Summary

Evidence-based practice (EBP) education of undergraduate health professionals has become a focus for curricular development in medicine, nursing and a range of allied health professions. Around the globe, physiotherapy profession as a whole has transited towards a more practical and functional evidence based practice. Evidence based practice as defined by Sackett involves the integration of 1) the best research scientific evidence together with; 2) patient goals/values; and 3) clinical expertise of the therapist. As per WCPT, physiotherapists have a responsibility to use evidence during clinical practice and ensure that the treatment of patients is based on the best available scientific evidence.

Currently, it is seen that EBP is the professional standard in practice, and hence it was important to assess which of the above steps of EBP are implemented and systematically utilized in our graduate (UG) and post-graduate (PG) education. There is no literature available about the extent to which the above steps of EBP were integrated in physiotherapy educational curricula in India.

The purpose of this study was to scan the current trends of evidence based practice and research in physiotherapy education, to know about the awareness of research & critical appraisal and their impact on physiotherapy practice & health care.

Research Question

Does the Indian physiotherapy education meet the needs of the current healthcare system which is moving towards EBP?
The basic aim of the research was to discover, explain, analyze and present in a systematic form the facts, principles, concepts, theories behind EBP in physiotherapy education.

Type of study – Descriptive

Descriptive and exploratory approaches were used to determine whether any inadequacies or gaps existed in current physiotherapy education which is moving towards evidence based practice.

Further Analytical and Critical approaches were used to analyze the existing physiotherapy education and its strength to face upcoming challenges in order to understand explain and draw conclusions from it and to critically analyze it to draw the inadequacies, disadvantages and to express opinion on rational basis.

Grounded Theory approach was used; theories and themes were collated from the data collected.

Data was collected by conducting desk review, in-depth interview & by using modified Delphi process.

This research program basically included 3 phases:

Phase I: Intent: Desk Review of curricula

Phase II: Action: Semi structured interviews with experts

Phase III: Solution: Designing an EBP module

**Phase I: INTENT –**

- **Desk Review of curricula**

Since the Central Council for Physiotherapy does not exist in India, physiotherapy curriculum differs in each University. As there are no definite guidelines the content, training methods, assessment patterns, marks allotted differs in each
University. So there was a need to evaluate which research component of EBP is included in the curriculum.

**Research Questions:**

1. What processes are currently used to facilitate student learning of the research component of EBP in UG & PG Physiotherapy programs in India?
2. Do all Universities in India include EBP, its steps & research methodology in their curricula?

**Objectives:**

1. To find the total number of Universities (Govt, State, Private, Deemed) offering Physiotherapy UG & PG programs in India.
2. To explore the different curricula to find the inclusion of the research component of EBP in Physiotherapy programs in India.

**Study design: Descriptive study**

List of Universities registered on University Grants Committee (UGC) website were downloaded. Universities offering Physiotherapy courses were identified. Syllabi if available online was downloaded. Request letters were sent to Universities whose syllabi were not available online. Reminder was given after 2 weeks. A Data Abstraction sheet for desk review was prepared-(version IV). Validation of content of this sheet was done by physiotherapy experts, with a teaching experience of more than 15 years and Tool validation committee of MGM Institute of Health Sciences. It gathered data on whether or not research component of EBP was taught, specific EBP content covered, in which academic year, hours of teaching, and subjects in which EBP content was covered, teaching and evaluation methods, marks allotted.
Results:

Content relevant to the steps of EBP, was incorporated from as early as 2nd yr to final year. The courses included research methodology (84.61%), research project (69.23%) and clinical management subjects (57.14%). However, there were no guidelines given about adopting EBP in clinical practice. Preferred mode of teaching was didactic lectures (81.81%). Preferred method for assessing research projects was viva (44.44%). The 3rd step of EBP ‘Appraisal’ was least included in entry level education. Content relevant to all the five steps of EBP was included in most of the PG curricula.

Phase II: ACTION-

- Semi structured interviews with experts

Research Questions:

1. What is the opinion and view of senior Physiotherapy faculty about implementation of EBP/ or its steps in Physiotherapy education?

Objectives:

1. To know the opinions and views of senior Physiotherapy faculty about research component of EBP/ or its steps.

Study design: Grounded Theory approach using in-depth semi-structured interviews

Preparation for semi-structured interviews included drawing up a “theme guide” which is a list of themes that need to be discussed.

All interviews were recorded and later transcribed. A software called ‘Audacity’ version 2.1.0 was used to alter the tempo (slow it down) of the conversation to help in writing notes. Data collection and analysis process was simultaneous. Sample
adequacy was determined by theoretical saturation. Theoretical saturation for this study was after 14 semi-structured interviews.

**Results:**

The focus of the interviews was opinions and views of senior Physiotherapy faculty about research component of EBP or its steps. A range of themes relating to this topic were generated in the analysis. The identified integrative themes: “Need of EBP”, “Facilitators of EBP”, “Barriers of EBP”, “Integration of the research component of EBP”, and “Faculty development and research engagement” were studied in detail. These themes address the aim of the study in a more holistic way, as they were identified across all codes in all interviews.

All interviews were recorded and later transcribed. A software ‘Audacity’ version 2.1.0 was used to modulate the voice and alter the tempo of the conversation to help in transcription. Detailed notes were taken and read several times (for data immersion). Codes generated were highlighted. Further, themes were developed by getting codes from one family together.

**Phase III: SOLUTION**

- **Designing a module on EBP**

**Research Question:**

1) What do panelists identify as important in the development of a module on evidence based practice for entry-level students of Physiotherapy?

2) What do panelists identify as important to the development of assessments of a module on evidence based practice for entry-level students of Physiotherapy?
Objectives:

1) Our primary objective with this study was to use a modified Delphi consensus to develop a module for teaching evidence based practice.

2) To get a consensus on the topics and contents of the module, duration of the module, teaching and assessment methods, year in which it should be taught.

Thirty two members were identified to participate in this Delphi panel with policy decision makers, implementers, practitioners and stakeholders. The academicians chosen were PhD guides/ scholars or involved in EBP research. Practitioners with evidence based practice-approach were selected. It was a heterogeneous group consisting of Physiotherapists with 11 policy decision makers (regarding curriculum), 8 academicians, 8 practitioners and 5 UG/ PG students. They were chosen on the basis that they were willing to participate, devote time and were ready to share their knowledge in developing a module.

Results:

The responses in Round one were analyzed on basis of central tendency of responses. For judgment on responses mode of 3 and above was considered. There was a consensus achieved on the following in the 1st round:

1. Attributes appropriate for undergraduate students
2. Learning objectives of EBP module
3. Contents of topics under all the 7 domains: Introduction, Ask, Acquire, Appraise, Inferential Statistics, Apply, Assess

Tutorial, Didactic, Practical, Seminar, were the options chosen largely by maximum panelists. Total time for all topics: about 15 hours. There were suggestions from
panel members about conducting this module as a 2 day workshop for better understanding. Case based and Assignments were the two methods largely chosen by maximum panelists for assessment.

These results were discussed with the research team and 3 questions were finalized for round 2. In round 2, the three questions had a consensus of 76.19%, 85.7 and 85.7% respectively.