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Knowledge, Attitudes, and Perceptions of Barriers towards Evidence Based Practice among Nurses in Menoufia University Hospital

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Abstract: **Nowadays, increasing number of researches focus on Evidence Based Practice (EBP) in order to achieve higher quality of patient care. Aim: The study aim was to assess nurses' knowledge, attitude, and perceptions of barriers towards evidence-based practice in Menoufia University Hospital. Design: Descriptive research design was utilized to achieve the aim of this study. Setting: the study was conducted at different units at Menoufia University Hospital. Sample: A convince sample of 100 nurses Tools: three tools were utilized to collect the data.: An interviewing questionnaire to assess demographic data and assessing knowledge of the EBP, Evidence-Based Practice Attittude Scale and Evidence-Based Practice Barriers Scale .Result: illustrated that participants had positive attitudes towards evidence-based practice. Regarding knowledge, more than two thirds of nurses don't had knowledge about evidence based practice. There are many barriers for implementing evidence-based practice as time,knowledge,administration not allow implementation of evidence-based practice and the nurse does not capable of evaluating the quality of the research.Conclusions:the findings from this study concluded that nurses had positive attitudes towards EBP, their knowledge were limited,and there are many barriers for implementing EBP .Recommendations:Ongoing education for nurses regarding research and technological skill is needed to support research implementation in clinical setting.**

Keywords: **Nurses' Knowledge, Attitudes, Perceptions of Barriers &Evidence Based Practice.**

1. INTRODUCTION

Evidence-based practice has become a worldwide concern for healthcare staff and administrators as well as researchers. Evidence-based practice has been considered as critical element to improve quality of health services and achieving excellence in patient care. The implementation of Evidence-based practice in clinical environments has been challenging. In nursing profession, EBP has gained its importance by influencing the knowledge and practice of nurses . Evidence-based practice is the integration of the best current evidence for clinical decision making process . It serves as an approach for problem- solving and a framework for decision making to answer emerging clinical questions . While considering the patient's values and practitioner's own views .Therefore, EBP has been considered as critical element to improve quality of health services and achieving excellence in patient care . Furthermore, EBP is considered as a keystone for health care quality . (1-3)

Also, the importance of EBP has been shown as a reason behind 28% of improvement in patient outcomes when clinical care was based on evidence rather than traditional practices . Evidence-based practice implementation is associated with all aspects of quality in health care such as efficient use of resources, improvement of patient care, decreasing costs and length of hospital stay, increasing patient satisfaction and elimination of unnecessary practices (4).

Incorporating EBP throughout a nurse's education and clinical experiences develops more advanced critical thinking and decision-making skills. Nurses are better able to adapt to situations, utilize informatics and work in interdisciplinary teams. They also feel a greater sense of confidence and pride in their work and have higher job satisfaction (5,6)

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Evidence-based practice (EBP) is the process of collecting, processing, and implementing research findings to improve clinical practice, the work environment, or patient outcomes. According to the American Nurses Association (ANA), nursing interventions should be practical, methodical decisions based on EBP research studies. Utilizing the EBP approach to nursing practice helps us provide the highest quality and most cost-efficient patient care (7).

Evidence-based practice (EBP) is a process involving the examination and application of research findings or other reliable evidence that has been integrated with scientific theories .The nurses apply this process by using their critical thinking skills to review research publication and other sources of information .After the information is evaluated ,nurses use their clinical decision –making skills to apply evidence to patient care and patient preferences and needs are the basis of care decision (8).

Evidence-based practice involves the incorporation of three components to improve outcomes and quality of life. External evidence includes systematic reviews, randomized control trials, best practice, and clinical practice guidelines that support a change in clinical practice. Internal evidence includes health care institution based quality improvement projects,outcome management initiatives, and clinical expertise. Patient preferences and values is the third component of this critical equation (5,9).

Nursing research is important because it leads to an increase in knowledge about nursing practice, administration and education.Traditionally, nurses have based patient care on a variety of factors including trial and error, authority instruction, personal experience,intuition and reasoning. Evidence-based practice in nursing closes the gap between scientific evidence and experiential evidence. Nurses have to decide if the evidence is applicable for specific patients. Clinical expertise helps nurses weigh the risks and benefits of treatments for patients and takes into account each patient's unique circumstances, including diagnoses, comorbidities and preferences. This integration of knowledge and experience leads to better patient outcomes, safer, more efficient and effective care(10).

An investigation carried out by the National Board of Health and Welfare in Sweden (2008) revealed that 8.6% of patients were injured during hospital care. These injuries were judged to have been avoidable if actual knowledge had been applied. In order to reduce injuries caused by the lack of use of knowledge, evidence-based practice needs to be implemented (11).

Recent literature has reported that there are a gaps between research and nursing practice and has identified barriers that prevent the translation of evidence to clinical practice. These barriers to applying evidence-based nursing practice have been consistent across studies. The greatest barriers were lack of time and lack of skills to find and manage research evidence (12). Other barriers such as Language barriers, inability to access, interpret, and use the research findings, and knowledge deficit about EBP were reported (13,14). In a study that was conducted in Oman; 83% of nurses were moderately successful in searching the internet, while only 36% of the nurse had adequate searching skills using the data bases (13). Also the findings indicated that nurses had lower scores on knowledge and skills, and moderate scores on attitudes. Another study in the Kingdom of Saudi Arabia reported that a moderate knowledge about EBP in nurses, however the positive attitudes toward EBP was lacking (15). Furthermore, despite growing numbers of nurse researchers and studies designed to improve practice at the staff nurse level, many nurses lack research knowledge, skills and understanding. Also nurses not have formal computer and library training, making scientific evaluation very difficult (16).

Institutional barriers to EBP have also been identified. In addition to lack of financial resources, healthcare organizations may have higher-priority goals, such as recruiting and retaining staff .Other institutional barriers as lack of interest by administrators, lack of research consultants and lack of support (16).

Nurses implementing EBP needs skills such as conducting literature searches and evaluating evidence .Knowledge, skills, attitudes and practice are the basic of implementing EBP.Findings from previous studies indicated that nurses' knowledge, attitudes and beliefs about EBP can play a crucial role to the extent to which EBP is implemented (17). To meet the 2020 goal, nurses must become proficient in evaluating various types of EBP research because they provide effective, proven rationales for nursing actions. As the nurses incorporate this new knowledge into their clinical practice and work areas, they become a role model and a positive change agent(18).

Aim : The study aim was to assess nurses' knowledge, attitude, and perceptions of barriers towards evidence-based practice in Menoufia University Hospital.

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Research questions:

1- What are nurses' attitudes toward EBP?

2- What are nurses' knowledge/skills of EBP?

3- What are the nurses' perceptions of barriers to implementation of Evidenced-based practice

2. SUBJECTS AND METHOD

Design :Descriptive research design was utilized to achieve the aim of this study.

Setting: the study was conducted at different units at Menoufia University Hospital(Oncology ,Medicine and Surgical Unit).

Sample: A convince sample of 100 nurses who agreed to participate in the study and met the following inclusion criteria were included: 1) has been working at least one year, and 2) signed an informed consent.

Tools: three tools were utilized to collect the data.:

Tool I:An interviewing questionnaire to assess :

Part one :Demographic data such as age,gender ,years of experince ,working department ,education andwork shift.

Part two : Questionnaire to assess level of knowledge/skills of evidence based practice. Ten questions for assessing knowledge of the EBP. Scoring :1=know; 0=dont know ,Thus possible knowledge scores could range from 0-10.No knowledge =0, Low level of EBP knowledge= 1-3, average level of EBP knowledge= 4-6 and high level of EBP knowledge= 7-10

Tool II: Evidence-Based Practice Attittude Scale :Attitude toward EBP. Aarons's (2004) (19).Evidence-Based Practice Attitude Scale (EBPAS) had 6 items designed to measure attitudes about adopting new or different therapies or interventions. The answers to these Likert questions were rated on an ordinal scale so that 1 = strongly disagree; 2 = disagree; 3= neither agree nor disagree ;4 = agree and 5 = strongly agree .This questionair was estamated by the total number of responses by the participants. The higher the score the higer agreement .

Tool III: Evidence-Based Practice Barriers Scale .it was adopted from (20).It contains 29 items used to explore the perceived barriers to research use and identify the variables that were related to research use .

There are four factors :

(i) characteristics of the adopter(N, nurse)(eight items),

(ii) characteristics of the organization (S, setting barriers and limitations)(eight items),

(iii) characteristics of the innovation (R, quality of the research)(seven items),

(iv) characteristics of the communication (P, presentation and accessibility of the research)(six items)

The characteristics of the adopter measured the nurses' values, skills, and awareness of research. The characteristics of the organization measured the nurses' perception about limitations and barriers in the work setting .The characteristics of the innovation measured nurses'perceptions of the quality of research. The characteristics of the communication measured nurses' perceptions about the presentation and accessibility of the research. The answers to these Likert questions were rated on an ordinal scale so that 1 = strongly disagree; 2 = disagree; 3= neither agree nor disagree ;4 = agree and 5 = strongly agree .This questionnaire was estimated by the total number of responses by the participants. The higher the score the higher agreement . The internal consistency reliability of the tool was tested using Cronbach's alpha coefficient .Cronbach's alpha coefficients for the four factors on the BARRIER Scale were found to be 0.65to0.80.Cronbach' alpha is an index of the degree to which all of the different items in a scale measure the same attribute (21).

Method

1- A written permission was obtained from head manager of the hospital to proceed with the study after explaining the aim of the study.

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2- Tools development: The first are constructed by the researchers after reviewing the relevant literature (22)., the second tool was constructed by Aarons's (19).and the third tools by Funk (20).and all tools were tested for content validity by 5 experts specialized in Medical Surgical Nursing to ascertain relevance and completeness. Then these tools were tested for reliability by using a test- retest method and Pearson correlation coefficient formula was used. It was found to be 0.82for tool one and 0.89for tool two .Modifications were done accordingly to ascertain relevance and completeness

3- Ethical consideration: a clear and simple explanation about the nature and aims of the study was given to each participant. After that, an written consent was obtained from each participant to get his/ her acceptance as well as cooperation. All participants were informed about confidentiality of the data and used only for research purposes and they have the right to withdraw from the study at any time without any effect on their work.

4- Prior to the actual study, a pilot study was conducted on 10% of the study sample (10 nurses) to test study tools for its clarity, feasibility and applicability and determine the required time to fulfill theses tools and then necessary modifications were carried out accordingly.Those who shared in the pilot study were excluded from the study sample.

5- Data collections :

- Data were collected over a period of 2 months from the beginning of January to the end of February 2019.
- Questionnaires were distributed by the researcher individually to all participant in their units. Participants were asked to return the completed questionnaires within one week.

Statistics

The data collected were tabulated & analyzed by SPSS (statistical package for the social science software) statistical package version 20 on IBM compatible computer.

Two types of statistics were done:

1) Descriptive statistics: were expressed as mean and standard deviation (X+SD) for quantitative data or number and percentage (No & %) for qualitative data.

2) Analytic statistics:

1- Student t- test (parametric test): is a test of significance used for comparison between two independent groups of normally distributed quantitative variables.

2-ANOVA test (parametric test): is a test of significance used for comparison between more than two independent groups of normally distributed quantitative variables.

3-Pearson correlation: is a test of significance used for quantitative variables that were normally distributed.

P-value at 0.05 was used to determine significance regarding:

- P-value > 0.05 to be statistically insignificant.
- P-value ≤ 0.05 to be statistically significant.
- P-value ≤ 0.001 to be highly statistically significant.

Table (1): Demographic characteristics of the study participant (n=100)

Demographic characteristics	study participant (n=100)	
	No.	%
Age (years):		
< 30	24	24.0
30 - 40	56	56.0
> 40	20	20.0

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Gender: Male Female	 4 96	 4.0 96.0
Education: Associates Bachelors	 16 84	 16.0 84.0
years of experience: 5-10 years More than 10 years	 84 16	 84.0 16.0
Work setting: Oncology department Medical department Surgical department	 40 32 28	 40.0 32.0 28.0
Work shift: Day Night	 48 52	 48.0 52.0

Table (1) In relation to age , 56%of the study participants their ages from 30-40years , 96% of the study participant were female, 84% of the study participants had bachelors and 5-10 years of experience .Regarding to work shift 52%of the study participants had night shift and 40% of nurses were working in oncology department.

Figure (1) distribution of level of nurses knowledge regarding evidence based practice .

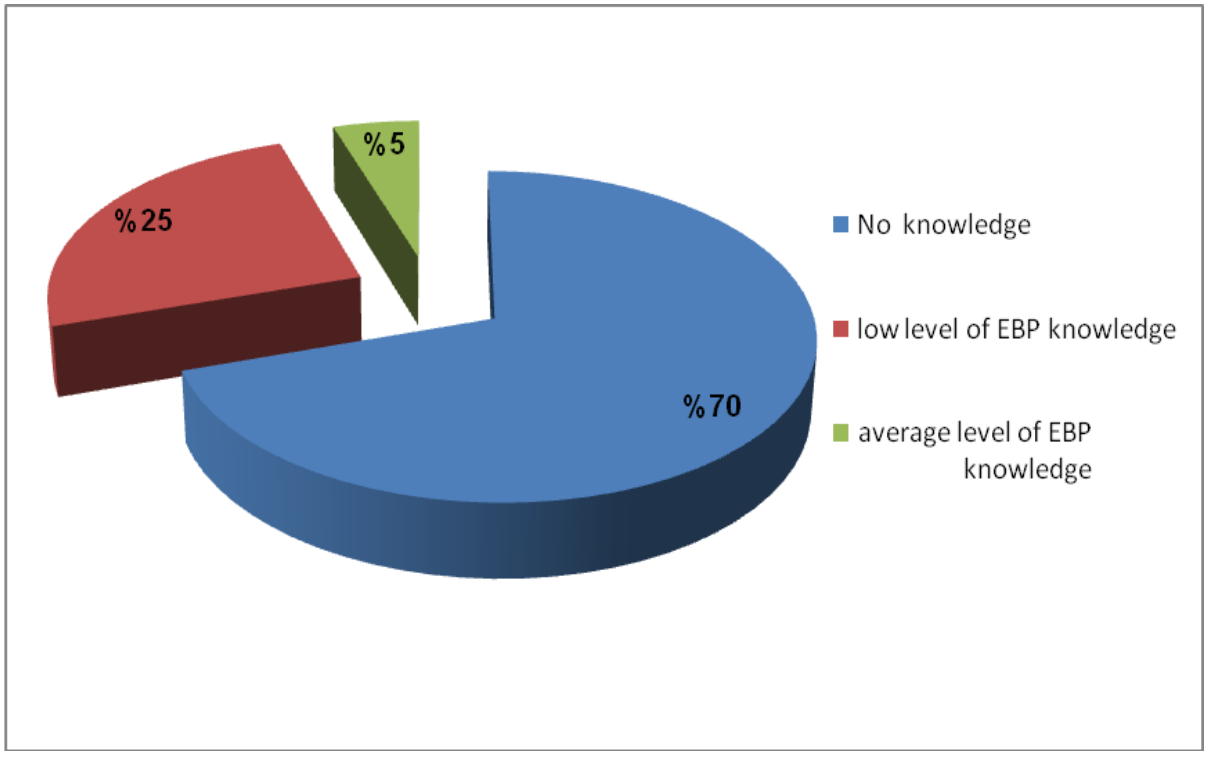

Figure (1) : Shows that more than two thirds of nurses (70%) don't had knowledge about evidence based practice.

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Figure (2):distribution of level of nurses knowledge regarding evidence based practice according their age.

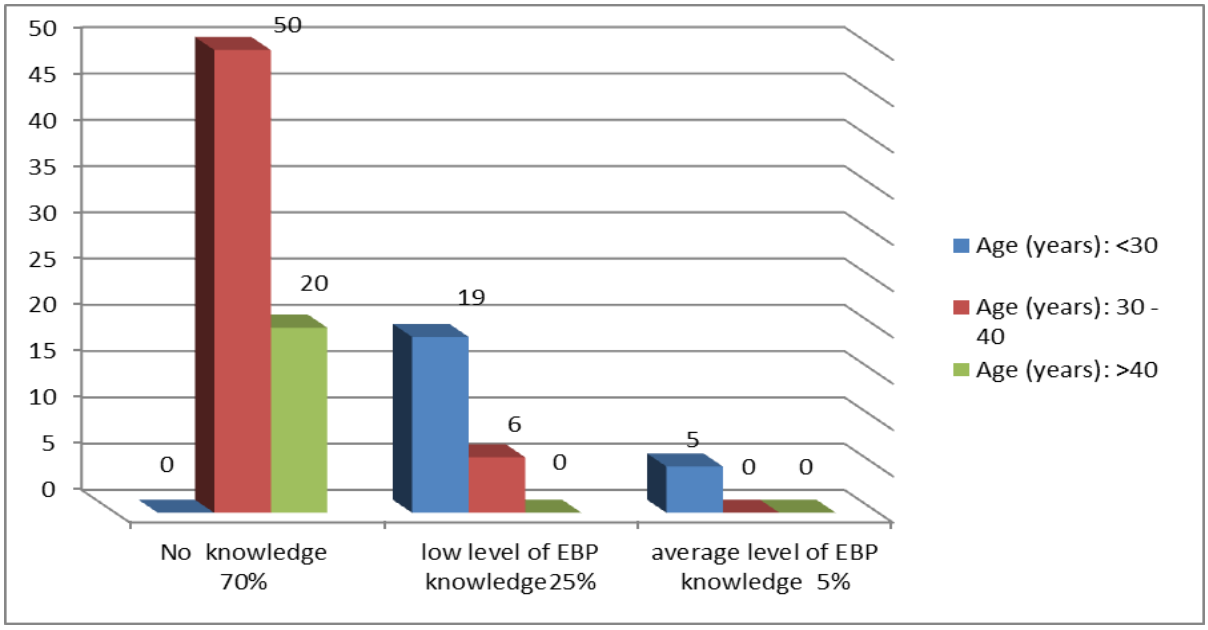

Figure (2): Shows that 50% and 20% of the nurses in age group30- 40 and more than 40 years respectively don't had knowledge about evidence based practice.While19% and 5%of the nurses in age group less than30 years had low level and average level of EBP knowledge respectively.The older nurses don't had knowledge about evidence based practice compared to younger nurses.

Table (2): Mean and frequency distribution regarding attitudes of nurses toward EBP (n=100)

How much do you agree with the following items?	Strongly Disagree NO (%)	Disagree NO (%)	Neither agree nor disagree NO (%)	Agree NO (%)	Strongly Agree NO (%)	Mean ± SD
Using evidence-based practice is necessary in my daily work.	0 (0.0)	4 (4.0)	12 (12.0)	68 (68.0)	16 (16.0)	3.96±0.66
Literature and research findings are useful in my daily work	0 (0.0)	4 (4.0)	16 (16.0)	56 (56.0)	24 (24.0)	4.0±0.75
I know better than academic researchers how to care for my clients.	0 (0.0)	0 (0.0)	0 (0.0)	48 (48.0)	52 (52.0)	4.52±0.50
I am willing to use new and different types of EBP/Interventions developed by researchers	0 (0.0)	0 (0.0)	16 (16.0)	68 (68.0)	16 (16.0)	4.0±0.56
My professional/clinical experience is more important than using EBP/Interventions.	0 (0.0)	16 (16.)	20 (20.0)	48 (48.0)	16 (16.0)	3.64±0.93
I would try a new EBP even if it were very different from what I am used to doing.	0 (0.0)	16 (16.0)	12 (12.0)	56 (56.0)	16 (16.0)	3.72±0.92
Total score						23.84±1.57

Table (2): According to nursing attitude toward EBP ,the table illustrated that 68%of nurses agreed regarding using evidence-based practice is necessary in my daily work and I am willing to use new and different types of EBP/Interventions developed by researchers.56% of them agreed that literature and research findings are useful in my daily work and I would try a new EBP even if it were very different from what I am used to doing. While 48% of nurses agreed that I know better than academic researchers how to care for my clients and my professional/clinical experience is more important than using EBP/Interventions.

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Table (3): Mean and frequency distribution regarding barriers related to application of EBP(n=100).

How much do you agree with the following items?	Strongly Disagree NO (%)	Disagree NO (%)	Neither agree nor disagree NO (%)	Agree NO (%)	Strongly Agree NO (%)	Mean ± SD
Organizational factors						
There is insufficient time on the job to implement new ideas	0 (0.0)	0 (0.0)	0 (0.0)	12 (12.0)	88 (88.0)	4.88±0.32
The nurse does not feel she/he has enough authority to change patient care procedures	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	100 (100.0)	5.0±0.75
Administration will not allow implementation	0 (0.0)	0 (0.0)	0 (0.0)	48 (48.0)	52 (52.0)	4.68±0.50
Physicians will not cooperate with implementation	0 (0.0)	0 (0.0)	16 (16.0)	40 (40.0)	44 (44.0)	4.28±0.56
The nurses does not have time to read research	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	100 (100.0)	5.0±0.93
The facilities are inadequate for implementation	0 (0.0)	12 (12.0)	12 (12.0)	40 (40.0)	36 (36.0)	4.0±0.92
Other staff are not supportive of implementation	0 (0.0)	0 (0.0)	0 (0.0)	72 (72.0)	28 (28.0)	4.28±0.93
The nurse feels results are not generalisable to own setting	12 (12.0)	12 (12.0)	16 (16.0)	32 (32.0)	28 (28.0)	3.52±0.92
Score of organizational factors						**35.64±2.82**
Individual factors						
The nurse does not feel capable of evaluating the quality of the research	0 (0.0)	0 (0.0)	0 (0.0)	12 (12.0)	88 (88.0)	4.88±0.32
The nurse sees little benefit for self	0 (0.0)	12 (12.0)	24 (24.0)	32 (32.0)	32 (32.0)	3.84±1.01
The nurse is unwilling to change/try new ideas	12 (12.0)	36 (36.0)	32 (32.0)	20 (20.0)	0 (0.0)	2.60±0.94
There is no documented need to change practice	0 (0.0)	0 (0.0)	0 (0.0)	16 (16.0)	84 (84.0)	4.84±0.36
The nurse feels the benefit of changing practice will be minimal	0 (0.0)	28 (28.0)	28 (28.0)	44 (44.0)	0 (0.0)	3.16±0.83
The nurse is isolated from knowledgeable colleagues with whom to discuss the research	0 (0.0)	0 (0.0)	20 (20.0)	40 (40.0)	40 (40.0)	4.20±0.75
The nurse is unaware of the research	0 (0.0)	4 (4.0)	12 (12.0)	20 (20.0)	64 (64.0)	4.44±0.85
The nurse does not see the value of research for practice	0 (0.0)	24 (24.0)	32 (32.0)	44 (44.0)	0 (0.0)	3.20±0.80
Score of individual factors						**31.16±2.12**

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Communicational factors						
Statistical analysis is not understandable	0 (0.0)	0 (0.0)	0 (0.0)	12 (12.0)	88 (88.0)	4.88±0.32
The relevant literature is not compiled in one place	24 (24.0)	12 (12.0)	20 (20.0)	44 (44.0)	0 (0.0)	2.84±1.22
Research reports/articles are not readily available	0 (0.0)	0 (0.0)	0 (0.0)	8 (8.0)	92 (92.0)	4.92±0.27
The research is not relevant to the nurse's practice	16 (16.0)	24 (24.0)	52 (52.0)	8 (8.0)	0 (0.0)	2.52±0.85
Implications for practice are not made clear	0 (0.0)	12 (12.0)	20 (20.0)	40 (40.0)	28 (28.0)	3.84±0.97
The research is not reported clearly and readably	0 (0.0)	0 (0.0)	56 (56.0)	16 (16.0)	28 (28.0)	3.72±0.87
Score of communicational factors						**22.72±1.71**
Quality of research						
The research has methodological inadequacies	16 (16.0)	28 (28.0)	56 (56.0)	0 (0.0)	0 (0.0)	2.40±0.75
Research reports/articles are not published fast enough	0 (0.0)	8 (8.0)	72 (72.0)	20 (20.0)	0 (0.0)	3.12±0.51
The conclusions drawn from the research are not justified	0 (0.0)	28 (28.0)	44 (44.0)	28 (28.0)	0 (0.0)	3.0±0.875
The nurse is uncertain whether to believe the results of the research	0 (0.0)	0 (0.0)	48 (48.0)	52 (52.0)	0 (0.0)	3.52±0.50
The research has not been replicated	0 (0.0)	12 (12.0)	88 (88.0)	0 (0.0)	0 (0.0)	2.88±0.32
literature reports conflicting results	0 (0.0)	16 (16.0)	68 (68.0)	16 (16.0)	0 (0.0)	3.0±0.56
The amount of research information is overwhelming	0 (0.0)	0 (0.0)	40 (40.0)	28 (28.0)	32 (32.0)	3.92±0.84
Score of quality of research						**21.84±1.76**
Total score						**111.36±5.92**

Table (3) As regards to **organizational factors**, the table showed that100% of nurses strongly agree that the nurse does not feel she/he has enough authority to change patient care procedures and nurses does not have time to read research. 88 % of nurses strongly agree that there is insufficient time on the job to implement new ideas.72% agree that other staff are not supportive of implementation. Also52 % of nurses strongly agree that the administration will not allow implementation.

In relation to **individual factors** 88% of nurses strongly agree that the nurse does not feel capable of evaluating the quality of the research.84% of nurses strongly agree that there is no documented need to change practice. 64% of nurses strongly agree that the nurse is unaware of the research.

According to **communicational factors** 92% of nurses strongly agree that the research reports/articles are not readily available and 88% of nurses strongly agree that the statistical analysis is not understandable.

In relation to **quality of research** 52% of nurses agree that the nurse is uncertain whether to believe the results of the research. While 88% ,72% ,68% of nurses neither agree nor disagree of the research has not been replicated, research reports/articles are not published fast enough, literature reports conflicting results respectively .

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Table (4): Correlation between nurses` attitude and barriers:

Variable	Total score of nurses` attitude	
	R	P value
Score of organizational factors	-0.36	<0.001 HS
Score of individual factors	-0.02	0.82 NS
Score of communicational factors	0.18	0.06 NS
Score of quality of research	-0.16	0.09 NS
Total score of barriers	-0.17	0.07 NS

r: Pearson correlation

Table (4): Show negative correlation between nurses` attitude with all subscales of barriers except score of communicational factors.

Table (5): Association between demographic characteristics of the studied group and their attitude score:

Demographic characteristics	No.	Mean ± SD	Test of sig.	P value
Age (years): < 30 30 - 40 > 40	 24 56 20	 23.50±1.31 24.01±1.55 23.75±1.88	**F=** 0.94	0.39 NS
Gender: Male Female	 4 96	 22.0±1.41 23.91±1.54	**t=** 2.44	0.01 S
Education: Associates Bachelors	 16 84	 23.62±1.36 23.88±1.61	**t=** 0.59	0.55 NS
years of experience: 5-10 years More than 10 years	 84 16	 23.94±1.52 23.31±1.77	**t=** 1.47	0.14 NS
Work setting: Oncology department Medical department Surgical department	 40 32 28	 24.0±1.73 23.75±1.36 23.71±1.58	**F=** 0.34	0.71 NS
Work shift: Day Night	 48 52	 23.52±1.36 24.13±1.70	**t=** 1.97	0.05 S

F: ANOVA

t: student`s t test

Based on the results from **Table 5**: age , years of experience ,work setting and education does not have any significant correlation with attitude.While there was significant correlation between gender and work shift with attitude.

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Table (6): Association between demographic characteristics of the studied group and their total Evidence based practice barriers score:

Demographic characteristics	No.	Mean ± SD	Test of sig.	P value
Age (years):				
< 30	24	110.0±5.71	**F=**	0.16
30 - 40	56	112.35±6.40	1.84	NS
> 40	20	110.20±4.22		
Gender:				
Male	4	117.0±0.0	**t=**	<0.001
Female	96	111.12±5.92	9.71	HS
Education:				
Associates	16	116.25±1.34	**t=**	<0.001
Bachelors	84	110.42±6.0	7.91	HS
Years of experience:				
5-10 years	84	111.19±6.20	**t=**	0.40
More than 10 years	16	112.25±4.15	0.85	NS
Work setting:				
Oncology department	40	113.80±5.19	**F=**	<0.001
Medical department	32	135.75±5.17	37.04	HS
Surgical department	28	105.14±1.75		
Work shift:				
Day	48	116.75±2.74	**t=**	<0.001
Night	52	106.38±2.73	18.24	HS

Table (6) presented that there was a significant correlation between total evidence based practice barriers score and gender ,education ,work setting and work shift. While there was no significant correlation between total evidence based practice barriers score and age and years of experience .

Table (7):Association between demographicc characteristics of the studied group and their Evidence based practice barriers subscales:

Demographic characteristics	Organizational factors	Individual Factors	Communicational factors	Quality of research
	Mean ± SD	**Mean ± SD**	**Mean ± SD**	**Mean ± SD**
Age (years):				
< 30	35.0±2.57	30.66±2.25	22.50±2.10	21.83±1.23
30 - 40	36.07±3.08	31.35±1.96	22.92±1.45	22.0±1.98
> 40	35.20±2.19	31.20±2.37	22.40±1.90	21.40±1.66
ANOVA	1.52	0.89	0.95	0.84
P value	0.22 NS	0.41 NS	0.38 NS	0.43 NS
Gender:				
Male	39.0±0.0	33.0±0.0	22.0±0.0	23.0±0.0
Female	35.50±2.79	31.08±2.13	22.75±1.74	21.79±1.78

Student t test	12.25	8.81	4.20	6.62
P value	<0.001 HS	<0.001 HS	<0.001 HS	<0.001 HS
Education:				
Associates	38.50±0.89	32.50±0.89	22.25±0.44	23.0±0.0
Bachelors	35.09±2.74	30.90±2.19	22.80±1.85	21.61±1.84
Student t test	9.11	4.87	2.42	6.84
P value	<0.001 HS	<0.001 HS	0.01 S	<0.001 HS
Years of experience:				
5-10 years	35.47±2.95	31.14±2.22	22.71±1.84	21.85±1.79
More than 10 years	36.50±1.86	31.25±1.52	22.75±0.85	21.75±1.69
Student t test	1.80	0.18	0.07	0.22
P value	0.08 NS	0.85 NS	0.94 NS	0.82 NS
Work setting:				
Oncology department	36.30±3.50	32.0±1.28	23.0±0.78	22.50±1.03
Medical department	35.37±2.82	32.62±1.0	24.0±0.50	21.75±2.14
Surgical department	35.0±1.08	28.28±0.89	20.85±1.99	21.0±1.80
ANOVA	1.98	135.81	53.12	6.67
P value	0.14 NS	<0.001 HS	<0.001 HS	0.002 S
Work shift:				
Day	37.83±1.58	32.50±1.12	23.25±0.93	23.16±0.69
Night	33.61±2.11	29.92±2.07	22.23±2.10	20.61±1.56
Student t test	11.19	7.79	3.17	10.69
P value	<0.001 HS	<0.001 HS	0.002 S	<0.001 HS

Table(7) show that there was a significant correlation between evidence based practice barriers subscales and gender ,education ,work setting and work shift except work setting for organizational barriers there was no significant correlation.While there was no significant correlation between evidence based practice barriers subscale and age and years of experience .

3. DISCUSSION

EBP has become the predominant model of care that has gained recognition for facilitating the transfer of research evidence into clinical practice. Using EBP means integrating the best available information with clinical expertise and patient values to achieve optimal health outcomes .As a consequence, it is a critical way to strengthen the practice of nursing. (23).

The results of this study showed that the majority of the nurses were female this may be due to that males were recently entered the institutions and faculties of nursing in Egypt . More than half of the study participants their ages from 30-40years , and were working in medical and surgical department .The majority of the study participants had bachelors and 5-10 years of experience .

These findings correspond with Mohammed(2019) (24) who found that more than two thirds of the study participant were female , More than half of the study participants their age were less than thirty years and had less than six years clinical experience . The majority of the study participants had bachelors degree and half of nurses were working in medical and surgical unit .Also AbuRuz (2017) (25)found that The mean age of the participants was 28.54 ± 5.24 years and the mean number of years of experience was 6.22 ± 5.03 years. More than half of the sample was females and the majority had bachelors degree. Other study was conducted by Mohsen (2016) (26) who found that two thirds of nurses had more than five years experience and more than half of them had bachelors degree.

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Regarding knowledge level the present study found that more than two thirds of nurses don't had knowledge about evidence based practice. The older nurses don't had knowledge about evidence based practice compared to younger nurses this may be due to younger nurses recently taught EBP in their faculties through undergraduate curricula .These results are in agreement with Mohammed(2019) (24)who found that more half of nurses had beginning level of knowledge regarding EBP. The knowledge level is increased in nurses less than thirty years more than older nurses. AbuRuz (2017) (25)found that older nurses had less knowledge about research compared to younger nurses. Also Jordan (2016) (27) stated that nurses younger than forty years of age had higher level of knowledge regarding research process and EBP than older nurses .

The results of this study indicate that our respondents generally viewed EBP positively and their attitudes towards EBP tended to be more positive than their knowledge of EBP. Less than two thirds of nurses agreed regarding using evidence-based practice is necessary in daily work and I am willing to use new and different types of EBP/Interventions developed by researchers. More than half of them agreed that literature and research findings are useful in daily work and I would try a new EBP even if it were very different from what I am used to doing. These findings suggest that the nurses might have realized the importance of EBP and accepted the necessity for implementing it. These results are in accordance with Malik(2015) (28)who stated that Participants of the study demonstrated positive attitudes towards benefits in changing their practice based on research, and they wanted to access evidence more often than they were. Also these findings correspond with Zhou (2016) (29)who concluded that attitudes towards EBP were more positive than their knowledge, skills and implementation. Karki et al. (2015) (30)and Heydari et al. (2014) (31)stated that The majority of the study respondents demonstrated positive attitudes toward EBP.

In relation to organizational factors the results of the study illustrated that all nurses strongly agree that the nurse does not feel she/he has enough authority to change patient care procedures and nurses does not have time to read research. The majority of nurses strongly agree that there is insufficient time on the job to implement new ideas. More than two thirds agree that other staff are not supportive of implementation. Also more than half of nurses strongly agree that the administration will not allow implementation. An explanation for insufficient time on the job could be that all nursing practices are more tradition based than evidence based, which lead to increased workload. However, it could also be due to poor time management. Additionally, a lack of trained nurses could lead to increased workload and poor time management. Also it may be due to insufficient staffing.

This result was the same consistent with Mohammed(2019) (24) who found that more than two thirds of nurses agree that there is insufficient time on the job to implement new ideas, other health care member are not supportive of implementation of EBP.Around two thirds of nurses reported that the administration will not allow implementation .Karki (2015) (30)stated that the greatest barrier identified was the lack of adequate time and workload release. Also the our study results similar to findings reported from previous studies. (32,33)

In relation to individual factors the current study demonstrated that the majority of nurses strongly agree that the nurse does not feel capable of evaluating the quality of the research, there is no documented need to change practice. More than half of nurses strongly agree that the nurse is unaware of the research. This may be due to nurses not have formal computer and library training, making scientific evaluation very difficult and the internet not avilable in clinical setting for online search of EBP. On the same line other study done by Mohammed(2019) (24) who found that more than two thirds of nurses agree that the nurse is unaware of the research .Karki (2015) (30) found that the two most commonly identified barriers were difficulty in judging the quality of research paper and report and difficulty in finding time at work place to search research articles. Also Khammarnia (2015) (34) stated that more than half of the participants agreed that barriers to implementation of evidence based practice are related to individual aspects, as lack of time to read literature ,lack of ability to work with computer and insufficient proficiency in English language.

According to communicational factors the majority of nurses strongly agree that the research reports/articles are not readily available and the statistical analysis is not understandable. This may be due to nurses not have formal computer and library training, making scientific evaluation very difficult and the internet not avilable in clinical setting for online search of EBP .This result was supported by Shifaza (2014) (23)who found that the majority of nurses reported that difficulty in understanding the statistical analysis, relevant literature not being compiled in one location. In addition, more than half reported that research reports are not readily available.

In relation to quality of research more than half of nurses agree that the nurse is uncertain whether to believe the results of the research. This result was supported by Shifaza (2014) (23) who found that more than half of the respondents felt that "the nurse is uncertain whether to believe the results of research" was not a barrier.

The present study found that age , years of experience ,work setting and education does not have any significant correlation with attitude. While there was significant correlation between gender with attitude. This result was the same consistent with AbuRuz (2017) (25)who found that age and years of experience does not have significant correlation with attitudes. While there was significant correlation between gender with attitude. This result was contradicted with Koehn (2008) (35)&Upton (2006) (36)who found that there was statistically significant difference between attitudes and educational levels .Therefore, the findings may indicate a tendency for nurses with higher education to be more likely to use and value the best available evidence for practice.

The present study found that there was a significant correlation between evidence based practice barriers subscales and gender ,education ,work setting and work shift. while there was no significant correlation between evidence based practice barriers subscale and age and years of experience. This result was in the same line with Khammarnia (2015) (34)who found that educational level, and employment status were associated with organizational barriers to implementation of EBP. At the individual level only education was associated with barriers to implementation of EBP. Also this result was in the same line with Mohammed(2019) (24)who found that there were no significant statistical difference in all items related to professional and institutional barriers among nurses according to their clinical years of experience in the hospital .While this result was contradicted with Khammarnia (2015) (34)who found that age and job experience were associated with organizational barriers to implementation of EBP. This finding is inconsistent with the study done by Mohsen (2016) w(26) who found that there was a statistical significant relation was found between nurses, barriers toward EBP and years of experience .

4. CONCLUSION

The findings of current study provided basic information to hospital managers and educators about the starting point to enhance the use and implement EBP among nurses. This study revealed that more than two thirds of nurses don't had knowledge about evidence based practice. The older nurses don't had knowledge about evidence based practice compared to younger nurses. Nurses had positive attitudes towards EBP. Major barriers to research use were found to be most often related to insufficient time, the nurse does not feel she/he has enough authority to change patient care procedures , the administration will not allow implementation, the nurse does not feel capable of evaluating the quality of the research, the nurse is unaware of the research, the statistical analysis is not understandable and the nurse is uncertain whether to believe the results of the research.

5. RECOMMENDATION

- An educational programme needs to be designed, offering knowledge and developing necessary skills to promote EBP
- Nursing administrators can support nurses by providing time for activities that promote EBP development .
- Opportunities need to be provided to nurses to attend these sessions on a regular basis.
- Continued support from the organization has been identified as important for participants, as education is not effective without such support.
- Provide the clinical setting with internet for online search of EBP

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