their patients. The results indicate that 86% of respondents felt that occupational therapy in some way is of importance in the rehabilitation of their patients. The remaining 14% of respondents were indifferent indicating that they did not know if their patients benefited from occupational therapy services. These results have been illustrated in the bar graph below. (see figure 3).

Figure 3



Combined Variable Analysis

In terms of referrals, there were an equal number of male and female respondents who sent patients for occupational therapy. However, the two respondents that did not refer patients to occupational therapy were of the male gender. These respondents stated that physical therapy encompasses all rehabilitation. Refer to table 6.

Table 6

Cross Tab – Patients Referred to Occupational Therapy Vs. Gender				
		Gender		Total
		Male	female	
refer pt's to OT	yes	6	6	12
	no	2	0	2
Total		8	6	14

The majority of those respondents that referred to occupational therapy indicated that no time was spent in course work on the discussion of occupational therapy. The assumption is made that their experience with occupational therapy developed through practical experience. Refer to the table 7.

Table 7

Cross Tab – Refer Patients To Occupational Therapy Vs. Time in Course Work						
		time in course				Total
		no time	1 hour	1-2 hours	no answer provided	
refer pt's to OT	yes	5	4	2	1	12
	no	1	1	0	0	2
Total		6	5	2	1	14

In analyzing the importance of occupational therapy to rehabilitation, the respondent's personal opinion and source of occupational therapy training was considered. Interestingly, those that felt occupational therapy to be important were exposed to some source of occupational therapy information. A total of 71% of respondents received occupational therapy information from medical lectures, residency, post-residency, or other (work experience), and all of these respondents felt occupational therapy was important to the rehabilitation of patients. The cross tab table below supports these findings. (see table 8).

Table 8

Cross Tab – Importance of Occupational Therapy in Rehab Patients Vs. Source of Occupational Therapy Information						
		source of OT information				Total
		Medical school lectures	residency	post residency	other (work experience)	
importance of OT in rehab pt's	important	3	3	1	3	10
	indifferent	0	1	0	1	2
	somewhat important	0	2	0	0	2
Total		3	6	1	4	14

### Discussion

In summary 86% of medical doctors indicated that they have referred patients to occupational therapy services in the past and believe that they possess adequate knowledge in this service area to make this type of referral. However survey results indicate that these respondents may not necessarily be as knowledgeable or well versed in the domains of occupational therapy modes of care as they would believe.

The number of male and female respondents was virtually identical with eight males and six females. This enabled the data to avoid being skewed by gender biases as both sexes were represented fairly equitably.

With regards to sources of information about occupational therapy, the results clearly showed that a majority of respondents received it from their residency program, whereas, only one respondent received it from post-residency. However, of equal importance, is the 29% that indicated other, and specified work experience as being that other. It is unclear if some respondents differentiated their residency experience from their work experience when they completed their medical education. These results are congruent with what past researchers have indicated through their research. It appears that most practitioners understanding of rehabilitation occurs through applied work experience.

Most respondents indicated on their survey that they have referred a patient to occupational therapy services. Those that did not refer indicated not having done so due to physical therapy encompassing all of rehabilitation. Possible other responses included: lack of knowledge, patient not ready to return to work, and activity level not appropriate for skilled occupational therapy. It is

interesting to note, that the only response given was in regards to physical therapy. Much of the past research indicates that occupational therapists are most commonly referred to as physical therapists. Physical therapy is a well-known area of rehabilitation; it is easy to determine what physical therapy encompasses by reviewing its name. However, occupational therapy is often thought to be related to finding one a job. This lack of understanding of our area may begin with our name being misleading.

A list of 16 occupational therapy and physical therapy interventions was presented as one of the questions. Respondents were asked to then select those interventions that were occupational therapy based. There was no limit to how many interventions they could select. Through analysis of the results, occupational therapy is most commonly known for activities of daily living. However, other fundamental interventions that are the basis of occupational therapy delivery were not selected. Furthermore, it is important to note that some physical therapy interventions were selected. It has been proposed that many times in practice occupational therapists will receive inaccurate referrals that belong to physical therapy and vice versa. The results of this question support that proposition, as clearly some respondents could not accurately differentiate between occupational therapy and physical therapy interventions. In past research many respondents claim to have an understanding of occupational therapy, but when asked to define occupational therapy roles, these respondents are unable to do so. This is similar to the results found in this study.

Since some respondents could not clearly differentiate between occupational and physical therapy interventions, it would not be unreasonable to assume that they would not know the actual benefits realised from occupational therapy itself. However, it is not clear from the results to what extent this inability to differentiate has on their responses to other questions in the survey.

#### Implications for Occupational Therapy

The respondent's inability to consistently refer patients to the needed occupational therapy services has implications that are three-fold. First, the medical field in general may need to give more attention to the area of rehabilitation and the role of occupational therapy. This will provide medical students with a better understanding of this service, which will allow them to more appropriately match the service with patient needs. Second, if physicians are inappropriately matching rehabilitation services to patient needs the patients may face a recovery process that is non-beneficial. Last, occupational therapists may not be doing enough to keep medical physicians up to date and well informed of the services offered in their field and the benefits that result from them.

#### Limitations

The limitations are as follows:

- As stated earlier, 40 surveys were distributed to three different facilities. Of the three facilities selected, one facility in particular employed a greater number of physicians than the other two. In addition, this facility is also a research-based institution, which may have resulted in them being more prone to responding. It is also important to note that the number of respondents is quite small and may bring in to question the validity of any conclusions

drawn. A survey sample of 14 is too small to make absolute correlation's and conclusions. More surveys may need to be distributed or more acute care facilities may need to be included in the study. As stated earlier, only two respondents both female responded to the medical specialty question in the survey. The specialties included neurology and general practice. Due to the limited responses, it is unknown the affect each specialty would play in referring to occupational therapy.

- For the question referring to the amount of time in course work devoted to the discussion of occupational therapy, the options ranged from no time spent to more than four hours. However, answering this question would require the respondents to recall events and training that may have taken place many years ago. Therefore, the accuracy of the response would be suspect to their recall. It is also important to consider the range of choices offered in the question as it may lead to responses being skewed. For instance, the choice of hours spent on occupational therapy was broken down in to four ranges. However, the upper limit of the first range was also the same number of hours as the lower limit of the next range. By doing so, respondents now have the option of selecting either range as their choice when they should have only had one choice.
- Having been in Canada for a brief period of time prior to the research beginning, I felt disconnected to the occupational therapy community in the area. It would have been a benefit to know fellow occupational therapists that may have directed me at times of confusion. This may have been an opportunity for me to get input and feedback from practicing therapists regarding what needs may need to be addressed during the education of the referring physicians.
- The survey had been sampled by two general practitioners and an occupational therapist practicing in Edmonton, Canada prior to the research receiving ethics approval. However after analyzing the data I was unsure of whether all the interventions listed in Question four of the survey are areas that Canadian occupational therapists practice in. I had used my American knowledge base when asking that question and am now aware that the Canadian system may be different.
- Some of the questions in the survey relied on the respondent's ability to accurately recall events during early years of training. Some responses may be subject to speculation as it relied on their ability to recall these events accurately.
- Greater attention could have been given to some of the survey questions to better record responses and to eliminate the possibility of ambiguity. For example the open-ended question asking years of practice may have been more useful had ranges of years been provided. This would have grouped responses in a more meaningful manner and eliminated any overlap in range years. An example of where ambiguity may arise is when respondents were asked what percent of their patient's were referred to occupational therapy services. In this question, a

choice of four options was given to choose from. However the respondent's answer may have fallen between two of the given choices leaving it up to their discretion to indicate which would be the more correct choice.

#### Suggestions for further research

Other research conducted in this area has obtained similar results to what has been provided in this thesis. That is, a lack of appropriate education with physicians can lead to inaccurate referrals. Future research in this area should include the effect education has on the referral process. Both physical and occupational therapists should be involved in the education process to ensure that their domain of care is understood and appropriately acknowledged.

#### Conclusion

The governing boards for occupational therapy both in North America and Europe need to become involved with standardising what occupational therapist's domain of care entails. Our approach to care needs to become standardised throughout the world to ensure that what is occurring in one part of the world is also occurring in another. If occupational therapy practise remains varied throughout the world and in many cases in the same country; it becomes difficult to standardise what is being taught to those that refer to our services. Occupational therapists need to remain active in educating ourselves with new and improved information and technology, but we must share our new knowledge with others. We must remain active with what is current and with what has been proven to work in the past. We must take the initiative to ensure that our profession is respected and understood on its own accord.



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**Appendix A**

**Human Subjects Institutional Review Board Approval Form**

# WESTERN MICHIGAN UNIVERSITY

Human Subjects Institutional Review Board



Date: June 6, 2003

To: Diane Dirette, Principal Investigator  
Naina Jamani, Student Investigator for thesis

From: Mary Lagerwey, Chair

A handwritten signature in black ink that reads "Mary Lagerwey".

Re: HSIRB Project Number 03-06-01

This letter will serve as confirmation that your research project entitled "The Understanding and Utilization of Occupational Therapy Services by Medical Doctors in Acute Hospital Settings" has been **approved** under the **exempt** category of review by the Human Subjects Institutional Review Board. The conditions and duration of this approval are specified in the Policies of Western Michigan University. You may now begin to implement the research as described in the application.

Please note that you may **only** conduct this research exactly in the form it was approved. You must seek specific board approval for any changes in this project. You must also seek reapproval if the project extends beyond the termination date noted below. In addition if there are any unanticipated adverse reactions or unanticipated events associated with the conduct of this research, you should immediately suspend the project and contact the Chair of the HSIRB for consultation.

The Board wishes you success in the pursuit of your research goals.

Approval Termination: June 6, 2004

**Appendix B**  
**Study Instrument**

THE UNDERSTANDING AND ULITIZATION OF OCCUPATIONAL THERAPY SERVICES BY  
MEDICAL DOCTORS IN ACTUE HOSPITAL SETTINGS

Male          Female

Medical Specialty:

Type of Education:

MD            MD & PhD

How many years have you been practicing in the acute care hospital setting?

1. The amount of time in your coursework devoted to a discussion of occupational therapy?

No time  
1 hour  
1-2 hours  
2-4 hours  
More than 4 hours

2. Your source of information about occupational therapy included:

Medical school lectures  
Residency  
Post residency  
Fellowship  
Other (please specify) \_\_\_\_\_

3. Have you referred a patient to occupational therapy?

yes          no

If no, please check one or more of the following:

Lack of knowledge  
Assumption that physical therapy encompasses all rehabilitation  
Patient not ready to return to work  
Activity level not appropriate for skilled occupational therapy  
Other (please specify) \_\_\_\_\_

4. I would refer a patient to occupational therapy (check all that apply):

Activities of daily living

Strengthening

Bed mobility

Home Safety

Crutch training

Splints

Massage

Visual- perceptual

gait training

Functional mobility

Coordination

ROM to BUE

Adaptive equipment

Sensory Integration

Cognitive retraining

Dysphasia

5. How many of your patients would benefit from the activities listed in question 4.

0%

25%

50%

75%

100%

don't know

6. How many of these rehab patients would benefit from occupational therapy?

0%

25%

50%

75%

100%

don't know

7. Do you feel that occupational therapy is important in the rehabilitation of your patients?

very important

important

indifferent

somewhat important

not important

8. Please comment or add any additional comments.

Appendix C  
Approved Consent Document

# WESTERN MICHIGAN UNIVERSITY



Occupational Therapy Department

WESTERN MICHIGAN UNIVERSITY

H. S. I. R. B.

Approved for use for one year from this date:

JUN 06 2003

x May Zagury  
HSIRB Chair

You are invited to participate in a research project entitled "The understanding and utilization of occupational therapy services by medical doctors in acute hospital settings" This study is designed to analyze the attitudes and knowledge base of those physicians in a position to refer to occupational therapy services. Medical doctors practicing in areas of physical disability who are likely to refer to occupational therapy are chosen for this study. These areas include CVA, TBI, SCI, degenerative diseases, hand injury/ peripheral nerve injury, rheumatoid arthritis, burns, amputations, hip fractures/ hip replacements, and splints. This study is being conducted by Dr. Diane Dirette (principle investigator) and Naina Jamani (student investigator) from Western Michigan University, Department of Occupational Therapy. This research is being conducted as part of the thesis requirements for Naina Jamani.

This survey is comprised of 7 closed ended questions and 1 open ended question and will take approximately 5 minutes to complete. Your replies will be completely anonymous; so do not put your name anywhere on the form. You may choose to not answer any question and simply leave it blank. If you choose not to participate in this survey, you may either return the blank survey or you may discard it in the box provided. Returning the survey indicates your consent for use of the answers you supply. If you have any questions, you may contact Dr. Diane Dirette at 269-387-7243, Naina Jamani at 780-487-7917, the Western Michigan University Human Subjects Institutional Review Board (269-387-8293) or the vice president for research at Western Michigan University (269-387-8298). The HSIRB chair can be reached at [research-compliance@wmich.edu](mailto:research-compliance@wmich.edu) and the VP for research can be contacted at [jack.luderer@wmich.edu](mailto:jack.luderer@wmich.edu).

This consent document has been approved for use for one year by the Human Subjects Institutional Review Board as indicated by the stamped date and signature of the board chair in the upper right corner. You should not participate in this project if the stamped date is more than one year old.