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Original Research Article

SURVEY ON "EVIDENCE BASED PRACTICE": BELIEFS, ATTITUDES, KNOWLEDGE & BEHAVIORS OF PHYSICAL THERAPISTS IN GUJARAT, INDIA

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ABSTRACT

Background & Purpose: Evidence based Practice is the explicit use of current best evidence in making decisions about the care of individual patients and is a concept of growing importance for Physiotherapy. The physiotherapy profession has been undergoing a period of change and has been encouraged to prove the effectiveness of clinical interventions by scientific evidence. Little research has been done regarding attitudes and behaviors of physical therapists relative to the use of evidence in practice. The purpose of this study was to explore the Beliefs, attitudes, knowledge & Behaviors of Physical therapists in Gujarat, India and to generate relationship between attributes & personal Practice.

Methodology: A total of 185 Physiotherapists from 224 were volunteer to participate in studies who are qualified Practicing Physical therapists in Gujarat India. Personal interview method of data collection was used. Participants completed a questionnaire designed to determine beliefs, attitudes Knowledge and behaviors regarding EBP as well as demographic information about themselves and their practice settings. Responses were summarized for each item and frequency & percentage values were analyzed

Result: Our result suggests that Physical therapists have generally a positive attitude regard for EBP. More so experienced clinicians who treat patients with similar problems on day to day basis may not find it necessary to refer frequently to the literature. The fact that large no. of PTs do not have access to relevant databases and the internet at their facilities (i.e Place of work). Training , familiarity with and confidence in search strategies , use of databases and critical appraisal tended to be associated with younger therapists. According to our respondents the primary barrier to implementing EBP was insufficient time

Discussion and Conclusion: The respondents had a positive attitude towards EBP and were interested in improving the skills necessary to implement EBP. There was a need to increase the use of EBP in clinical practice and decision making among Physiotherapists. The respondents who were recently licensed and those with post graduate education expressed more positive attitudes towards EBP than those who were not.

Key words: Evidence Based Practice, Physiotherapists.

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INTRODUCTION

Evidence Based Practice (EBP) have become increasingly important in healthcare because they provide a framework for clinical problem solving that allows practitioners to keep up- to -date with current best practice in their field. Clinical decision should be informed by up-to-date, relevant evidence rather than outdated primary training or over interpretation of individual patient experiences [1].

The Physiotherapy profession has been undergoing a period of change as a result of pressure from different health professional group in recent times. In order to meet these challenges Physiotherapists(PTs) have been encouraged to prove the effectiveness of their interventions through scientific evidence known as evidence based Practice [2,3]. Evidence based Practice has been defined by sackett et al [4] as "the conscientious, explicit and judicious use of current best evidence in making decisions about the care of the individual patients"

Context of the study:

A Number of studies have explored the views and knowledge of health care professional towards EBP. Most of these studies have concentrated on medical practitioners. For example, studies have suggested that family or general practitioners report mainly positive attitudes [6,7].

Although barriers such as lack of time [6,8] and understanding of terminology [9] have hindered the progression of EBP.

Studies [5,10-12] have shown that clinically relevant researches as well as clinical experts are important component of EBP and that identification and application of patient's preferences should be part of clinical decision making.

Many physiotherapists have only limited access to this high level evidence (due partly to restricted access to database that archive clinical trial and reviews or even an awareness of these databases) which has led to the belief that there is little evidence about the effect of physiotherapy interventions [13].

The concept of EBP marks a shift among health care professionals from a traditional emphasis on action based on the "opinions of authorities to guide clinical practice" to an emphasis on "data based clinically relevant studies and researches" [14]. Although strongly held views based on belief rather than sound information still exerts much influence in health care delivery [15]. there are number of challenges for Physiotherapists who are attempting to use research to aid clinical decision making and most of these challenges have been grouped into 3 areas: research methods, clinician's skill and administrative factors [16].

The Physiotherapy evidence Database (PEDro) was launched in oct.1999 to support an evidence based approach to teaching and practice of Physiotherapy [17].

In many instances there is little evidence to support or refute current practices. Clinician's negative attitudes about research further compound the difficulties [18]. Most clinicians want to provide the best possible care for their patients ,when they do not , it is usually due to a lack of knowledge , their attitudes or their beliefs [19].

Physiotherapists appeared to rely more heavily on initial education and training when selecting treatment techniques or modalities instead of using scientific evidence to guide practice thus; clinical decision making had been guided by personal experience and expert opinion [20].

It is not clear to what extent PTs in Gujarat, India has been integrated into this newer model of clinical Practice. Till date PTs, particularly those in Gujarat, India are still faced with many questions and uncertainties about the relevance of EBP to clinical practice, more so there seems to be little research regarding the knowledge, attitudes and beliefs of PTs in India to EBP. This study was therefore designed to determine the knowledge, attitudes and beliefs of PTs in Gujarat, India towards EBP.

Evidence Based Practice Development: The emergence of evidence based Practice in the early 1990s marked a shift within health care from an emphasis on reliance on information in textbooks and the opinions of authorities towards an emphasis on contemporary scientific, clinically relevant studies and research [21, 22].

The Five steps for Evidence based Practice

Sr. No	EBP step	Knowledge and skills required
1	Ask an answerable clinical question	Recognize a knowledge gap & Formulate a structured question that defines the problem the intervention and outcomes of interest
2	Acquire the best available evidence	No evidence sources and types and research database
3	Appraise the evidence	Critically appraise the evidence to determine validity and clinical importance
4	Apply the evidence	Integrate the evidence with clinical expertise and patient preferences
5	Asses the Process	Reflect on steps 1-4 & identify ways to improve efficiency

Based on sacket et al. (2001) & Del mar et al. (2004) [24,25].

The clear message of the national health committee (NHC) is that initial education is no longer considered sufficient to sustain a career and that experience alone is not enough as a basis for modern practice [23].

Challenges and Barriers to implementing: Although the importance of research based practice was identified decades ago and has gradually been adopted by the Physical therapy Profession, there are a number of challenges for physical therapists who are attempting to be use research to aid in clinical decision making [21,26-28].

Most challenges can be grouped under one of 3 areas:

1. Research methods,
2. Clinician's skill and
3. Administrative factor

Strategies for Effective Evidence based Practice

Strategy 1: Develop, Implement and Evaluate Dissemination Techniques specific to EBP

Strategy 2: Re-think Traditional Continuing Education Courses

Strategy 3: Development, Implementation and Evaluation of "user friendly" knowledge Transfer activities

Strategy 4: Highly visible Role for Professional Association

Strategy 5: Broaden the meaning of Evidence

Strategy 6: Start early

Strategy 7: Increase Clinicians' Involvement in research

Purpose of the study: The Purpose of this study was to explore the beliefs, attitudes Knowledge and behaviors of Physical therapists towards Evidence based clinical Practice in Gujarat, India And to generate relationship between attributes and Personal Practice

METHODOLOGY

Study design: Cross Sectional Survey

Selection Criteria: Qualified Physical Therapists working in Gujarat, India, Volunteers to Participate in the study

Procedure: Subjects: Qualified Practicing Physiotherapists, dealing with patients through working in any health care sector in Gujarat, India volunteering to participate in the study were included. A total of 185 Physiotherapists were Participated.

Material: Study had been provided with a Questionnaire adapted from a similar study by jette et al [17] which inquire about the evidence based Physiotherapy Practice among APTA members in the USA.

Questionnaire (Appendix) is divided into two sections namely consent section and Questionnaire section. The Questionnaire section having 52 closed ended questions divided into four parts, first part inquires about personal attitude toward use of and perceived benefits and limitation of EBP. The second part inquires about personal use and understanding of clinical guidelines. The third part inquires about availability of resources to access information and personal skills in using those resources and the fourth part inquires about personal demographic information.

Method: Personal Interview method of data collection had been used, the Principal investigator had personally meet the participants with prior appointment in their work place and explain about the study and get the consent form and questionnaire filled.

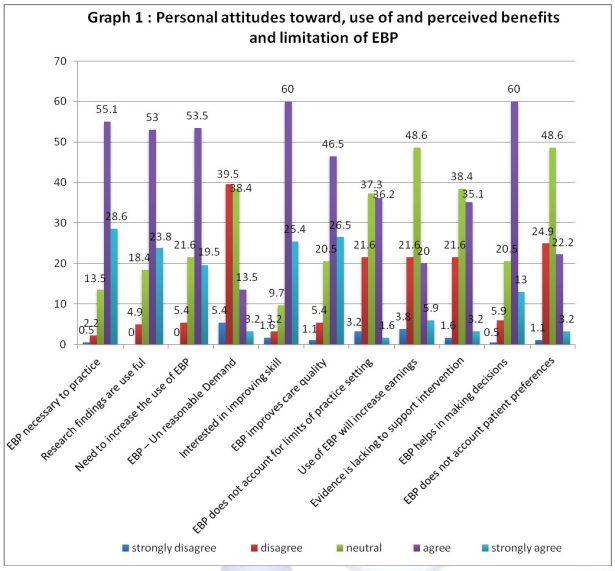
Scoring: Responses to most items concerning attitudes, belief and education, knowledge and skill related to EBP was scored using a 5 point likert scale with 'strongly disagree' and 'strongly agree' as anchor. Several items related to access information requires 'yes/no' response.

Item with a 5 point likert scale and a positive response set (i.e. agreement with the statement suggested positive regard for EBP Items categorized by the number of times articles were read or database were accessed in an average month, the lowest category (i.e., less than 5) was distinguished from the higher categories based on our belief that the lowest level of access represented poor attention to the literature that was in consistent with the intent of EBP.

RESULTS AND DATA ANALYSIS

Data were analyzed by using SPSS 17 for windows, the frequency distribution and perentage values were calculated and reported.

Graph 1: Attitude or Belief.



Majority of practicing Physiotherapists, in gujarat held generally positive attitude and belief regarding EBP, with contending they agreed that application of EBP is necessary in Practice (55.1%), Research findings are useful in their daily practice (53.2%), and they need to increase the use of EBP (53.5%).

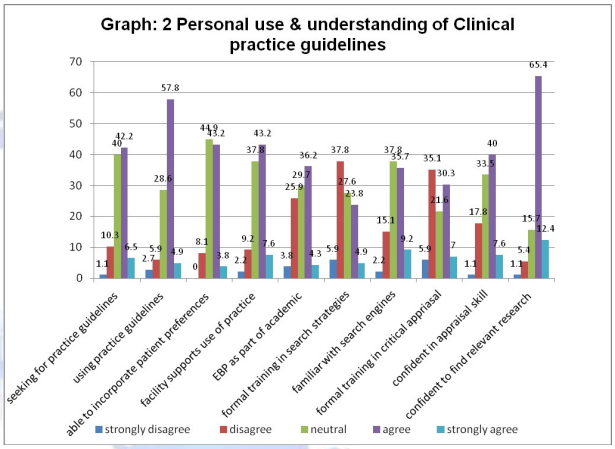
Table 1: Personal use and understanding.

Personal use and understanding	Number	Percentage
Review literature		
<1 article	32	17.3
2-5 article	110	59.5
6-10 article	22	11.9
11-15 article	10	5.4
16+ article	11	5.9
Use of professional literature		
<1 times	39	21.1
2-5 times	91	49.2
6-10 times	37	20
11-15 times	10	5.4
16+ times	8	4.3
Use database for research		
<1 time	79	42.7
2-5 times	65	35.1
6-10 times	22	11.9
11-15 times	8	4.3
16+ times	11	5.9

Respondents had given negative response to that EBP is an unreasonable demand (39.5% disagree and 38.4% neutral).

60% are agreeing that they interested in improving skill to incorporate with EBP & it helps in making decision about patient care. EBP improves the quality of patient care (46.5%) Majority have shown neutral response to that EBP will increase earnings(48.6%), strong evidence is lacking to support most of the interventions (38.4% neutral & 35.1% agree),EBP does not account patient preferences (48.6% neutral) and EBP does not account for limits of practice setting(37.3% neutral& 36.2% agree). 21% of physiotherapists reported they read more than 5 articles and majority of them reported (59.5%) read 2-5 articles in an average month. Around 21.1% are using professional literature < 1 time and majority 49.2% using 2-5 times in an average month.42.7% physiotherapists have reported they using database for research < 1 time.

Graph 2: Personal use and understanding.



Nearly 74.1% physiotherapists have reported that practice guidelines are available for topics related to their practice. 40 % are neutral & 42.2% agree that they are seeking for practice guidelines pertaining to areas of their practice & 57.8% are using practice guidelines.

Around 87% Physiotherapists have reported that they are aware about online practice guidelines & 78.9% are able to access practice guidelines. 44.9% neutral & 43.2% are agreeing that they are able to incorporate patient preferences with practice guidelines.

57.3 % had access research in their paper form.64.3% are able to access database & internet at their facility & 81.6% able to access at home or location other than facility.

For 43.2% their facility supports for the use of EBP. For EBP as part of academic preparation 25.9% are dis agree , 29.7% neutral & 36.2% are agreeing.37.8% physiotherapists reported disagree & 27.6% as neutral for received formal training in search strategies 37.8% had given neutral response to that they are familiar with search engines(eg., MEDLINE,CINAHL). 35.1% are disagreeing for received formal training in

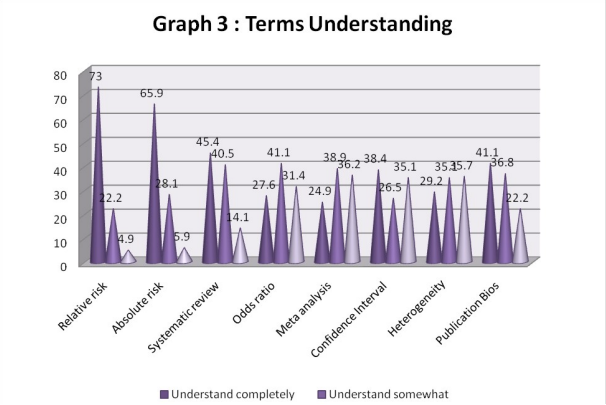
critical appraisal & 33.5% are neutral for their confident in appraisal skill.

Majority of therapists are confident in their ability to find relevant research to answer their clinical questions

Table 2: Information and personal skills using resources.

Information and personal skills in using resources	Number	Percentage
Access research in paper form		
Yes	106	57.3
No	79	42.7
Able to access database and internet at facility		
Yes	119	64.3
No	51	27.6
Do not know	15	8.1
Able to access internet at home or location other than facility		
Yes	151	81.6
No	24	13
Do not know	10	5.4
Facility supports use of practice		
Strongly disagree	4	2.2
Disagree	17	9.2
Neutral	70	37.8
Agree	80	43.2
Strongly agree	14	7.6
EBP as part of academic		
Strongly disagree	7	3.8
Disagree	48	25.9
Neutral	55	29.7
Agree	67	36.2
Strongly agree	8	4.3
Formal training in search strategies		
Strongly disagree	11	5.9
Disagree	70	37.8
Neutral	51	27.6
Agree	44	23.8
Strongly agree	9	4.9
Familiar with search engines		
Strongly disagree	4	2.2
Disagree	28	15.1
Neutral	70	37.8
Agree	66	35.7
Strongly agree	17	9.2
Formal training in critical appraisal		
Strongly disagree	11	5.9
Disagree	65	35.1
Neutral	40	21.6
Agree	56	30.3
Strongly agree	13	7
Confident in appraisal skill		
Strongly disagree	2	1.1
Disagree	33	17.8
Neutral	62	33.5
Agree	74	40
Strongly agree	14	7.6
Confident to find relevant research		
Strongly disagree	2	1.1
Disagree	10	5.4
Neutral	29	15.7
Agree	121	65.4
Strongly agree	23	12.4

Graph 3: Term Understand.



Majority of Physiotherapists understand the terms completely are relative risk (73%) Absolute risk (65.9%).45.4% had reported that they understand the term systematic review completely and 40.5% understand it somewhat. Majority of Physiotherapists understand the term somewhat is odds ratio (41.1%). For the term Meta analysis 38.9% reported for understand somewhat and 36.2 for do not understand. Around 38.1% understand the term confidence interval completely and 35.1% do not understand.35.1 % and 35.7% understand somewhat and do not respectively for the term heterogeneity and 41.1% had reported that they understand the term publication bios completely.

Table 3: Barriers to use EBP.

Barriers	Number	Percentage
Insufficient time		
1	80	43.2
2	20	10.8
3	25	13.5
Lack of Information resources		
1	38	20.5
2	25	13.5
3	11	5.9
Lack of research skill		
1	14	7.6
2	41	22.2
3	18	9.7
Poor ability to critically appraise the literature		
1	14	7.6
2	14	7.6
3	6	3.2
Lack of generalizability of the literature to Patient		
1		
2	10	5.4
3	39	21.1
	30	16.2
Inability to apply findings to Pt. with uniqueness		
1		
2	10	5.4
3	28	15.1
	49	10.8
Lack of understanding of statistical analysis		
1	10	5.4
2	10	5.4
3	20	10.8
Lack of support among colleague in facility		
1	1	0.5
2	4	2.2
3	16	8.6
Lack of Interest		
1	8	4.3
2	4	2.2
3	10	5.4

In 185 respondents for given 3 ranking numbers to their greatest barriers to the use of EBP in their clinical practice 43.2% had given 1st rank to Insufficient time 22.2% had given 2nd rank to lack of research skill and 26.5% had given 3rd rank to inability to apply research findings to Pt. with unique characteristics.

Table 4: Gender.

Characteristics	Number	Percentage
Sex		
Male	41	22.2
Female	144	77.8

Majority of Practicing Physiotherapists in Gujarat are female (77.8%)

Table 5: Age of Therapist.

Age	Number	Percentage
<25	118	63.8
26-30	47	25.4
31-35	6	3.2
36-40	4	2.2
41-45	6	3.2
>46	4	2.2

Majority of Physiotherapists are below the age of 25 years

Table 6: years of Practicing.

Year of Practice	Number	Percentage
<5	142	76.8
6-15	30	16.1
16-25	10	5.2
>26	3	1.6

Majority 76.8% Physiotherapists had Practicing for < 5 years.

Table 7: Level of Degree.

Degree	Number	Percentage
Diploma	0	0
Baccalaureate	153	82.8
Post Graduate Diploma	1	0.5
Master's	30	16.2
Doctorate	1	0.5
Postdoctorate	0	0
Other	0	0

Majority of Physiotherapists in Gujarat have done baccalaureate degree (153 subjects out of 185, 82.2%) and 16.2% with master's degree.

Table 8: Personal Demographic Information.

Characteristics	Number	Percentage
Intend to pursue advanced degree		
Yes	123	66.5
No	35	18.9
Do not know	27	14.6
Specialized in Particular field		
Yes	53	28.6
No	132	71.4
Participate in continuing education courses		
Yes	111	60
No	74	40
Clinical Instructor		
Yes	76	41.1
No	109	58.9
Involved in academic teaching		
Yes	47	25.4
No	138	74.6

Majority 66.5 % Physiotherapists reported to intend to pursue advanced degree in future.71.4 % are not specialized in Particular field. 60 % are taking Participation in continuing education courses 58.9% are non clinical instructor and 74.6% are not involved in academic teaching.

Table 9: Patients per day.

Patients Per day	Number	Percentage
< 5	29	15.7
6-10	68	36.8
11-15	34	18.4
>16	54	29.2

Majority of Physiotherapists are seeing around 11-15 Patients per day (36.8%) and 29.2% are seeing > 16 Patients

Table 10: Hours of work per week.

Hours work per week	Number	Percentage
< 20	17	9.2
21-30	47	25.4
31-40	44	23.8
>41	77	41.6

Most of around 41.6% Physiotherapists are working > 41hours per week and 23.8% working 31-40 hours

Table 11: No. Of Physical therapist at facility.

Hours work per week	Number	Percentage
< 5	110	59.5
6-10	39	21.1
11-15	25	13.5
>15	11	5.9

59% Physiotherapists have reported that no.of <5 Physiotherapist are at their facility.

Table 12: Percentage of Patient care.

Percentage of patient care	Number	Percentage
0-25	12	6.5
26-50	23	12.4
51-75	40	21.6
76-100	110	59.5

59.5% Physiotherapists in Gujarat doing 76-100 % of patient care.

Table 13: Percentage of research.

Percentage of patient care	Number	Percentage
<10	106	57.2
11-30	69	37.3
31-50	6	3.2
51-70	4	2.1
>70	0	0

Majority 57.2% Physiotherapists reported they doing <10% of research work.

Table 14: Percentage of Teaching.

Percentage of of Teaching	Number	Percentage
<10	123	66.4
11-30	37	19.9
31-50	16	8.6
51-70	8	4.3
>70	1	0.5

Majority 66.6 % Physiotherapists reported they doing < 10% Teaching

Table 15: Age (year) of the majority of patients treated.

Age(year) of the majority of patients treated	Number	Percentage
Pediatric (<18 y)	26	14.1
Adult (19-64 y)	141	76.2
Geriatric(65+)	18	9.7
Do not treat Patients	0	0

Majority of 76.2% Physiotherapists are treating the adult patients between age of 19-64 years

Table 16: Type of condition for majority of patients.

Type of condition for majority of Patients	Number	Percentage
Orthopedic	137	74.1
Neurological	40	21.6
Cardiovascular/Pulmonary	6	3.2
Other	2	1.1
Do not treat Patients	0	0

74.1% Physiotherapists reported that majority they are treating orthopedic conditions and 21.6 % are seeing neurological cases majorly.

DISCUSSION

Attitudes and Beliefs: Our result suggests that physical therapists who are members of IAP have a generally positive regard for EBP. The respondents believe that the use of evidence in practice is necessary and that literature has been very helpful to their practice and decision making. They believing that they need to increase the use of EBP & they are interested in improving the skill to incorporate with EBP. This finding is corroborated by the findings of McColl et al [6] and freeman and Sweeney [34]. The quality of patient care was reported to be better when evidence is used. This same belief had been previously reported in study of physicians and nurses [29-31].

The respondents were not sure for that EBP could not take into account the limitations in their practice settings and strong evidence existed to support the interventions they provided. Similarly, qualitative statements by physician general practitioners in the United Kingdom[32] and hospital nurses in Australia [31] have suggested doubts about applicability of practice guidelines to specific patients in specific settings and the relevance of research findings to their practices. Some of problems of accounting for the limitations in evidence in practice settings have been addresses by Haines and Donalkd [33].

In our study majority have shown neutral response to that EBP will increase their earnings & EBP does not account for patient preferences.

Attention to Literature: The finding that 23.2% of respondent read >5 articles & 76% read less than 5 articles per month that 29.7 % used literature in their clinical decision making more than five and 70.3% less than 5 per month and it may suggest that they had average reading habits. More so, experienced clinicians who treat patients with similar problems on a day to day basis may not find it necessary to refer frequently to the literature. The finding that only 22.1% of PTs reported using online databases to access literature more than 5 times & 77.8% for less than 5 times per month is not surprising considering the fact that a large no. of PTs do not have aceess to relevant databases and the internet facilities (i.e. Places of work) and those that had access would probably not have enough time to access it during the working hours.

Personal Use and Understanding: In our study respondents are aware and able to access practice guidelines online so they are using practice guidelines and actively seek for practice guidelines pertaining to their areas of practice guidelines are available for topics related to their practice and they are able to incorporate patient preferences with it. The fact that a large number of PTs do not have access to relevant databases and internet facilities (i.e. Place of work.)

Education, Knowledge and Skills: The knowledge of Technical terms and confidence in skills needed to retrieve and critically appraise information was related to age and years since licensure. Age and education attainment were significantly associated to knowledge. This further suggests that there might have been an increased emphasis on Knowledge (skills) needed to implement EBP in Physiotherapy education programs in recent years.

Access and availability of Literature:

Efficiency requires easy retrieval of information, use of online sourses and skill in finding relevant resources. The majority of our respondents had access to online information, although more had access at home (81.6%) than at work (64.3%).

McColl et al [6].

In our opinion, it was therefore asserted that using evidence in practice is possible only when there is sufficient time & efficient access to information resources.

Barriers: Insufficient time was belief to be a Primary barrier to implementing EBP by the majority respondents in this study (43.2%). This may probably be due to the volumes of patients that were daily attended to. Interestingly other researchers have corroborates this finding. [6, 31, 32] In our study secondary barrier was lack of research skill (22.2%) lack of information resources was also one of the barriers chosen by 20.5%Tertioary 21.1% respondents given 3rd rank to lack of generalizability of the literature findings to their patient Population. Other barriers given importancre are In ability to apply research findings to individual patients with unique characteristics and lack of understanding of statistical analysis.

Our respondents did not view lack of collective support among colleagues at facility (8.6%) and lack of interests (5.4%) as a primary barrier to implementing EBP. Restas [31] however found that 2 of the top 10 barriers cited by nurses in Australia were lack of cooperation from physicians and lack of support from colleagues.

CONCLUSION

Physical therapists who are qualified and working in Gujarat had a positive attitude toward EBP, as they were interested in increasing their skills and the amount of evidence used in their practices. Many of the beliefs, skills, and behaviors we examined were related to the age, years since completion of course and degree attainment of our study. Respondents who were younger, that is, recently completed course and those with higher degree appeared to express more positive attitudes and stated that they had greater skills and confidence related to accessing and critically appraising information. The fact that a large number of PTs do not have access to relevant databases and the internet at their facilities (i.e. Places of work) Training , familiarity with and confidence in search strategies , use of databases and critical appraisal tended to be associated with younger therapists with fewer years since they were licensed. According to our respondents the primary barrier to implementing EBP was insufficient time. The findings have implications for the education, clinical and research communities.

ABBREVIATIONS

APTA – American Physical Therapy association
EBP – Evidence based Practice
IAP – Indian association of Physiotherapists
NHC – National health committee
PTs – Physiotherapists
PEDro – Physiotherapy evidence database
WCPT – world confederation for Physical therapy

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Conflicts of interest: None

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APPENDIX

Introduction

Thank you for agreeing to be a participant in survey on "Evidence Based Practice in Physiotherapy". This takes few minutes, kindly read the questionnaire and answer all questions as applicable. The purpose of this survey is to explore Beliefs, Attitudes, Knowledge and Behaviors towards evidence-based clinical practice among Indian physiotherapists. The data collected will be kept confidential, reported in aggregate and used for research purpose only.

Investigator: Dr. Pranali Thakkar

Consent form for participating in the study on ***"The perceived beliefs, attitudes, knowledge, and behaviors towards evidence-based practice among physiotherapists in India."***

1. I have been explained about the reasons for the study and all the procedures that I am being asked to participate in.
2. All the questions I had about this study have been properly answered.
3. I clearly understand what I will be required to do if I agree to participate in this study.
4. I also know that I have the right to withdraw from the study at any time if I do not want to continue.
5. I am aware that all the information that I give and all the findings of the study are for the use of this study.
6. I am guaranteed confidentiality for the information that I may provide as well as the findings of this study.
7. I do not expect any financial remuneration or benefit for my participation.
8. I therefore, voluntarily agree to take part in this study.

Name of the participant: Prof. /Dr.
Address:

Mobile:
Email:

Signature:
Date: ___/___/___

Witness name:

Signature:

Date: ___/___/___

For Office Use Only

Participant Id:

Data Collected By:

Compiled By:

This section of the questionnaire inquires about personal attitudes toward, use of, and perceived benefits and limitations of EBP.(Evidence Based Practice)

For the following items, place a mark ☑ in the appropriate box that indicates your response.

1. Application of EBP is necessary in the practice of physical therapy.

□ Strongly disagree □ Disagree □ Neutral □ Agree □ Strongly Agree

2. Literature and research findings are useful in my day-to-day practice.

□ Strongly disagree □ Disagree □ Neutral □ Agree □ Strongly Agree

3. I need to increase the use of evidence in my daily practice.

□ Strongly Disagree □ Disagree □ Neutral □ Agree □ Strongly Agree

4. The adoption of EBP places an unreasonable demand on physical therapists.

□ Strongly Disagree □ Disagree □ Neutral □ Agree □ Strongly Agree

5. I am interested in learning or improving the skills necessary to incorporate EBP into my practice.

□ Strongly Disagree □ Disagree □ Neutral □ Agree □ Strongly Agree

6. EBP improves the quality of patient care.

□ Strongly Disagree □ Disagree □ Neutral □ Agree □ Strongly Agree

7. EBP does not take into account the limitations of my clinical practice setting.

□ Strongly Disagree □ Disagree □ Neutral □ Agree □ Strongly Agree

8. My earnings will increase if I incorporate EBP into my practice.

□ Strongly Disagree □ Disagree □ Neutral □ Agree □ Strongly Agree

9. Strong evidence is lacking to support most of the interventions I use with my patients.

□ Strongly Disagree □ Disagree □ Neutral □ Agree □ Strongly Agree

10. EBP helps me make decisions about patient care.

□ Strongly Disagree □ Disagree □ Neutral □ Agree □ Strongly Agree

11. EBP does not take into account patient preferences.

□ Strongly Disagree □ Disagree □ Neutral □ Agree □ Strongly Agree

For the following items, place a mark ☑ in the appropriate box that indicates your response for a typical month.

12. Read/review research/literature related to my clinical practice.

□ <1 article □ 2–5 articles □ 6–10 articles □ 11–15 articles □ 16+ articles

13. Use professional literature and research findings in the process of clinical decision making.

□ <1 time □ 2–5 times □ 6–10 times □ 11–15 times □ 16+ times

14. Use MEDLINE or other databases to search for practice-relevant literature/research.

□ <1 time □ 2–5 times □ 6–10 times □ 11–15 times □ 16+ times

The following section inquires about personal use and understanding of clinical practice guidelines. Practice guidelines provide a description of standard specifications for care of patients with specific diseases and are developed through a formal, consensus building process that incorporates the best scientific evidence of effectiveness and expert opinion available.

For the following items, place a mark ☑ in the appropriate box that indicates your response.

15. Practice guidelines are available for topics related to my practice.

□ Yes □ No □ Do Not Know

16. I actively seek practice guidelines pertaining to areas of my practice.

□ Strongly Disagree □ Disagree □ Neutral □ Agree □ Strongly Agree

17. I use practice guidelines in my practice.

□ Strongly Disagree □ Disagree □ Neutral □ Agree □ Strongly Agree

18. I am aware that practice guidelines are available online.

□ Yes □ No

19. I am able to access practice guidelines online.

□ Yes □ No

20. I am able to incorporate patient preferences with practice guidelines.

□ Strongly Disagree □ Disagree □ Neutral □ Agree □ Strongly Agree

The following section inquires about availability of resources to access information and personal skills in using those resources.

For the following items, place a mark ☑ in the appropriate box that indicates your response. In items referring to your "facility," consider the practice setting in which you do the majority of your clinical care.

21. I have access to current research through professional journals in their paper form.

□ Yes □ No

22. I have the ability to access relevant databases and the Internet at my facility.

□ Yes □ No □ Do Not Know

23. I have the ability to access relevant databases and the Internet at home or locations other than my facility.

□ Yes □ No □ Do Not Know

24. My facility supports the use of current research in practice.

□ Strongly Disagree □ Disagree □ Neutral □ Agree □ Strongly Agree

25. I learned the foundations for EBP as part of my academic preparation.

□ Strongly Disagree □ Disagree □ Neutral □ Agree □ Strongly Agree

26. I have received formal training in search strategies for finding research relevant to my practice.

□ Strongly Disagree □ Disagree □ Neutral □ Agree □ Strongly Agree

27. I am familiar with the medical search engines (eg, MEDLINE, CINAHL).

□ Strongly Disagree □ Disagree □ Neutral □ Agree □ Strongly Agree

28. I received formal training in critical appraisal of research literature as part of my academic preparation.

□ Strongly Disagree □ Disagree □ Neutral □ Agree □ Strongly Agree

29. I am confident in my ability to critically review professional literature.

□ Strongly Disagree □ Disagree □ Neutral □ Agree □ Strongly Agree

30. I am confident in my ability to find relevant research to answer my clinical questions.

□ Strongly Disagree □ Disagree □ Neutral □ Agree □ Strongly Agree

For the following item, place a mark ☑ in one box in the row for each term.

31. My understanding of the following terms is:

Term	**Understand Completely**	**Understand Somewhat**	**Do Not Understand**
a) Relative risk	□	□	□
b) Absolute risk	□	□	□
c) Systematic review	□	□	□
d) Odds ratio	□	□	□
e) Meta-analysis	□	□	□
f) Confidence interval	□	□	□
g) Heterogeneity	□	□	□
h) Publication bias	□	□	□

For the following items, rank your top 3 choices by placing numbers in the appropriate boxes (1_most important).

32. Rank your 3 greatest barriers to the use of EBP in your clinical practice.

___ insufficient time
___ Lack of information resources
___ Lack of research skills
___ Poor ability to critically appraise the literature
___ Lack of generalizability of the literature findings to my patient population
___ Inability to apply research findings to individual patients with unique characteristics
___ Lack of understanding of statistical analysis
___ Lack of collective support among my colleagues in my facility
___ Lack of interest

The following section inquires about personal demographic information.

For the following items, place a mark ☑ in the appropriate box next that indicates your response.

33. What is your sex?

□ Male □ Female

34. What is your age?

□ ___ yrs

35. Are you currently practicing?

□ Yes □ No

36. For how many years have you been practicing?

□ ___ yrs

37. What are your degrees in physiotherapy & years of completion?

□ Diploma _____

□ Baccalaureate _____

□ Post Graduate Diploma _____

□ Master's _____

□ Doctorate _____

□ Post Doctorate _____

□ Other Specify _____

38. If you do not currently hold an advanced degree, do you intend to pursue one in the future?

□ Yes □ No □ Do Not Know

39. Are you specialized in a particular field of physiotherapy?

□ Yes □ No If yes mention your Speciality: _____

40. Participate in continuing education courses?

□ Yes □ No If yes mention no of courses in a year _____

41. Do you belong to one or more professional practice-oriented organizations (eg, IAP)?

□ Yes □ No

42. Are you a clinical instructor for physiotherapist students/interns/residents?

□ Yes □ No

43. Are you involved in academic teaching of physiotherapy at a college/ university?

□ Yes □ No If yes mention no of years_____

44. On average, how many patients do you see daily?

□ <5 □ 5–10 □ 11–15 □ >15

45. On average, how many hours per week do you work?

□ <20 □ 20–30 □ 31–40 □ >40

46. How many full-time physical therapists are in the facility in which you do the majority of your patient care?

□ <5 □ 5–10 □ 11–15 □ >15

47. Please indicate the percentage of your total work time that you spend in each type of activity during an average month.

a) Patient care ___ %

b) Research ___ %

c) Teaching ___ %

48. Which of the following *best* describes the location of the facility in which you perform the majority of your patient care?

□ Rural

□ Urban

□ Suburban

49. List the City/(ies) in which you practice.

50. Which of the following ***best*** describes the facility at which you do ***most*** of your patient care?
    - □ Public hospital
    - □ Multispeciality hospital
    - □ Nursing Homes
    - □ Super speciality hospital
    - □ Privately owned outpatient clinic
    - □ Institution-based outpatient clinic
    - □ Home care
    - □ Home Visits
    - □ Rehabilitation centre
    - □ School system
    - □ Medical College Hospital
    - □ Other, Specify _____

51. Which of the following ***best*** describes the ***majority*** of patients you see?
    - □ Pediatric (<18 y)
    - □ Adult (19–64 y)
    - □ Geriatric (65+ y)
    - □ Do not treat patients

52. Which of the following ***best*** describes the ***majority*** of problems/ conditions you see?
    - □ Orthopedic
    - □ Neurological
    - □ Cardiovascular/pulmonary
    - □ Other, Specify _____
    - □ Do not treat patients