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# Knowledge, Attitude and Barrier to Evidence-based practice among Physiotherapists in selected districts of Nepal

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## ABSTRACT

**Background:** Evidence-based practice is considered as one of the most accepted practice all over the world. Physiotherapists in Nepal have started evidence-based practice, but there has been no study regarding evidence-based practice in physiotherapy in Nepal.

**Methods:** A cross-sectional study was carried out among 164 physiotherapists working in different clinics and physiotherapy centers of selected districts of Nepal. A self-reported questionnaire was distributed and collected later.

**Results:** It was found that the physiotherapists had a positive attitude towards evidence-based practice with 95.2% agreeing or strongly agreeing that evidence-based practice is necessary for the practice of physical therapy and an overall total mean score of 34.73(72.35%) out of 48 and an overall mean 2.8 out of 4. It was also found that physiotherapists had moderate knowledge towards evidence-based practice with an overall total mean score of 19.18(68.5%) out of 28 and an overall mean of 2.74 out of 4. It was found that those having a specialization degree had two times greater knowledge than without specialization. The major barriers to evidence-based practice were obtained insufficient time and traditional methods of treatment.

**Conclusions:** Physical therapists of Nepal stated they had a positive attitude towards evidence-based practice with the majority of the physiotherapists interested in learning more about the topic. They believed that they needed to increase the use of evidence in practice. They thought major barrier as insufficient time hence continuous professional development training that incorporate evidence-based practice were of greater importance.

**Keywords:** Attitude; barrier; evidence-based practice; knowledge.

## INTRODUCTION

Evidence-based Practice (EBP) is defined as a good judgment done according to one's inner sense with no confusion utilizing the best evidence for patient care.<sup>1</sup> According to the Nepal Health Professional Council (NHPC) document, Evidence-based practice started from 1990 in physiotherapy and 2010 in Nepal. There is no research regarding the application of EBP among physiotherapists in Nepal. Evidence-based practice is one of the most important aspects of any profession. It is much preferred all over the world. Hence, to develop the base of EBP, it is important to know about the knowledge and attitude regarding EBP and also the major barriers regarding the practice of EBP.<sup>2</sup> EBP involves the integration of the best available research evidence with clinical expertise and patient values and circumstances to make the best decision regarding patient care.<sup>3</sup>

## METHODS

A cross-sectional study was conducted from December 2017 to May 2018. The districts included were Kathmandu, Bhaktapur, Lalitpur, Kavre, Gorkha, Jumla, Jiri, Kaski, Rasuwa, Sarlahi, and Chitwan. Kathmandu, the capital city has the maximum concentration of physiotherapists working in different clinics and rehabilitation centers of Nepal.

According to the data of Nepal Health Professional Council, there are about 1166 permanently registered physiotherapists in Nepal. Among them, 111 are in specialization level, 889 in level one, 104 in level two and 62 in level three. As the preference was physiotherapists who had completed a Bachelor's degree. Hence the sample size was taken including only the physiotherapists of specialization and level one. Using the prevalence of

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50% and a precision of 7% the sample size was calculated 164.

The survey tool was the adaptation from self-reported questionnaire adapted by Jette et.al in 2003 which was originally used to study attitudes of physician and general practitioner towards evidence-based medicine and the structured questionnaire used by Yahui & Swami Nathan in 2017 regarding Knowledge, attitude, and barriers to evidence-based practice among physiotherapists in Malaysia.

The final structured questionnaire was prepared that consisted of 2 sections. First, the demographic part and the second section that consisted of questions regarding knowledge, attitude and, barriers to evidence-based practice. Responses to most of the items concerning attitudes and beliefs and knowledge and skills related to evidence-based Practice were addressed using 5 point Linkert Scale with “strongly disagree” and “strongly agree” as the anchors

The questionnaires were distributed to the respective hospitals and rehabilitation centers in Kathmandu and outside Kathmandu, a representative from NEPTA-Nepal (Nepal Physiotherapy Association) distributed the questionnaire. Two week time was given to fill up the form following which they were collected and checked for completion and entered in Excel sheet. The respective representative from outside Kathmandu collected the questionnaire and scanned them back to the researcher, and some sent it back with people coming to Kathmandu. They too were entered in Excel and were imported in SPSS to analyze using SPSS version 16 for Microsoft Windows. Data were analyzed considering 95% confidence interval and 5% level of significance. Ethical approval was taken from the Nepal Health Research Council. (Reg no: 517/2017)Consent forms were filled by all the physiotherapists participating in the study.

**RESULTS**

The study was carried out among 164 physiotherapists working in various districts of Nepal. Table 1 show that almost half a percentage of both male (47.6%) and female(52.4%) have been included in the study. Maximum percentage that is around 78.7% are around 20-30 years of age. Maximum of 40.9% see around 5-10 patients in a day.39.6% patients see around less than 5 patients in a day. Maximum number of physiotherapist around 54.3% are appointed in acute care hospitals. Majority of the patient treated that is 47.5% are orthopedic cases.

**Table 1. Characteristics of respondents (n=164).**

Characteristics	Frequency	Percentage
Gender of Physiotherapists	Male	78 47.6
	Female	86 52.4
Age of Physiotherapists	20-30	129 78.7
	31-40	27 16.5
	41-50	3 1.8
	>50	5 3
Number of years working as a Physiotherapist	<2	65 39.6
	2-5	55 33.5
	6-10	30 18.3
	>10	14 8.5
Number of hours worked per week	<20	6 3.7
	20-30	11 6.7
	31-40	36 22
Number of patients seen in a day	>40	111 67
	<5	14 8.5
	5-10	67 40.9
No of Physiotherapist working in area of practice	11-15	44 26.8
	>15	39 23.8
No of Physiotherapist working in area of practice	<5	65 39.6
	5-10	64 39
	11-15	22 13.4
	>15	13 7.9

An attitude of physiotherapists regarding evidence-based practice was measured by respondents’ indicating their level of agreement to statements in 5 point Linkert scale.(0=strongly disagree;4=strongly agree). Responses are summarized in table 2. Positive attitudes were reflected by the overall mean score of 2.89 with the majority of the respondents agreeing or strongly agreeing to positive questions and the majority of the respondents disagreeing or strongly disagreeing to negative questions. The average score was obtained 34.73 out of 48 with a percentage of 73.25%. Respondents showed they generally had a positive attitude towards evidence-based practice with majority of them sticking to agree or strongly agree in the statements, application of EBP is necessary for the practice of physical therapy (95.7%), literature and research are useful in day to day practice (93.9%), EBP improves quality of patient care (92.7%), EBP helps to make decision about patient care (89.6%).

**Table 2. Measure of attitude and belief towards EBP.**

Statement	Strongly disagree (N/%)	Disagree (N/%)	Neutral (N/%)	Agree (N/%)	Strongly agree (N/%)	Mean	(SD)
Application of EBP is necessary in the practice of Physical Therapy	5 (3)	1 (0.6)	1 (0.6)	61 (37.2)	96 (58.5)	3.48	0.81
Literature and research are useful in day to day practice	4 (2.4)	1 (0.6)	5 (3)	82 (50)	72 (43.9)	3.32	0.7
EBP places unreasonable demand on Physical Therapists	12 (7.3)	29 (17.7)	40 (24.4)	59 (36)	24 (14.6)	2.33	1.14
I am interested in learning or improving the skills necessary to Incorporate EBP in my practice.	4 (2.4)	1 (0.6)	11 (6.7)	100 (61)	48 (21.3)	3.14	0.76
EBP improves quality of patient care	6 (3.7)	0(0)	6 (3.7)	88 (53.7)	64 (39)	3.24	0.83
EBP helps me make decision about patient care	2 (1.2)	2 (1.2)	13 (7.9)	96 (58.5)	51 (31.1)	3.17	0.72
EBP does not take into account patient preferences	4 (2.4)	32 (19.5)	60 (36.6)	58 (35.4)	10 (6.1)	2.23	0.91
I need to increase use of Evidence in my daily practice	3 (1.8)	2 (1.2)	14 (8.5)	110 (67.1)	35 (21.3)	3.05	0.71
Literature and research findings help improve patient care.	1 (0.6)	1 (0.6)	6 (3.7)	91 (55.5)	65 (39.6)	3.33	0.63
I am interested in attending courses related to EBP.	1 (0.6)	1 (0.6)	11 (6.7)	91 (55.5)	60 (36.6)	3.27	0.66
Mean(SD)						2.89	0.56

**Table 3. Measure of skills and knowledge required for Evidence Based Practice.**

Statement	Strongly disagree (N/%)	Disagree (N/%)	Neutral (N/%)	Agree (N/%)	Strongly agree (N/%)	Mean	(SD)
I am able to conduct search to answer my clinical questions confidently	1 (0.6)	2 (1.2)	27 (16.5)	107 (65.2)	26 (15.9)	2.95	0.65
I am confident in my ability to critically review professional literature	3 (1.8)	8 (4.9)	41 (25)	98 (59.8)	14 (8.5)	2.68	0.73
I use practice guidelines in my Practice	1 (0.6)	5 (3)	62 (37.8)	85 (51.8)	11 (6.7)	2.61	0.68
I am able to incorporate patient preferences with practice guidelines	1 (0.6)	7 (4.3)	58 (35.4)	90 (54.9)	8 (4.9)	2.59	0.68
I learnt foundations for EBP in My academic years	3 (1.8)	13 (7.9)	20 (12.2)	80 (48.8)	48 (29.3)	2.96	0.94
I received formal training in search Strategies for finding research relevant to my practice	4 (2.4)	44 (26.8)	33 (20.1)	66 (40.2)	17 (10.4)	2.29	1.05
I am familiar with the medical Search engines e.g PEDro, PubMed	4 (2.4)	8 (4.9)	14 (8.5)	79 (48.2)	59 (36)	3.1	0.92
Mean (SD)						2.74	0.27

The measure of knowledge and skills for EBP were carried out by asking respondents to answer the questions in a Linkert Scale of 0 to 4. In table 3, the mean score of 2.74 indicated moderate skills among the physiotherapists to acquire evidence-based practice. The standard deviation was obtained 0.27 which is lesser than the mean score indicating the significance. The average score of the total was obtained 19.18 out of 28 with a mean percentage of 68.5.

In the question mentioning the learning of evidence-based practice during the academic years 78% agreed that they did learn EBP in their academic years.48.8% agreed and 29.3% strongly agreed that they learned evidence-based practice during their academic years.68.3% agreed or strongly agreed that they are confident in the ability to critically review professional literature. 81.1% responded that they agreed or strongly agreed that they can search to answer clinical questions confidently.

Binary logistic regression analysis was carried out between the variable of attitude and the factors associated with the respondents. In table 4, physiotherapists having specialization level thought it was necessary to increase the use of evidence in daily practice five times more than those having no specialization ( $p = .035$ , 95% CI: 1.12-22.69). Physiotherapists who worked in an acute care hospital felt literature and research findings help improve patient ninth times than those of others. ( $p = .04$ , 95% CI: 1.088-75.39)

Also, Table 4 shows the results of binary logistic regression between knowledge and skills and the factors associated with the respondents. Variable of knowledge

and skill that is physiotherapists ability to search to answer clinical questions confidently and Gender was found statistically significant. It was found that male respondents thought they were able to search to answer clinical questions confidently two times more than female.

Figure 1 depicts the picture of barriers towards evidence-based practice. The maximum number of participants that is 67.06% indicated that insufficient time was one of the top three barriers to evidence-based practice.62.8% of the respondents stated lack of research skills to be among the top three barriers to evidence-based Practice followed by inability to apply research findings in patient population where 61.6% of the respondents marked it as the top 3 barriers to evidence-based practice. Limited access to search engines was considered to be the top 3 barriers to evidence-based practice by around 53.04% of the respondents. Around 34.1% of the respondents ranked lack of support from colleagues as the top three barriers to evidence-based practice. Lack of interest has been stated as the top 3 barriers to evidence-based Practice by only 23.8% of the respondents which is the minimum percentage among the 6 options. In the open-ended question with additional barriers patient’s belief towards a traditional method of treatment was considered another major barrier for evidence-based practice.

Figure 2 shows that physiotherapists had a good understanding of the research terms meta-analysis, systematic review, absolute risk, and relative risk. The research terms that the physiotherapists had less understanding were heterogeneity, confidence interval and odds ratio.

Table 4. Binary logistic regression analysis for attitude/knowledge and factors associated with the respondent.

Attitude or Belief	Factor	Level	n	Odds ratio(95% CI)	P	N
Needto increase use of Evidence in my daily Practice	Specialization Level	Specialization	56	5.044 (1.12-22.69)	.035	164
		No specialization	108	Reference		
Literature and research findings help improvepatient care	Facility at which Physiotherapists work	Acute care hospital	89	9.05 (1.088-75.39)	.042	164
		Others	75	Reference		
Knowledge	Factor	Level	n	Odds ratio (95% CI)	P	N
I am able to conduct searchto answer myclinical questions confidently	Gender	Female	86	Reference	.04	163
		Male	77	2.44 (1.042-5.721)		
I am confident in my ability to critically review professional literature	Specialization Level	Specialization	56	2.5 (1.1-5.3)	.01	163
		No specialization	108	Reference		

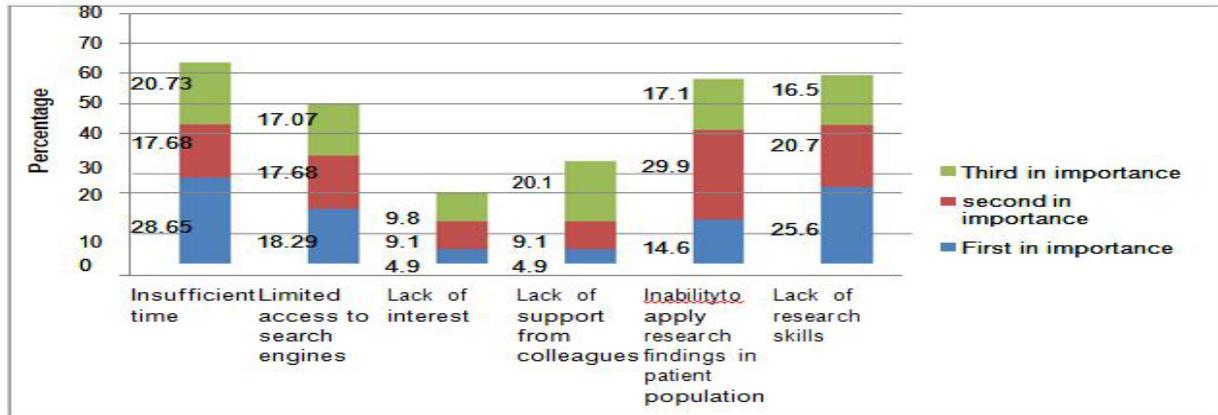


Figure 1. Barriers towards Evidence Based Practice.

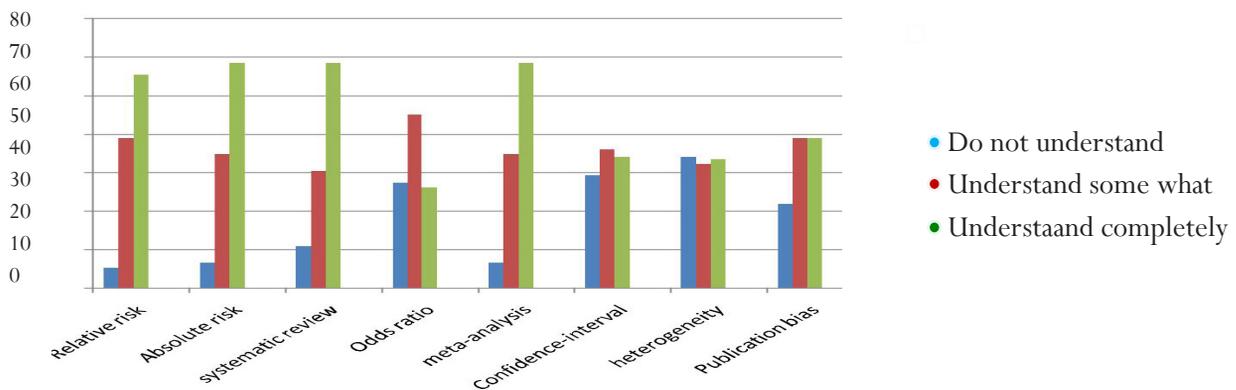


Figure 2. Self-reported Knowledge of research terms.

**DISCUSSION**

In the demographic section, total male respondents were 47.6% and the female respondents were 52.4%. This percentage varied from the two other studies, <sup>4, 5</sup> where the total male respondents were 32.8% and female respondents were 67.2% and where the total male percentage was 25.5% and the female percentage was 73.5%.

Maximum percentage of respondents were in the age group 21-30 years and similar was found in the study, <sup>5</sup> where the maximum number that is 85.3% of the respondents lay in the age group 25 to 34. However, another study, <sup>6</sup> found the maximum number of Physiotherapists between 30 to 39 years of age that is 58%.

A study, <sup>7</sup> showed that number of physiotherapists working less than 20 hours per week was 10.7% and another study, <sup>4</sup> showed the number of physiotherapists who worked less than 20 hours per week was 7.2%. The researcher’s study showed that only 3.7% of the

physiotherapists worked less than 20 hours per week and 62% of the physiotherapists worked more than 40 hours per week compared to the study, <sup>8</sup> where 32.4% worked more than 40 hours per week. But, a study, <sup>4</sup> had similar results where 59.2% worked more than 40 hours per week. This shows the increased load of the patients to be seen by the physiotherapists in Nepal.

The results obtained suggested that physiotherapists had a generally positive attitude towards evidence-Based Practice. Majority of the physical therapists had thought the application of EBP was necessary for the practice of physical therapy and literature and research was useful in day to day practice. Also, they believed evidence-based practice improved the quality of patient care. A similar survey in Nigeria, <sup>6</sup> reported that a maximum of 99% agreed or strongly agreed EBP is necessary. Literature is useful to practice (98%), EBP improves quality of patient care (98%), and they need to increase the use of evidence in their daily practice. (99%), and evidence helps in decision-making (88%).

In a study among nurses,<sup>8</sup> regarding the attitude towards evidence-based practice the mean score of 3.6 was considered as positive attitudes towards evidence-based where the score was from 1 to 5. In the researcher's study, the mean score of 2.89 was obtained for a score from 0 to 4 which indicated a positive attitude in our study as well.<sup>8</sup> The mean score of 2.74 was obtained for score measuring from (0 to 4) as compared to the knowledge and skill scores of nurses that was 4.1 measuring from (1 to 6). The knowledge regarding physiotherapists could be considered moderate with a mean percentage of 68.5%.

Another study,<sup>4</sup> discussed those having bachelor's degree as their highest certificate, were less likely to have the skills or training required for evidence-based practice compared to those with a master's degree. Similarly, in our study, those having a specialization degree were more confident in their ability to critically review professional literature.

Also, the understanding of certain research terms was associated with the highest degree obtained. As obtained in the study,<sup>4</sup> respondents with baccalaureate degrees had less knowledge of the research terms compared to those having masters' degree. Similar findings were obtained in our study where those having specialization degree were two times more likely to understand the terms rather than those not having specialization degree. This could be explained by the fact that those physiotherapist having specialization degree need to perform a research thesis for the sake of partial fulfillment of their course.

The major barrier was found to be the time in this study with 28.65% citing as 1<sup>st</sup> in importance as a major barrier. Another study,<sup>9</sup> stated the main barrier towards the adoption of a system was lack of training associated with its use. Another study,<sup>4</sup> reported 67% of the respondents' stated insufficient time as one of the top three barriers. Likewise, a study among physiotherapists and nurses,<sup>8</sup> also described the insufficient time as the most difficult barrier to overcome for both professionals. When asked regarding the barriers among the physiotherapists in other items, some have stated that time is no barrier to evidence-based practice. Also an article,<sup>2</sup> showed perceived barriers to implementing change had cognitive factors, an attitude of the physician, social and organizational context.

Lack of access to full articles also has been one of the major barriers to evidence-based practice.<sup>10</sup> Also, another factor that the respondents majorly focused on was the quality of the articles published.<sup>11</sup>

## CONCLUSIONS

Physical therapists of Nepal had a positive attitude and moderate knowledge towards evidence-based practice. There was a significant association between the variable of attitude and specialization level and facility at which the physiotherapists worked and with specialization level, age and number of years working as a physiotherapists and knowledge and skill variables. The major barrier to evidence-based practice measured was insufficient time. As the major barrier had been considered time, continuous professional development workshops and training could be beneficial to the physiotherapists

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