

# Knowledge, attitude and implementation of evidence-based practice of physiotherapists in India: A web-based cross-sectional study

Rekha Chaturvedi, Shaveta Khrolia, Vandana Yadav, Meenakshi Bagri, Jyoti

Guru Jambheshwar University of Science and Technology, Hisar, Haryana, India

## ABSTRACT

**Background and objective.** Evidence based practice (EBP) is based on the combination of the best research finding and clinical skill to ease clinical decision-making procedure. Patients treated with evidence-based practices have much better results as compared to the other patients. In today's world, EBP has attained global acceptance in physiotherapy sector. The objective of the study was to access the knowledge, attitude and implementation of EBP of physiotherapists in India via a cross sectional study.

**Method.** A cross sectional survey was held with the help of a web based customized questionnaire and was sent to physiotherapists.

**Results.** Most of the subjects were affirmative regarding EBP but did not have enough knowledge and expertise for its implementation. The chief barriers for EBP implementation was lack of time and the cost of information resources.

**Conclusions.** Physiotherapists need to upgrade their perspective, knowledge, understanding and skills regarding EBP. Furthermore, EBP must be added to the academic curriculum for its early recognition among the medical students.

**Keywords:** evidence based practice, physiotherapists, barriers, clinical findings

## INTRODUCTION

Evidence-based practice (EBP) has been originated from evidence-based medicine (1). It's requirement in the field of physiotherapy is increasing day by day and has been widely implemented in different healthcare departments (2,3). Evidence-based practice is "the punctilious, straight forward, and sensible utilization of contemporary prime evidence from research work in deciding procedure concerning the individual patient's supervision (4). Although, patient's beliefs, desires, ethics along with the working experience of the physiotherapist, furthermore requisites to be examined in deciding the procedure (4). However, implementation of evidence based practice (EBP) is tough and requires various policies that simplify the difficulties of organization of care, individual

practitioners and varying healthcare cultures to be EBP environment (5). Implementation of EBP is needed to lessen the injuries due to insufficient utilization of knowledge among the practitioners (1). It has been seen that randomized controlled trials, case reports, scientific procedures like descriptive and qualitative research, also the expert opinion, case description charts, and scientific theories have led to the best evidences. The clinical execution needs to be led by the proved research findings along with the patient's values as well as clinical expertise. The research evidences must be updated with the new research results timely (5). The ruling aim of EBP is to provide high level of qualitative and rationalized care, and to improve patient result by choosing affordable and secure treatment (6). The term 'evidence' states high quality clinical re-

*Corresponding author:*

Rekha Chaturvedi

*E-mail:* rekhachaturvedi85@gmail.com

*Article History:*

Received: 19 April 2021

Accepted: 19 June 2021

search (7). The prime obtainable research finding must be from a high-grade research, however if in case, high grade clinical study isn't accessible then the foremost accessible research finding may comprise of low-grade clinical study, clinical expertise or solidarity views. Such practices should not be included into EBP (7). 'Practice knowledge' arises from professional practice and experience. During each patient encounter, knowingly or unknowingly, physiotherapists put on to their confidential knowledge base. However, the 'evidence' which is required for Evidence-Based Practice is not 'practice knowledge'. A satisfactory clinical judgment includes combination of high-grade clinical study, preferences of the individual (patient) as well as practice knowledge. Some more determinants such as cultural backgrounds of patients, regional factors etc. can also influence decision (7). However, even after lots of advancements in the field of healthcare system having EBP, there are various barriers which have been examined through various research surveys. The main barriers to EBP implementation are shortage of time, lack of ability to understand statistical data, insufficient employer assistance, less resources, low interest and lack of simplifying the final outcomes of the studies of patient, and sometimes lack of publication (4).

Till today, only few researches have been carried out considering the attitudes, behaviors and use of research findings among the healthcare professionals in clinical practices (5,8,9). Therefore, the present study was undertaken to access the knowledge, attitude and implementation of EBP of physiotherapists in India via a cross sectional study.

## METHOD

A cross sectional survey was conducted among the Indian physiotherapists from April 2020 to June 2020 during the COVID-19 lockdown period. The ethical clearance for the study was not taken because of the COVID 19 pandemic, as the meetings were suspended. Interns, post-graduate students, private practitioners, clinical practitioners in hospitals and professors in physiotherapy institutes were included in the study. Students undergoing bachelors of physiotherapy degree were excluded from the study.

## Data collection

Data was collected through a web based customized questionnaire. Questionnaire included demographic information about the subjects and items for measuring the awareness of, attitude towards, knowledge of, barriers to and implementation of EBP. The questionnaire contained 5-point Likert-type scale (1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, and 5 = strongly agree) and multiple-choice questions to assess the knowledge, attitude and implementation of evidence based practice.

## Sample size estimation

Sample size was calculated by using EPI software, percentage frequency was kept at 95% with 3% absolute precision and the sample size of 122 was calculated (5,10). 137 responses were generated from a population of 300.

## Data analysis

Data was compiled and tabulated by software named Streebo and the tables and graphs for the responses were generated.

## RESULTS

Out of 287 survey questionnaire forms, 137 forms were completed and returned back with a response rate of 47.73%. Females had a higher participation with 59.10% response rate. The academic qualifications of the participants were bachelors (45.30%), masters (38.70%) and PhD (16.10%). 36.50% subject had their work setting in private clinics, 46% in hospitals and remaining 17.50% in academics. Out of 137 respondents, 63.50% subjects had an experience of 0-5 years, 23.40% had 5-10 years and 13.10% had experience of 10 years and above. Only 40.10% respondents stated that they have taken some formal training in EBP. Approximately, 49.10% mentioned that they were aware of term evidence-based practice (Table 1). The intention for developing knowledge and implementation, application and the barriers in implementing EBP are presented in tables 2-5.

**TABLE 1.** Awareness regarding term EBP

	Not true at all	Not really true	Possibly true	Quite likely true	Very true
I understand what is meant by the term EBP	16.80	14.60	25.50	21.20	1.90
I am aware of EBP in my profession	12.40	23.40	21.20	21.20	1.90
I am aware of current developments in EBP in my profession	16.80	14.60	16.80	29.90	1.90

**TABLE 2.** Intention for developing knowledge and implementation of EBP

	No intention at all	Unlikely to consider doing it	Could consider doing it	Highly likely to consider doing it	Absolutely intend to do it/ keep doing it
I intend to develop knowledge about EBP	12.40	19	29.90	21.20	17.50
I intend to develop skills in accessing, acquiring and appraising evidence relevant to my area of practice	12.40	23.40	21.20	21.20	21.90
I intend to read relevant literature to update knowledge	13.60	20.80	23.20	18.40	24
I intend to apply best available evidence findings to improve practice	13.60	20.80	23.20	18.40	24

**TABLE 3.** Understanding about application of EBP

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Application of EBP is necessary in my work	0	0	100	0	0
Literature and research findings are useful in my day-to-day work	12.4	25.5	21.9	21.2	19
I need to increase the use of evidence in my daily work	21.2	21.2	21.9	21.2	14.6
I am interested in learning or improving the skills necessary to incorporate EBP into my work	16.8	16.8	21.9	16.8	27.7
EBP helps me make decisions about clients in my work	12.4	16.8	35	21.2	14.6

**TABLE 4.** Implementation of EBP

	Never	Monthly or less	Fortnightly	Weekly	Daily
Formulated a clearly answerable question that defines the client or problem, the intervention and outcome(s) of interest	16.8	19	25.5	21.2	17.5
Searched an electronic database	12.4	19	21.2	21.2	26.3
Integrated research evidence with your expertise	16.8	19	21.2	25.5	17.5
Read published research reports	16.8	14.6	29.9	21.2	17.5
Informally shared and discussed literature/research findings with others in your workplace	16.8	19	16.8	25.5	21.9

**TABLE 5.** Barriers in implementing EBP

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
I want to learn new information	16.8	16.8	26.3	21.2	19
I make time to read research	16.8	16.8	21.9	16.8	27.7
Insufficient time is one of the greatest barriers to the use of EBP in my clinical/ professional practice	13.6	23.2	19.2	28	16
The cost of information resources limits my use of EBP in my clinical/ professional practice easy access to computers dictates whether or not I practice EBP	21.2	21.2	26.3	16.8	14.6

## DISCUSSION

The result of the present study showed that only 43.1% respondents were aware of evidence-based practice in physiotherapy. However, Manjula et al.

(5) have shown that 49.1% of the respondents that included undergraduate and postgraduate medical students in North Karnataka were aware of the term evidence based practice and Gupta et al. (11),

who studied on dentists of Bhopal, showed 70.5% of the practitioner were aware of the term EBP. Weng et al. (10) suggest that there was an awareness of EBP in medical, nursing and pharmacological and allied healthcare professionals. The result of the present study showed that only half of the respondents were aware of the term EBP which is much lesser as compared to previous researches on evidence based practices. All of these suggests that there is greater need to increase the awareness regarding evidence based practice in physiotherapists of India. For this, there is significant need to inaugurate some workshops, seminars and conferences for generating awareness regarding EBP for physiotherapists practicing in India. Further, evidence based practice can also be included as a compulsory topic in the curriculum for the physiotherapy students so that they are well aware of this. The result also showed that evidence based practice is convenient and essential in their routine work and they should have positive attitude towards EBP. Almost half of the participants of the study intend to develop knowledge and implement EBP in physiotherapy profession. Similar inclinations of positive attitude was also suggested by Jette et al. (8) and have concluded that EBP lead to better quality of patient care and a satisfactory clinical judgment that includes combination of high-grade clinical study, preferences of the individual (patient) as well as practice knowledge. Some more determinants such as cultural backgrounds of patients, regional factors etc. can also influence decision (7). The present study showed that 26.3% of the participants were involved in regular access to databases for gaining and updating knowledge regarding the EBP which was considerably higher than the study conducted by Manjula R et al. (5), which was only 8.2%. All of this is are suggestive of greater utilization of the web

based resources by the students and professionals for reviving the new updates and information regarding EBP now a days. The students can further utilize the available resources more efficiently for attaining information explored by numerous researchers. One of the prominent barriers in availing knowledge on EBP is lack of time (44%) which is consistent with the findings of Manjula R et al. (5) and Heiwe et al. (1). The other ruling barrier in attaining and implementing EBP was the cost of information resources. 34.4% of the participants suggest that the cost of gaining knowledge was considerably higher. Majority of the subjects were affirmative regarding EBP but did not have enough knowledge and expertise for its implementation. Curriculum in academics (particularly in India) is majorly built on theoretical knowledge & textbooks and students are hence unable to gain any evidence based perspective to clinical settings. Therefore, there are substantial exigencies to develop a deeper insight for attaining knowledge, removing the barriers and implementing evidence based practices for physiotherapists practicing in India.

## CONCLUSION

Physiotherapists need to upgrade their perspective, knowledge, understanding and skills regarding EBP. The authorities, administrators and the curriculum developers should consort with the various barriers that are hindering the EBP. It will be beneficial if initiatives are taken at both organizational and individual levels.

Furthermore, EBP must be added to the academic curriculum for the better recognition of evidence-based practice among the upcoming professional years in the physiotherapy sector.

## REFERENCES

1. Heiwe S, Kajermo KN, Tyni-Lenne R, Guidetti S, Samuelsson M, Andersson IL, Wengstrom Y: Evidence-based practice: attitudes, knowledge and behaviour among allied health care professionals. *Int J Qual Health Care*. 2011;23:198-209.
2. Iles R, Davidson M. Evidence based practice: a survey of physiotherapists' current practice. *Physiother Res Int*. 2006; 11(2):93-103.
3. Silva TM, Costa LCM, Garcia AN, Costa LOP. What do physical therapists think about Evidence-Based Practice? A systematic review. *Man Ther*. 2015;20(3):388-401.
4. Silva TM, Costa LCM, Costa LOP. Evidence-Based Practice: a survey regarding behavior, knowledge, skills, resources, opinions and perceived barriers of Brazilian physical therapists from São Paulo state. *Braz J Phys Ther*. 2015;19(4):294-303.
5. Manjula R, Srivastava AK, Dorle AS. Evidence based practice: knowledge, attitude and practice among undergraduate and postgraduate medical students of a medical college in North Karnataka, India. *Int J Community Med Public Health*. 2018; 5:2411-5.
6. Scholten-Peeters GG, Beekman-Evers MS, van Boxel AC, van Hemert S, Paulis WD, van der Wouden JC, et al. Attitude, knowledge and behaviour towards evidence-based medicine of physical therapists, students, teachers and supervisors in the Netherlands: a survey. *J Eval Clin Pract*. 2013;19(4):598-606.

7. Herbert R, Jamtvedt G, Mead J, Hagen KB, Chalmers I. Practical Evidence-Based physiotherapy. 2nd ed. United Kingdom: Butterworth-Heinemann; 2011.
8. Jette DU, Bacon K, Batty C, Carlson M, Ferland A, Hemingway RD, Hill JC, Ogilvie L, Volk D: Evidence-based practice: beliefs, attitudes, knowledge, and behaviors of physical therapists. *Phys Ther.* 2003;83:786-805.
9. Grimmer-Somers K, Lekkas P, Nyland L, Young A, Kumar S. Perspectives on research evidence and clinical practice: a survey of Australian physiotherapists. *Physiother Res Int.* 2007;12(3):147-61.
10. Weng YH, Kuo KN, Yang CY, Lo HL, Chen C, Chiu YW. Implementation of evidence-based practice across medical, nursing, pharmacological and allied healthcare professionals: a questionnaire survey in nationwide hospital settings. *Implementation Sci.* 2013;8:112.
11. Gupta M, Bhambal A, Saxena S, Sharva V, Bansal V, Thakur B. Awareness, Attitude and Barriers Towards Evidence Based Dental Practice Amongst Practicing Dentists of Bhopal City. *J Clin Diagn Res.* 2015 Aug;9(8):ZC49-54.

*Conflict of interest:* none declared

*Financial support:* none declared