

# Current Practice of Physical Therapists: An evidence-based practice survey

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## ABSTRACT

**Background:** Patient/client management is comprehensive multidirectional process. It includes patient client examination, evaluation, diagnosis, prognosis, intervention and then discharge plans from supervised treatment to follow ups. The process of examination includes comprehensive history taking, performing systemic review and special tests and measures.

**Aim:** To investigate Pakistani physiotherapists' current practice, skills and understanding of evidence-based practice in order to improve the utilization of the evidence base in physiotherapy in the country.

**Methods:** This observational cross section study was done in Pakistan Institute of Medical Sciences and Islamabad Medical and Dental College, Islamabad between January 2021 and March 2021. Physiotherapists (n=369) were contacted through non-probability convenience sampling technique. Respondents were contacted at clinical facilities in the twin cities of Pakistan. The content of the questionnaire was validated using the literature and the method of Lynn MR et al. The results were extracted, conclusion was drawn, suggestions and recommendations were made.

**Results:** The participants mean age was 27.58±7.41 years. The male/female ratio was almost same. Approximately half of the respondents 50.4% were agreed about the role of EBP in practice. 57% respondents were agreed that EBP removes the art from clinical practice. 58.5% respondents were agreed about benefit of EBP and EBP improves clinical outcomes and 53.4% respondents were agreed about help of EBP in decision making. Attitude and knowledge need analysis was positive but there found compromise in utilization of this evidence-based practice, while this study showed more utilization.

**Conclusion:** Five steps of evidence-based practice were found being infrequently practiced. Physiotherapists had good to fair understanding of evidence-based practice. Physiotherapists had fair to poor appraisal skills.

**Keywords:** Clinician practice; Data base; Evidence-based practice; Physical therapist; Practice guideline; Patient management.

## INTRODUCTION

Evidence-based practice (EBP) is the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients by integrating individual clinical expertise with the best available external clinical evidence from systematic research<sup>1</sup>. EBP bridges the gap between research and clinical practice. The EBP process can be divided into five main steps, such as converting the problem to some primary question, finding the best available evidence, critically evaluating the evidence before application, integrating clinical expertise, best available evidence and patient preferences. At the end, the whole process is re-evaluated to see the results, and if necessary, the first four steps are repeated.<sup>3</sup> Although a theoretical and practical curriculum has recently been added to undergraduate physical therapy programs, several studies conducted worldwide on physical therapists show that practicing physical therapists they need training in evidence-based practice. The most frequently cited deficiencies are lack of familiarity with research and biostatistics, poor literature search skills, and lack of ability to critically evaluate research work<sup>4-7</sup>.

Patient/client management is comprehensive multidirectional process. It includes patient/client examination, evaluation, diagnosis, prognosis, intervention and then discharge plans from supervised treatment to follow ups. The process of examination includes comprehensive history taking, performing systemic review and special tests and measures. This very stage either leads to diagnostic processes or may be used as a tool to identify the relevance of problem, or locate problems that may require other consultation or referral<sup>8</sup>.

Both of prior processes i.e., examination and evaluation are used to reach final diagnosis. So, diagnosis is process in which therapist organizes information into clusters, syndromes or

categories that may lead to determine prognosis and appropriate interventional strategies<sup>9</sup>. Confident diagnosis help determining prognosis i.e., expected time of cure and also selection of interventional plan to specify timings and frequency of intervention<sup>10</sup>.

After identified prognosis, purposeful and skilled interaction of therapist with patient/client is warranted. The techniques and methods used by therapists are consistent with the prognosis. The therapists reexamine the patients to figure out changes in patient's condition or modify or redirect intervention. The process of examination may identify any lack of prognosis. At this point, again, referral or further consultation may be called<sup>11</sup>.

Finally interventional strategies and reexamination leads to checking results and fulfilment of expected outcomes and impact of therapy which may include changes in pathology, disease, disorder or condition, limitations, risk prevention, societal participation and patient/client satisfaction<sup>12</sup>.

When we look into details of process of EBP, making searchable clinical questions are the first step considered. These are the questions which are used to find necessary related literature<sup>13</sup>. The second step in process of EBP is searching evidence as suggested or asked in first element of care. The search is done in research databases, peer reviewed journals. Before selecting databases to search, it is decided that what type of evidence is required. There is classification and distribution of research designs from bottom to top of pyramid (Fig. 1). More the design near or on top of pyramid, more it is not like to produce biases in results<sup>14</sup>.

For example, when searching evidence about clinical practice, it should be started from clinical practice guidelines to systematic reviews to clinical trials including randomized controlled trials or without controlled trial.

The study aims were to investigate Pakistani physiotherapists' current practice, skills and understanding of

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evidence-based practice in order to improve the utilization of the evidencebase in physiotherapy in the country.

Fig. 1: Pyramid of research evidence



**METHODOLOGY**

After IRB permission this observational cross-sectional study was conducted in Pakistan Institute of Medical Sciences and Islamabad Medical and Dental College between January 2021 and March 2021. Physiotherapists working in clinical facilities were contacted. Physiotherapists who work only in academic settings or have a work nature other than clinical practice were excluded. A convenience sampling technique was used to obtain data from physical therapists. Exact number of physical therapists is not registered. Contacting various authorities in the field of physiotherapists and to the best of our knowledge the number of practicing physiotherapists in twin cities, Rawalpindi/Islamabad is not more than 400. Using WHO sample size calculator, whereas CI; 95%, alpha error 5%, population size 400 and the sample was

197. The study participants were enrolled voluntarily and informed consent was taken. The respondent information sheet (RIS) was explained to the respondents about the aim of the study. The questionnaire was distributed in the form of leaflets and by email. The questionnaire (EBPQ) was based upon the already published survey for the similar purpose. The content of the questionnaire has already been validated through literature. Suitable items have been selected. This initial draft was forwarded for comments, addition and subtractions, to four physical therapists teaching evidence-based practice. The questionnaire modified in light of these comments was sent further to nine physical therapists working in clinical setups. The final modified draft after the suggestions of these physical therapists was used as survey questionnaire. This procedure is based further on Lynn MR and Iles R<sup>15,16</sup>.

The collected data was analyzed by SPSS v 23.0. Statistical analysis was performed to obtain the results. For numerical data, data was presented in mean and standard deviation whereas for categorical data, data was presented in for of frequencies and percentages. P value ≤ 0.05 was considered significant.

**RESULTS**

All 369 respondents were under age 35 years old. The participants mean age was 27.58±7.41 years. Out of total 369 respondents 170(46.1%) were male and 199(53.9%) were females. Out of total 369 respondents 73 (19.8%) were practicing in Govt. hospitals, 46 (39.6%) were working in private hospitals, 112(30.4%) were practicing in rehabilitation centers and 38(10.3%) others were not mentioned in questionnaire. Out of total 369 respondents, 110(29.8%) had bachelor degree, 169(45.8%) postgraduate, 81(22%) had MS/M.Phil and 9(2.4%) were from Ph.D program. The study questionnaire regarding EBP role in clinical practice, removes the art from clinical practice, improves clinical outcomes, decision making and others were measured and analyzed (Table 1). Other study questions were measured and analyzed (Fig. 2 & 3).

Table 1: Statistics of EBP questionnaire frequencies and percentages, n=369

	Strongly Agree	Agree	Undecided	Disagree	Strongly disagree
EBP role in clinical practice	82 (22.2%)	104 (28.2%)	97 (26.3%)	86 (23.3%)	-
EBP removes the art from clinical practice	68 (18.4%)	142 (38.5%)	71 (19.2%)	82 (22.2%)	6 (1.6%)
EBP improves clinical outcomes	28 (7.6%)	188 (50.9%)	110 (29.8%)	43 (11.7%)	-
EBP in decision making	-	197 (53.4%)	151 (40.9%)	21 (5.7%)	-
EBP impractical for everyday clinical practice	65(17.6%)	195(52.8%)	71(19.2%)	38(10.3%)	-
EBP history taking and examination skills	-	164(44.4%)	126(34.1%)	79(21.4%)	-
Outcome research and scientific studies	78(21.1%)	109(29.5%)	149(40.5%)	33(8.9%)	-
Conducting research practicing in the field	88(23.8%)	110(29.8%)	83(22.5%)	88(23.8%)	-
Resources (e.g., access to worldwide web, databases, libraries etc.) EBP	27(7.3%)	152(41.2%)	127(34.4%)	63(17.1%)	-
Quality of research in our areas of clinical interest or sufficient to support participation	46(12.5%)	164(44.4%)	152(41.2%)	7(1.9%)	-

Fig. II: Percentages of EBP questionnaire, n=369

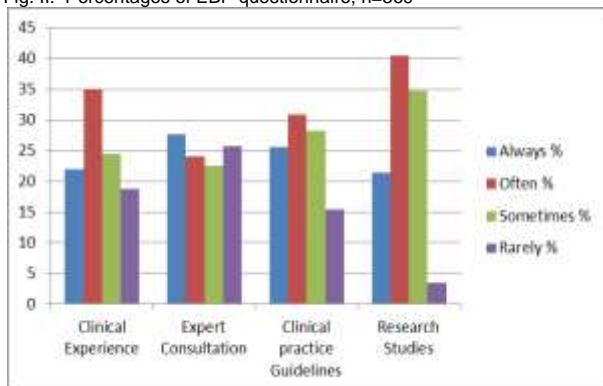
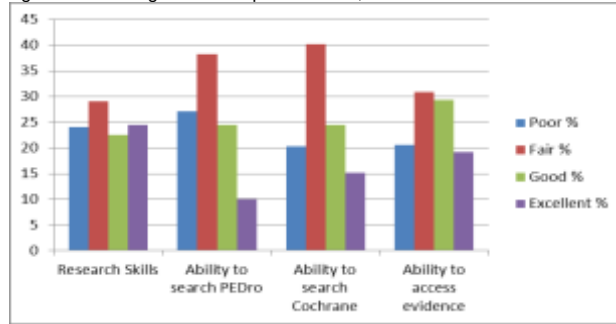


Table 1 shows, approximately half of the respondents 50.4% were agreed about the role of EBP in practice. 57% respondents were agreed that EBP removes the art from clinical practice. 58.5% respondents were agreed that EBP improves clinical outcomes and 53.4% respondents were agreed about help of EBP in decision making.

Fig. 2 shows, only 22% respondents were always using their own clinical experience. 27.6% respondents were always using sources of information/expert consultation in clinical decision making. Only 25.5% respondents were always using clinical practice guidelines sources of information in clinical decision making and only 23.8% respondents were always using research studies of information in clinical decision making.

Fig. 3 shows, only 24.4% respondents were excellent in research skills and same percentage respondents were good ability to search Pedro and Cochrane library. 29.3% respondents were good having ability to access evidence.

Fig. III: Percentages of EBP questionnaire, n=369



## DISCUSSION

In this study, response rate was good with total of 369 participants. Age group showed that the study participants were young physiotherapists. Although female ratio is much more in the physical therapy field but in this study male and female ratio was almost equal. Majority of the physiotherapist found working in private sector, while government hospitals contained only minor portion of the total physiotherapists, and the physiotherapists running self-clinic were also not less. The other important demographic variable was education and most of the physiotherapists were postgraduated. At most of the items about attitudes of the physiotherapists towards EPB, rate of agreement was high. However, on the questions about the role of evidence-based practice in clinical growth, the indecisive rate was high. About utilization of evidence-based practice, most of the participants have difficulty accessing journals and full text articles. They also highlighted deficit of professional development training about utilization of evidence-based practice. However, big percentage of physiotherapists reported that the research work and searching evidence for physiotherapy management was not task of the physiotherapists. Also, the ratio was big who had opinion that reliance on own clinical expertise more appropriate. High ratio of respondents being undecided about using clinical outcomes and research findings showed that there would be lack in understanding or application of evidence-based practice concept<sup>16</sup>. Another confusing response was utilization clinical practice guidelines, which most are indecisive about their utilization while at the same time they showed high positive attitude towards evidence-based practice<sup>17-19</sup>.

The results of our study are a little different from those of previous studies. In our study rate of agreement and indecisiveness is high as compared to previous studies<sup>20,21</sup>. In the past American Physical Therapy Association conducted a survey with random sampling on physical therapists. However, that was multipurpose survey estimating beliefs, attitudes, knowledge and behaviors regarding evidence-based practice<sup>22</sup>. Like this study, attitude and knowledge need analysis was positive but there found compromise in utilization of this evidence-based practice, while this study showed more utilization, which on the other hand is under question that how it is possible despite having limited resources here, even the data base access limitations?

In a bird eye view, from the perspectives of attitude, the results are similar to previous and international studies, but limitations and barriers reported are serious nature. The study showed that data basis is not available here, or physiotherapists have not access to full text articles. While internationally in most of developed and under developed countries this is not an issue. Also here in Pakistan, this support is unavailable even by organizational and institution level. Other limitations are time and appraisal skill. This is also similar to previous studies<sup>23-24</sup>. Clinicians find little time in their tight schedule to sit and find best available evidence, even if they manage to find literature, this is extremely difficult to appraise it either it is good enough for their particular case or not. Appraisal of research studies demands skill and time<sup>25</sup>.

## CONCLUSION

Five steps of evidence-based practice were found being infrequently practiced. The physiotherapists had good to fair understanding of evidence-based practice. The physiotherapists had fair to poor appraisal skills. The physiotherapists had good attitude towards evidence-based practice and in last, obstacle to evidence-based practice was resources.

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**Authors Contribution:** **NA;** provided concept/research design and did data collection, **MS & MN,** did statistical analysis and manuscript writing, **NA, HMMHK** did edit of manuscript and project management, **AA & MZ** did critical revision of the manuscript for important intellectual content, **NA** takes the responsibility and is 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.

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