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Evidence-based practice at Patan Academy of Health Sciences, Nepal: knowledge, attitude, behavior and barriers

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ABSTRACT

Introduction: Evidence based practice (EBP) is the use of current best evidence in making decisions about the care of individual patients. The aim of this study was to explore the practices, attitudes, knowledge and perceived barriers in relation to EBP among faculty members at Patan Academy of Health Sciences (PAHS), Nepal.

Methods: This was a cross-sectional survey study. Participants were faculty members (both clinical and non-clinical) at PAHS. The main outcomes were attitude towards the usefulness of EBP, the frequency of use of EBP in practice, and the barriers to carrying out EBP.

Results: One hundred and seventy-two faculty members participated in this survey. Ninety five percent knew it was used for clinical decision making and the majority used it for teaching. Senior faculty spent more time on searching for evidence and reading compared to junior faculty. There was no difference between clinical and non-clinical departments. The main barriers to EBP were inadequate teaching learning support by 49% (85/172) followed by inadequate time 30% (52/172).

Conclusions: The study showed that faculty at PAHS had a generally positive attitude towards EBP. EBP could be better facilitated by proper teaching and allocation of dedicated time.

Keywords: evidence-based practice, faculties, health sciences, attitude-knowledge-behavior

INTRODUCTION

Evidence based practice (EBP) is defined as the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients.¹ It has been proposed as a way to promote the transference of evidence obtained from research into the day-to-day provision of health care services.^{2,3} It is now widely accepted that health services must stand on research evidence.^{4,5}

Health and medical care system is dynamic and becoming more complex, therefore health care practitioners need to be updated and respond more wisely to the changing circumstances.^{6,7} The quality of health education, services and health facility management might be compromised in low income countries due to inadequate EBP by health professionals.⁸

This study aims to determine the extent to which clinicians and teachers at an academic health institute in Nepal use EBP in their teaching learning and patient care services.

METHODS

An institution-based cross-sectional study was carried out at Patan Academy of Health Sciences (PAHS), Lalitpur, Nepal between 5-19 May 2017. A structured questionnaire with both open- and close-ended questions developed and validated by McInerney et al. was applied.⁹ The questionnaire consisted of four sections: demographic information, knowledge and attitude toward EBP, use of EBP, and perceived barriers to EBP. Respondents were asked to reflect personal attitudes towards EBP using a four-point Likert scale that ranged from strongly agree, agree to disagree and strongly disagree.

The selection of participants was based on convenience and availability. We aimed to include maximum number of faculties as far as possible. There is weekly morning 8-9 o'clock grand-rounds every Friday for one

hour at PAHS auditorium. These are seminars on specific themes of contemporary health and clinical issues across all the fields from basic to clinical sciences. The grand rounds are attended by all clinical and basic sciences faculties. On 5 May 2017, at the end of the scheduled grand-round all attendees were explained about this study. The consent to participate in the survey was obtained and the paper-based research questionnaire was distributed to respondents. The same process was repeated on 19 May 2017 so that those who were unable to attend previous grand-rounds could be approached.

A similar process was carried out among faculty members at the School of Nursing and Midwifery, PAHS on 12 May 2017 at their worksite in Sanepa, Lalitpur. Following a faculty meeting, all attendees were explained about this study. The consent to participate in the survey was obtained and the paper-based research questionnaire was distributed to respondents.

The researchers checked the filled questionnaires for any inconsistencies. The SPSS 16.0 was used for descriptive statistical analyses of the data.

Ethical approval to undertake this survey was obtained from the Institutional Review Committee of PAHS. (Ref: med1606241106 Date: 2016-06-24).

RESULTS

During the study period, PAHS had 300 teaching faculties from clinical (205), nursing (42), basic sciences (38) and public health (15) fields. Clinical faculties also included medical officers and residents who were involved in the informal teaching of medical students. A total of 172 respondents returned filled questionnaires. Of them, 88 were clinical faculty, 38 nursing school faculty, 31 basic sciences and 15 public health.

The mean age of the participants was 36 ± 10 years. Fifty eight percent of respondents were

in age category of 24 to 45 years. Less than one year and one to five years work experience at PAHS accounted for 32.56%, six

to ten years 22.09% and more than 15 years were 8.14%, (Table 1).

Table 1. Socio-demographic characteristics of participants (n=172) on evidence-based practice (EBP) at Patan Academy of Health Sciences (PAHS), Nepal

Characteristics		Medicine (N=88)	Nursing(N=38)	Basic Sciences (N=31)	Public Health (N=15)
Gender	Male	50 (56.8%)	4 (10.5%)	21 (67.7%)	12 (80.0%)
	Female	38 (43.2%)	34 (89.5%)	10 (32.3%)	3 (20.0%)
Highest Education	Bachelors	46 (52.3%)	13 (34.2%)	7 (22.6%)	2 (13.3%)
	Masters	37 (42.0%)	25 (65.8%)	22 (71.0%)	12 (80.0%)
	PhD	5 (5.7%)	0	2 (6.5%)	1 (6.7%)
Work Experience	< 1 year	41 (46.6%)	7 (18.4%)	5 (16.1%)	3 (20.0%)
	1 - 5 year	18 (20.5%)	14 (36.8%)	17 (54.8%)	7 (46.7%)
	6 - 10 year	19 (21.6%)	7 (18.4%)	8 (25.8%)	4 (26.7%)
	11 - 15 year	3 (3.4%)	4 (10.5%)	0	1 (6.7%)
	> 15 year	7 (8%)	6 (15.8%)	1 (3.2%)	0
Job Title	MO / TA	39 (44.3%)	13 (34.2%)	7 (22.6%)	1 (6.7%)
	Lecturer	28 (31.8%)	19 (50.0%)	16 (51.6%)	9 (60.0%)
	Assist. Prof.	10 (11.4%)	1 (2.6%)	5 (16.1%)	1 (6.7%)
	Assoc. Prof.	8 (9.1%)	4 (10.5%)	3 (9.7%)	4 (26.7%)
	Professor	3 (3.4%)	1 (2.6%)	0	0

Note: MO - Medical Officer, TA - Teaching Assistant, Assist - Assistant, Assoc- Associate, Prof- Professor

One hundred seventy-one (99.4%) respondents had the view that EBP improves treatment outcomes and 163 (94.8%) were using it in professional decision making. One hundred and fourteen (66.3%) believed that they currently implemented EBP in their teaching, (Table 2).

The practice EBP showed senior faculty members were seen to be searching more, reading more articles and spending longer time reading across all the departments, (Table 3a and 3b).

There were 166 (96.5%) respondents who stated the sources of evidence can be from various avenues such as journals, textbooks, the internet, colleagues, clinical guidelines, and the Cochrane Library. The faculty members experienced inadequate teaching learning support and inadequate time as greater barriers (Table 4), and provided suggestions, (Table 5).

DISCUSSIONS

The results of this study indicate that the faculty at PAHS had very positive attitude towards EBP. There was still a lot of room for improvement in their knowledge and skills, and use of EBP. These results were consistent with previous studies describing attitudes, practices, and knowledge and skills associated with EBP.¹⁰⁻¹⁴ Therefore, it can be said that EBP attitudes of faculty members commonly differ from their ability to implement it.

One of the major barriers for the use of EBP was inadequate teaching-learning support. In areas in which interventions have been supported through research, there must be continued efforts to synthesize existing bodies of evidence and focused efforts to conduct translational research to determine what strategies work best in disseminating interventions into clinical and academic practice. Findings in the present study indicate that despite the ambition of health

Table 2. Attitudes and uses of EBP of Participants (n=172) at PAHS, Nepal

Attitudes Towards Evidence Based Practice	Strongly Agree N (%)	Agree N (%)	Disagree N (%)	Strongly Disagree N (%)
One of the perspectives of clinical effectiveness	87 (50.6%)	81 (47.1%)	0	4 (2.3%)
Heart of clinical effectiveness	79 (45.9%)	91 (52.9%)	2 (1.2%)	0
Need to incorporate EBP into practice	89 (51.7%)	80 (46.5%)	1 (0.6%)	2 (1.2%)
Improves patients' care	71 (41.3%)	100 (58.1%)	1 (0.6%)	0
Used in act of clinical decision making	55 (32%)	108 (62.8%)	9 (5.2%)	0
Adoption of EBP is too demanding	12 (7%)	93 (54.1%)	59 (34.3%)	8 (4.7%)
Used EBP	Very Often	Often	Not Often	Not at all
Make use of research in teaching and research improvement	23 (13.4%)	91 (52.9%)	50 (29.1%)	8 (4.7%)

Table 3a. Effort made by respondents (n=172) for EBP based on faculty positions at PAHS, Nepal

	MO / TA N (%)	Lecturer/ Asst prof N (%)	Assoc Prof/ Prof N (%)	Total N (%)
Frequency of literature searches in last one month				
None	12 (20.0%)	12(13.5%)	1(4.3%)	25 (14.5%)
1-5 times	43 (71.7%)	53(59.6%)	14(60.9%)	110 (64.0%)
6-10 times	4 (6.7%)	12(13.5%)	3(13.0%)	19 (11.0%)
11-15 times	1 (1.7%)	7(7.9%)	4(17.4%)	12 (7.0%)
16 times and more	0 (.0%)	5(5.6%)	1(4.3%)	6 (3.5%)
Number of journal articles read in last one month				
None	12 (20.0%)	7(7.9%)	0(.0%)	19 (11.0%)
1-3 articles	36 (60.0%)	38 (42.7%)	11(47.8%)	85 (49.4%)
4-6 articles	4 (6.7%)	35 (39.3%)	5(21.7%)	44 (25.6%)
7-9 articles	7 (11.7%)	1 (1.1%)	3(13.0%)	11 (6.4%)
10 articles and more	1 (1.7%)	8 (9.0%)	4 (17.4%)	13 (7.6%)
Hours spent reading professional literatures in last one month				
None	12 (20.0%)	7 (7.9%)	0 (0%)	19 (11.0%)
1-3 hour	30 (50.0%)	41 (46.1%)	9 (39.1%)	80 (46.5%)
4-6 hour	6 (10.0%)	26 (29.2%)	11 (47.8%)	43 (25.0%)
7-9 hour	6 (10.0%)	7(7.9%)	2 (8.7%)	15 (8.7%)
10 hour and more	6 (10.0%)	8(9.0%)	1 (4.3%)	15 (8.7%)
Attended training on evidence based practice				
Yes	21 (35.0%)	22 (24.7%)	11(47.8%)	54 (31.4%)
No	39 (65.0%)	67 (75.3%)	12(52.2%)	118 (68.6%)
Percentage of evidence based teaching				
1-20	12 (20.0%)	12 (13.5%)	6 (26.1%)	30 (17.4%)
21-40	25 (41.7%)	33 (37.1%)	7 (30.4%)	65 (37.8%)
41-60	17 (28.3%)	22 (24.7%)	3 (13.0%)	42 (24.4%)
61-80	6 (10.0%)	16 (18.0%)	7 (30.4%)	29 (16.9%)
81-100	0 (.0%)	6 (6.7%)	0 (.0%)	6 (3.5%)
Knowledge on meta analysis				
Yes	3 (5.0%)	12 (13.5%)	3 (13.0%)	18 (10.5%)
No	57 (95.0%)	77 (86.5%)	20 (87.0%)	154 (89.5%)

care professionals to incorporate evidence-based practice in their work, this was not done due to various reasons. This could be altered through support from the organization and management, including search for and implementation of updated evidence-based guidelines as part of the job description and providing time for this.^{15,16}

Insufficient time was identified as one of the main barriers to using EBP among faculties in PAHS. Similar responses have been observed in other research in clinical practice. These studies have stated that the perceived lack of time was a justification adopted in order to guard themselves from unfamiliar ideas that

Table 3b. Effort made by respondents (n=172) for EBP based on departments of faculties at PAHS, Nepal

	Clinical Sciences N (%)	Nursing N (%)	Basic Sciences N (%)	Public Health N (%)
Frequency of literature searches in last one month				
None	12 (13.6%)	9 (23.7%)	4 (12.9%)	0(0%)
1-5 times	58 (65.9%)	23 (60.5%)	21 (67.7%)	8 (53.3%)
6-10 times	8 (9.1%)	5 (13.2%)	3 (9.7%)	3 (20%)
11-15 times	5 (5.7%)	0 (0%)	3 (9.7%)	4 (26.7%)
16 times and more	5 (5.7%)	1 (2.6%)	0 (0%)	0 (0%)
Number of journal articles read in last one month				
None	9 (10.2%)	7 (18.4%)	2 (6.5%)	1 (6.7%)
1-3 articles	48 (54.5%)	19 (50%)	13 (41.9%)	5 (33.3%)
4-6 articles	19 (21.6%)	6 (15.8%)	14 (45.2%)	5 (33.3%)
7-9 articles	7(8%)	3 (7.9%)	1 (3.2%)	0 (0%)
10 articles and more	5 (5.7%)	3 (7.9%)	1 (3.2%)	4 (26.7%)
Hours spent reading professional literatures in last one month				
None	10 (14.4%)	7 (18.4%)	2 (6.5%)	0 (0%)
1-3 hour	42 (47.7%)	20 (52.6%)	11 (35.5%)	7 (46.7%)
4-6 hour	26 (29.5%)	6 (15.8%)	10 (32.3%)	1 (6.7%)
7-9 hour	5 (5.7%)	3 (7.9%)	5 (16.1%)	2 (13.3%)
10 hour and more	5 (5.7%)	2(5.3%)	3 (9.7%)	5 (33.3%)
Attended training on evidence based practice				
Yes	28 (31.8%)	11 (28.9%)	9(29.0%)	6 (40.0%)
No	60 (68.2%)	27 (71.1%)	22(71.0%)	9 (60.9%)
Percentage of evidence based teaching				
1-20	11 (12.5%)	9 (23.7%)	8(25.8%)	2 (13.3%)
21-40	37 (42.0%)	16 (42.1%)	8(25.8%)	4 (26.7%)
41-60	19 (21.6%)	8 (21.1%)	11(35.5%)	4 (26.7%)
61-80	17 (19.3%)	4 (10.5%)	3(9.7%)	5 (33.3%)
81-100	4 (4.5%)	1 (2.6%)	1(3.2%)	0 (0%)
Knowledge on meta analysis				
Yes	10 (11.4%)	1(2.6%)	6(19.4%)	1 (6.7%)
No	78 (88.6%)	37 (97.4%)	25(80.6%)	14 (93.3%)

Table 4. Barriers for EBP (multiple response possible) from respondents (n=172) at PAHS, Nepal

	Medical Officer/TA 60 (100%)	Lecturer/ Assist Prof 89 (100%)	Associate Prof/Prof 23 (100%)	Total 172
Inadequate knowledge about EBP	9 (15.0%)	25 (28.1%)	1 (4.3%)	35 (20.3%)
Inadequate recognition of EBP	16 (26.7%)	0 (0%)	0 (0%)	16 (9.3%)
Inadequate teaching learning support	26 (43.3%)	47 (52.8%)	12 (52.2%)	85 (49.4%)
Inadequate time	13 (21.7%)	28 (31.5%)	11 (47.8%)	52 (30.2%)
Resistance to change	10 (16.7%)	9 (10.1%)	0 (0%)	19 (11.0%)
Bonded by existing protocol	7 (17.1%)	2 (2.7%)	0 (0%)	9 (5.2%)

Table 5. Suggestions to improve EBP (multiple response possible) from respondents (n=172) at PAHS, Nepal

	MO/TA N (%)	Lecturer/Assist. Prof. N (%)	Assoc. Prof/Prof N (%)	Total N (%)
Capacity building on EBP	5 (8.3%)	30 (33.7%)	5 (21.7%)	40 (23.3%)
Feedback mechanism in place	6 (10.0%)	7 (7.9%)	2 (8.7%)	15 (8.7%)
Implementing EBP guideline	4 (6.7%)	19 (21.3%)	7 (30.4%)	30 (17.4%)
Journal club	5 (8.3%)	4 (4.5%)	1 (4.3%)	10 (5.8%)
Recognition of research work	2 (3.3%)	9 (10.1%)	4 (17.4%)	15 (8.7%)
Offering needed resources	15 (25.0%)	26 (29.2%)	8 (34.8%)	49 (28.5%)
Organizing conf/ws on EBP	17 (28.3%)	23 (25.8%)	3 (13.0%)	43 (25.0%)
No idea about EBP	4 (6.7%)	3 (3.4%)	0 (0%)	7 (4.1%)

might require changing their practices.^{17,18,19} It appears that a better understanding of the practice environment is crucial to the understanding and development of interventions to advance EBP in the health sciences practices and teaching.²⁰ In this light, the management of hospitals and academic medical centres should consider making adjustments to faculties' work schedules so that they have additional time to attend classes on conducting EBP, reviewing relevant literature and planning practice changes.

The results of this study indicated that those with more years of experience have fewer barriers to finding and reviewing research. These findings are consistent with those reported in a previous study which found that with more years of experience, physicians and teachers become more confident in implementing EBP because they have had more exposure to evidenced-based information as part of their continuing education.^{20,21} On the other hand, other literature found that the relationship between years of experience and the implementation of EBP was weak.²¹ The current study, and another study with similar findings, seems to suggest that, in order to effectively implement EBP, less experienced faculties should be supported by senior faculties with encouragement and provision of necessary resources.²² Such support could be provided by increasing the opportunities for faculties to attend EBP training, as this is likely to improve their confidence in and utilization of EBP.²¹

Faculties are generally trained in research techniques and unless these skills are

maintained and supported within their place of employment, they may quickly be forgotten.²¹ If faculties do not have access to the appropriate technology to conduct comprehensive searches of the literature, then such issues become major barriers in practicing EBP. Our study has also pointed out that faculties who perceived more barriers in finding and reviewing research, reported less frequent use of EBP, fewer positive attitudes towards EBP and less knowledge/skills associated with EBP.

Studies have shown that some of the difficulties to integrate researches into a clinical and academic settings are inadequate organizational support, lack of knowledge about research studies/utilization and lack of time.^{23,24} Faculties knowledge on information technology is important to implement EBP. Although it is reasonable to expect that academic faculties have competencies on EBP, personal attitudes toward EBP have been shown to be the main determinant for its use.²⁵

The possible limitations of our study include the use of tool that was not pretested and validated in our setting, which may affect the understanding and expectations of EBP. We conveniently selected the sample based on attendance in grand round; this may have led to the selection of respondents, having more positive attitude towards EBP. The small number of senior faculties was also a limitation in making sound comparisons.

CONCLUSIONS

In this study, we found that faculty at PAHS generally have positive attitude towards EBP. The barriers to EBP were insufficient time and resources to change their practice. Institutional support by allocating dedicated time for EBP; and senior faculties conducting training on EBP to junior faculties could be carried out to enhance the culture of evidence based practice.

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