# Knowledge, Attitude and Use of Evidence Based Nursing Practice among Nurses Working at Tertiary Level Cancer Hospital: "Where Do we Stand?".

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## Abstract

**Background**: Evidence-based practice (EBP) in oncology nursing is a clinical decision-making approach in nursing care that improves quality care and outcomes in health care but is not yet standard in clinical settings.

**Objectives:** The purpose of this study was to determine EBP knowledge, attitude and practice of oncology nurses.

**Methods:**Cross sectional study used the self-administered Evidence-Based Practice Questionnaire (EBPQ) developed by Upton and Upton in the United Kingdom. Simple random sampling technique was used to select the sample. The sample size was 139 nurses working in tertiary level cancer hospital Chitwan.

**Results:** Out of 139 respondents, all of them were female. Mean age of the respondents was 31.9712 sd±7.30390 where minimum age found to be 20 years and maximum was 55 years. In regards to marital status 74.1% of the respondents were married, remaining 24.9% were unmarried. In terms of education more than half (56.8%) of respondents had Bachelor in Nursing Science (BNS) degree, 24.5% had Bachelor of Science in Nursing degree, 11.5% had proficiency certificate level degree and remaining 7.2% had master degree. The mean year of experience was = 8 years sd±6.77809 with minimum 6 month, Maximum=28 years. In terms of designation, most of the respondents (76.3%) were working in staff nurse post. In three sub scale of evidence based practice, Good level of knowledge 41.7%, positive attitude 40.3%and good practice 41.7% was found to be on less than fifty percent of the respondents. Poor level of knowledge, negative attitude and poor practice was found among 34.5%, 30.9% and 34.5% respectively. Fair level of knowledge, neutral attitude and fair practice was reported by 23.5%, 28.8% %23.7% respectively. Findings shows that knowledge, attitude and practice is significantly associated with level of education of the respondents ( p=.000) at 0.05 level of significance. Findings further shows there exist significant correlation between knowledge attitude and practice among respondents on evidence based nursing practice. Respondents' practice has significantly positive correlation with attitude (r=.774 & p=.000). Similarly knowledge of the respondents positively correlated with practice significantly ( r=.765 & p=.000). So like attitude of the respondents is positively correlated with knowledge at statistically significant level. ( r=.891 and p= .000). There is a weak correlation of work experience with, attitude and practice where, r=.219 p=.009 ,r=176 p=.039 respectively. Knowledge was not correlated with year of experience.

**Conclusion:** Research findings reported the strong correlation between knowledge attitude and practice, acknowledged a lack of full preparation in the EBP process to engage in and implement EBP consistently. Nurses working in the oncology setting should be provided the mentorship and support to obtain continuing education for better implementation of evidence based practice in their working institutions.

**Keywords:** Evidence-based practice; Knowledge, Attitude and Practice; Oncology nursing.

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## Introduction

Cancer is terrible illness that endangers people's lives and health. Globally, there were 9.7 million cancer-related deaths and 20 million new cases in 2022[1], and both the incidence and mortality of cancer are expected to rise further. Globally, the number of new cancer cases is predicted to rise by 47% between 2020 and 2040. An increasing proportion of cancer patients are able to live with their disease for longer due to advancements in cancer screening and treatment. However, the majority may suffer from cancer and cancer-related treatments that have negative physical, psychological, or social side effects that significantly impair quality of life, including pain, exhaustion, sadness, and sleep disturbance [2] and may experience cancer recurrence at any stage of post-cancer survival.[3]

Because of its varying degrees of preventability and chronicity, cancer emphasizes the necessity for comprehensive prevention and care. The whole range of services and support for those at risk, with a cancer diagnosis, or living with cancer is included in the continuum of care for cancer. To meet every need throughout the cancer journey, a comprehensive strategy is required. This method placed a strong emphasis on evidence-based suggestions for every continuum step.[4]

Cancer-related morbidity and mortality are causing a concerning scenario in Nepal, where there are insufficient human and material resources. To preserve their quality of life till the end, people with life-limiting illnesses want intensive, long-term, and continuous care. This care must be evidence-based to allow for dignified living and to help families deal with the cancer illness journey in peace.[5]

Evidence based practice (EBP) has been defined as a method for making decisions about patient care that integrates the best available evidence with the clinical expertise and judgment of a practitioner, as well as the patient's personal values and preferences.[6] In oncology nursing, evidence-based practice, or EBP, is essential because it guarantees safe, effective, and high-quality care. Oncology nurses may make well-informed decisions, maximize patient outcomes, and raise the standard of care by combining clinical knowledge, research findings, and patient preferences.

In the constantly evolving field of cancer care, the role of evidence-based nursing (EBN) in managing symptom clusters is evolving. Pain assessment and management is crucial aspect of cancer care continum, World Health Organization (WHO) created the pain scale and analgesic ladder which can be used to identify the actual needs of pain management. Similarly, distress is a significant aspect in the quality of life for cancer patients. The National Comprehensive Cancer Network created the distress thermometer and problem list[7], which was then published in NCCN Guidelines to aid in the identification of spiritual and psychological suffering[3]. Stoma care, lymphedema assessment and management is another major area of rehabilitation & care, after definitive treatment of cancer. To aid the better management, stoma assessment and lympehdema assessment validated tools are developed.[8,9] Other major symptoms in oncology which required specialized care are, extravasations, fatigue, alopecia, stomatitis/ skin changes. The idea behind working in an evidence-based way is to ensure that nursing interventions are based on robust scientific evidence and do not only rely on nonreflective experiential knowledge and practices. Evidence shows that with the incorporation of EBP, nursing practice has been shifted toward decisions based on high-quality evidence, and this paradigm shift has been driven by advances in nursing research, multidiscipline research, and technological innovations.[7]

Evidence-based treatment reduces family conflicts, eases the burden of end-of-life care decisions on families, and promotes communication between cancer patients and medical personnel. By honoring people's beliefs, making sure their desires are followed, and supporting their decisions throughout the advance care planning process, nurses play a crucial role in care planning.[10]

In the context of Nepal, there is a discrepancy between the nursing care requirements and academic preparation. The majority of clinical nurses lack EBP knowledge and skills because EBP content is not covered in academic curricula of front line nurses.[11],[12,13] Self-efficacy and competency is also a recurring obstacle to using EBP in clinical practice. The lack of resources to assist EBP (such as time and EBP mentors), the idea that EBP requires a lot

of time, and the conviction that corporate culture does not support EBP are additional significant obstacles that are preventing the implementation of EBP.[14] Many research findings has also shown that managers and leaders face difficulties in promoting EBP, such as resistance to EBP [15]and a lack of expertise in leading EBP.[16,17,18,19]

Clinical nurses, leaders in healthcare and professional organizations can create and maintain EBP infrastructures and cultures to support EBP. With this support, nurses providing oncology care can apply new research and findings, resulting in EBP patient care techniques that can enhance cancer survivors' treatment, recovery, and quality of life. Professional nursing organizations are uniquely positioned to address the gap between excellent care and new knowledge, and they have a significant role to play in advancing evidence-based practice.[20]

According to Rosenzweig et al[21] the Oncology Nursing Society (ONS) encourages the creation of new information through research and the mentoring of research scientists in their fields. At the point of care, ONS also creates evidence-based materials for members and others to utilize. Since creating an EBP resource section on its website in 2001, ONS has taken the lead in EBP activities. These materials eventually changed to the ONS Putting Evidence into Practice (PEP) resources, which assessed and ranked the most recent data on 20 pertinent cancer symptoms, side effects, and the stress and burden on caregivers. Although PEP tools have been there for over 15 years, very less is known about oncology nurses' current EBP knowledge, beliefs, self-efficacy, and practice.[22]

In context to Nepal, till to date Nepal Nursing Council still do not have a provision to register the oncology specialist nurses. There are many sub-speciality area with in the oncology nursing where nurses can make a treatment decision like, enterostomal therapy, palliative nursing, breast nursing, chemo-nursing, Peripherally inserted Central Catheter(PICC) nursing, radiation oncology nursing etc. Unfortunately there is no existence of oncology nursing society in Nepal, which may play a crucial role to advance the oncology nursing in better implementation.

Individuals with life-threatening illnesses and their families will be directly impacted by the knowledge, attitudes, and practices of nurses. It is essential to evaluate nurses' knowledge, attitudes, and behavior about evidence-based practice in oncology settings and assist them in deepening their understanding of this concept in order to effectively customize nursing education and practice.

## Methods and Material

Cross sectional analytical study was carried out to identify the knowledge, attitude and practice of nurses working at BP Koirala Memorial Cancer, Bharatpur Chitwan. Population of the study was registered nurses having more than six month work experience in different department. Simple random sampling technique ( lottery method) was used to select the sample**.** Sample size calculation was done by Raosoft sample size calculator. Considering the prevalence rate of EBP knowledge 26.1%[23],the margine of error 5%, confidence level 95%, and population size 237, calculated Sample size was 132. By adding the 10 % non response rate, required sample size was 132+13= 145 and actual sample size was 139. Ethical approval was taken from IRC BP Koirala Memorial Cancer Hospital. Data collection was done on July to august 2024.

## Instrument Consisted of Three Parts

**Part I:** Socio-demographic information of the oncology nurses

**Part II**: Consisted of nine research related questions in yes no format. One number was assigned for Yes response and 0 number was assigned for No response.

**Part III:** A self-administered Evidence-Based Practice Questionnaire (EBPQ) was used to explore respondents' practice, knowledge, attitude and use associated with EBP. This data collection tool was developed by Upton and Upton in the United Kingdom to assess the EBP knowledge, attitudes, and practice among nurses. This instrument identified through literature review and previously published studies is a self report scale which explores the day-to-day use of EBP. [23] This tool has three subscales: practice of EBP, attitudes towards EBP, and knowledge associated with EBP. The practice subscale has six items, the attitude subscale has four items, and the knowledge subscale has 14 items. All items were scored from one to seven with a higher

score indicating a more positive attitude towards EBP, greater use (practice), and good knowledge of EBP respectively. Each subscale, of these three subscales, were totaled. Therefore, the total score for the practice subscale was ranged from 6-42, for the knowledge subscale from 14-98 and for the attitude subscale was ranged from 4-28.

There are no established standards and criteria for dividing knowledge, attitude and practice into poor, moderate, and good categories as they are believed to be latent variables.

For comparison, we converted the scores of each dimension into standardized scores and, based on the experience of previous researchers [24], defined standardized score less than 60% as poor, 60% to 79 %as moderate and more than scores79% as good . The calculation formula is as follows: Standardized score for each dimension=actual score for this dimension/theoretical maximum×100.[3]

## Findings

### Socio-demographic Variables

Out of 139 respondents, all of them were female. Mean age of the respondents was 31.9712 sd±7.30390 where minimum age found to be 20 years and maximum was 55 years. In regards to marital status (103) 74.1% of the respondents were married, remaining (36) 24.9% were unmarried. In terms of education more than half ( 79) 56.8% of respondents had Bachelor in Nursing Science (BNS) degree, (34) 24.5% had Bachelor of Science in Nursing degree,(16) 11.5% had proficiency certificate level degree and remaining (10)7.2% had master degree. The mean year of experience was = 8 years sd±6.77809 with minimum 6 month, Maximum=28 years. Regarding working area **(59)**42.4% were working in surgical oncology department, (45) 32.3% were working in medical department, (10)7.2% were working in radiation department,(9) 6.47% were working in urgent care unit, remaining (8)5.75% in hospice and palliative unit, and (8) 5.75% in OPD and prevention department respectively**.** In terms of designation, most of the respondents (106) 76.25% were working in staff nurse post, (17) 12.2% of the respondents were working in senior staff nurse post, (10)7.2% nursing officer and least number of respondents (6) 4.3% had senior nursing officer post.

### Research Related Variables

Almost all 98.2% of the respondents had not received training on evidence based nursing practice. Only 23% of the respondents had participated in research related conferences. Similarly, 88.5% of the respondents had conducted the research, among them 89.4% had done only one time for their academic requirement. Remaining 10.4% had done more than one time in search of evidence. So like 88.5% of the respondents reported that their organization has library facilities and 60.4% said that they have internet facilities in their organization. Only 23.7% of the respondents had practice of reading research article frequently, remaining 77.3 % rarely read the research article. In regards to the organizational activities related to research, 58.8% respondents reported that their organization conduct the research related activities and few number (13.9%) got opportunity to participate in research related activities within the organization. Very few (3.6%) respondents reported that their organization support financially for research.

Table 1: Respondents Level of Knowledge, Attitude and Practice on Evidence Based Practice ( N=139)

| Variables | Frequency | Percentage |
|---|---|---|
| Level of Knowledge | | |
| Poor | 48 | 34.5 |
| Fair | 33 | 23.5 |
| Good | 58 | 41.7 |
| Level of Attitude | | |
| Negative | 43 | 30.9 |
| Neutral | 40 | 28.8 |
| Positive | 56 | 40.3 |
| Level of Practice | | |
| Poor | 48 | 34.5 |
| Fair | 33 | 23.7 |
| Good | 58 | 41.7 |

Table 1 shows the level of knowledge, attitude and practice of respondents on evidence based practice. In three sub scale of evidence based practice, Good level of knowledge 41.7%, positive attitude 40.3%and good practice 41.7% was found to be on less than fifty percent of the respondents. Poor level of knowledge, negative attitude and poor practice was 34.5%, 30.9% and 34.5% respectively. Fair level of knowledge, neutral attitude and fair practice was reported 23.5%, 28.8% %23.7% respectively.

Table 2: Association of Level of Knowledge Attitude and Practice with Educational Status of Respondents (N=139)

| Variables | Educational status | | | | Total | $X^2$ P= Value |
|---|---|---|---|---|---|---|
| **Level of knowledge** | PCL | BNS | Bsc | MN | | |
| Poor | 14 | 16 | 10 | 1 | 41 | .000 |
| Fair | 1 | 29 | 12 | 0 | 42 | |
| Good | 1 | 34 | 12 | 9 | 56 | |
| **Level of Attitude** | | | | | | .000 |
| Negative | 14 | 19 | 9 | 1 | 43 | |
| Neutral | 1 | 22 | 15 | 2 | 40 | |
| Positive | 1 | 38 | 10 | 7 | 56 | |
| **Level of Practice** | | | | | | .000 |
| Poor | 15 | 26 | 6 | 1 | 48 | |
| Fair | 1 | 18 | 11 | 3 | 33 | |
| Good | 0 | 35 | 17 | 6 | 58 | |

Table 2. shows that knowledge, attitude and practice is significantly associated with level of education of the respondents ( p=.000) at 0.05 level of significance.

Table 3: Association Between Designation and Level of Knowledge, Attitude and Practice(N=139)

| Variables | Designation | | | | Total | $X^2$ (P Value) |
|---|---|---|---|---|---|---|
| **Level of knowledge** | Staff Nurse | Senior staff nurse | Sister | Senor Sister | | |
| Poor | 36 | 3 | 2 | 0 | 41 | .068 |
| Fair | 33 | 7 | 1 | 1 | 42 | |
| Good | 37 | 7 | 7 | 5 | 56 | |
| **Level of Attitude** | | | | | | .145 |
| Negative | 38 | 3 | 2 | 0 | 43 | |
| Neutral | 31 | 6 | 2 | 1 | 40 | |
| Positive | 37 | 8 | 6 | 5 | 56 | |
| **Level of Practice** | | | | | | .197 |
| Poor | 42 | 4 | 2 | 0 | 48 | |
| Fair | 21 | 7 | 3 | 2 | 33 | |
| Good | 43 | 6 | 5 | 4 | 58 | |

Table 3 Shows that there exist no significant association between designation of respondents with knowledge, attitude and practice on evidence based practice.

Table 4: shows there exist significant correlation between knowledge attitude and practice among respondents on evidence based nursing practice. Respondents' practice has significantly positive correlation with attitude (r=.774 & p=.000). Similarly knowledge of the respondents positively correlated with practice significantly ( r=.765 & p=.000). So like attitude of the respondents is positively correlated with knowledge at statistically significant level.( r=.891 and p= .000).

Table 4: Correlation between Knowledge Attitude and Practice and Working Experience

| Variables | Practice | Attitude | Knowledge | Experience |
|---|---|---|---|---|
| Practice on evidence based Practice | 1 | r=.774** P=.000 | r=.765** p=.000 | |
| Attitude on Evidence Based Practice | r=.774** p=.000 | 1 | r=.891 p=.000 | |
| Knowledge on Evidence Based Practice | r=.765** p=.000 | r=.891** p=.000 | 1 | |
| Working Experience | r=.176* p=.039 | r= .219** p=.009 | r=.164 p=.054 | 1 |
| **Correlations is significant at P < 0.01 level ( 2 tailed)<br>*Correlation is significant at 0.05 Level ( 2 tailed) | | | | |

There is a weak correlation of work experience with, attitude and practice where, r=.219 p=.009, r=176 p=.039 respectively. Knowledge was not correlated with year of experience.

## Discussion

To the best of our knowledge this is the first study to identify the knowledge attitude and practice regarding evidence based practice among oncology nurses in Nepal. Oncology nursing is the specialized area of nursing where nurses involved in the care from prevention to the diagnosis, treatment, palliation and care of survivors. In three sub scale of evidence based practice, level of knowledge was categorized in three level namely good, moderate and poor. Present study findings revealed good level of knowledge reported by 41.7% of respondents , which is higher in percentage in comparison of poor knowledge that is 34.5% . This findings is not much similar with the findings from ONS survey in USA which reported that ,EBP Knowledge found to be poor in the study conducted among oncology nurses in united states. [25] There are many studies reporting the EBP knowledge among general nurses in Nepal, EBP knowledge was found to be inadequate and moderate level.[23,26]

In regards to the attitude of respondents, less than fifty percent( 40.3%) of the respondents had positive attitude towards the evidence based practice. One third of the respondents had negative attitude towards the evidence based practice. This findings is contrast with the findings from china study which reveal that Chinese oncology nurses seem to have more positive attitudes towards advance care planning, but they do not prepare adequately in practice.[27] Findings from Nepalese study of general nurses reveal that, moderate level to negative attitude towards the evidence based practice[23,26] in contrast Iranina study on EBP revealed positive attitude of the nurse and midwife. Furthermore, different study reported that, general nurses have positive attitude towards evidence based practice but their knowledge and implementation of EBP are limited. [28,29]

Present study depict that , only 41.7% respondents reported they had good level of practice , 23.7% had fair level of practice and 34.5% had poor practice on eveidence based practice. This findings is supported by oncology nursing society survey reported that oncology nurses have deficit in EBP skill[25]. Furthermore present study findings is similar with the Nepalese study on general nurses reported poor and moderate level of practice.[23,26]

Findings further reported that there exist strong correlation between knowledge attitude and practice among respondents on evidence based nursing practice. Respondents' practice-attitude has significant positive correlation (r=.774 & p=.000). Similarly knowledge-practice found to be positively correlated at statistically significant level ( r=.765 & p=.000). So like Knowledge- attitude of the respondents is positively correlated at statistically significant level.( r=.891 and p= .000). This finding is similar with the findings from Nepalese study which was conducted among general nurses, which revealed that there was statistically strong relation between knowledge –attitude ( p=0.038), knowledge –practice ( p=0.003) and practice attitude ( p=0.001).[23]

In terms of education more than half (56.8%) of respondents had Bachelor in Nursing Science (BNS) degree, 24.5% had Bachelor of Science in Nursing degree, 11.5% had proficiency certificate level degree and remaining 7.2% had master degree. Education was associated with higher EBP competency (Knowledge p=.000 attitude p=.000 and practice p=.000) in the current study and consistent with the findings from oncology nursing society survey.[25] Both studies revealed that higher degree holder had positive attitude towads EBP, good level of knowledge and good practice in their clinical setting. Oncology subjects are not taught as independent subjects in undergraduate curriculum and least credit hour contents are included in bachelor level curriculum with limited clinical exposure in almost all university curriculums except BNS Oncology of Pokhara Univrersity context to Nepal. Review from Asia Pacific Journal also identified the need of teaching oncology as independent subjects to frontline worker, specific oncology nursing subjects would better prepare nurses for cancer care.[30]

The mean year of experience was = 8 years sd±6.77809 with minimum 6 month, Maximum=28 years. Present study findings reported that there is a weak correlation of work experience with knowledge, attitude and practice where r=.164,r=.219,r=176 respectively. Research report from different setting reported the contrast findings, nurses with longer duration of work experience tends to have better knowledge, attitudes and practice.[31,32,33] Furthermore Melnyk et al reported moderate EBP competency with Knowledge has positive association between EBP competency and culture.[16]

In terms of designation, most of the respondents (76.3%) were working in staff nurse post. In Nepalese context, staff nurse is the post for frontline nurse worker. Current research findings shows that there exist no significant association between designation and level of knowledge, attitude and practice. Sometimes frontline nurses may be reluctant to involved in research when they are facing a shortage of manpower and overwhelmed by the work load / additional work imposed by the institution.[34]

Present study revealed that almost all 98.2% of the respondents had not received training on evidence based nursing practice. Nurses should be provided the mentorship and support to obtain continueing education about how to engage in EBP and about implementing EBP changes.[35] Findings of the present study further reported that, only 23% of the respondents had participated in research related conferences. In Nepal oncology nursing society/ association is not existed till to date. Asian oncology

nursing society is the major venue for sharing the research related findings in the field of oncology nursing in Asian continent.[36] The oncology nursing society USA annual congress is another major venue for presenting the cutting edges research in the field of oncology nursing throughout globe but not accessible to Nepalese nurses. Additionally, the europian oncological society host their regular symposia where their emerging studies on patient centered care and nursing interventions are discussed again there is a issue of accissibility.[37]

Present study reported that, 88.5% of the respondents had conducted the research, among them 89.4% had done only one time for their academic requirement. Remaining 10.4% had done more than one time in search of evidence. The Most common type of research design conducted by respondents was descriptive, which only can describe the phenomena. So it is necessary to use the more rigorous experimental and analytical studies using the theoretical framework to generate the evidence for appropriate practice. Findings of the study is consistent with the integrative study from Korea, reported that 75% of the research conducted by nurse were descriptive and recommended for experimental design. It is recommended that, more rigorious studies must be conducted to produce visible outcome and scientific evidence.[30]

Present study findings revealed that 88.5% of the respondents reported their organization has library facilities and 60.4% said that they have an internet facilities in their organization but only 23.7% of the respondents had practice reading research article frequently. In regards to the organizational activities related to research, 58.8% respondents reported that their organization conducted the research related activities and few number (13.9%) got opportunity to participate in research related activities within the organization. Very few (3.6%) respondents reported that their organization support financially for research. Lack of time to formulate, cary out and disseminate research are among the top barriers across the multiple studies.[38,39] Nurses job often require that 100% of their time be spent performing direct patient care, with limited or no paid time away from clinical responsibilities. Nurses involvement in research may also be hindered by insufficient institutional support. Institutional support for nursing research may vary widely by working area and academic affiliation.[40]

**Conclusion**: Research findings reported the strong correlation between knowledge attitude and practice, acknowledged that there exist a gap of full preparation in the EBP process to engage in and implement EBP consistently. Nurses working in the oncology setting should be provided the mentorship and support to obtain continuing education for better implementation of evidence based practice in their working institutions.

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