#### **ORIGINAL ARTICLE**

# Knowledge, attitude and practice towards evidence based practice among clinical physical therapists of Khyber Pakhtunkhwa

Qarib Ullah<sup>1</sup>, Jahangir Khan<sup>2</sup>, Mansoor Ahmad<sup>3</sup>, Sana Ullah<sup>4</sup>, Husan Hayat<sup>5</sup>, Huma Balqias<sup>6</sup>, Madiha Anees<sup>7</sup>

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## Author Information 1-6Physical Therapy Department Rehman Medical Institute 7Rehman College of Rehabilitation Sciences

#### **Corresponding Author**

Madiha Anees Senior Lecturer Rehman College of Rehabilitation Sciences Peshawar Email: madiha.anees@rmi.edu.pk

#### **ABSTRACT**

**Introduction:** Evidence Based Practice (EBP) constitutes of clinical skills, patients values and high-quality clinical research for decision-making in-patient care. EBP provide better use of resources for improving the emerging questions in clinical setup hence improving the effectiveness of the treatment. The physical therapists and physical therapist assistants shall provide services which increase patients care and hence improve quality of life.

Materials and Methods: The research design for this study was cross sectional survey and was conducted in tertiary health care hospitals of Peshawar and district hospitals of KPK. The duration of this study was 6 months: from September 2018 to February 2019. Census sampling was performed, and 103 participants were screened. Inclusion criteria was applied, and 96 participants were included in the research. Inclusion criteria for this survey was clinical physical therapists having at least one-year clinical experience and decline consent was excluded from this survey. The questionnaire we used in the study was modified APTA standard Questionnaire.

**Results:** The respondents' characteristics of 80 participants shows that more than half were male 47(58.8%) and the remaining were females 33(41.3%). Respondents held positive attitude and beliefs regarding EBP application with a majority of 35(43.8%) strongly agreed while 6(7.5%) PT's strongly disagreed. The most common barrier reported by 49 (61.3%) respondents was inability to apply research findings to individual patient with unique characteristics.

**Conclusion:** Clinical physical therapists of Khyber Pakhtunkhwa have positive attitude towards EBP. Majority of the respondents showed an interest in adopting evidence-based practice in their clinical setups and also claimed that evidence-based practice is necessary for daily clinical practice.

Keywords: Attitude, Clinical Physical Therapist, Evidence based practice, Knowledge.

The authors declared no conflict of interest and agreed to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved. All authors contributed substantially to the planning of research, questionnaire design, data collection, data analysis and write-up of the article. The research work was supervised by Madiha Anees Senior Lecturer Rehman College of Rehabilitation Sciences

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#### INTRODUCTION

Evidence Based Practice (EBP) constitutes of clinical skills, patient values and high quality clinical research for decision making in patient care. Clinical expertise defined as clinical knowledge of the health care practitioner and their past experience on the basis of which they identify patient condition and provide effective intervention accordingly. Patient values has been considered as the expectation patient bring regarding his condition. High quality research means studies relevant to the basic research or literature available on the patient centered approach. According to WHO the best research evidence should be in integral part of all health and social services. To make EBP worthwhile, attitude and belief are equally important as to implement EBP it is necessary to make the intervention according to the required need. Effective application of EBP may require modification in practice, self-learning and compatible work environment.

The use of EBP has been increased in various sectors of health including medicine, nursing, dentistry, physical therapy, occupational therapy, and nutrition.<sup>8</sup> The use of EBP and its

application in clinical practice has now been written in educational curricula of countries like Australia, Spain, United States of America (USA), Columbia and United Kingdom (UK). In physical therapy approaches based on EBP are emerging and referred as evidence based physical therapy. According to the vision statement of APTA 2020, the physical therapists and physical therapist assistants shall provide services which increase patients care and hence improve quality of life. At the 13th general meeting of world confederation of physical therapy in 1995, several declarations were made regarding the use of EBP into daily practice. It was suggested that physical therapists have a duty to apply new techniques into their clinical practice based on newer evidence.

In recent decade the researches have been increased dramatically which sometimes make difficult for the practitioner to stay up to date about the recent advances and to apply into their clinical practice. A study conducted by Shuster and colleagues describe that 30-40% of patients are deprived of treatment given on the basis of current scientific literature and 20-25% receive care which

is not relevant to their condition or may be harmful for them.<sup>3</sup> Another major concern faced by physical therapists is lack of availability of the high quality researches in rehabilitation journals.<sup>13</sup> The health care professionals shall be confident enough to practice evidence-based approaches in their clinical setups. For this reason the knowledge, attitude and skills of EBP are incorporated in the curriculum which based on 5 steps identifying the problem, searching for the answer, critically appraising the content, applying the appraised method into practice and evaluating the performance. 14, 15 Practitioners shall introduced to the teachings of EBP in their undergraduate years so they can easily understand the concept of applying EBP into the clinical practice and not only stick to the experience of their own.<sup>16</sup> In profession like physical therapy where the research content is still lacking, it is difficult to implement EBP in clinical environment. To make its implementations possible, the challenges faced by EBP must be highlighted.<sup>17</sup> Situations like inability to find research, lack of availability of research literature, varying patient conditions, scarcity of information retrieval and ineffectiveness to address patient preferences were considered to be the barriers in the process of EBP implementation into physical therapy practice. 18 These factors were also recognized by other health care professions. 19 Scurlock-Evans et al conducted a study in 2014 and suggested that the main barriers faced by physical therapists were lack of time for EBP application and inability to retrieve resources.<sup>20</sup> The other factor which influence the use of EBP is language of the research publication. As most of publish article are available in English language which is sometimes difficult to understand.<sup>21</sup> Difficulty to analyze research data and misinterpretation of results also make it difficult for physical therapists implement EBP.22

It is not clear to what extent physical therapists in KPK has been integrated to newer model of practice. Studies regarding EBP have been done mostly in developed countries and have focused only the knowledge of evidence by physical therapists while the practice, attitude and barriers toward EBP are still lacking. Majority of the studies have been done on general practitioners. So, this study was therefore designed to determine the knowledge, attitude and practice towards EBP among physical therapists of KPK.

#### **MATERIALS AND METHODS**

This was cross sectional survey conducted at tertiary health care hospitals of Peshawar and district hospitals of KPK. The duration of this study was 6 months from September 2018 to February 2019. The study was conducted from 25 district hospitals of KPK and 6 tertiary care hospitals of Peshawar which included Khyber Teaching Hospital (KTH), Hayatabad Medical Complex (HMC), Lady Reading Hospital (LRH), Fauji Foundation, Rehman Medical Institute (RMI) and Northwest General Hospital (NWGH). Census sampling was performed, and 103 participants were included. Those Clinical physical therapists having at least 1 year experience were included which comes down to 96 participants. Participants were invited to be the part of the survey by the members of research group and were explained the importance and benefits of this survey. Those who agreed and signed the consent form were recruited in the study. The questionnaire was

taken and adopted by a study conducted by American Physical Therapy Association (APTA) which was based on Likert scale. Questionnaire was comprising 30 questions which have various domains like questions about personal attitude and practice towards EBP, inquiry about interest and motivation, level of use of literature in EBP, personal use and understanding of clinical practice guidelines, availability of resources, educational background and knowledge related to assess EBP and barriers towards application of EBP. The questionnaire was filled by the district physical therapists on email and their responses were duly filled by the group members on the questionnaire. Total sample size was 96 in which response of only 80 participants were obtained. Data was analyzed using SPSS version 22. Frequency, cross tabulation, correlation, standard deviation and mean of variables were analyzed. Data was tabulated using percentage distribution.

#### **RESULTS**

The respondent's characteristics of 80 participants shows that more than half were males 47(58.8%) and the remaining were females 33(41.3%). The mean age of participants was  $31.37\pm4.44$  years (mean  $\pm$  standard deviation). A total of 47(58.8%) PT's were selected from DHQ hospitals of KPK and the remaining 33(41.3%) were selected from tertiary care hospitals of Peshawar. Further details are given in table 1.

Table 1: Participants Demographics				
Variables		Frequency		
Gender	Male	47 (58.8%)		
	Female	33 (41.2%)		
Age	Mean ± S. D	31 ± 4.4		
Current Working	Tertiary Care Hospital	33 (41.2%)		
Facility	Peshawar			
	DHQ Hospital	47 (58.8%)		
Degree Level	BS-PT	14 (17.5%)		
	DPT	25 (31.3%)		
	MS-PT	41 (51.3%)		
Working Experience	1-5 Years	39 (48.8%)		
	6- 10 Years	35 (43.8%)		
	11-15 Years	3 (3.9%)		
	16-20 Years	3 (3.5%)		
Are you a clinical	Yes	36 (45%)		
instructor for physical				
therapy students/	No	44 (55%)		
interns/residence?				

29(36.6%) PT's work greater than 40 hours/week and minimum working hours for 5(6.3%) PT's was less than 20 hours. Out of 80 participants 29(36.3%) PT's were attending more than 15 patients per day while minimum number of patient's attended by 11(13.8%) physical therapist was 11-15. Details are given in table 2.

Respondents held positive attitude and beliefs regarding EBP application with a majority of 35(43.8%) strongly agreed while 6(7.5%) PT's strongly disagreed. According to 36(45%) PT's literature and research findings were useful in their daily life while for 4(5%) PT's they were not useful. 23(28.7%) respondents stated that using evidence in practice places unreasonable demand on them while 11(13.8%) PT's totally disagreed with it. 30(37.5%) and

29(36.3%) PT's strongly agreed 5(6.3%) strongly disagreed that EBP has positive effect on patient care. Respondents chose agree response 36(45%) that using evidence in practice places unreasonable demands on them. 27(33.8%) participants strongly agreed while 3(3.8%) strongly disagreed that incorporating EBP into their practice increases the reimbursement rate. PT's were diverse in their beliefs about whether there was a lack of strong evidence to support aspects of their practice. 39(48.8%) stated that they agreed with statement and 6(7.5%) strongly disagreed with statement. While considering patient preferences 22(27.5%) agreed and 19 (23.3) strongly disagreed about EBP use. For details see table 3.

Table 2: Details of participants working hours and patients attended				
Variables		Frequency		
On average how many hours per week do you work?	< 20 hours	5 (6.3%)		
	20-30 hours	24 (30.0%)		
	31-40 hours	22 (27.5%)		
	> 40 hours	29 (36.3%)		
On average how many patients do you see daily?	< 5	13 (16.3%)		
	5-10	27 (33.8%)		
	11-15	11 (13.8%)		
	>15	29 (36.3%)		

Table 3: Personal Attitude					
Questions	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
Application of EBP is necessary in the practice of physical therapy.	6 (7.5%)	6 (7.5%)	3 (3.8%)	30 (37.5%)	35 (43.8%)
Literature and research findings are useful in my day-to-day life.	4 (5.0%)	8 (10.0%)	1 (1.3%)	36 (45.0%)	31 (38.8%)
The adaptation of EBP places on unreasonable demand on physical therapist.	11 (13.8%)	21(26.3%)	7 (8.8%)	23 (28.7%)	18 (22.5%)
EBP improves the quality of patient care.	5 (6.3%)	12 (15.0%)	4 (5.0%)	29 (36.3%)	30 (37.5%)
EBP does not take into account the limitation of my clinical practice setting.	8 (10.0%)	9 (11.3%)	14 (17.5%)	36 (45.0%)	13 (16.3%)
My reimbursement rate will increase if I incorporate EBP into my practice.	3 (3.8%)	10 (12.5%)	4 (5.0%)	38 (47.5%)	25 (31.3%)
Strong evidence is lacking to support most of the interventions I use with my practice.	19 (23.8%)	22 (27.5%)	5 (6.3%)	22 (27.5%)	12 (15.0%)
EBP helps me make decisions about patient care.	2 (2.5%)	8 (10.0%)	5 (6.3%)	30 (37.5%)	35 (43.8%)
EBP does not take into account patient preferences.	2 (2.5%)	11 (13.8%)	4 (4.0%)	26 (32.5%)	37 (46.3%)

35(43.8%) PT's strongly disagree about increasing the use of evidence in daily practice while 30(37.5%) agree. 37(46.3%) respondents strongly agree while 2 (2.5) strongly disagree that they were interested in learning and improving the skills necessary to implement EBP. A total of 28(35.0%) participants reported reading 2-5 articles while 23(28.7%) read less or equal to 1 article. 28(35.0%) of the respondents reported using professional literature in the process of clinical decision making about 2-5 times per 3 months. 26(32.5%) respondents reported performing  $\leq$  1 database searches in 3 months.

A total of 54 (67.5%) respondents contended that clinical guidelines were available relevant to their practice and 30 (37.5%) agree that they actively seek practice guidelines pertaining to their specific areas.

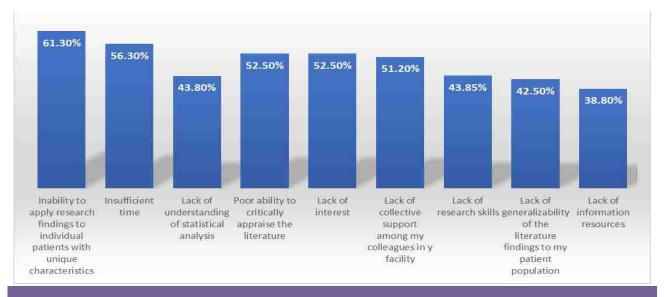
Nearly 64(80.0%) respondents contended that clinical guidelines relevant to their practice areas were available online and 59(73.8%) stated that they had access to those guidelines online. 41 (51.2%) have access to current research through professionals' journals in their paper form. In terms of the current working facility 44 (55%) have the ability to access relevant databases. This was mostly noticed by physical therapist working in tertiary hospitals of Peshawar. Other than working facility 46 (57.5%) could access databases at home.

28(35.0%) participants agreed that they learn the foundation for

EBP as a part of their academic preparation in which most of them were with the master's degree while 16 (20%) disagreed. In context of receiving formal training and search strategies for finding research relevant to practice 23(28.7%) participants agreed and 18(22.5%) strongly disagreed. Physical therapist in tertiary hospitals agreed about receiving trainings while district physical therapist strongly disagreed. In regard to the knowledge of medical search engines 39(48.8%) agree that they were familiar with the engines and 13(16.3%) disagreed. 28(35.0%) agreed that they received formal training in critical appraisal of research literature as a part of their academic preparation while 18(22.5%) strongly disagreed. 29 (36.3%) were confident in their ability to critically review the professional literature while 17 (21.3%) strongly disagreed, in relation to their degree level participants with master's degree were more confident. 32(40.0%) respondents were confident in response to the ability to find relevant research to answer their clinical question (for further details, see table 5). Certain barriers were identified in the present study which hinders the application of EBP into daily practice. The most common barrier reported by 49 (61.3%) respondents was inability to apply research finding to individual patients with unique characteristics. Followed by 45 (56.30%) respondents reporting insufficient time. Details have been shown in figure 1.

Table 4: Clinical Practice Guidelines				
Questions	Yes	No	Don't Know	
I am aware that practice guidelines are available online.	64(80.0%)	16(20.0%)	-	
I am able to access practice guidelines online.	59(73.8%)	21(26.3%)	-	
I have access to current research through professional journals in their paper form.	41(51.2%)	39(48.8%)	-	
I have the ability to access relevant databases and the internet at my facility.	44(55.0%)	34(42.5%)	2(2.5%)	
I have the ability to access relevant databases and the internet at home or locations other than my facility.	46(57.5%)	31(38.8%)	3(3.8%)	

Table 5: Educational background					
Questions	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
I learned the foundations for EBP as a part of my academic preparation.	16(20.0%)	11(13.8%)	3(3.8%)	28(35.0%)	22(27.5%)
I have received formal training in search strategies for finding research relevant to my practice.	18(22.5%)	13(16.3%)	5(6.3%)	23(28.7%)	21(26.3%)
I am familiar with the medical search engines (e.g. MEDLINE, CINAHL).	13(16.3%)	3(3.8%)	3(3.8%)	39(48.8%)	22(27.5%)
I received formal training in critical appraisal of research literature as part of my academic preparation.	18(22.5%)	13(16.3%)	8(10.0%)	28(35.0%)	13(16.3%)
I am confident in my ability to critically review professional literature.	17(21.3%)	5(6.3%)	12(15.0%)	29(36.3%)	17(21.3%)
I am confident in my ability to find relevant research to answer my clinical questions.	13(16.3%)	8(100%)	6(7.5 %)	32(40.0%)	21(26.3%)



Barriers of Evidence Based Practice

Figure 1: Barriers

#### DISCUSSION

The purpose of this study was to explore the knowledge, attitude and practices of physical therapists of KPK and to find out the barriers which influence their application of EBP. Results of this study demonstrated that majority of the participants showed positive attitude towards EBP and indicated that they have much more knowledge about EBP. Findings of this study were somewhat similar to the work done by a study in which 74% respondents agreed to the application of EBP into practice of physical therapy which is similar to this study showing 81% positive response. In the latter study, 38% respondents disagreed that they learnt foundations of EBP as part of their academic curriculum in contrary to which 62.5% respondents agreed in our study. 57% respondents in their study suggested that they did not receive formal training in search strategies for finding relevant research while in our study 55% agree. In this study 51.3% agreed that they can critically appraise literature while in their work 47% disagree. The difference in the findings were may be due to the fact that majority of the participants (51.2%) in this study were having a post graduate degree while in their study most of the participants (73%) have bachelor's degree as their highest professional qualification.23

The findings of this study were also replicated in a study which suggested that 88% of their participants agree that EBP is necessary. The mean age of respondents in this study was 28-30 years. However, the participants in Uroosa et al have age  $\leq$  34 years. 88% respondents in their study indicated that EBP improves the quality of patients care which is 73.8% in our study. 69.4% agreed in their study they frequently read research literature in previous months that which is different in our study as 28.7% only read 2-5 articles in three months. The findings of the present

survey indicated that majority of the respondents faced several barriers while implementing EBP into practice. Inability to apply research findings to individual patients with unique characteristics was observed as the most important barrier in this study followed by insufficient time and lack of understanding of statistical analysis respectively. While in their study insufficient time, limited access to search engines and inability to apply research findings to patient population were considered most important barriers towards EBP application.<sup>24</sup>

35.0% participants in this study reads 2-5 articles related to their clinical practice in a typical month, 35.0% respondents reported that they use research findings 2-5 times in their clinical decision making. These findings did not correlate with the study conducted by Jette et al in which 17% respondents read average of  $\leq$  2 articles. <sup>18</sup>

51% respondents in current study demonstrated that they have access to the current research professional journals which is contrary to the work done in another study which showed lack of access to the journals. 48.8% respondents observed that strong evidence is lacking to support most of the interventions used by them in clinical practice which was also reflected by comparing study. Respondents of this study agreed that they were familiar with the medical search engine and 55.0% have access to the internet facility at home and 57.5% have access at work. In contrast of which 81% have shown that they have computer access at their home and 68% have access to their work places in their findings. Lack of time was considered the major barrier to their EBP application.<sup>25</sup>

#### **CONCLUSION**

The clinical physical therapists of district hospitals of Khyber Pakhtunkhwa and tertiary care hospitals of Peshawar have much more knowledge on evidence-based practice and shows positive attitudes towards implementing it. Majority of the respondents showed an interest in adopting evidence-based practice in their clinical setup and also claimed that evidence-based practice is necessary for daily clinical practice. The finding of this study may provide a base for implementing evidence-based practice in different clinical settings by understand the barriers which effect the adaptation in their daily practice.

#### **LIMITATIONS**

All hospitals of Peshawar were not included. The hospitals were not divided into government and private sectors. We collected data through social media and by interviewing the physical therapists because of these two methods of collecting the data differences may have occurred.

#### RECOMMENDATIONS

Research work on the use of evidence-based practice encourages the physical therapists in providing quality health care. There is a need to inculcate research culture among the clinical physical therapist to overcome all the barriers which hinders the quality of work.

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