Understanding Occupational Therapy: Medical Doctors and Doctors of Osteopath’s Knowledge about Occupational Therapy in an Acute Care Hospital

Shereen A. Metwalli

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UNDERSTANDING OCCUPATIONAL THERAPY:
MEDICAL DOCTORS AND DOCTORS OF
OSTEOPATH'S KNOWLEDGE ABOUT
OCCUPATIONAL THERAPY IN AN
ACUTE CARE HOSPITAL

by
Shereen A. Metwalli

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
December 2003
The purpose of this study was to discover whether medical doctors (MD) and doctors of osteopath (DO) at two large hospitals in the Midwest have adequate knowledge about the roles and functions of occupational therapy, its services and benefits to patients and its implications on interdisciplinary team success. Increasing the knowledge in these three areas could influence occupational therapy referral rates and, as a result, impact the quality of patient care. This study used a descriptive survey to collect data from 55 physicians. Respondents acquired their knowledge of occupational therapy through secondary sources within informal sources of information. A statistically significant relationship was found between knowledge of occupational therapy acquired through informal sources and the referral rate. Over 80% of respondents selected Activities of Daily Living (ADL) as being an occupational therapy service area. Strategies for increasing physicians' knowledge of occupational therapy services and increasing referral rates to occupational therapy include offering regular seminars, providing literature to describe the services, initiating personal contact, establishing regular scheduled tours to occupational therapy departments and offering interactive workshops on occupational therapy treatments.
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Introduction:

Neistadt and Crepeau (1998) stated that, “Occupational therapy is the art and science of helping people do the day-to-day activities that are important to them despite impairment, disability or handicap. ‘Occupation’ in occupational therapy does not simply refer to jobs or job training; occupation in occupational therapy refers to all of the activities that occupy people’s time and give meaning to their lives.” Put simply, occupational therapy provides the “skills for the job of living” (Thomas & Metzler, 1998). Gutman (1998) has described the mission of occupational therapy as helping persons with disabilities to function optimally in self-care, home management, and work or school activities in their homes and community environments.

Gutman also stated that historically, the profession of occupational therapy had developed and mastered the domain of functional activities of daily living (ADL) since the profession’s inception in the early 1900’s (1998). In recent years, many other professions have tried to compete for the domain of functional ADL’s in response to recent historical and socioeconomic events. Some of these other professionals are physical therapists, nurse practitioners and neuropsychologists, to name a few. Despite other healthcare disciplines using functional ADL’s, there is hope that occupational therapy will overcome, due to its existing recognition in health care.

Specific occupational therapy services may include the use of one or more of the following media, methods and techniques:

1. Analysis and training of daily living skills for the development, restoration or maintenance of skill performance in self-maintenance, productivity and leisure occupations;
2. Design, fabrication and application of orthotic and prosthetic devices to assist or substitute for functional performance;
3. Analysis, selection and use of adaptive equipment or assistive technology or devices for functional performance;
4. Selected application of sensorimotor, cognitive or psychological activities to develop or redevelop specific performance components;

5. Use of therapeutically analyzed crafts, games or toys to promote purposeful actions that can be organized into performance components;

6. Task analysis and development of play and prevocational and avocational skills to facilitate the organization of performance components into occupational areas;

7. Adaptation of physical environment to improve the health, well-being and functional performance of all people (architectural or environmental barriers) (Reed & Sanderson, 1992).

A fundamental principle in occupational therapy evaluation and treatment philosophy is that intervention should always be “patient-centered”. Thomas and Metzler (1998) discuss the challenges of providing a high standard of client care while meeting government interests in controlling healthcare costs. According to the article, with the challenges facing healthcare, occupational therapy is in an ideal position of meeting healthcare challenges while continuing to uphold its standards. Thomas and Metzler note that occupational therapy would be a highly beneficial resource due to its holistic and client-centered treatment, which meets the physical, psychosocial and environmental needs of their clients (1998). The occupational therapy appraisal first considers the person’s occupational performance and then the related performance component, including sensory, physical motor, cognitive and psychosocial, which allows the therapist to determine reasonable patient goals and the resources necessary to meet these goals (1998). Clark (1997) confirms that occupational therapy can lead to better outcomes in function and patient satisfaction.

Occupational therapists rely mainly on referrals from physicians (medical doctors (MD) and doctors of osteopath (DO)), yet these professionals might not clearly understand the roles and functions of occupational therapy. It is important for physicians to have the knowledge about
the services and functions of occupational therapy, so to provide their patients with the needed occupational therapy services and to ensure the return to the highest level of independence.

Physician’s knowledge of occupational therapy is acquired through formal or informal sources. The formal education is based on the academic classroom lectures in medical school and clinical practice in residency within a university or hospital setting. The informal knowledge is acquired through dealing and interacting with occupational therapists in practice, medical meetings and hallway discussions.

Occupational therapy is one aspect of an interdisciplinary team that is concerned with helping persons with disabilities. Being part of an interdisciplinary team is a key success in an acute care hospital. A key element of an interdisciplinary team is an understanding and appreciation of the unique perspectives, knowledge, skills, values, and purposes of each of the professions represented on the team (DeGraw, C. Fagan, M., Parrott, M., Miller, S., 1996). Healthcare professionals are required to not only know the services needed by their clients, but also understand the abilities of various healthcare disciplines that provide the needed services so that clients will receive appropriate and adequate services (DeGraw et al., 1996).

However, if medical doctors and doctors of osteopath, who are the primary referral source are unaware of the services and functions of occupational therapy, utilization of services does not occur.

The purpose of this study is to find out whether medical doctors (MD) and doctors of osteopath (DO) at two large hospitals in the Midwest have adequate knowledge about the roles and functions of occupational therapy, its services and benefits to patients and its implications on interdisciplinary team success. Increasing the knowledge in these three areas could influence occupational therapy referral rates and as a result impact the quality of patient care. As the level of knowledge and understanding of occupational therapy increases doctors might be able to suggest to their clients and other professionals the benefits of occupational therapy. As a result, clients could be convinced about the role of occupational therapy in their recovery and more
diligent with their treatment. The study will also examine the level of knowledge of a number of specialists within the medical profession that might benefit from further education on the roles and functions of occupational therapy. The medical professional’s awareness of the differences between the roles and functions of other rehabilitation professionals, such as physical therapy and speech language pathology, may enhance the effectiveness and efficient utilizations of the rehabilitation resources available in an acute care setting. Additionally, better awareness and thus utilization of services available may facilitate the patient’s recovery time and shorten the length of stay in the acute care hospital.

Literature Review:

In the last two decades, a great deal of efforts was made investigating the level of the medical professional’s knowledge and understanding of occupational therapy. Several authors have published articles that relates to healthcare professionals referral to occupational therapy services (Deitch, Gutman & Factor, 1994; Jamnades, Burns & Paul, 2001).

Evans and Annunziato (1986) found that the most preferred means through which physicians learned about occupational therapy roles and functions was individual contact with therapists. Physician’s failure to clearly identify and evaluate the various clientele in their practices that can benefit from occupational therapy is a reflection that the medical professions have a narrow understanding of occupational therapy. Research has found that physicians refer patients to occupational therapy primarily for improvement of isolated physical deficits secondary to specific disease processes, rather than for development of skills to succeed in functional activities (Deitch & Gutman, 1994).

Few articles, however, have dealt with physician’s perception and medical resident’s education about occupational therapy. Only one published study was found that attempted to assess the understanding of occupational therapy by nursing and physician assistant’s students (Jamnades, Burns & Paul, 2001). The article made an attempt to compare between the physician
assistant and nursing students’ perceived knowledge of occupational therapy and their actual knowledge. The findings were not statistically significant because of the difficulties in measuring the perceived knowledge based on the initial research assumption that students from nursing and physician assistant programs need to be educated first about occupational therapy.

The purpose of this research is to fill the gap by providing an overview of physicians’ (MD & DO) knowledge and understanding of occupational therapy services.

The Center of Health Policy Research of George Washington University Medical Center in Missouri conducted a project to examine innovative, interdisciplinary education and training programs for professionals serving people with disabilities (DeGraw, Fagan, Parrott, & Miller, 1996). A section of this article described the concept of educating professionals about the roles of multiple disciplines involved in the entire healthcare system. The purpose of this study was to gain knowledge about an effective and coordinated healthcare system with various professionals working together to provide a high standard of client care (DeGraw et al, 1996). According to DeGraw and colleagues (1996), healthcare professionals are required to not only know the services needed by their clients, but also understand the abilities of the various healthcare disciplines that provide the needed services so that clients will receive appropriate and adequate services.

Rehabilitation is a relatively new clinical discipline which to date has tended to receive scant attention in undergraduate medical courses (Crotty, Finucane & Ahern, 2000). This may be partly due to the difficulty of introducing new material into an overloaded curriculum. Studies of undergraduate teaching have identified a need for an improved approach to the teaching of disability and rehabilitation (Crotty et al, 2000). With the aging of our population, management of disability will consume a greater part of the medical professional’s time. It is essential that physicians acquire specific knowledge about occupational therapy services, which will allow them to effectively manage patients with disability.
The information provided in this research should promote a better understanding of medical professionals (MD & DO) level of knowledge of occupational therapy services and explore the future needs to increase and enhance the understanding of the services available to patients with disabilities. As a result, physicians may increase their referrals to occupational therapy, which in turn will preserve and strengthen occupational therapy practice.

Method:

Design and Instrument:

This study used a descriptive survey design. The face and content validity of the survey instrument were established by five experienced occupational therapists and three occupational therapy faculty members who are experienced researchers. These researchers felt that the survey instrument was appropriate for the task of collecting data on the knowledge of occupational therapy from physicians. The content of the survey included a mix of forced choice and open ended questions which sought to gather data about how the medical professionals learned about the profession of occupational therapy, level of knowledge of occupational therapy, opinions about the relevancy of occupational therapy to their respective specialties and their history of referrals to occupational therapy. The open-ended question asked medical professionals to comment on any additional items concerning occupational therapy. The survey also included demographical information such as gender, level of education, years of practice and area of specialty.

Subject Selection:

Medical doctors and doctors of osteopath were chosen as subjects because these professionals are the primary source of referrals for occupational therapy. The participants of the study included residents and physicians from two hospitals located in the western region of
Michigan. A convenience sample was used in subject selection procedures in certain areas of specialties that were requested to complete the survey.

**Procedure:**

The first step in the procedure to administer the survey is to obtain the approval of the Human Subjects Institutional Review Board (HSIRB) at Western Michigan University. Approval was granted after the submission of a detailed protocol outline that specified the project description, benefits of the research, subject selection and the research instrument.

The institutional review board at both hospitals was informed of the study and its objectives. The researcher obtained approval from both hospitals to conduct the research. The researcher placed the surveys in the medical professionals’ mailboxes of the selected specialists for the study. A consent form was attached to each survey. One hundred and fifty surveys were distributed between both hospitals. Each participant was asked to read the consent form prior to completion of the survey. The time needed to complete the survey was 5-10 minutes. The researcher placed an empty box next to the mail slots where participants would place the completed and/or blank survey. The completed surveys implied consent to participate in the study.

**Data Analysis:**

Data analysis began with a demographic variable of gender, medical specialty, type of education and years of experience to reflect on any relationship between these variables and the sense of acquiring sufficient knowledge to make occupational therapy referrals. The statistical analysis of the survey involved descriptive statistics and correlation analysis between the sources of acquiring information about occupational therapy and the chances of referrals and patient benefiting from occupational therapy services.
To answer the question "the amount of time devoted in the course work to a discussion of occupational therapy and the sources of information (formal and informal) about occupational therapy with the sense that physicians will know how to refer patients to occupational therapy?",
a crude ratio analysis, a frequency distribution and correlation analysis was performed on the time and information variables as it related to occupational therapy referrals. The demographic variables of gender, education and years of experience were also correlated to identify any relationship between these variables and a sense of having knowledge sufficient to make occupational therapy referrals.

To identify which variables may be helpful in providing sufficient knowledge about occupational therapy for referral purposes, a crude ratio and frequency analysis were used. The variables are (a) having received a presentation on occupational therapy treatment, (b) toured an occupational therapy department in the hospital, (c) having a personal contact with an occupational therapist, (d) having read literature describing occupational therapy services, and (e) having a family member who received occupational therapy services.

The respondents were able to identify the occupational therapy services that they use as they refer patients to occupational therapy treatments. Likert scales, requiring medical professionals (MD’s & DO’s) to rate the importance of occupational therapy in the rehabilitation of their patients. All analyses were performed using the SPSS statistical package.

Results:

A total of 55 physicians responded to the survey. Forty-eight hold a medical doctor (MD) degree and seven hold a doctor of osteopath (DO) degree. Seventy-five percent (n=41) were male; twenty-five percent (n=13) were female. The area of specialties that were assessed included internal medicine, orthopedics, emergency medicine, family and general practice, general surgery, neurology, physical medicine and rehabilitation, pediatrics, cardiology, and psychiatry. The researcher was unable to assess the number of medical professionals in each
specialty due to the lack of uniformity of responses to this specific question. Fifty-five surveys (or 37%) were completed and returned over a period of four weeks.

Years of practice in acute care facilities was represented as follows: 24% were five years or less in practice; 41% were between six and ten years in practice; 5% were between eleven and fifteen years in practice; 18% were between sixteen and twenty years in practice and 10% were over twenty years in practice. In aggregate the respondents average years in practice was 10.7 years in acute care settings.

It is probable that medical professionals (MD & DO) acquire formal knowledge on the basis of time devoted in their course work to discuss occupational therapy. Forty-seven percent (n=26) of the total respondents indicated that they did not spend any time discussing occupational therapy in their course work. However, twenty-four percent (n=13) reportedly spent only one hour, while eleven percent (n=6) spent more than four hours discussing occupational therapy in their course work. Figure 1 shows the frequency distribution of the time devoted in discussing occupational therapy, which indicates a mean of 1.8 hours and a median of one hour with a standard deviation of 1.2

---

**Figure 1**

*Time Devoted to Discussion of Occupational Therapy*

<table>
<thead>
<tr>
<th>Time (hrs)</th>
<th>Respondents (MD &amp; DO)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Time</td>
<td>26</td>
</tr>
<tr>
<td>1</td>
<td>13</td>
</tr>
<tr>
<td>1 - 2</td>
<td>5</td>
</tr>
<tr>
<td>2 - 4</td>
<td>5</td>
</tr>
<tr>
<td>More Than 4</td>
<td>6</td>
</tr>
</tbody>
</table>

Mean = 1.8  
Median = 1.0  
Std. Deviation = 1.19  
Variance = 1.42
Comparing the time devoted in course work between medical doctors (MD) and doctor of osteopath (DO) indicates that 50% of MD’s and 29% of DO’s had no time devoted in their course work to occupational therapy. However, 29% of DO’s as compared to 6% of MD’s spent 2-4 hours in their course work devoted to occupational therapy. Twenty-one percent of MD’s and forty-two percent of DO’s spent one hour in their course work on occupational therapy as show in Table 1.

<table>
<thead>
<tr>
<th>Time in Coursework</th>
<th>MD’s Number</th>
<th>%</th>
<th>DO’s Number</th>
<th>%</th>
<th>Total Number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Time</td>
<td>24</td>
<td>50</td>
<td>2</td>
<td>29</td>
<td>26</td>
<td>47</td>
</tr>
<tr>
<td>1 hour</td>
<td>10</td>
<td>21</td>
<td>3</td>
<td>42</td>
<td>13</td>
<td>24</td>
</tr>
<tr>
<td>1 – 2 hours</td>
<td>5</td>
<td>10</td>
<td>-</td>
<td>-</td>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td>2 – 4 hours</td>
<td>3</td>
<td>6</td>
<td>2</td>
<td>29</td>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td>More than 4 hours</td>
<td>6</td>
<td>13</td>
<td>-</td>
<td>-</td>
<td>6</td>
<td>11</td>
</tr>
<tr>
<td>Total</td>
<td>48</td>
<td>100%</td>
<td>7</td>
<td>100%</td>
<td>55</td>
<td>100%</td>
</tr>
</tbody>
</table>

Other sources of information were effective in the process of educating physicians (MD & DO) about occupational therapy. Thirty-five percent of physicians indicated that residency training was a major source of information about occupational therapy. However, medical school lectures were ranked second with 28% of respondents. Thirteen percent of MD’s and DO’s specified that the following sources of information had contributed to their knowledge about occupational therapy:

- Journal articles;
- Professional discussion with other physicians;
- Experience and practice;
- Own inquiry;
- Physical Therapy team member;
- Discussion with occupational therapist;
- Hospital orientation program about occupational therapy.
There is no significant difference in the responses between medical doctors (MD’s) and doctors of osteopath (DO’s).

Ninety-four percent (n=53) of the physicians responding to the survey referred patients to occupational therapy services. Table 2 showed that the high percentage of referral rate is significantly correlated (p=0.70) to the various sources of information that contributed to the knowledge of the medical professionals about occupational therapy. However, the amount of time devoted in the course work of physicians was not significantly correlated (p=0.15) to the high referral rate as Table 3 indicates.

<table>
<thead>
<tr>
<th>Table 2</th>
<th>Pearson Correlation of Sources of Information and the Referral to Occupational Therapy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have you referred to Occupational Therapy</td>
<td>Have You Referred to OT</td>
</tr>
<tr>
<td>Sign (2-tailed)</td>
<td>1</td>
</tr>
<tr>
<td>N</td>
<td>55</td>
</tr>
<tr>
<td>Source of Information</td>
<td>- .084</td>
</tr>
<tr>
<td>Sign (2-tailed)</td>
<td>.701</td>
</tr>
<tr>
<td>N</td>
<td>23</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 3</th>
<th>Pearson Correlation of Time Devoted in Course Work and the Referral to Occupational Therapy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time Devoted in Coursework</td>
<td>Have You Referred to Occupational Therapy</td>
</tr>
<tr>
<td>Sign (2-tailed)</td>
<td>1</td>
</tr>
<tr>
<td>N</td>
<td>55</td>
</tr>
<tr>
<td>Have you referred to Occupational Therapy</td>
<td>Sign (2-tailed)</td>
</tr>
<tr>
<td></td>
<td>.197</td>
</tr>
<tr>
<td>N</td>
<td>55</td>
</tr>
</tbody>
</table>
The demographic responses clearly indicate a positive correlation \((p=0.555)\) between the level of education and the number of years of experience. However, a positive but low correlation \((p=0.35)\) was noted between the years of experience and the gender of the respondents, as shown in Tables 4 and 5.

### Table 4
**Pearson Correlation Between Education and Years of Experience**

<table>
<thead>
<tr>
<th></th>
<th>Education</th>
<th>Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education</td>
<td>1</td>
<td>.081</td>
</tr>
<tr>
<td>Sign (2-tailed)</td>
<td>-</td>
<td>.555</td>
</tr>
<tr>
<td>N</td>
<td>55</td>
<td>55</td>
</tr>
<tr>
<td>Years</td>
<td>.081</td>
<td>1</td>
</tr>
<tr>
<td>Sign (2-tailed)</td>
<td>.555</td>
<td>-</td>
</tr>
<tr>
<td>N</td>
<td>55</td>
<td>55</td>
</tr>
</tbody>
</table>

### Table 5
**Pearson Correlation Between Gender and Years of Experience**

<table>
<thead>
<tr>
<th></th>
<th>Years</th>
<th>Gender</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>-.128</td>
<td>1</td>
</tr>
<tr>
<td>Sign (2-tailed)</td>
<td>.352</td>
<td>-</td>
</tr>
<tr>
<td>N</td>
<td>55</td>
<td>55</td>
</tr>
<tr>
<td>Years</td>
<td>1</td>
<td>-.128</td>
</tr>
<tr>
<td>Sign (2-tailed)</td>
<td>-</td>
<td>.352</td>
</tr>
<tr>
<td>N</td>
<td>55</td>
<td>55</td>
</tr>
</tbody>
</table>

Sixty-two percent \((n=34)\) of medical professionals (MD’s & DO’s) feel that they have a sufficient level of knowledge for referral purposes to occupational therapy, while thirty-eight percent \((n=21)\) did not feel that their level of knowledge is sufficient enough to provide occupational therapy with referrals. As the 21 medical professionals stated in their responses, a number of professional activities are needed to achieve the sufficient level of knowledge to make referrals to occupational therapy. As Figure 2 shows, seventy-one percent \((n=17)\) of the 21
physicians feel the need to receive a presentation (seminar) on occupational therapy treatments. Twenty-one percent (n=7) of the 21 feel that reading literature describing occupational therapy services will provide them the needed level of knowledge to make referrals. Personal contact with an occupational therapist will help increase the level of knowledge to eighteen percent (n=6) of the 21 respondents. Only four of the 21 physicians feel the need to tour the occupational therapy department to acquire the sufficient knowledge needed to refer patients to occupational therapy services.

![Figure 2](image)

Figure 2
Professional Activities Needed to Create a Sufficient Level of Knowledge for Medical Professionals

When physicians (MD’s & DO’s) responded to the questions related to referring patients to one or more of the 16 direct and related occupational therapy services, all seven DO’s and 83% of MD’s chose Activities of Daily Living (ADL) from the list shown in Tables 6 and 7. Other more frequently identified services by MD’s included home safety evaluation (63%), functional
mobility (60%), adaptive equipment (58%), strengthening (54%), bed mobility (50%) and coordination (50%). Frequently identified occupational therapy services included splints (48%), cognitive retraining (38%), ROM to BUE (31%), sensory integration (31%) and visual-perceptual (30%). Services less frequently related to occupational therapy but selected by the MD’s as part of the services included crutch training (27%), gait training (23%), dysphasia (21%) and massage (13%).

<table>
<thead>
<tr>
<th>Services Provided</th>
<th>Number of Respondents</th>
<th>Percentage of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activity of Daily Living (ADL)</td>
<td>40</td>
<td>83</td>
</tr>
<tr>
<td>Home Safety Evaluation</td>
<td>30</td>
<td>63</td>
</tr>
<tr>
<td>Functional Mobility</td>
<td>29</td>
<td>60</td>
</tr>
<tr>
<td>Adaptive Equipment</td>
<td>28</td>
<td>58</td>
</tr>
<tr>
<td>Strengthening</td>
<td>26</td>
<td>54</td>
</tr>
<tr>
<td>Bed Mobility</td>
<td>24</td>
<td>50</td>
</tr>
<tr>
<td>Coordination</td>
<td>24</td>
<td>50</td>
</tr>
<tr>
<td>Splints</td>
<td>23</td>
<td>48</td>
</tr>
<tr>
<td>Cognitive Retraining</td>
<td>18</td>
<td>38</td>
</tr>
<tr>
<td>ROM to BUE</td>
<td>15</td>
<td>31</td>
</tr>
<tr>
<td>Sensory Integration</td>
<td>15</td>
<td>31</td>
</tr>
<tr>
<td>Visual-Perceptual</td>
<td>14</td>
<td>30</td>
</tr>
<tr>
<td>Crutch Training</td>
<td>13</td>
<td>27</td>
</tr>
<tr>
<td>Gait Training</td>
<td>11</td>
<td>23</td>
</tr>
<tr>
<td>Dysphasia</td>
<td>10</td>
<td>21</td>
</tr>
<tr>
<td>Massage</td>
<td>6</td>
<td>13</td>
</tr>
</tbody>
</table>

Doctors of osteopath, or 13% of the respondents, refer patients to one or more of the 16 direct and related occupational therapy services listed in Table 7. All respondents refer patients for Activities of Daily Living (ADL) but only 71% of respondents refer patients to functional mobility, adaptive equipment and visual-perceptual. Other more frequently identified services included home safety evaluation (57%), sensory integration (57%) and cognitive retraining (57%). Comparing Table 6 with Table 7, we observed that doctors of osteopath differ with medical doctors in ranking the more frequently referred occupational therapy services. The DO’s
excluded strengthening, bed mobility and coordination but included visual-perceptual, sensory integration and cognitive retraining to the more frequently identified occupational therapy services. Other services frequently identified with 43% of respondents were strengthening, bed mobility, ROM to BUE and dysphasia. Some services less frequently related to occupational therapy but which were chosen by the respondents as part of the referred services included coordination (29%), gait training (29%), massage (29%), splint (14%) and crutch training (14%).

It is interesting to note that medical doctors ranked coordination (50%) and splint (48%) as more frequent and frequent services, respectively. However, doctors of osteopath ranked coordination (29%) and splint (14%) as less frequent occupational therapy services.

Comparing Table 6 with Table 7, we can observe that the difference in ranking between the frequent and the less frequent services might be caused by the size of the sample responding to the survey (47 MD’s and 7 DO’s).

<table>
<thead>
<tr>
<th>Services Provided</th>
<th>Number of Respondents</th>
<th>Percentage of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activity of Daily Living (ADL)</td>
<td>7</td>
<td>100</td>
</tr>
<tr>
<td>Functional Mobility</td>
<td>5</td>
<td>71</td>
</tr>
<tr>
<td>Adaptive Equipment</td>
<td>5</td>
<td>71</td>
</tr>
<tr>
<td>Visual-Perceptual</td>
<td>5</td>
<td>71</td>
</tr>
<tr>
<td>Home Safety Evaluation</td>
<td>4</td>
<td>57</td>
</tr>
<tr>
<td>Sensory Integration</td>
<td>4</td>
<td>57</td>
</tr>
<tr>
<td>Cognitive Retraining</td>
<td>4</td>
<td>57</td>
</tr>
<tr>
<td>Strengthening</td>
<td>3</td>
<td>43</td>
</tr>
<tr>
<td>Bed Mobility</td>
<td>3</td>
<td>43</td>
</tr>
<tr>
<td>RIM to BUE</td>
<td>3</td>
<td>43</td>
</tr>
<tr>
<td>Dysphasia</td>
<td>3</td>
<td>43</td>
</tr>
<tr>
<td>Coordination</td>
<td>2</td>
<td>29</td>
</tr>
<tr>
<td>Gait Training</td>
<td>2</td>
<td>29</td>
</tr>
<tr>
<td>Massage</td>
<td>2</td>
<td>29</td>
</tr>
<tr>
<td>Splint</td>
<td>1</td>
<td>14</td>
</tr>
<tr>
<td>Crutch Training</td>
<td>1</td>
<td>14</td>
</tr>
</tbody>
</table>
It was evident from the respondents that 98% of patients benefited when referred to the various occupational therapy services. When asked the percentage of patients who benefited, 64% of the respondents indicated that between twenty-five to fifty percent of referred patients benefited from occupational therapy services. Seventy-five percent of the referred patients benefited according to five percent of the respondents. However, twenty-two percent of the respondents indicated that every patient benefited from occupational therapy services.

To reveal what medical professionals (MD & DO) know about occupational therapy services, subjects were asked to rate perceived importance of occupational therapy’s contribution in the rehabilitation of patients. Figure 3 shows, not surprisingly, sixty-five percent (n=36) of the respondents felt that occupational therapy is very important in the rehabilitation of patients while twenty-nine percent (n=16) of respondents felt that occupational therapy is important to patient rehabilitation. Only four percent of the respondents felt that occupational therapy is somewhat important. One respondent answered indifferent regarding the level of importance of occupational therapy as it relates to patient rehabilitation.

**Figure 3**

**Occupational Therapy Perceived Importance**

![Bar chart showing perceived importance of occupational therapy](image)
Analyzing the responses to the last open-ended question in the survey requesting comment on additional ideas regarding occupational therapy found that the majority felt the need for more education on occupational therapy services and treatments. Most respondents indicated the importance of receiving a list of all professional services rendered by occupational therapists. Some requested specialized services for transplant patients.

It was evident from the survey results that most of the respondents’ knowledge about occupational therapy was acquired through informal sources. Also, the majority noted that occupational therapy’s domain was associated predominantly with activity of daily living (ADL).

Discussion:

Physicians {medical doctors (MD) and doctors of osteopath (DO)} did appear to gain their knowledge of occupational therapy largely through secondary sources within informal sources of information. Only the variables (a) residency and post-residency training, (b) having had personal contact with an occupational therapist in which the therapist explained occupational therapy services in patient care, (c) having had discussions with other physicians in practice, (d) received lectures in medical school and hospital orientation as a medical student, (e) and having own inquiry in reviewing professional journals were found to be independently and effectively associated with acquiring a sense of knowledge of occupational therapy. Variables representing formal education sources (e.g., time devoted in course work and seminars dedicated to occupational therapy roles and services for patient rehab) were not found to be related to acquiring knowledge of occupational therapy. This finding closely replicates Evans and Anunziato’s (1986) research that found physicians learn about occupational therapy through individual contact with therapists.

A statistically significant relationship was found between knowledge of occupational therapy acquired through informal sources and the referral rate (p=0.70). This suggests that knowledge of occupational therapy does influence physician’s referral rate for occupational
therapy services. On the other hand, however, the time devoted in the course work was not found
to be significant \( (p=0.15) \) to the referral rate for occupational therapy services.

To determine whether physicians feel a need for more education concerning occupational
therapy services, they were queried as to whether they have a sufficient knowledge for referral
purposes. The thirty-eight percent \( (n=21) \) of the respondents felt that they have insufficient
knowledge about occupational therapy and selected the following professional activities as
beneficial in achieving a sufficient level of knowledge:

a. receive a presentation on occupational therapy treatment;

b. read literature describing occupational therapy services;

c. having personal contact with an occupational therapist;

d. tour an occupational therapy department in the hospital; and

e. having a family member who received occupational therapy services.

To reveal the level of understanding of medical professionals (MD’s & DO’s) about
occupational therapy services, subjects were asked to check all or one of the services related to
occupational therapy. On the positive side, all DO’s and 83% of MD’s selected Activities of
Daily Living (ADL) as being an occupational therapy service area. However, with this
distinction comes a variation in understanding about the importance of the remaining list of
services between medical doctors (MD) and doctors of osteopath (DO). Although the
respondents (MD’s & DO’s) chose home safety evaluation, functional mobility and adaptive
equipment in the more frequently identified services, other choices such as strengthening and
coordination were not selected by doctors of osteopath as a more frequent occupational therapy
service.

Another concern revolves around the concept of accurate distinction between
occupational therapy and physical therapy. For example, services predominantly associated with
physical therapy, such as gait training and crutch training were selected by MD’s and DO’s as
less frequent occupational therapy services. This indicates that there is a need for occupational
therapy professionals to clearly describe their services within healthcare in order to improve physician’s knowledge and understanding of occupational therapy services and also to differentiate the profession’s philosophy, ideals and services from those of other health professions such as physical therapy. It was evident from the survey results that ninety-four percent (n=52) of respondents feel that occupational therapy is important in the rehabilitation of their patients.

Limitations and Recommendations:

A number of physicians participating in the study did not reply to the medical specialty question in the demographic section of the survey. The lack of responses made it difficult to analyze, compare and correlate the referral rate to occupational therapy services by the various medical specialties.

The findings of this study suggest that occupational therapy professionals need to become more proactive in educating the academic medical institutions and physicians (medical doctors and doctors of osteopath) about the profession’s role in patient care and rehabilitation. Little has been recommended in the literature concerning what type of academic medical educational preparation would best provide adequate time and enough knowledge to medical students regarding occupational therapy services and treatments that would enhance their patient’s functional abilities. The researcher recommends a minimum of two hours to be devoted in the medical curriculum to learn about occupational therapy. This can enhance the medical graduate’s knowledge in the field, knowing that forty seven percent of medical doctors surveyed indicated that they did not spend any time in their course work to learn about occupational therapy and its benefits to patient care.

This study revealed that physicians are acquiring their knowledge about occupational therapy via secondary sources within informal, personal interactions. A recommended strategy
for educating physicians on occupational therapy should focus on the following activities conducted by members of the profession:

a. Offer regular seminars on occupational therapy treatments and its benefits to patient care.

b. Provide literature to clearly describe occupational therapy services as it relates to the various medical specialties.

c. Initiate personal contact between occupational therapists and physicians to provide the needed information and facilitate referrals.

d. Becoming more active in hospital orientation programs to physicians and other health professionals.

e. Establish regularly scheduled tours to the occupational therapy department to encourage physicians and other medical professionals to interact with therapists.

f. Encourage greater collaboration between occupational therapist, other rehabilitation specialties and physicians.

g. Participate in discharge planning meetings, which not only consider discharge but also track patient’s treatment planning during hospital stay.

h. Offer an interactive workshop on various occupational therapy treatments for different medical specialties (ex: hands, vision, home care, etc.)

It is also important to inform the health care recipient about occupational therapy services and treatment. Today’s health care consumer is often sophisticated, informed, knowledgeable and actively participating in his or her health care services. Directly marketing occupational therapy services to the end user can be an effective strategy to increasing referrals requested by well-educated patients.

Future research should include a larger sample size involving more physicians (medical doctors and doctors of osteopath) with a wider range of specialties that can bring in valuable information about the level of knowledge and awareness of occupational therapy services and
treatments. Also, members of the profession should focus their research on occupational therapy emerging specialty area (low vision services, assisted technology, community mental health and driver’s evaluation and training) and provide physicians with the new knowledge and up-to-date information to facilitate referrals.
APPENDIX A

H.S.I.R.B. APPROVAL
Medical Professionals' Knowledge about Occupational Therapy in an Acute Care Hospital, Winter 2003 Western Michigan University, Department of Occupational Therapy

You are invited to participate in a research project entitled “Understanding Occupational Therapy: Medical Doctors and Doctors of Osteopaths’ Knowledge about Occupational Therapy in an Acute Care Hospital” designed to analyze the knowledge of medical doctors and doctors of osteopath on Occupational therapy. The study is being conducted by Dr. Ben Atchison and Ms. Shereen Metwalli from Western Michigan University, Department of Occupational Therapy. This research is being conducted as part of the thesis requirements for Shereen Metwalli.

This survey is comprised of 9 multiple choice, short answer and forced choice questions and will take approximately 5-10 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 to not 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 the use of the answers you supply. If you have any questions, you may contact Ben Atchison at (269-387-3527), Shereen Metwalli at (616-656-8663), the Human Subjects Institutional Review Board (269-387-8293) or the vice president for research (269-387-8298).

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.
Medical Professionals’ Knowledge about Occupational Therapy in an Acute Care Hospital
Graduate Survey Instrument, winter 2003

☐ Male ☐ Female

Medical Specialty:

Type of Education: ☐ MD ☐ DO ☐ MD & PhD ☐ DO & 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 hour
   ☐ 2-4 hour
   ☐ 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
4. Do you feel that your present level of knowledge of occupational therapy is sufficient for referral purposes?
   □yes         □no

   If no, please check one or more of the following that would have been helpful:
   □ having received a presentation on occupational therapy treatments
   □ toured an occupational therapy department in the hospital
   □ having had personal contact with an occupational therapist
   □ having read literature describing occupational therapy services
   □ having a family member who received occupational therapy services

5. I would refer a patient to occupational therapy (check all that applies):
   □ Activities of daily living      □ Gait training
   □ Strengthening                  □ Functional mobility
   □ Bed mobility                   □ Coordination
   □ Home safety evaluations        □ ROM to BUE
   □ Crutch training                □ Adaptive equipment
   □ Splints                        □ Sensory integration
   □ Massage                        □ Cognitive retraining
   □ Visual-perceptual              □ Dysphasia

6. How many of your patients would benefit from any of the activities in question 5?
   a= 0%
   b= 25%
   c= 50%
7. How many of these patients (in question #6) would benefit from occupational therapy?
   a = 0%
   b = 25%
   c = 50%
   d = 75%
   e = 100%
   f = don't know

8. Do you feel that occupational therapy is important in the rehabilitation of your patients?
   a = very important
   b = important
   c = indifferent
   d = somewhat important
   e = not important

9. Please feel free to comment on any additional ideas regarding occupational therapy.....


Survey of Perceptions Regarding Occupational Therapy & AOTA. (1980, September). (Available from AOTA Research & Information Department, PO Box 1725, Rockville, MD 20849-1725).
