

Use of Evidence Based Practice by Physical Therapist in Delhi and NCR, India: A Crosssectional Survey

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ABSTRACT

Introduction: Evidence-based practice (EBP) is access to and availability of the scientific database, the search of relevant literature in practice, and the precise use of Evidence in making decisions about the care of individual patients. Assessment of variables such as the beliefs, attitudes, knowledge, and behavior give rise to factor influencing and self-efficacy of individuals practicing EBP and conceptualizing the growing importance of EBP in the physical therapy sector. The present study aimed to assess belief and attitude about EBP, its knowledge, and skills related to obtaining and evaluating evidence and identify barriers to practice among Physical Therapists in India.

Methods: A cross-sectional analytical study was conducted among the physical therapist working in Delhi and NCR. They were practicing in various setups like multispecialty hospitals, clinics, and various academic institutions. They had a postgraduate qualification in musculoskeletal, cardiopulmonary, sports, neurology, pediatrics, and community-based rehabilitation with two years of minimum experience after completing a degree. A survey questionnaire contains 5 segments and 51 statement item screening beliefs, attitudes, knowledge, and behavior of individuals in terms of using EBP. The relationship among variables is obtained by using Logistic Regression analysis. The data was collected from April 2016 through May 2016.

Results: The physical therapist state that they had a positive attitude toward EBP and understand the necessity of evidence-based practice (87%). They were familiar with a search engine (87%), relevant literature is useful in practice (75%), help in clinical decision making (75.9%), and improve quality of patient care (78.9%) but the majority of respondents said that it doesn't come under patient preference (51.8%), lack of generalizability of research finding to the individual patient (28.7%), and insufficient time (77.8%) to incorporate EBP.

Conclusion: Indian physical therapists from Delhi and NCR believe that they had a positive attitude toward obtaining EBP, using available evidence for clinical decision making, and improve the quality of patient care. A cultural change within the working environment and the organization's support will allow more time for searching relevant databases for implementing EBP in daily clinical practice. It will be a change agent for a paradigm shift toward EBP in the physical therapy profession.

Keywords: *Evidence based practice, Physical therapy, India*

INTRODUCTION

Evidence-based practice (EBP) implies solicitation and amalgamation of the best available research evidence with clinical expertise and patient values by health care professionals delivering healthcare services. Evidence-based practice is the judicious use of current best evidence in making decisions about the care of the individual patient.¹⁻³

Clinical education is a core element in physiotherapy education and provides an opportunity to learn EBP in authentic clinical settings.⁴ Assessment of the variables such as attitudes, beliefs, knowledge, and self-efficacy

concerning EBP and, in particular, to guidelines provides important knowledge about factors that influence the application of EBP and the use of guidelines.⁵⁻⁷

In this day and age, experts believe that EBP enhances the patient's outcomes, lowers health costs, and decreases errors. Besides, it contributes a stable approach to provide quality care at reasonable costs.⁵ The outcome of the

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research work will elucidate the domains where lacunae are present so that they can be worked upon in the future. EBP challenges problems of unwarranted clinical variation, substandard quality of care, and unsustainable health care costs.^{2,8} The failure of clinicians and health care organizations to assimilate evidence-based care strategies into the routine care of patients could affect significantly the status quo.⁹⁻¹³ The scientific literature is replete with examples of evidence-based practice (EBP) guidelines, more effective evaluation and treatment methods, and redesigned care processes that have not been systematically incorporated into everyday clinical practice. In India, the physiotherapy profession is already facing great challenges. It is demanding more from us to uplift the professional practice and conduct. The professional practice will make a better approach and insight for teaching and learning activities. It will provide a better healthcare delivery system.^{8, 12-13} Hence the present study was conducted to study the belief and attitude about EBP, its knowledge, and skills related to obtaining and evaluating evidence and identify barriers to practice among physical therapists in India.

METHODS

The study was a cross-sectional survey conducted on the post-graduate physical therapists working in various physiotherapy setups in Delhi and NCR. They had a postgraduate qualification in musculoskeletal, cardiopulmonary, sports, neurology, pediatrics, and community-based rehabilitation with two years of minimum experience after completing a degree. The eligible participants were selected based on a convenience sampling for this research. The ethical clearance for this study was approved by the Jamia Hamdard Institutional Ethics Committee (JHIEC), Jamia Hamdard University New Delhi, India.

A questionnaire developed by Jette et al. was used as an outcome measure after getting the approval. The questionnaire was administered to 210 physical therapists (either personally or electronically) who were informed of necessary information regarding the objective, purpose, and signification of the study. The participants were requested to sign an informed consent form before participation. Two weeks was given to submit their responses. Tracing of questionnaire completion status was done through direct phone contact or electronic media.

Partially completed questionnaires were discarded and collected data were analyzed and interpreted in context to the four domains of the survey as attitudes and beliefs,

education, knowledge, and skills, attention to literature, access to and availability of literature, barriers.

Data analysis was performed by using IBM SPSS V 17 software. The response frequencies for survey questions were determined and displayed in tabular and graphic format. Descriptive statistics were used to determine the frequencies of survey items of EBP. The responses were dichotomized according to previous studies that allow further analysis using them as dependent measures in logistic regression analyses. For those items with a 5-point Likert scale and a positive response set, the "strongly agree" and "agree" categories were combined, as were the "neutral," "strongly disagree," and "disagree" categories, so that responses fell into "agree" or "disagree" categories.^{2,15}

RESULTS

Demographic data

The sample consisted of 108 respondents, where male and female shows homogeneous participation in the study. The most people surveyed were 30-39 years old (56.5%) and lowest were above 40 years of age group (1.9%). The other characteristics are illustrates in Table 1.

Table1: Description of demographic data

Character	Number	Percentage
Gender		
Male	54	50
Female	54	50
Age (Years)		
20-29	45	41.7
30-39	61	56.5
40-49	2	1.9
Year of licensed		
<5	43	39.8
5-10	53	49.1
11-15	10	9.3
>15	2	1.9

Self-reported attitude and beliefs toward EBP

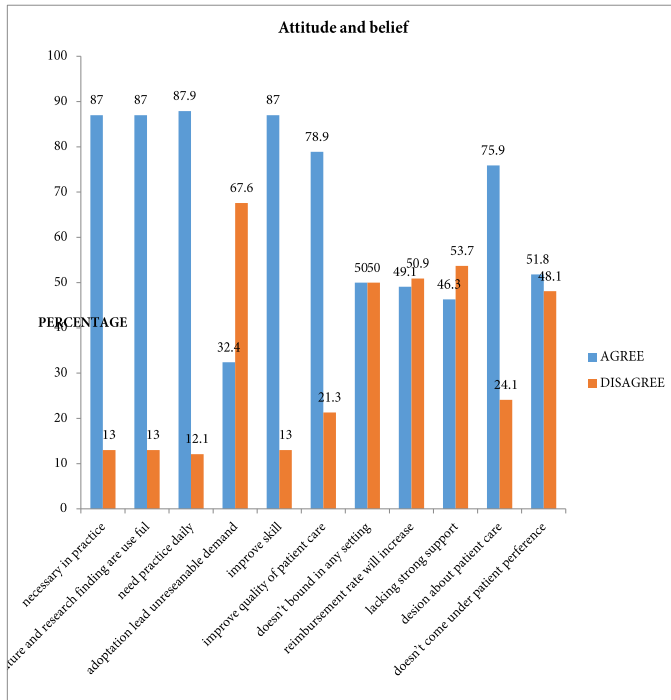


Figure 1. Self-reported attitude and belief

Figure 1 depicts attitude and belief toward EBP. The majority of respondents stated a positive attitude and belief toward EBP. They agreed on the necessity of application of EBP (87%), the importance of literature and research finding in the daily routine of clinical practice, and showed engrossed in learning skills and incorporate EBP in clinical practice. The EBP practice support as a valuable tool in making a decision (75.9%), improve the quality of patient care (78.9%), and increased reimbursement rate (49.1%) but EBP does not take part in treatment preference for patients (51.8%), there is a lack of strong evidence to support most of the intervention (46.3%) and increase unreasonable demand on physical therapist on adopting it.

Knowledge and Skills regarding EBP

The majority of respondents had learned the foundation for EBP as part of their academic preparation (78.7%). They had the facility that supports the use of current research in practice (65.8%) and eighty-seven percentages of respondents were familiar with the medical search engines like MEDLINE and CINHALL. They had the experience of formal training to find strategies for relevant search (60.2%) and critical appraisal of research literature (58.4%) which helps them to find the relevant research to answer a clinical question (75%) and boost their confidence level in critically reviewing professional literature (72.9%).

They had acknowledged about aware of the various research terminologies like absolute risk (80.6%), systemic review and relative risk (75%), confidence level (73.1%), a meta-analysis (56.5%), publication bias (55.6%) and heterogeneity (50.9%). The remaining characteristics are demonstrated in figure 2.

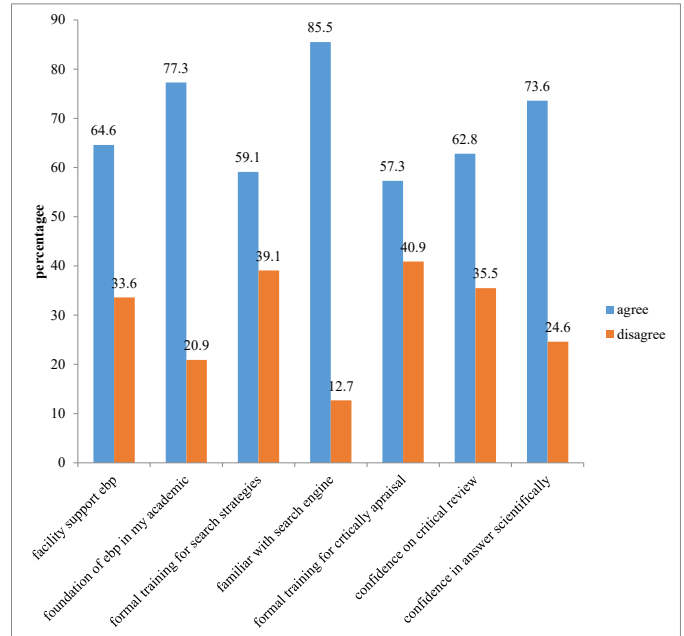


Figure 2. Education, Knowledge, and Skills regarding EBP

Self-reported attention to literature

The majority of respondents reported reading between 2 and 5 articles (38.9%) and performing database searches for 2 to 5 times (43.5%) in an average month. They used professional literature (21.3%) and MEDLINE or other databases to search for practice-relevant research 2 to 5 times (38.9%). The other characteristics are illustrated in figures 3 and 4.

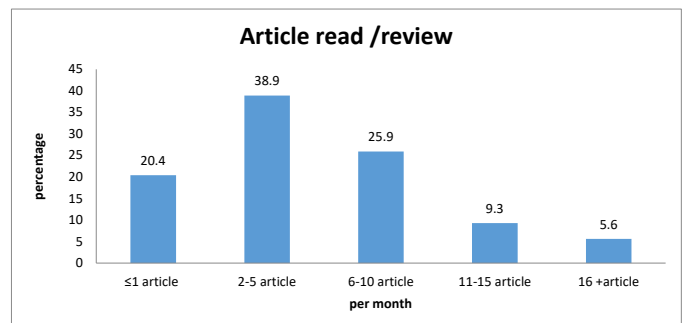


Figure 3. Article review per month

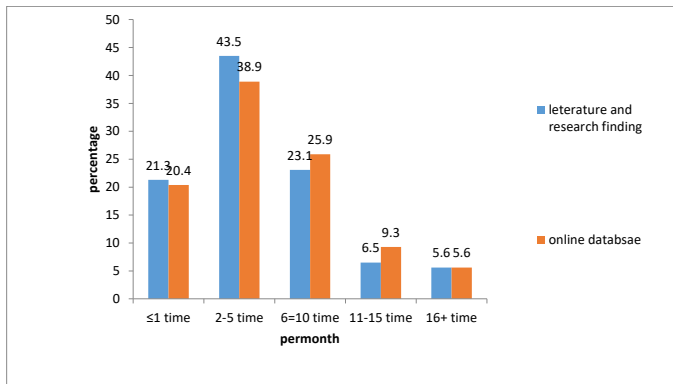


Figure 4. Review of Literature and database per month

Self-reported access to and availability of literature

Most of the respondents stated that they had access to relevant databases and the Internet at home (86.1%). They were aware of the online availability of practice guidelines (89.8%) and able to access the practice guidelines online (74.1%). Sixty-two percentages reported that had access to professional journals in paper form. The remaining characteristics of access to and availability of literature are illustrated in figure 5.

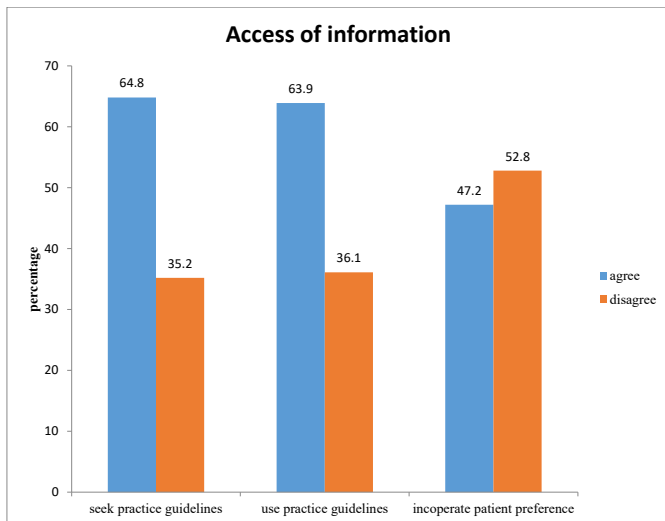


Figure 5. Access of information

Self-reported Barriers to evidence-based practice

This section tried to evaluate the top three most common barriers to the use of EBP in your clinical practice. Most of the respondents indicated insufficient time (77.8%) as the most important barrier to the use of the evidence in daily practice. Lack of generalizability of research finding to their specific patient population (28.7%); inability to apply findings to the patient with unique characteristics (26.9%) reduce the use of EBP in a clinical setup. Other characteristics are illustrated in figure 6.

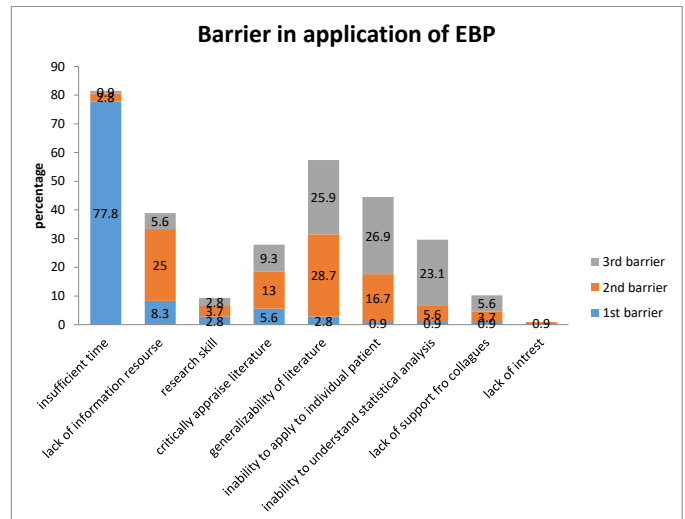


Figure 6. Barrier in application of EBP

DISCUSSION

The present study was conducted to exhibit the attitudes and beliefs, education, knowledge, and skills, attention to literature, access to and availability of literature, barriers in the use of evidence-based practice among physical therapists within Delhi and NCR. An instrument, the Fresno test assess physical therapists' EBP knowledge and skills and does not measure variable like attitude or behavior or any aspects of guidelines, precluding any meaningful comparisons.^{16,17} Mostly tools were targeted toward students and were developed to evaluate the teaching of EBP rather than the application of EBP in clinical practice. This questionnaire developed by Jette et al was determined to have a good face and content validity and acceptable reliability for measuring self-reported attitudes, knowledge, behavior, prerequisites, and barriers related to EBP and guidelines among physical therapists.¹⁶

The survey covered 108 respondents out of which 71.3 % worked more than 40 hours per week and 51.9 % reported that they see more than 15 patients per day. This information highlights that these long working hours and handling the maximum no of patients can be a potential hindrance in reviewing relevant literature for their clinical queries and could not devote enough time to use EBP inpatient care.

The respondents believe the use of evidence in practice is necessary, that the literature is helpful to them in their practice and decision making and for the quality of patient care. These beliefs have been similarly reflected in studies of physicians and nurses.^{10, 11} A study done on physician general practitioners of the United Kingdom agreed that

practicing using evidence improved patient care.¹⁴ The respondents in our study (50%) were not sure that EBP could take into account the limitations in their practice settings or the preferences of their patients. The responses of the physical therapists in this study may reflect a belief by practitioners that the interventions designed for research studies may not be adaptable for implementation into practice. Additionally, respondents in our survey (46.3 %) were mixed in their beliefs about whether good evidence existed to support the interventions they provided.

Their belief about whether evidence existed to support their practice was not related to the area of practice or type of patients seen by the physical therapists. The mixed responses related to beliefs about the existence of evidence to support practice reinforce the notion that more research is needed in support of our practice. 49.1% thought that reimbursement rate will increase with the incorporation of EBP which convinces that the practicing therapist wants to see their growth in patient wellbeing and quality treatment.

To develop professional skills and upgrade their knowledge with a scientific data-based system they should have a better understanding and ability to use search engines. They should know how to critically appraise the professional finding, relevant research, and appraisal of research literature. In our research 87 % were familiar with the medical search engines like MEDLINE, CINHALL, etc, 72.9 % were confident in critically reviewing professional literatures and 58.4 % of respondents were formally trained in critical appraisal of research literature. This result implements that people of today's generation moving forward toward a scientific data-based system and a better understanding of value education and knowledge to mastery in a skill.

Approximately forty percent of respondents reported that they read fewer than 2 articles in a typical month and twenty percent of the respondents stated they used less than two literatures per month in their clinical decision making. In our estimation, the level of attention to the literature in our sample may not be consistent with the intent of EBP. Experienced clinicians facing patients with similar problems daily may not need to refer to literature.

It was also found, not surprisingly that those physical therapists with easier access to online databases were likely to perform database searches more frequently and read more articles. These data emphasize the need for technology to assist in the use of evidence in the workplace. 43.5% of the respondents reported performing database searches for 2 to 5 times in a typical month. 21.3% of

respondents used professional literature and research findings in the process of clinical decision making for one time while only 5.6 % could do the same for more than 16 times in a month.

Findings suggested that 38.9 % of the respondents reported using MEDLINE or other databases to search for practice-relevant research 2 to 5 times per month. The workload on individual practitioners at the working setup might be a prime factor for using database sources to find the practice-relevant search or they might not aware of strategies for relevant search and critical appraisal of finding.

The availability of literature provides a single source of information about the management of clinical conditions. Evidence-based clinical guidelines integrate high-quality clinical research help to get high-quality information for both practitioner and patient, so they can discuss together the different options for treatment and the different degrees of benefit or risk that interventions may have for that patient. A shared and informed decision can then be made about how to proceed with treatment.^{18,19}

Using evidence in practice is possible only when there is efficient access to information resources. Efficiency requires easy retrieval of information, the use of online sources, and skill in finding relevant resources. The majority of our respondents had access to online information, although more had access to relevant databases and the Internet at home (86.1%) than at work (13.9%). 74.1% were able to access practice guidelines online. More than half of the respondents (62%) reported they had access to professional journals in paper form. 72.2% of the respondents contended that they could access the relevant database and internet at their facility. This indicates that the majority of the population can find relevant guidelines database to support patient care and current demand for scientific treatment.

The primary barrier to implementing EBP was a lack of time for answering a clinical question by accumulating the relevant information to stop the search and synthesizing multiple pieces of information to formulate an answer to the question.²⁰ 77.8% of the respondents indicated insufficient time was the most important barrier to the use of evidence in practice which may be due to increase workload on the individual therapist in terms of patient care during their service hours. Approximately 28.7% of the respondents rated a lack of generalizability of research findings to their specific patient population as the second most common barrier and 26.9% rated the inability to apply findings to individual patients with unique characteristics. Research

shows that they have difficulty in decision making incorporated with EBP in patients with an individual differently because they don't have proper time to access, evaluate, and critically appraised the research finding.

The result of this study emphasize that EBP must be incorporated into physiotherapy curriculum and clinical practice to improve the quality of patient care, help in decision making, it Improves relationship with other health care professionals and finally It upgrades the physiotherapy profession. The limitation of this self-reported survey is that respondents could have chosen responses that they perceived to be acceptable to the researcher. Data was localized to Delhi and NCR; sample size is less and could not differentiate between clinician and academician. Future study can be carried out under various domains of rehabilitation protocol concerning EBP; Comparative study can be done between academicians and clinical practitioners as well as undergraduate and postgraduate practitioners and lastly influence of barriers in implementation EBP.

CONCLUSION

Indian physical therapists working in Delhi and NCR have positive attitudes and beliefs toward EBP and were captivated in learning or improving the skills lacking to implement EBP. A cultural change within the working environment and organization's support will allow more time for searching, reading, and critical appraisal of relevant databases, guidelines, professional journals, and literature.

As increased number of physical therapists in the work area will demand less workload on therapists and will have sufficient time to incorporate EBP along with clinical expertise and patient preference enhance the better outcome, Lower health cost and decrease errors in addition to offering a stable approach to provide quality care. The finding can be applied for education, clinical, and further research purpose.

REFERENCES

- Huston CJ. Professional issues in nursing: Challenges and opportunities. Lippincott Williams & Wilkins; 2013 Jan 15.
- Jette DU, Bacon K, Batty C, Carlson M, Ferland A, Hemingway RD, et al. Evidence-based practice: beliefs, attitudes, knowledge, and behaviors of physical therapists. *Physical Therapy*. 2003 Sep;83(9):786–805.
- Guyatt GH, Haynes RB, Jaeschke RZ, Cook DJ, Green L, Naylor CD, et al. Users' Guides to the Medical Literature. *JAMA*. 2000 Sep 13;284(10):1290.
- Frost JS, Jensen GM, Mostrom E. Preparation for teaching in clinical settings. *Handbook of teaching and learning for physical therapists*. 3rd ed. St. Louis, Mo.: Elsevier Butterworth Heinemann. 2013:124-44.
- Adams S. Use of evidence-based practice in school nursing: Survey of School Nurses at a National Conference. *The Journal of School Nursing*. 2009 Aug; 25(4):302–13.
- Skoien AK, Vagstol U, Raaheim A. Learning physiotherapy in clinical practice: student interaction in a professional context. *Physiotherapy Theory Practice*. 2009 Aug 8;25(4):268–78.
- Olsen NR, Bradley P, Espehaug B, Nortvedt MW, Lygren H, Frisk B, et al. Impact of a Multifaceted and Clinically Integrated Training Program in Evidence-Based Practice on Knowledge, Skills, Beliefs and Behaviour among Clinical Instructors in Physiotherapy: A Non-Randomized Controlled Study. *PLoS One*. 2015 Apr 20;10(4):e0124332.
- Dannapfel P, Peolsson A, Nilsson P. What supports physiotherapists' use of research in clinical practice? A qualitative study in Sweden. *Implementation Sci*. 2013 Dec;8(1):
- Heiwe S, Kajermo KN, Tyni-Lenne R, Guidetti S, Samuelsson M, Andersson I, et al. Evidence-based practice: attitudes, knowledge and behaviour among allied health care professionals. *International Journal for Quality in Health Care*. 2011 Apr;23(2):198–209.
- Flores G, Lee M, Bauchner H, Kastner B. Pediatricians' attitudes, beliefs, and practices regarding clinical practice guidelines: A National Survey. *Pediatrics*. 2000 Mar;105(3):496–501.
- Retsas A. Barriers to using research evidence in nursing practice. *J Adv Nurs*. 2000 Mar; 31(3):599–606.
- Chartered Society of Physiotherapy. History of the Chartered Society of Physiotherapy [Internet]. 2008. [cited: May 29, 2015]. Available from: <http://www.csp.org.uk/director/about/thecsp/history.cfm>
- Manns PJ, Norton AV, Darrach J. Cross-sectional study to examine evidence-based practice skills and behaviors of physical therapy graduates: Is There a knowledge-to-practice gap?. *Phys Ther*. 2015 Apr 1; 95(4):568–78.
- Mc Coll A, Smith H, White P, Field J. General practitioners' perceptions of the route to evidence based medicine: a questionnaire survey. *BMJ*. 1998; 316:316–65.

15. Bernhardsson S, Johansson K, Nilsen P, Öberg B, Larsson ME. Determinants of Guideline Use in Primary Care Physical Therapy: A Cross-Sectional Survey of Attitudes, Knowledge, and Behavior. *Physical Therapy*. 2014 Mar 1;94(3):343-54.
16. Bernhardsson S, Larsson ME. Measuring Evidence-Based Practice in Physical Therapy: Translation, Adaptation, Further Development, Validation, and Reliability Test of a Questionnaire. *Physical Therapy*. 2013 Jun 1;93(6):819-32.
17. Tilson JK. Validation of the modified Fresno Test: assessing physical therapists' evidence based practice knowledge and skills. *BMC Med Educ*. 2010 Dec; 10(1).
18. Herbert R, Jamtvedt G, Mead J, Hagen KB. *Practical evidence-based physiotherapy*. London: Elsevier's Health Sciences, 2005.
19. Higgs J, Titchen A. Rethinking the Practice-Knowledge Interface in an Uncertain World: a Model for Practice Development. *British Journal of Occupational Therapy*. 2001 Nov;64(11):526-33.
20. Ely JW. Obstacles to answering doctors' questions about patient care with evidence: qualitative study. *BMJ*. 2002 Mar 23;324(7339):710.