

Clinical information behavior of rehabilitation therapists: a review of the research on occupational therapists, physical therapists, and speech-language pathologists*

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Objectives: The review sought to synthesize existing research relevant to rehabilitation therapists' clinical information behavior and to identify gaps in evidence, particularly in comparison to what is already known about the information behavior of other health professionals, such as physicians.

Methods: A literature review was conducted of both quantitative and qualitative research studies that included information on the clinical information behavior of occupational therapists, physical therapists, and speech-language pathologists. Findings were organized according to a taxonomy of variables derived from the literature.

Results: Findings from seventeen studies, mostly surveys, conducted since 1990 demonstrate that very

little is known about the clinical information needs of and information use by rehabilitation therapists. The sources most often consulted by rehabilitation therapists are printed materials (books and journals) and colleagues. Databases are consulted less often, and few rehabilitation therapists are aware of databases other than MEDLINE.

Discussion: Methodological flaws limit the generalizability and validity of much of the research conducted on the clinical information behavior of this population. More research is needed to better understand the clinical questions that arise in rehabilitation therapists' practice, reasons for consulting certain sources, and ways in which information seeking enhances evidence-based practice.

INTRODUCTION

Rehabilitation therapists—including occupational therapists (OTs), physical therapists (PTs, also called physiotherapists), and speech-language pathologists (SLPs, also called speech therapists)—represent a growing proportion of health professionals and are central to health care delivery. As practitioners, rehabilitation therapists engage in information behavior: they identify information needs, decide whether or not to seek answers to these needs, engage in information-seeking behaviors, and then decide how to use information to improve patient care. Even so, rehabilitation therapists are neglected in the literature on information behavior in library and information studies. As a result, little is known about what information needs arise in rehabilitation therapists' everyday practice and how they cope with these needs through information seeking and use. This review synthesizes existing research relevant to rehabilitation therapists' clinical information behavior and identifies gaps, particularly compared to what is known about other health professionals, such as physicians.

More than 10,000 publications from many disciplines have been published on information behavior [1], thousands of which describe research on users [2]. In her review of clinical information-seeking behavior, Marshall remarked that there was very little

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Highlights

- Rehabilitation therapists rely heavily on print sources and colleagues for answering questions that arise in practice.
- Few rehabilitation therapists are familiar with databases other than MEDLINE/PubMed.
- Evidence provided by the library or databases can impact rehabilitation therapists' practice and knowledge.
- Few qualitative studies have been conducted with rehabilitation therapists to understand their clinical information behavior, and current evidence from survey research reveals little about rehabilitation therapists' information needs and use of information.

Implications

- Rehabilitation therapists may benefit from increased education and outreach initiatives, as they are unaware of many online resources for answering clinical questions.
- Information providers are advised to continue developing high-quality print evidence resources and online forums where rehabilitation therapists and other health professionals can benefit from sharing best practices.
- More research is needed on rehabilitation therapists' clinical information behavior to design appropriate services and resources for evidence-based patient care.

research on professionals other than physicians [3], and this proportion remains relatively constant to the present day. Case's 2007 book, which summarized theory and research on the subject of information behavior, includes references to hundreds of studies on health care providers [1]. Only 7 studies, however, were included in a single paragraph describing the information behavior of allied health professionals (i.e., other than physicians and nurses). These included research on "dentists, hospital social workers, at-home care providers, midwives, and practitioners of alternative medicine" [1]. Absent from this list was any mention of research studies on rehabilitation therapists. Similarly, in McKnight and Peet's annotated bibliography of health professionals' information behavior, which included 39 studies and 9 reviews published since 1990, only 5 studies fell under the heading "allied health," of which 2 were about rehabilitation therapists [4].

Research on the clinical information behavior of physicians and, to some extent, nurses is clearly well documented, and several narrative and systematic reviews have been published on the topic [3, 5–9]. To date, no review has included the clinical information behavior of rehabilitation therapists, who, in addition to having different educational backgrounds than physicians and nurses, work in different settings and provide health care that is distinct from other health professionals. Several electronic resources are available to rehabilitation therapists, suggesting not only that they have a need for specialized information, but that an abundance of available evidence exists to meet that need.

IMPORTANCE OF REHABILITATION THERAPISTS' INFORMATION BEHAVIOR

Evidence-based practice (EBP) is being encouraged in the field of rehabilitation [10–13], and rehabilitation therapists are expected to be skilled at asking clinical questions, retrieving relevant evidence, appraising the evidence, and applying it to their practice [14–16]. There is much published evidence to inform rehabilitation therapists' clinical practice, but research suggests that it is often not used [17–20]. That is, despite efforts to teach and promote EBP, it is not being implemented by rehabilitation therapists. Various obstacles have been identified that inhibit the implementation of EBP in rehabilitation [21, 22], including rehabilitation therapists' difficulty in formulating clinical questions [23]. In the past few years, new databases have emerged to support EBP for rehabilitation, including PEDro [24], OTseeker [25], and Hooked on Evidence [26]. These databases assume that users have specific clinical questions and that they possess the necessary search skills to locate the evidence. User studies on these databases demonstrate that this is not the case, as queries are often vague and unstructured [27]. Research is needed to identify what clinical questions rehabilitation therapists ask and if these facilitate information seeking and use of information for EBP.

Table 1
Taxonomy of variables studied for health professionals' clinical information behavior

Information needs

- Number of clinical questions per patient encounter or per day
- Clinical questions expressed
- Importance of a clinical question
- Types of clinical questions asked
- Proportion of clinical questions pursued
- Types of clinical questions pursued and why
- Proportion of clinical questions answered or resolved successfully

Information seeking

- Awareness of existing information sources
- Types of information sources considered or consulted to answer clinical questions
- Preference for types of information sources
- Actual information sources considered or consulted, including databases
- Number of sources consulted to answer a clinical question
- Database searching techniques (including search strategy and selected search terms)
- Time spent seeking information
- Obstacles and facilitators to information seeking
- Reasons for terminating information seeking

Information use

- Types of information used
- Impact of (found) information on practice or knowledge
- Ways of using found information
- Obstacles and facilitators to information use
- Proportion of found information not used and why

This review will first provide a brief overview of the information behavior of physicians, according to a taxonomy of the types of variables that have been studied. Next, it will summarize all known research on rehabilitation therapists with reference to this taxonomy. Methodological weaknesses and limitations of current research will be outlined. Finally, gaps in evidence as well as potential areas for future research will be discussed.

The term "information behavior" is used to mean any process by which individuals determine their own information needs, search for information, engage with the information, and make use of the information [28, 29]. This review focuses on information behavior related to patient care, that is, clinical information needs and the ensuing seeking and use of that information. The word "clinical" is used to differentiate this type of behavior from information behavior related to teaching, research, and administration.

The clinical information behavior of health professionals can be subdivided according to three main areas: information needs, information seeking, and information use. Using different measures, researchers have investigated and suggested a multitude of variables in each of these areas. Classifying these clinical information behavior-related variables into these three areas allows for easier review of a wide array of findings, as well as for comparison between populations. A taxonomy of these variables is proposed in Table 1. The taxonomy was derived from the literature review on both physicians' and rehabilitation therapists' clinical information behavior and is meant to be a starting point for organizing research findings and generating research questions.

CLINICAL INFORMATION BEHAVIOR OF PHYSICIANS

Information needs of physicians

Research on the information needs of physicians has reported varying numbers of clinical questions posed. A review of primary care physicians, which included 21 studies using various data collection techniques, reported a range of 0.07–1.89 questions per patient consultation [5]. Other calculations reported from as many as 5 questions per consultation to as few as 1 for every 15 patients [1]. One of the most interesting findings in this area was that of Covell et al., who found that physicians significantly underestimated the self-reported number of information needs in a questionnaire (average of once per week) compared to observed number of information needs (6 per half-day) [30]. This finding might help explain discrepancies in other studies.

Few studies reported physicians' actual information needs or clinical questions [3], although one study concluded that few physicians' clinical questions followed the recommended person, intervention, comparison, outcome (PICO) structure for evidence-based medicine [31].

Some studies reported on different categories of information needs, such as questions related to treatment or diagnosis [7, 32] or to unrecognized needs, recognized needs, pursued needs, and answered needs [8]. Between 30% and 57% of clinical questions asked by physicians are pursued [5], and of those, 72% to 89% are reported as correctly answered [7].

Information seeking by physicians

Clinicians' information needs have been found to differ from those of researchers and scientists, and their needs were frequently resolved informally, most often by consulting colleagues [3]. One recent review confirmed this conclusion [5], although others have found that print sources such as textbooks and journals were more commonly consulted than colleagues [6, 7, 9]. Results must be carefully interpreted, however; as noted above, physicians may be inaccurate when self-reporting their preferred and consulted sources of information via questionnaire [30]. In a systematic review of the literature on the information sources of nurses, Spenceley et al. found that nurses, too, preferred colleagues over other sources [33].

Covell et al. also found that physicians overestimated the amount of time they spent seeking information to answer clinical questions [30]. Researchers have found that the average time spent searching a database ranged from two to fifteen minutes, depending on the setting in which the clinical question was asked [5, 7]. Rarely were more than two sources consulted to answer a single clinical question [7].

Several obstacles have been identified to seeking information, including lack of time, difficulty in question formulation, and inadequate search skills [7, 34].

Information use by physicians

Little has been written about the use of clinical information as it is difficult to define and, therefore, measure. Few studies attempt to measure how information is used or to conceptualize the concept. "Impact" is one variable that has been studied in research on information use, measuring the impact of information on practice. In a study on how information retrieval technology impacts on the practice of family doctors, Pluye and Grad found that clinical information impacts practice in one or more of six ways: practice improvement, reassurance, learning, confirmation, recall, and frustration [35]; and a later study validated their method for determining the impact of clinical information delivered from an evidence-based resource [36].

Other studies have investigated the impact of library services on clinical practice. Marshall found that physicians reported "probably or definitely" implementing changes to patient care as a result of information provided by the library in 80% of cases in which library services were provided [37]. A review of the literature on this topic concludes that while several studies demonstrate the positive impact of information on patient care, the reported outcomes vary considerably [38].

CLINICAL INFORMATION BEHAVIOR OF REHABILITATION THERAPISTS

A rehabilitation therapist is a certified professional working in the field of rehabilitation, that is, the restoration of a person with a disability in order to maximize independence in daily life. The disability may be congenital or acquired and may be acute or chronic. Rehabilitation therapists work with populations of all ages, including, for example, children with cerebral palsy, patients with stroke, patients with burns, and athletes with injuries. Three groups of professionals are included under this umbrella term: OTs, PTs, and SLPs.

Scope of the review

For the purpose of this review, research studies on information behavior were sought on the population of interest: OTs, PTs, SLPs, or a combination of these. Studies that included other populations were kept as long as findings for rehabilitation therapists were also reported. Studies that investigated at least one of the variables listed in Table 1 were retrieved. Studies that examined the use of or barriers to EBP but did not look specifically at information needs, seeking, or use were excluded. Studies on readership behavior (e.g., names or number of journals read), library usage, library needs assessments, or continuing education needs were also excluded. These studies were deemed irrelevant as they did not report variables related to clinical information behavior and were therefore outside the scope of this review. Seventeen studies were identified by means of literature searches, hand-

searches, and citation snowballing in both library and information studies (LIS) and rehabilitation literature. Table 2 provides a summary of the studies included in this review and their characteristics.

Overview of research on rehabilitation therapists' clinical information behavior

Of the seventeen identified studies on various information behaviors of rehabilitation therapists, nine were on PTs, seven on OTs, and four on SLPs. Most studies focused on one of these groups, while one study focused on both PTs and OTs [39] and another on all three groups as well as other health professionals [40]. Two studies combined populations of rehabilitation therapists with other professionals: Palfreyman et al. studied both PTs and nurses [41], while Guo et al. included SLPs and audiologists [42]. The studies took place in regions that ranged in size, including Australia, Canada, the United Kingdom, or the United States.

Studies were almost evenly split in terms of discipline of the first author, with nine studies conducted by researchers in rehabilitation sciences [17, 27, 39, 43–48] and seven conducted by librarians [40, 42, 49–53]. One study was conducted by a nurse [41]. Unlike research on the information behavior of physicians and nurses, none of the studies were conducted by faculty in an LIS program.

With respect to methodology, twelve studies were quantitative in nature and four employed a purely qualitative approach. One study used a combination of both [44]. The most common data collection method used was the survey questionnaire: Eleven of the quantitative studies utilized this method, while a single study made use of logged searches (recording search terms entered into the database over a period of time). All qualitative studies employed interviews, and the mixed method study used a combination of both survey and interview. The findings of these studies are synthesized below, organized according to the taxonomy of clinical information behavior variables shown in Table 1.

Information needs of rehabilitation therapists

Several studies reported on the information needs of rehabilitation therapists. PTs reported the need for information on specific disorders [49] as well as the usefulness of information on interventions and diagnostic and assessment methods [49, 51]. A study that looked at actual search terms entered into the OTseeker database found that most terms fell in the categories of diagnoses and interventions [27]. No comparable data were available for SLPs, although one study noted that SLPs reported clinical information needs related to patient care in almost a third of all cases [53]. More than half of these SLPs also considered themselves very successful at finding answers to their questions and applying the information.

Studies on motivations for using the OTseeker database offered conflicting findings. A survey found that 87.4% of users cited clinical information as the reason for accessing the database [47], while a qualitative study that employed interviews and was conducted in the same year found this to be the least common reason reported [46].

Information seeking by rehabilitation therapists

PTs, OTs, and SLPs reported turning primarily to colleagues and journal articles for information [17, 39, 41, 42, 44, 48, 49, 51, 53]. Other sources of information mentioned were the Internet [40, 50], including nonprofessionally sponsored websites [53] and continuing education courses [45, 48]. Several studies sought to find out which databases were most frequently accessed, with PTs naming Hooked on Evidence produced by the American Physical Therapy Association [52] and SLPs naming MEDLINE and ERIC [53]. In a study on SLPs, half of the respondents were unaware of bibliographic databases such as PubMed, CINAHL, Cochrane Library, ERIC, PsycINFO, and EMBASE [42].

Several studies investigated usage of the OTseeker database. McKenna et al. found that 85.9% of OTs surveyed were aware of the OTseeker database, and a little more than half of these had actually accessed it [47]. Of those who had accessed it, only 2.9% did so daily or weekly, 30.1% monthly, and 72.8% less than once a month. In McCluskey et al.'s study, 8 of 11 OTs used OTseeker up to 10 times in the previous 18 months and 3 used it more than 10 times in the year [46]. Bennett et al.'s later study of OTseeker users found that half reported themselves monthly users of the database, with only a small proportion using the database daily or weekly [43]. In another study of database usage in general, 10% of OTs reported accessing these at least once a month and only 3% at least once a week. Half reported never consulting databases [17].

In a study investigating the quantity, subject matter, and publication date of books in the personal libraries of PTs, Brown et al. found that personal book collections ranged from 5 to 29 books (13 on average) [50]. The most common topics were orthopedics, basic sciences and anatomy, medical and surgical, and neurotherapeutics. The average copyright date for the books was about 15 years older than the date of data collection. While the study did not ascertain the extent to which these personal libraries were used for answering clinical questions, the quality and age of the books could have a significant impact on answering clinical questions that arise in practice.

Bohannon conducted semi-structured telephone interviews with twenty-seven PTs to categorize their information-seeking style as reactive, proactive, or a combination of both [44]. This research suggested that information seeking was often the result of an acute information need (i.e., reactive), but that many PTs continually looked for information (i.e., proactive). PTs claimed to use between three to eleven types of

Table 2
 Characteristics of studies of rehabilitation therapists' clinical information behavior

Study	Population*	n	Response rate	Region	Setting	Date of data collected	Discipline	Methodology	Data collection method†
Bohannon (1990)	PT	27	54.0%	North Carolina, USA		Not stated	PT	Qualitative/quantitative	Survey interviews, randomly selected
Hall (1995)	PT	43	85.0%	Vermont, USA	Private practice	April 1994	Librarianship	Quantitative	Survey questionnaire, census
Ashcroft (1998)	PT	73	5.0%	Northern and Yorkshire regions, UK	37 NHS Trust hospitals	Not stated	Librarianship	Quantitative	Survey questionnaire, self-selected
Dysart and Tomlin (2002)	OT	209	58.0%	USA		Spring 2000	OT	Quantitative	Survey questionnaire, randomly selected
Rappolt and Tassone (2002)	OT, PT	24	29.0%	Ontario, Canada	Large metropolitan area, worked with low back pain	Not stated	OT	Qualitative	Interviews, randomly selected
Palfreyman et al. (2003)	PT +	37 PTs	37.0% of PTs (28% total)	UK	Acute large teaching hospital	Not stated	Nursing	Quantitative	Survey questionnaire, census
Judd (2004)	PT	234	77.7%	Canada	Orthopedics	Not stated	PT	Quantitative	Survey questionnaire, randomly selected
Vallino-Napoli and Reilly (2004)	SLP	378	54.2%	Victoria, Australia		Not stated	SLP	Quantitative	Survey questionnaire, census
Hoffman (2005)	PT	3	n/a	(Not stated) USA	Various	Not stated	Librarianship	Qualitative	Email interviews
McKenna et al. (2005)	OT	213	27.3%	Queensland and New South Wales, Australia	All of Australia, as well as 95 facilities in New South Wales and Queensland	November 2004	OT	Quantitative	Survey questionnaire, random sample
Bennett et al. (2006)	OT	4,500 searches	Used 10% of 46,350 searches conducted	n/a	OTseeker users	March 17–July 17, 2004	OT	Quantitative	Observation (logged searches), randomly selected
Haigh (2006)	PT, OT, SLP +	8	n/a	Salford, UK	Hospital Clinical Effectiveness Group	Not stated	Librarianship	Qualitative	Action research: interviews, purposive sample
McCluskey et al. (2006)	OT	11	n/a	Australia	Frequent users of OTseeker	2004	OT	Qualitative	Interviews, purposive and theoretical sampling
Bennett et al. (2007)	OT	498	12%	USA, Australia, Canada, UK	OTseeker users	December 2004–January 2005	OT	Quantitative	Survey questionnaire, self-selected
Brown et al. (2007)	PT	40	Not stated	5 states in the USA	OTseeker users	Not stated	Librarianship	Quantitative	Survey questionnaire, snowball sampling
Nail-Chiwetalu and Bernstein Ratner (2007)	SLP	208	21%	USA		February 2005	Librarianship	Quantitative	Survey questionnaire, randomly selected
Guo et al. (2008)	SLP + audiologists	69 SLPs	82.1% (SLPs)	Idaho, USA		2006	Librarianship	Quantitative	Survey questionnaire, census

* OT: occupational therapists, PT: physical therapists, SLP: speech-language pathologists, + indicates other populations were also included in the study.
 † Sampling method is indicated if mentioned in the study.

Table 3
Clinical information behavior investigated in research on rehabilitation therapists

Study	Population*	Information needs	Information seeking	Information use
Bohannon (1990)	PT		X	
Hall (1995)	PT	X	X	
Ashcroft (1998)	PT		X	X
Dysart and Tomlin (2002)	OT		X	X
Rappolt and Tassone (2002)	OT, PT		X	X
Palfreyman et al. (2003)	PT +		X	
Judd (2004)	PT		X	
Vallino-Napoli and Reilly (2004)	SLP		X	
Hoffman (2005)	PT		X	
McKenna et al. (2005)	OT	X	X	X
Bennett et al. (2006)	OT	X		
Haigh (2006)	PT, OT, SLP +		X	
McCluskey et al. (2006)	OT	X	X	X
Bennett et al. (2007)	OT		X	X
Brown et al. (2007)	PT		X	
Nail-Chiwetalu and Bernstein Ratner (2007)	SLP	X	X	
Guo et al. (2008)	SLP + audiologists		X	

* OT: occupational therapists, PT: physical therapists, SLP: speech-language pathologists, + indicates other populations were also included in the study.

sources each on a regular basis for accessing information. PTs interviewed for the study reported frequently consulting a relatively narrow selection of books and journals as part of their practice.

Information use by rehabilitation therapists

Several studies investigated the impact of information provided by libraries on rehabilitation therapists' practice. In a study of PTs on practice change, 53% claimed a change in treatment, 35% claimed a change in amount of treatment, 39% claimed a change in criteria for treatment, and 59% claimed a change in advice given to a patient [49]. Fifty-five percent of PTs also stated that they avoided ineffective or inappropriate care as a result of the information. These findings suggest that for clinical questions related to treatment, information provided by a library may have a significant impact on patient care. Another study found that a little over half of OTs reported using current research to change or develop between 1 and 5 new treatment plans in the previous year [17], while another found that OTs and PTs could not explain how they integrated new knowledge into their practice [39].

Three studies were conducted on the impact of the OTseeker database on practice change. In the first study, information found using the database was considered to have impacted practice, teaching, or management for 13.6% of OTs and changed knowledge for 63.1% [47]. In the second study, most participants claimed that the information found did not impact their practice directly, but that it was kept for future use, and only 2 participants used the information to create summaries to be shared with staff, patients, and families [46]. In the most recent study on the impact of OTseeker, 17% of clinicians reported changing practice, 38% claimed it improved their knowledge, and 15% claimed it confirmed their knowledge [43]. These varying results suggest that more research on impact is required.

Types of findings on the clinical information behavior of rehabilitation therapists

Table 3 provides an overview of the areas covered in existing research on the clinical information behavior of rehabilitation therapists. While some research provides insight into the nature of the clinical information needs of rehabilitation therapists, very little data exist on the structure of rehabilitation therapists' clinical questions or the number of clinical questions asked per patient consultation. Sources of clinical information preferred by rehabilitation therapists have also been identified, mostly by self-reported surveys, but little else is known about the amount of time spent seeking information, search strategies, or reasons for abandoning a search. While the findings on use of information, from studies of impact of information on practice and knowledge, are somewhat contradictory, these are still preliminary and merit further investigation. It should be noted that no variables on information use by rehabilitation therapists other than impact have been studied.

DISCUSSION

Methodological limitation of the research

Findings from the studies included in this review should be interpreted with caution, as many have methodological weaknesses. In several studies, it is unclear whether researchers distinguish between practitioners and students. For example, studies on OTseeker usage presume that those entering search terms into the database are OTs. However, it is likely that many of these users are in fact students in occupational therapy, and their information-seeking behavior may differ significantly from that of seasoned practitioners or those who rely less on the Internet as a source of information. Related to this is the issue of sampling. Many studies use convenience samples or self-selected samples limiting the generalizability of the findings. One study on PTs has as few

as three participants [52], making it difficult to draw firm conclusions.

Many of the studies use participant self-report as the method of data collection. Studies using self-report have been shown to be unreliable compared to observational data [30]. Whether using surveys or interviews, this type of data collection relies heavily on memory, which may be faulty. In addition, participants in many studies may have been influenced by a desire to please the researchers in studies requiring evaluation of library-provided information or databases.

Lastly, studies purporting to report on the information needs of rehabilitation therapists do not use an agreed upon definition of needs. Needs are not behavior and therefore cannot be directly observed. The issue of defining terms is an important one, as the lack of consistent definitions of variables and outcome measures makes comparison across studies difficult. It is recommended that future studies of the information behavior of rehabilitation therapists, or any group, be situated in LIS theory to ensure that findings are meaningful and extend current knowledge. Nevertheless, it is useful to compare existing research on rehabilitation therapists to research on physicians to determine not only if they are comparable in their information behavior, but also to see which areas require further research.

Comparison of rehabilitation therapists and physicians

Many rehabilitation therapists' information needs are likely to be clinical in nature, that is, they arise in the context of patient care. However, little is known about the number of clinical questions that occur during rehabilitation therapists' patient consultations or the proportion of these that are pursued. Interestingly, research on neither physicians nor rehabilitation therapists examines how clinical questions are structured, although categories of clinical questions posed are better known. Physicians and rehabilitation therapists ask questions relating to treatment and diagnosis, and physicians ask questions relating to drug information. In one study, more than half of SLPs report finding an answer to a clinical question, while physicians report finding an answer between 72%–89% of the time [7].

Rehabilitation therapists frequently need clinical information and consult a variety of sources to find it. A striking similarity between research on physicians and rehabilitation therapists is that both frequently consult colleagues for questions regarding patient care. Books and journal articles are also ranked highly by both groups, while databases are less popular. Both groups cite time as a major obstacle in finding information, and rehabilitation therapists mention lack of skills as an impediment. No data have been published on the amount of time rehabilitation therapists spend consulting various sources of information.

While findings regarding the impact of information are preliminary in both research on physicians and rehabilitation therapists, it would seem that both groups report potential impacts on treatment plans and the clinicians' knowledge. There is little research to identify the clinical information needs of rehabilitation therapists, while there is more on the information sources used and their information-seeking behavior. Research is required to improve understanding in these areas of rehabilitation therapists' clinical information behavior, particularly with regard to their information needs or clinical questions. This research would complement findings from studies on health professionals such as physicians and nurses, which would in turn guide database and resource developers to design more useful and relevant tools for making information accessible to clinicians. Moreover, librarians serving rehabilitation therapists would benefit from a greater understanding of what information needs arise in their clinical practice, how these needs differ from those of other clinicians, and how these needs can best be met.

CONCLUSION

While much is known about physicians' clinical information behavior, the same cannot be stated for rehabilitation therapists. This group of professionals would benefit from further investigation, particularly to determine their information needs. Marshall made this assertion in 1993, when she remarked that "[i]n the future, librarians should consider doing additional research on the needs of nonphysician groups as well as research which examines actual information needs that occur in clinical settings" [3]. Such research would provide a broader picture of the clinical information behavior of physicians, nurses, and allied health professionals. Educators, health managers, and librarians require a better understanding of the types of clinical questions that arise during patient encounters, as well as their frequency and rate of being pursued or answered, to meet the information needs of rehabilitation therapists.

Future research should focus on collecting clinical questions from rehabilitation therapists, analyzing their frequency, and analyzing the rate at which they are pursued and are answered successfully. Librarians might want to know which of these clinical questions are answered using particular sources or with the aid of an intermediary. Additional research on rehabilitation therapists' information seeking—including time spent consulting colleagues, books, journal articles, and databases or EBP tools—and reasons for selecting particular tools over others would be useful for understanding and improving services and products for this group of users. Finally, data on rehabilitation therapists' use of information for clinical decision making—for example, by measuring impact on knowledge, confidence, and patient satisfaction—could be instrumental to supporting the continued development of information services and products in this area.

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