

Iranian Occupational Therapists' Knowledge and Experiences about Evidence-Based Practice

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Abstract

Although Evidence-Based Practice (EBP) and Research Utilization (RU) were introduced to occupational therapy more than two decades ago, no research has been published which specifically identifies its use by occupational therapists in Iran. This study explores the knowledge and experiences of EBP among occupational therapists working in Iran. A qualitative study using semi structured interviews was employed with eleven occupational therapists. Purposeful sampling was used based on the participants' abilities to contribute relevant information on using the evidence in their own practice. Participants were requested to describe their own perceptions of EBP and experiences of using evidence in their therapy. The findings identified two broad categories including knowledge of EBP, and, factors that influenced introduction of EBP and research utilization in therapy. The results indicated that the participants held divergent definitions of evidence and EBP. Their perceptions varied by their qualifications. Furthermore, their use of research was influenced by educational and personal factors. There are some factors which could be useful to ensure that optimal services are provided for clients according to current research evidence in occupational therapy, including: complementary education related to research skills, and, organizational support in relation to accessing information and relevant databases.

Keywords: Evidence-based practice, research utilization, occupational therapist, Iran

Introduction

One of the main responsibilities of all health providers, and occupational therapists as a member of this team, is to present high-quality services for their clients based on reliable and scientific evidence. However, clinicians often base their decisions on the clinical expertise of themselves or their colleagues¹. So, there was a need to introduce Evidence-Based Medicines (EBM) to occupational therapy profession². Evidence-Based Medicine has extended its scope to include various health and rehabilitation fields and is now known as (EBP) or Evidence-Based Health care³.

In occupational therapy practice, EBP is considered as the combination of the best research evidence with practical expertise in order to choose effective interventions relevant to the context, task, and the unique values and conditions of each client^{4,5}. Also, EBP may be achieved through high quality research⁶.

Some studies have attempted to explore EBP and research utilization among occupational therapists. Over the previous decade, Canadian occupational therapists were concerned with this concept and concentrated on knowledge obtained from practical experience, persons, and consultation with peers².

They mostly preferred Informal consultations with peers as the main source of information⁷. Occupational therapists in the UK and Australia had a proper attitude towards the researches, however less than two-thirds of them are reported to use researches to guide their clinical practice. Workload pressures or lack of time were major inhibiting factors^{8,9}. Occupational therapists of Australia, UK, and Taiwan who work with children indicated that their perception of research knowledge, attitudes, and practices was at an average level, and the investigators considered the likelihood of some level of engagement in EBP and RU by pediatric occupational therapists¹⁰. Australian pediatric occupational therapists implement research results in practical practice to some degree¹¹. Few occupational therapists in the USA utilized EBP in their therapy planning procedure¹². In New Zealand, the EBP behaviors and attitudes of occupational therapists were largely consistent with international standards¹.

Understanding the EBP perceptions and experiences of occupational therapists has a significant role in developing programs to promote the use of EBP. It is obvious that only few literatures are accessible about implementation of EBP in Middle Eastern countries such as Iran. Although similarities can be expected between Iranian occupational therapists' perceptions and experiences of EBP and those of therapists

working elsewhere, probably some unique aspect of the Iranian environment may affect the degree to which EBP is utilized. Namely, in Iran, occupational therapy services are not under health insurance service, supervision on professional practice in healthcare organizations are not well defined, families assume a great supportive role in caring for patients, and therapists in private settings are generally not supported by insurance systems. Considering these differences, this study seeks to begin to fill this gap by exploring the knowledge and experiences of Iranian occupational therapists about Evidence-Based Practice.

Methodology

A content analysis with qualitative approach was employed to achieve the aim of this study. Qualitative researches may inform about Evidence-Based Practice without use of other research methodologies¹³. It's an important way for exploring emotions and perceptions, also health and education guidelines can be established by this kind of studies¹⁴. It is a systematic method which can be applied to understand implicitly a remarkable rate of textual information to ensure the trends and methods of communication¹⁵. In this method, raw data transform into categories or themes. In this procedure, the researcher applies inductive reasoning, careful examination and constant comparison to identify themes and categories in the data¹⁶.

Sample and data Collection method: Occupational therapists with at least two years of clinical experience were invited to participate in the study. Prior to data collection, each participant announced their informed consent.

The interviews were face-to-face and semi-structured, thus facilitating in-depth discussions. One investigator (the first author who was fluent in Persian language) conducted all digitally audio recorded interviews in Persian, making notes during and after each interview to capture the context of the interview and additional ideas. After answering brief demographic questions, each participant was interviewed separately at a mutually agreeable location. Participants were invited to share their experiences with Evidence-Based Practice and research utilization through open ended questions. The main interview started with the question: "What is your perception

about evidence-based practice? The narration was supported by questions such as: "Could you describe instances where you engaged in evidence-based practice?" Participants were encouraged to speak freely in a narrative form. The interviews took the form of a conversation, and the interviewer used active listening skills in this process. The average interview length was 55 minutes. Recruitment continued until achieving data saturation¹⁶. The study was under confirmation of the Ethics Committee of Tehran University of Medical Sciences. In accordance with qualitative research, sampling was purposeful¹⁷. Initially, a preliminary study was conducted to identify potential participants. The results indicated that clinicians are generally not familiar with EBP or engage in it. Therefore, purposeful sampling recruited faculty members who also were clinicians as participants, because they were (probably) more likely than others to have experiences in EBP and research utilization. Then, sampling was continued based on snowball sampling. Faculty member occupational therapists (eight participants) were interviewed first and their interviews coded for relevant themes. This was followed by interviews with those clinical occupational therapists (three participants) who were not faculty members.

Data Analysis: Data analysis was conducted along with data gathering to allow researchers to focus progressively on the interviews, and to decide how to interpret the emerging conclusions. The interviews were recorded, transcribed and analyzed. Full content of interviews was transcribed and read word by word repeatedly. Data was analyzed through the qualitative content analysis.

Analyzing occurred through following steps¹⁸: First, converting the interviews to text and reading them many times to achieve the sense of the whole. Then, the text was fragmented into meaning units that were compacted. After that, abstracting the compact meaning units and specifying with codes. At the next step, sorting codes into subcategories and categories, according to their resemblances and differences. Finally, constructing themes as the expression of the latent content of the text (table 2).

Table-1
Data analysis process

Meaning unit	Compact meaning unit	subtheme	Theme
The participant's doubt about her practice. Maybe because of the information the participant's have received from her academic environment, PhD studies and other forms of training (workshops). Also, she thoughts maybe she can only see from her own perspective and should try the client's perspective? She thinks Perhaps she should use the current research" (P 1).	Because of the information received from academic environment, the participant thinks she should use the current research.	Setting Characteristics	Factors influencing the use of EBP

Data credibility: The first and second authors read the transcripts, determine and named emerging concepts, and established a coding frame independently. The authors checked the coding of the first 5 transcripts and achieved an agreement on way of coding a special part of text. The first author coded the next interviews.

Maximum variation of sampling (choosing different participants from different fields and settings, different academic degrees, and different job experiences) was employed to enrich data. Credibility and conformability of the findings were established through the use of bracketing, member checking, peer checking, prolonged engagement and regular debriefing with the team by the data collector. In order to member checking, a summary of the interviews was given back to the participants to confirm that the researcher was reflecting their opinions accurately. Prolonged engagement was achieved by reviewing each interview transcript repeatedly. Peer checks were conducted at a number of points to verify the coding of the interview transcripts and the data analysis. The entire research process was documented clearly to increase data transferability.

Results and Discussion

Participants: A total of 11 occupational therapists with a mean of 39 years of age and 16.5 years of work experience were interviewed in six university hospitals and five public and private rehabilitation clinics. All 11 participants were key informant, occupational therapists from a variety of settings in three major cities and with different levels of experience and qualifications.

Analyzing the data and interviews of present study in order to begin to fill this gap by exploring the knowledge and experiences of Iranian occupational therapists about Evidence-

Based Practice resulted in two categories: "Diverse knowledge of EBP" and "Factors influencing implementation of the use of EBP".

Diverse Knowledge of EBP: While all participants were familiar with the term "EBP", their definitions of evidence and their understanding of the process of EBP were divergent.

Some participants, PhD candidates and some of the master-degrees in occupational therapy were familiar with the components of EBP and felt that they had the ability to critically appraise research articles before applying results in their therapies. The following statements indicate their perceptions of the significant role of EBP in providing effective care for clients:

"My understanding of the concept of EBP is that it provides evidence to defend and guide clinical practice. If we perform a protocol it should be tested and adapted to client's culture and the client should be happy with the intervention....it should be performed with care and discretion" (Participant 7). In my opinion EBP is a scientific intervention based on research articles and novel approaches which is used in throughout the world for treatment of a disease (P 5).

Five participants valued research as the key evidence, because they believed that the content of other resources, such as textbooks, was usually the opinion of the experts which does not always relate to clinical questions:

"In my experience, I have found that interventions mentioned in books often do not have much application in practice and have limited evidence to support them. Thus, I have decided to base my practice on research articles" (P 4).

Table-2
Description of eleven participants

Participant	Gender	Qualifications	Experience	Field	Practice Setting
Participant 1	Female	PhD Candidate in OT	24 years	psychiatric	Faculty Member
Participant 2	Female	PhD Candidate in OT	23 years	Adult physical dysfunction	Faculty Member
Participant 3	Female	PhD Candidate in OT	14 years	Pediatric	Faculty Member
Participant 4	Male	PhD Candidate in neuroscience	7 years	Adult physical dysfunction	Faculty Member
Participant 5	Female	PhD Candidate in neuroscience	20 years	Adult physical dysfunction	Faculty Member
Participant 6	Female	Master	18 years	Pediatric	Faculty Member
Participant 7	Male	Master	14 years	Pediatric and Adult Physical Dysfunction	Faculty Member and Private setting
Participant 8	Female	Master	14 years	Pediatric	Faculty Member
Participant 9	Female	Bachelor	16 years	Pediatric	Governmental and private setting
Participant10	Male	Bachelor	20 years	Adult Physical Dysfunction	Governmental and private setting
Participant 11	Female	Master's student	12 years	Hand Therapy	Governmental and private setting

While other (especially bachelor-degree) participants had no clear information about EBP components and critical appraisal, they emphasized on knowledge from textbooks and occupational therapy peers and other health care workers. In their opinion, textbooks need no assessment as they are the evidence per se.

"... (textbook's name) is not a book that can be written by just anybody" (P 10).

The following statement illustrates the emphasis of these participants on peer consultation and opinion as a source of knowledge:

"...but I think for a successful treatment outcome, discussion and consultation with other colleagues is part of the evidence" (P 10).

Factors Influencing Implementation of EBP from the Perspectives of Occupational Therapists: The participants described various factors that influenced their beginning to use research or EBP in practice. These factors consisted of two levels: practitioner characteristics and setting characteristics.

Practitioner characteristics: Most of the participants believed that certain characteristics of the therapist are the significant factor influencing implementation of EBP: willingness to change, moral obligation, and maintaining professional identity were the most important personal factors influencing the use of EBP.

Characteristics of practitioners, such as awareness, motivation, values and interests are considered as primary affection on successful use of EBP. A practitioner's interest in a potential change in practice is usually considered as the first step in acceptance innovations such as EBP. A senior occupational therapist stated that the implementation of EBP depends on the therapist's willingness to change:

"I think the use of evidence depends on the individual therapist's desire to make changes. So it depends on the therapist" (P1).

The practitioner's beliefs and values were also considered as effective personal factors by the participants. One participant stated:

"Sometimes patients come to me who are desperate and desperately want help from you, and this affects me a lot. I think it is the individual's moral responsibility to do the best thing that they can for the patient" (P 1).

"Any error is easily seen in orthopaedic practice, but I didn't want to make any mistake because I wanted my professional identity to be protected.... So, I turned to hand therapy journals and I found a case similar to mine which inspired me" (P 2).

Setting characteristics: The participants suggested certain features related to education and learning existed in their setting which encouraged them to use EBP. Working in settings that needs teaching/learning challenges may influence implementing EBP by practitioners. These factors, including PhD coursework, workshops, academic settings, and having educational responsibility, were categorized as setting characteristics.

"I doubt my own experience. Maybe because of the information I have received from my academic environment, PhD studies and other forms of training (workshops). Also, I thought maybe I can only see from my own perspective and I should try the client's perspective. Why do they come to me? What do they need? Perhaps I should use the current research" (P 1).

Discussion: The findings of this study make a valuable contribution to the limited body of available knowledge exploring EBP and research utilization, because it is the first study which addresses the understanding of occupational therapist perceptions and experiences of EBP in Iran.

In line with international literature¹⁹, this study achieved some different perceptions among occupational therapists on EBP. In the present study, the participants who were PhD candidates in the field of occupational therapy had a clear understanding of the term "Evidence-Based Practice" and were familiar with its process. Therefore, they considered research as a major source of evidence and integrated that with individual clinical expertise and client priorities and values. Other participants had limited information about EBP, and no information about its procedures. They announced EBP as a way of finding information from textbooks, colleagues, or articles and implementing it. Their viewpoint towards EBP appeared to be differed by academic qualifications. PhD candidates should pass an EBP course in their education, while EBP is not included in the curriculum of Bachelor or Master Degrees. In addition, continuing education and workshops addressing this issue are not established in the field of occupational therapy in Iran. Different educational groups offer various degree programs²⁰. This is strictly believed that academic education has a critical role in preparing students for future job²¹, but learning should actually continue all over the life²². This concept is indicated by other researchers such as Long that believed increasing knowledge may lead to improvement in job performance²³ and all of the scientific and traditional knowledge should be valued²⁴.

The factors that facilitate introduction of EBP into occupational therapy practice were categorized in two groups: setting and practitioner characteristics.

Setting characteristics such as teaching/learning and educational climate (culture) were repeatedly reported by many participants as an important determinant for use of EBP and research. In the present study, work settings with educational characteristics reported by the participants included taking courses on EBP in

PhD classes, research methods, statistics, along with postgraduate courses and continuing education. In one qualitative study, engaging in continuing education contributed to participant capacity to translate research evidence into practice²⁵. The participants in this study indicated that using research was affected by taking EBP courses post-graduation or relevant PhD classes. Similarly, Sweetland and Craik indicated that such attendance at postgraduate courses strongly influenced the choice of occupational therapy interventions for adult stroke patients²⁶. This suggests that advanced education may be an important factor in increasing the use of research literature in practice.

According to Estabrooks and colleagues, individual or practitioner factors explained the major part of the variance in nurses' research use²⁷. In this study important practitioner characteristics affecting implementation of EBP in practice include the therapist's willingness to change, moral obligation and continuing professional competency. The participants perceived willingness to change in practice as an important characteristic of a therapist. The models of research utilization or knowledge transfer (e.g. Prochaska and DiClemente's Model) consider the individual specifically. These models also suggest that change in behavior is modulated by a person's readiness to make changes at the time the information is provided²⁸. Practitioners are also professionally and morally obligated to ensure that their clinical decisions are based on the best practice. In addition, the primary reason for implementing evidence-based practice is a moral reason²⁹. In order to demonstrate their continuing competence to practice, occupational therapists will be expected to justify their intervention in terms of recognized standards²⁶.

Limitations and suggestions: This study is limited by the sample type. Most of the participating occupational therapists had previous experience with EBP and using research in practice. While this limits the transferability of the findings, it does provide interesting results about implementation of EBP into occupational therapy practice in Iran. These results indicate a need for a study to examine the knowledge, attitudes, practices and barriers to implementing EBP in occupational therapy in Iran. It would be beneficial for such a study to compare occupational therapists from different field of clinical practice. Regardless of the limitations of this study, it is exciting to note that EBP is increasingly a component of Occupational Therapy practice in Iran.

Conclusion

This study was the first to address research utilization and EBP among occupational therapists in Iran. The occupational therapists were aware of EBP. Perceptions and engagement varied according to levels of academic qualification.

The participants in this study described factors that influenced implementation research and EBP. The participants indicated

that knowledge used in making decision came primarily from textbooks, research articles, and consultation with colleagues.

In general, the participants had a positive attitude to evidence-based occupational therapy and were willing to promote the skills required in EBP also organizational supports.

It is recommended that if occupational therapists are to use research findings in their practice, the educators in healthcare organizations need to create strategies to improve the skills needed to implement EBP. It also seems that it would be beneficial to consider providing organizational facilities that optimize access to information.

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