

# Nurses' Perception on Evidence-Based Practice in Tertiary Hospital of Nepal

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## ABSTRACT

**Background:** The evidence-based practice movement has spread globally, prompting calls for evidence-based policymaking and public health. Health care being the dynamic discipline with research, is, intended to improve practice through evidence-based novel approaches. Nurses must use evidence-based practice (EBP) in order to raise the standard of care; limited evidence are available in Nepal. This study aimed to assess the perception of evidence-based practice among nurses of a tertiary hospital in Nepal.

**Methods:** A quantitative cross-sectional study was conducted among the 100 nurses of Bir Hospital in Kathmandu. The self-administered questionnaire was applied using the Evidence-Based Practice Questionnaire (EBPQ). A purposive sampling technique was employed. Mean score was calculated to assess the nurses' perceptions in the three sub-scales of knowledge, attitude, and use of evidence-based practice. Bivariate analysis was performed to examine the relationship between subscales.

**Results:** Majority (89.0%) of nurses did not receive training on evidence-based practices. The mean score of knowledge on EBP was  $4.47 \pm 1.11$ , the mean score of attitudes on EBP was  $4.45 \pm 1.06$ , and the mean score of EBP use was  $4.18 \pm 1.42$ . The knowledge, attitude, and use of EBP were not significantly associated with the selected demographic variables (age, work experience, EBP training and marital status).

**Conclusion:** Findings of the study indicates that implementation of EBP use needs to be strengthened among the nurses. Nurses need to be more involved in the implementation of EBP. To incorporate evidence in practice, nurses require training, incorporating EBP into nursing curricula and enhancing support from high authorities.

**Keywords:** Evidence-Based Practice, Perceptions, Nurses, Hospital

## INTRODUCTION

Evidence-based practice (EBP), as defined by The International Council of Nurses as "A problem solving approach to clinical decision making that incorporates a search for the best and latest evidence, clinical expertise and assessment, and patient preference values within a context of caring." [1]. Healthcare being a dynamic discipline, it is intended to improve its practice through the evidence-based novel approaches [2]. Nurse who utilizes an evidence-based approach in the practice are being able to ask good questions regarding how and when the practice should be changed, can demonstrate the best decision using good information, evaluate their practice, and know that the outcomes they are being measured on are appropriate and agreed in advance [3]. Nurses should understand various healthcare topics, including acute and chronic psychosocial and physical

needs. However, despite the focus on evidence-based practice, many nurses lack the time, resources, or skills to access and evaluate research, or they do not use evidence to guide their practice[4].

EBP is crucial for systematic and transparent decision-making, enhancing decision quality, reducing errors, fostering innovation, clarifying evidence needs, and aiding other practitioners in finding evidence[5]. Most nurses are not prepared for EBP. Despite recognizing its value and having positive attitudes, many do not use research findings or incorporate the best evidence into daily practice[6]. The evidence-based practice (EBP) movement has spread globally, prompting calls for evidence-based policymaking and public health [7-9].

Despite its importance in improving care quality, EBP application in Nepal is limited. Understanding nurses' perceptions of EBP is crucial for better implementation.

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The findings can guide the use of EBP by nurses in Nepal and help nursing faculty integrate EBP into their curriculum and practice. Research in Nepal shows that nurses and nursing students have positive attitudes toward EBP, but face significant barriers like limited knowledge, skills, time, and resources that hinder its full implementation [7,10]. These findings highlight the importance of further exploring the perception of EBP among Nepalese nurses to tailor interventions and training programs. Hence, the study aimed to assess the perception of evidence-based practice among nurses of tertiary hospital.

## METHODS

A quantitative cross-sectional study was conducted in Bir Hospital, a tertiary hospital in Kathmandu, Nepal. It is also the first oldest and multi-specialty government hospital currently running about 650 bed and more than 350 nursing staff. Data was collected by self-administering the questions to the nurses from the period of one month from 1 August to 2 September 2021. Sample size was calculated as per the study by Hadgu G et al which reported 90% respondents have good perception of EBP [11]. Using the formula  $n = z^2 pq / d^2$  where  $z = 1.96$ , prevalence ( $p$ ) = 90% (0.90),  $q = 100\% - 90\% = 10\%$  (0.10) and taking margin of error  $d$  as 6%, total sample size of the study was calculated as  $n = 1.96^2 \cdot 0.90 \cdot 0.10 / 0.06^2 = 96.04$ ; so the final sample size calculated was 96.04, however we took 100 sample for the study. Non-probability purposive sampling technique was employed.

The Evidence-Based Practice Questionnaire (EBPQ) developed by Upton & Upton was employed to collect the data [12]. It comprises of 24 items with score in each ranging from 1-7 point. The greater the score the higher the domain is. This questionnaire offers a practical amount on daily evidence-based practice, containing 3 subscale which are perception on knowledge, attitude and practice of EBP. There are 14 statements in knowledge subscale, four of statements in attitude and 6 statement in practical scale. The mean score was calculated in each sub-scale of EBP questions on knowledge, attitude, and use. We have individually calculated the mean of each domain. The likert scale was used for rating 14 knowledge statement on a scale from 1 to 7, with 7 representing the 'best' and 1 indicating the 'poor'. The attitudes towards EBP were also assessed using a 7 point likert scale ranging from 'strongly agree (1)' to 'strongly disagree (7)'. Additionally use of EBP was also assesses across 6 items, ranging from 'never (1)' to 'always (7)'. Pearson's correlation was performed to identify the association between the EBP knowledge, attitude, and use with other selected variables. Permission for instruments was obtained from the author to use the EBPQ through email. Ethical approval was taken from the Institutional Review Board of the National Academy of Medical Sciences (Ref. No. 286/2078/79). Formal permission was received from the Hospital and Nursing director of Bir Hospital. The purpose of the study was explained to the participants and written informed consent was collected before the study. Those who were willing to participate and present during the data collection day were included in the study. Every day data was collected through self-administered questionnaire on the presence of researchers during the break time and the shift change so that it had not hampered the usual duty of nurses in the wards. Ano-

nymity was maintained by not disclosing the name of the participants. Collected information was kept confidential by keeping in password-locked computer.

The collected data were entered into Microsoft Excel and transferred to Statistical Package for Social Sciences (SPSS) version 21 for analysis.

## RESULTS

A total 100 nurses were included in the study. Table 1 illustrates that average age of the nurses was 30.08 years with a standard deviation of 6.57 years. More than half (54.0%) were within the age group of 20 to 29 years. Most of them (62.0%) were married, more than three-fifths (64.0%) were qualified with a bachelor's degree, and a few (7.0%) with a master's degree in Nursing. The mean work

Characteristics	Categories	Frequency (n)
Age (years) Mean $\pm$ SD [30.08 $\pm$ 6.57]	20-29	54
	30-39	39
	40-49	4
	$\geq$ 50	3
Marital status	Unmarried	38
	Married	62
Education	PCL	29
	BN/BSc	64
	MN/MSc	7
Years of nursing experience Mean $\pm$ SD [7.53 $\pm$ 6.24]	1-5	52
	6-10	25
	11-15	10
	$\geq$ 16	13
Training on evidence-based practice	Yes	11
	No	89

experience were 7.53 years with 52.0% of nurses having 1 to 5 years of experience. The majority (89.0%) of nurses did not have training in evidence-based practices (EBP).

Table 2 represents the mean score and standard deviation of evidence-based practice knowledge, attitude, and use Each statement in knowledge (14 items) was rated from '7 to 1' indicating '7' being the best and '1' being the poor. The mean score of knowledge on EBP was 4.47 with a standard deviation of 1.11. The nurses' minimum mean score on IT skills was 3.73 with a standard deviation of 1.56, while the maximum mean score (5.11 $\pm$ 1.43) was on the ability to review own practice. There were 4 items under EBP attitude, and a 7-point Likert scale was used for the responses, 'strongly agree (1)' to 'strongly disagree (7)'. The mean score of attitudes on EBP was 4.45 with a standard deviation of 1.06. Similarly, there were 6 items on EBP use, classified between 'never (1)' and 'always (7)'. The mean score on EBP use was (4.18 $\pm$ 1.42). The least mean score (3.64 $\pm$ 1.70) was on the statement 'critically appraised, against set criteria, any literature you discovered' while

**Table 2:** Knowledge, Attitude and Use of Evidence-Based Practice among Nurses (n=100)

Item	Mean ± SD
<b>Knowledge on EBP</b>	<b>4.47±1.11</b>
1. Research skills	3.96±1.61
2. IT skills	3.73±1.56
3. Monitoring and reviewing of practice skill	4.38±1.36
4. Converting your information needs into a research question	4.24±1.41
5. Awareness of major information types and sources	4.51±1.41
6. Ability to identify gaps in your professional practice	4.68±1.26
7. Knowledge of how to retrieve evidence	4.13±1.45
8. Ability to analyze critically evidence against set standards	4.29±1.45
9. Ability to determine how valid (close to the truth) the material	4.43±1.38
10. Ability to determine how useful (clinically applicable) the material	4.64±1.45
11. Ability to apply information to individual cases	4.55±1.52
12. Sharing of ideas and information with colleagues	5.08±1.37
13. Dissemination of new ideas about care to colleagues	4.97±1.41
14. Ability to review your own practice	5.11±1.43
<b>Attitude of EBP</b>	<b>4.45±1.06</b>
1. My workload is too great for me to keep up to date with all the new evidence	3.71±1.93
2. I resent having my clinical practice questioned	3.87±1.61
3. Evidence-based practice is a waste of time	5.77±1.63
4. I stick to tried and trusted methods rather than changing to anything new	4.46±1.67
<b>Use of EBP</b>	<b>4.18±1.42</b>
1. Formulated a clearly answerable que as the beginning of the process toward filling this gap	3.84±1.66
2. Tracked down the relevant evidence once you have formulated the question	3.93±1.59
3. Critically appraised, against set criteria, any literature you discovered	3.64±1.70
4. Integrated the evidence you have found with your expertise	4.21±1.72
5. Evaluated the outcomes of your practice	4.67±1.75
6. Shared this information with colleagues	4.84±1.85

the greatest mean score (4.84±1.85) was on 'shared this information with colleagues.

Table 3 showed that EBP knowledge, attitude, and use with age were not significantly associated at  $p < 0.05$ . It showed a weak negative correlation between EBP knowledge and age, a weak negative correlation between EBP attitude and age, and a negligible correlation between EBP use and age. Therefore, based on this analysis alone, we cannot conclude that there is a meaningful relationship

**Table 3:** Association between EBP Knowledge, Attitude and Use with Age

Parameters	Pearson's Correlation Coefficient (r)	p-value
EBP knowledge	-0.049	0.630
EBP attitude	-0.044	0.666
EBP use	-0.029	0.776

between age and these EBP-related variables.

Table 4 illustrates that the association through bivariate analysis using correlation analysis of EBP knowledge, attitude and use with Age. The results show there are weak correlations between EBP knowledge, attitude, and use with years of work experience, but none of these correlations is statistically significant. Therefore, based on this data, we cannot conclude that there is a

**Table 4:** Association between EBP Knowledge, Attitude and Use with Work Experience

Parameters	Pearson's Coefficient of Correlation (r)	p-value
EBP knowledge	0.001	0.991
EBP attitude	0.038	0.710
EBP use	-0.049	0.630

**Table 5:** Association between EBP Knowledge, Attitude and Use with marital status and EBP training (Student t-test)

Variables	Categories	EBP Knowledge mean	p – value	EBP attitude mean	p - value	EBP use mean	p - value
Marital status	Married	4.45	0.789	4.40	0.558	4.22	0.721
	Unmarried	4.51		4.53		4.12	
EBP training	Yes	4.68	0.511	4.04	0.181	4.48	0.468
	No	4.45		4.50		4.15	

meaningful relationship between work experience and EBP knowledge, attitude, or use. Other factors might be influencing these variables.

Table 5 reveals marital status does not appear to have a significant impact on EBP knowledge, attitude, or use. EBP training does not significantly affect EBP knowledge or use, but there might be a significant effect on EBP attitude, although this requires further investigation due to the borderline p-value.

## DISCUSSION

This study aimed to assess how nurses at tertiary hospital in Nepal perceive evidence-based practice, which involves integrating the best available evidence with clinical expertise and patient preference in health care decision-making.

This study presented majority of participants (89%) had not received any formal training in evidence-based practice. This finding suggest that a significant portion of nursing staff may not have necessary skills or knowledge to effectively utilize evidence-based approach in their clinical practice. Findings was similar to another study conducted in Nepal where 93% have not received any training [7]. Moreover study highlighted that this lack of training among nurses even in other countries like Singapore [2] yielded comparable results. Addressing this gap through targeted education and training initiatives could enhance nurse's ability to incorporate evidence-based approaches.

The findings from this study revealed that across all three subscales of the questionnaire (EBP knowledge, attitude and use), participants have moderate perception regarding EBP. This suggests that while nurses at tertiary hospital in Nepal had some familiarity with EBP. Our study identified a moderate knowledge and attitude towards EBP, acknowledging its importance in healthcare. However, there was a slight lower mean score of EBP, indicating that nurses may face challenges or barriers in effectively applying EBP principles in daily practice. It was similar to the study conducted in the United States of America and the United Kingdom on knowledge and skill but differed in attitude [13,14]. The mean EBP knowledge and attitude score was in line with the study conducted in Iran, while there was a difference in its use [15]. These findings suggest that while there may be some universal trend in nurse's perception of EBP, cultural and contextual factors may influence the extent to which EBP is utilized. However, the finding was not similar to the study conducted in Ethiopia [11]. It might be due to the study participants involved in this study being bachelors and above. Additionally, a qualitative study conducted in Iran reported despite the positive attitude to evidence-based practices, there has been little application in nursing practices [14].

This study findings shows mean score on research skills and IT skills is lower which contrasts with another study conducted in Oman which means that the participants in Oman had received more focused training or had access to better resources for enhancing their research and IT skills, leading to their higher perceived skill levels in EBP [16].

Our study did not find a significant association of EBP knowledge, attitude, and use with age, work experience, marital status, and EBP training. This finding contradicts the study conducted in Turkey and Sweden where the findings show the significant association among them [17,18]. Less work experience, good knowledge, communication skills, EBP training, internet access, and evidence-based guideline availability were the predictors of evidence-based practice utilization in a hospital in Ethiopia [19]. Another study in Ethiopia reported educational level, attitude toward EBP, administrative support, and the availability of information resources were positively associated with EBP use [18]. The differences in findings might be because of variables and methodology used in these studies to see the association. Further research may be needed to better understand the specific contextual factors that influence nurses' perceptions and utilization of EBP in diverse healthcare settings.

This study has certain limitations. These are the relatively low sample size conducted only in a single tertiary hospital which might not be representative. To improve generalizability, future research could consider a larger and more diverse sample from multiple hospitals or healthcare settings across Nepal. Further qualitative studies may also be useful to explore associated factors with EBP knowledge, attitude, and use.

## CONCLUSION

This study presented a moderate level of perception of EBP among the nurses. Study shows participant had a minimum mean score on knowledge subscale, research and IT skills compared to other items. This suggests that nurses may require additional training or resources to strengthen their research literacy and proficiency in utilizing IT tools for accessing and evaluating evidences.

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**Ethical Approval:** This research was approved by Institutional Review Board (IRB) NAMS, Ref No. 286/2078/79 on 6 May 2021.

**Consent:** Informed written consent was obtained from all the participants before the data collection

**Data Availability Statement:** The data will be made

available on reasonable request for the research related to it.

**Conflicts of Interest:** Authors declare no conflict of interest

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**Author's Contribution:** Bhagawati Bhandari conceptualize the research, Narayani Lamichhane and Sharada Aryal did data collection, Sabita Karki and Bhagwati Bhandari did analysis and prepare result, Sabita Karki and Bhagawati Bhandari and Narayani Lamichhane drafted the manuscript, and all authors reviewed the manuscript and agree to be accountable for all aspects of the research work, and BB is corresponding author. SK, NL, and SA are abbreviated name authors.

**Layman Summary:**

The study assessed nurses' perceptions of evidence-based practice (EBP) in a tertiary hospital in Nepal. Findings revealed that nurses perceptions of evidence-based practice were moderate. Most nurses (89.0%) had not received EBP training. Demographic variables such as age, work experience, and marital status were not significantly associated with EBP perceptions.

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