Factors Influencing Effective Implementation of Evidence Based Practice among Nurses in Assiut City Hospitals, Egypt: A Comparative Study

Soad Baiomy[1], Ekram M Abdel Khalek[2]

[1] *Community Health Nursing department, Faculty of Nursing, Assiut University, Egypt*
[2] *Public Health and Community Medicine department, Faculty of Medicine, Assiut University, Egypt*

Abstract: *Nurses have relied on expert and opinions in clinical decision-making. However, these ways of practicing may be unsafe. Experienced-based knowledge may be associated with biased thinking that lead to errors. Scientific research is the standard by which sciences derive knowledge. This study aims to explore factors influencing the effective implementation of evidence-based practice among nurses working in outpatients clinics in hospitals of Assiut city. A cross-sectional comparative study was carried out on 807 nurses. Data were collected by interview questionnaires from January to June 2014. The present study included 414 nurses working in Assiut University Hospitals and 393 nurses from hospitals of Ministry of Health. Nearly 40% of the both studied groups never looked for information, research or evidence to support their nursing practice. Facilitators of evidence based practice were perceived slightly higher by the nurses working in Assiut University Hospitals than the other group. There are statistically significant differences between nurses working in Assiut University hospitals and nurses of Ministry of Health regarding reported facilitators and barriers of implementation of evidence-based practice. Improvement of nursing education, training and reducing barriers to implement research findings as evidence are essential steps to use the research evidence in clinical practice.*
Keywords: *Evidence Based Practice, Nursing, Perception*

I.   Introduction

Evidence-based health care (EBHC) aims to improve health outcomes through reference to systematic analysis of the best available evidence from the research literatures [1]. Hospitals stress on the use of evidence-based practice (EBP) to prevent practices that are unsafe or lack empirical support, to reduce unacceptable individual variance and increase efficiency and quality in healthcare [2].

In the last 30 years, the practice of nursing has been trending from relying on expert opinion to the application of evidence-based findings [3]. Evidence-based practice is essential for nurses to establish who they are, what they do, and what effect they have on patient outcomes [4]. Healthcare professionals have been unresponsive to embrace evidence-based health care in daily practice [5]. This may be explained by existing barriers such as, lack of EBP knowledge and skills; inadequate resources, lack of EBP mentor that interferes with an ability to implement EBP behaviors to attain the goal. Nursing staff are the largest health professional group in all sectors of healthcare [3, 6].

Evidence-Based Nursing Practice (EBNP) is the application of the best evidence in clinical decision-making by integrating clinical expertise with recent research findings taking into consideration the values and preferences of patients [7]. The scientific researches used by nurses in practice is facilitated by many factors. These factors occur at the individual, organizational or institutional levels, or due to qualities of the researches, in addition to the presentation ability and accessibility of the research [8]. On the other hand, barriers to the use of research in clinical practice are numerous. Studies have identified common barriers among nurses; the nurses' research values and skills, the quality of research, and how the research is communicated or presented [9].

Working conditions is one of the most important topics facing nurse managers and researchers [10]. Nursing staff in Egypt are important health professional group. The majority of nurses work in direct care of patients; assessing patients' needs and making decisions on nursing interventions. Nurses' practice of evidence based practice has a major impact on patients' outcomes and patient safety. Hence, there is an essential need to enhance nurses' practice of EBP to improve quality of care and patient safety.

II. Aims of the study

The present study aims to:
1- Assess nurses' reported facilitators and barriers related to implementation of Evidence Based Practice in Assiut city hospitals.
2- Compare between nurses working in Assiut University Hospitals and nurses working in hospitals of Ministry of Health regarding implementation of Evidence Based Practice in their workplaces.

III. Subjects and Methods

3.1 Significance of the study: Community nurses must improve their research literacy. This involves developing undergraduate and continuing education programs on the research process, including locating, appraising and using evidence. Through these strategies, community nurses will be able to mount a convincing case for the value of their role. The nursing profession remains central to the interdisciplinary and discipline-specific changes necessary to achieve care that is effective, safe and efficient.

3.2 Research Questions:
Q1: What are the facilitators and barriers on the use of Evidence Based Practice among nurses in Assiut city hospitals?
Q2: What are the differences between nurses working in Assiut University Hospitals and nurses working in hospitals of Ministry of Health regarding Evidence Based Practice implementation?

3.3 Study design: Cross sectional comparative design was used in this study.
3.4 Study setting: The study was conducted at the outpatients' clinics of governmental hospital in Assiut city. It included Assiut University Hospitals and hospitals of Ministry of Health. Assiut city was chosen because it has greater number of hospitals, which offer the health care services.
3.5 Study population: All nurses who were responsible for the outpatients' clinics at the selected hospitals in Assiut city and who agreed to participate in the study. Their number was 807 female nurses; 414 from Assiut University Hospitals and 393 from hospitals of Ministry of Health.

3.6 Tools of data collection: An interview questionnaire developed by the researchers, it contains 3 parts:
Part (1): This part was concerned with socio-demographic characteristics of the studied nurses such as age, educational level, work setting, job title, and years of experience.
Part (2): Facilitators Scale of implementing evidence based practice [11-13] that was translated by the researchers into Arabic, then back to English to maintain the accuracy of the translation. Some modifications were done to suit the Egyptian culture. Content validity was used after modifying the tool by a jury of 3 experts from Assiut Faculty of Nursing. The questionnaire was previously shown to be a valid and reliable instrument. It contains 17 statements. These facilitators included managerial and peer support, availability of time to review and implement research findings, availability of relevant research, colleagues' support, supportive policies, and training opportunities. The responses were ranked from 1 to 5 which displayed as (1) no extent (2) little extent (3) moderate extent (4) greet extent and (5) neutral opinion.
Part (3): The BARRIER Scale [14, 15] consists of 42 statements. Barriers of research utilization were categorized into factors related to the individual factors (nurse), organizational factors (workplace) and quality of research to which participants respond on a 5-point Likert scale that ranges from strongly agree (1) to strongly disagree (5). These barriers were classified into barriers related to the nurse' experience (17 statements), barriers concerning the workplace (10 statements) and barriers of research practice (16 statements).

3.7 Data collection: Data were collected from the target nurses using the self-administered questionnaire. A pilot study was carried out on 10% of the nurses to test the understandably and applicability of the instrument and the time needed to collect the data. The instrument required between 20 and 30 minutes. The pilot sample was not included in the main study sample since some modifications in the number and phrasing of the questions were done according to its results of the pilot. Data collection started from January June 2014. Interview of nurses was done at the morning shift; 9 am to 1 pm.

3.8 Ethical consideration: Formal administrative approvals were taken before the start of the data collection. These included approval by the Ethical Committee of Assiut Faculty of Nursing. Official approval letters was directed to the director of outpatient clinics in Assiut University Hospitals and director of Ministry of Health. The participants were informed that the information obtained is confidential and will be used only for the purpose of the study. Verbal informed consent was obtained from the study subjects, all nurses who were

present at the day of the visit were requested to fill out the questionnaires anonymously. The participation was voluntary; however, no one refused to cooperate with the researchers.

3.9 Data analysis: Data were entered and statistical analysis was done using SPSS version 20. Descriptive statistics, e.g. frequency, percentage and mean ± standard deviation (±SD) were calculated. Chi squared test for significance was calculated. The 0.05 level was chosen as the level of significance and 95% confidence interval. Measuring the score of facilitators for evidence based nursing practice includes 17 items and total scoring was 85 degree. Calculation of the Likert Scale and the mean and standard deviation for each item of the scale was done.

IV. Results

Table (1) presents the personal characteristics of the studied nurses. The total numbers of the participants were 807 nurses; 414 were working in Assiut University Hospitals and 393 from hospitals of Ministry of Health. There are statistically significant differences between the studied nurses working in Assiut University Hospitals and those working in hospitals of Ministry of Health in all their personal characteristics. The mean age of nurses in Assiut University Hospitals was 27.57 ± 3.52 years compared to 32.74 ± 7.88 years for nurses working in hospitals of Ministry of Health. Among nurses of Assiut University hospitals, staff nurses represented 8.7% and charge nurses were 43.7%. The majority of them (84.5%) had Bachelor degree of nursing and nearly half of them worked for 5- 10 years. Regarding nurses of Ministry of Health, staff nurses represented 44.5%, charge nurses were 14.2% and head nurses were 31.6%. More than three quarters (77.6%) had Bachelor degree of nursing and more than half of them (54.5%) worked more than 10 years.

Table (2) shows the information for supporting evidence based practices, 27.3% of Assiut university nurses had ever been involved in nursing research versus to 10.7% of nurses who were working in Ministry of Health. Less than two thirds (60.4%) of Assiut University nurses and more than three quarters of the other group learned about the nursing research firstly from their work. Nearly 40% of both studied groups never looked for information, research or evidence to support their nursing practice and about one fifth reported seldom long and 15.5% of nurses working in the university hospitals often looked for them versus 19.6% of nurses working in the Ministry of Health hospitals. Nearly 45% of the participants asked their colleagues or peers when they need a piece of scientific information.

The use of common sources of evidence based practice information is presented in Table (3), the most frequently available sources were reference text/ manual, journal article, research report and hospital library. Unfortunately, at least half of the respondents reported that they did not use any one of these resources at all. On the other hand, few of them used these sources many times daily. Nurses of Assiut University Hospitals were slightly more users of evidence based sources than their colleagues in the Ministry of Health.

As shown in Table (4) about half of the nurses in Assiut University Hospitals participated neither in research nor in implementation of development of guidelines at all compared to about three quarters of nurses of Ministry of Health. Table (5) shows, the key facilitators of using evidence based practice that was reported by the studied nurses. These facilitators include enhancing administrative support and encouragement, cooperative and supportive colleagues and improving the understandability of research reports.

Table (6) clarifies that all barriers of scientific research practice related to the nurse experience that reported by the nurses working in Assiut University Hospitals are significantly different from those reported by the nurses working in Ministry of Health. The mean and standard deviation for each item of barriers was higher among nurses working in Assiut University Hospitals than the other group with statistically significant difference. The total mean score of the barriers ± SD was 39.88 ± 11.92 among nurses of Assiut University Hospitals compared to 51.17 ± 13.08 among nurses of Ministry of Health. The results indicate that there are a range of barriers of scientific research practice concern to workplace.

The Top-five barriers that stated by the participants nurses were resistance to make changes in the work setting, poor access to research evidence, no power for implementation of research findings and lack of time (Table 7). Barriers related to the research are presented in Table (8). The studied nurses reported overwhelming amount of research information, uncertainty to believe the results of the research working, inadequate methodology and unjustified research conclusions as the common barriers. There are statistical significant differences in all items of the perceived barriers related to the research as perceived more frequently among nurses of Ministry of Health than nurses working in Assiut University Hospitals.

Figure (1) depicts the total mean score of evidence based practice facilitators and barriers perceived by the studied two groups of nurses. Facilitators of evidence based practice were perceived slightly higher by nurses working in Assiut University Hospitals than those in Ministry of Health. On the other hand, the nurses working in hospitals of Ministry of Health reported all types of barriers to use evidence based research more frequently than the other group.

Table (9) shows the correlation between facilitators and different types of barriers of evidence based practice. There are statistical significant differences regarding items of each type of barriers that is positively

related to the other two types of barriers. On the other hand, the barriers are negatively correlated to facilitators of using evidence based practice.

Table (1): Personal characteristics of the studied nurses working in outpatients clinics of Assiut city hospitals, 2014

Items	AUH (n= 414)		MOH (n= 393)		P-value
	No.	%	No.	%	
Age: (years)					
< 25 years	87	21.0	78	19.8	0.000*
25 - 30 years	228	55.1	65	16.5	
> 30 years	99	23.9	250	63.6	
Mean ± SD	**27.57 ± 3.52**		**32.74 ± 7.88**		0.000*
Position:					
Staff nurse	36	8.7	175	44.5	
Charge nurse	181	43.7	56	14.2	0.000*
Head nurse	176	42.5	124	31.6	
Unit supervisor	21	5.1	38	9.7	
Highest degree earned:					
Bachelor degree	350	84.5	305	77.6	0.012*
Nursing Diploma	64	15.5	88	22.4	
Workplace at outpatients clinics:					
Pediatric	72	17.4	91	23.2	
Internal Medicine	217	52.4	185	47.1	0.046*
Surgical	34	8.2	22	5.6	
Obstetrics and Gynecology	67	16.2	59	15.0	
Dermatology	24	5.8	36	9.2	
Years of experience:					
< 5	128	30.9	58	14.8	0.000*
5 - 10	202	48.8	121	30.8	
> 10	84	20.3	214	54.5	
Mean ± SD	**7.53 ± 3.50**		**13.12 ± 7.68**		0.000*

Table (2): Information of evidence based practice among the studied nurses in Assiut city hospitals, 2014

Items	AUH (n= 414)		MOH (n= 393)	
	No.	%	No.	%
Where did you learn about nursing research for a first time?				
No where	250	60.4	303	77.1
Bachelor program	164	39.6	90	22.9
Have you ever been involved in nursing research?				
Yes	113	27.3	42	10.7
No	301	72.7	351	89.3
How often do you look for information, research or evidence to support your nursing practice?				
Often (several times a week)	64	15.5	77	19.6
Regularly (weekly)	25	6.0	8	2.0
Occasionally (at least 1 per month)	72	17.4	68	17.3
Seldom (less than once / month)	84	20.3	86	21.9
Never	169	40.8	154	39.2
When you need information, where do you usually find it?				
I look for assistance from the librarian	14	3.4	10	2.5
I ask my colleagues or peers	185	44.7	178	45.3
I read journal or books	42	10.1	41	10.4
I search the bibliographic	26	6.3	15	3.8
I search the Internet/World Wide Web	71	17.1	65	16.5
I attend workshops, conferences, programs	76	18.4	84	21.4

Table (3): Uses of common sources of evidence based practice by the studied nurses in Assiut city hospitals, 2014

Sources	AUH (n= 414)		MOH (n= 393)	
	No.	%	No.	%
Reference text/ manual:				
Not at all	237	57.2	320	81.4
Monthly	65	15.7	36	9.2
Weekly	42	10.1	21	5.3
Daily	36	8.7	8	2.0
Many times daily	34	8.2	8	2.0
Research report:				
Not at all	306	73.9	311	79.1
Monthly	37	8.9	46	11.7
Weekly	24	5.8	10	2.5
Daily	26	6.3	18	4.6
Many times daily	21	5.1	8	2.0
Journal article:				
Not at all	216	52.2	279	71.0
Monthly	77	18.6	60	15.3
Weekly	43	10.4	19	4.8
Daily	41	9.9	15	3.8
Many times daily	37	8.9	20	5.1
Hospital library:				
Not at all	186	44.9	279	71.0
Monthly	107	25.8	54	13.7
Weekly	71	17.1	28	7.1
Daily	26	6.3	17	4.3
Many times daily	24	5.8	15	3.8

Table (4): Participation in evidence based practice the studied nurses in Assiut city hospitals, 2014

Items	AUH (n= 414)		MOH (n= 393)	
	No.	%	No.	%
Participated in research:				
Not at all	214	51.7	286	72.8
Once	97	23.4	69	17.6
Two times	66	15.9	27	6.9
Many times	37	8.9	11	2.8
Participate in implementation of development of guidelines:				
Not at all	205	49.5	298	75.8
Once	146	35.3	58	14.8
Two times	45	10.9	21	5.3
Many times	18	4.3	16	4.1
Participate in solution of researchable problem:				
Not at all	297	71.7	322	81.9
Once	72	17.4	18	4.6
Two times	27	6.5	32	8.1
Many times	18	4.3	21	5.3

Table (5): Facilitators of using evidence based practice reported by the studied nurses in Assiut city hospitals, 2014

Facilitating factors	AUH (n= 414) Mean ± SD	MOH (n= 393) Mean ± SD	P-value
1- Improving the understandability of research reports	3.49 ± 0.99	3.17 ± 1.42	0.000*
2- Improving availability/ accessibility of research reports	3.43 ± 0.95	3.04 ± 1.01	0.000*
3- Enhancing administrative support and encouragement	3.55 ± 0.91	3.38 ± 1.18	0.000*
4- Cooperative and supportive colleagues	3.50 ± 0.79	3.18 ± 1.19	0.000*
5- Increasing time available for reviewing and implementing research findings	3.42 ± 0.72	2.96 ± 1.35	0.000*
6- Conducting more clinically focused, relevant research	3.25 ± 0.70	2.89 ± 1.27	0.000*
7- Improving research knowledge	3.21 ± 0.61	3.09 ± 1.16	0.000*
8- More employees/sufficient staffing	3.38 ± 0.66	2.93 ± 1.36	0.000*
9- Improving financial resources for nurses in scientific activities	3.48 ± 0.69	2.88 ± 1.49	0.000*
10- Improving nurses' attitudes toward research	3.40 ± 0.67	2.94 ± 1.24	0.000*
11- Giving rewards for using research	3.30 ± 0.64	3.12 ± 1.34	0.000*
12- Translating of the articles to suitable language	3.40 ± 0.59	2.79 ± 1.46	0.000*
13- Opportunities for nurses to attend conferences	3.44 ± 0.67	3.08 ± 1.34	0.000*
14- Providing enhanced ward-based computer and internet	3.17 ± 0.87	2.73 ± 1.34	0.000*

	AUH	MOH	P-value
facilities			
15- Providing additional authority to implement changes.	3.36 ± 0.80	3.02 ± 1.47	0.000*
16- Joining clinical and academic nurses together to carry out research	3.46 ± 0.74	2.72 ± 1.28	0.000*
17- Giving opportunity for attending quarterly workshops on interpretation of statistic and methodology and implementing changes in nursing practice	3.46 ± 0.81	2.93 ± 1.11	0.000*
Total mean score	57.69 ± 8.26	50.86 ± 17.00	0.000*

Table (6): Barriers of using evidence based practice related to nurse experience reported by the studied nurses in Assiut city hospitals, 2014

Reported barriers related to nurse experience	AUH (n= 414) Mean ± SD	MOH (n= 393) Mean ± SD	P-value
1- The nurse is unaware of the importance of research	2.09 ± 1.01	2.59 ± 1.29	0.000*
2- The nurse does not have research skills	2.17 ± 1.04	2.96 ± 1.55	0.000*
3- Lack of information on types and sources for conducting research	2.17 ± 0.99	3.32 ± 1.34	0.000*
4- Inability to determine the validity of material	2.03 ± 0.87	3.09 ± 1.46	0.000*
5- Inability to critically appraise	1.93 ± 0.93	2.99 ± 1.35	0.000*
6- The nurse does not have time to read research	2.70 ± 1.07	3.10 ± 1.28	0.000*
7- The nurse feels that the benefits of changing practice will be minimal	2.39 ± 1.02	3.18 ± 1.27	0.000*
8- The nurse does not see the value of research for practice	2.29 ± 1.08	3.05 ± 1.30	0.000*
9- The nurse does not have computer skills	2.41 ± 0.93	2.99 ± 1.29	0.000*
10- The nurse sees little benefit for self development	2.36 ± 0.87	3.46 ± 1.28	0.000*
11- The nurse is unwilling to change/try new ideas	2.26 ± 0.90	3.60 ± 1.16	0.000*
12- Research is not relevant to the nurse's practice	3.12 ± 0.93	3.92 ± 1.12	0.000*
13- The nurse is isolated from knowledgeable colleagues with whom to discuss the research	3.29 ± 0.99	3.85 ± 1.30	0.000*
14- The nurse does not have access to the library	2.91 ± 0.92	3.33 ± 1.30	0.000*
15- Not capable to evaluate quality of research	3.43 ± 1.10	2.91 ± 1.45	0.000*
16- The research is not reported clearly and readably	2.33 ± 0.78	2.84 ± 1.29	0.000*
Total mean score	39.88 ± 11.92	51.17 ± 13.08	0.000*

Table (7): Barriers of using evidence based practice related to workplace reported by the studied nurses in Assiut city hospitals, 2014

Reported barriers related to work place	AUH (n= 414) Mean ± SD	MOH (n= 393) Mean ± SD	P-value
1- Physicians will not cooperate with implementation	1.87 ± 0.82	2.88 ± 1.38	0.000*
2- The facilities are inadequate for implementation	1.79 ± 0.81	3.05 ± 1.15	0.000*
3- There is no documented needs to change practice	1.85 ± 0.78	3.34 ± 1.27	0.000*
4- Other staff members are not supportive of implementation	1.74 ± 0.76	2.92 ± 1.21	0.000*
5- Insufficient time on the job to implement new ideas	2.22 ± 0.87	3.24 ± 1.34	0.000*
6- The nurse does not feel she has enough authority to change patient care procedures.	2.07 ± 0.81	3.41 ± 1.27	0.000*
7- The research results are not generalizable to other settings	2.05 ± 0.76	3.61 ± 1.15	0.000*
8- There is resistance to make changes in the work setting	2.84 ± 0.87	3.80 ± 1.10	0.000*
9- Access to research evidence is poor (no computers, or data bases)	2.48 ± 0.76	3.79 ± 1.08	0.000*
10- Administration will not allow implementation	2.45 ± 0.77	3.81 ± 1.12	0.000*
Total mean score	21.37 ± 6.89	33.85 ± 9.19	0.000*

Table (8): Barriers of using evidence based practice related to the research reported the studied nurses in Assiut city hospitals, 2014

Reported barriers related to research	AUH (n= 414) Mean ± SD	MOH (n= 393) Mean ± SD	P-value
1- The research has inadequate methodology	2.48 ± 0.59	3.53 ± 1.25	0.000*
2- The conclusions drawn from the research are not justified	2.42 ± 0.49	3.45 ± 1.34	0.000*
3- The research has not been replicated	2.45 ± 0.50	3.15 ± 1.29	0.000*
4- Research reports/articles are not published fast enough	2.25 ± 0.63	3.15 ± 1.33	0.000*
5- The literature reports conflicting results	2.38 ± 0.58	3.24 ± 1.47	0.000*
6- The nurse is uncertain whether to believe the results of the research	2.53 ± 0.59	3.48 ± 1.32	0.000*
7- The amount of research information is overwhelming	2.60 ± 0.59	3.62 ± 1.43	0.000*
8- Implications for practice are not made clear	2.48 ± 0.67	3.14 ± 1.28	0.000*
9- Statistical analyses are not understandable	1.80 ± 0.64	3.29 ± 1.12	0.000*
10- The relevant literature is not compiled in one place	2.01 ± 0.66	3.46 ± 1.37	0.000*
11- Research reports/articles are not readily available	2.17 ± 0.75	3.39 ± 1.33	0.000*
12- The rewards for using research results are not worth it	2.27 ± 0.79	3.38 ± 1.36	0.000*
13- Administration perceived EBP as a low management priority	2.27 ± 0.79	3.16 ± 1.42	0.000*
14- There is not support or incentives for clinical practice development	2.30 ± 1.15	3.13 ± 1.38	0.000*

15- There is insufficient time on the job to read research findings	2.45 ± 0.97	3.48 ± 1.41	0.000*
16- Research reports are published in a foreign language	2.41 ± 0.93	3.18 ± 1.25	0.000*
Total score	37.26 ± 7.70	53.23 ± 16.93	0.000*

Fig. (1): Total means score of the evidence based practice facilitators and barriers reported by the studied nurses in Assiut city hospitals, 2014
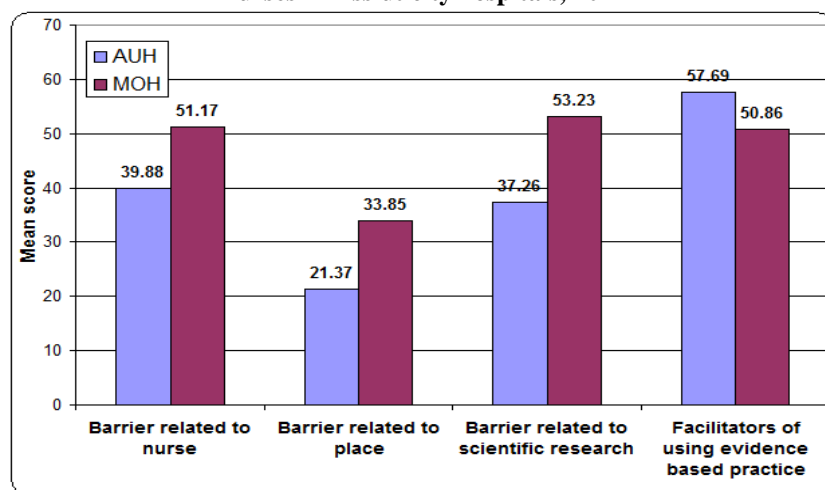

Table (9): Correlations between facilitators and types of barriers reported by the studied nurses in Assiut city hospitals, 2014

Items		Barriers related to nurse experience	Barriers related to workplace	Barriers related to research
Barriers related to workplace	r-value	0.693		
	P-value	0.000*		
Barriers related to scientific research	r-value	0.560	0.775	
	P-value	0.000*	0.000*	
Facilitators of using evidence based practice	r-value	-0.078	-0.231	-0.217
	P-value	0.027*	0.000*	0.000*

V.   Discussion

Strategies to promote evidence based practice among nurses should be based on evidence and address current knowledge/skills and practice of research findings as well as barriers that negatively associated with evidence based practice [16]. Nursing practice based on evidence has been found to improve patient outcomes [17]. In addition, nursing and health care services based on the best currently available evidence have shown to decrease costs [18].

Understanding facilitators and barriers to research utilization may facilitate the application of evidence-based practice [19]. Thus, it is important to explore factors influencing the effective implementation of evidence-based practice among nurses working in outpatients clinics in hospitals of Assiut city. The mean age of nurses at Assiut University Hospitals was 27.57 ± 3.52 years compared to 32.74 ± 7.88 years among nurses worked in hospitals of Ministry of Health. This is lower than the mean age of the nurses a large Norwegian University Hospital which was 37.4 years (range 22–63 years) [20].

About half of the nurses in Assiut University Hospitals participated neither in research nor in implementation of development of guidelines at all compared to about three quarters of nurses of Ministry of Health. However, the present study revealed that nurses in Assiut University Hospitals were slightly more users of evidence based sources than their colleagues in the Ministry of Health. However, a high percentage of nurses in both sites did not learn about EBP. Also, two fifth of both studied groups never looked for information, research or evidence to support their nursing practice. However, they knew that there were available sources as reference text/ manual, journal article, research report and hospital library. Meanwhile, more than half of the respondents did not use any one of these resources, and few percentages of them scan various Web sites and on-line resources. This may clarify that nurses need to be more active and take active part to keep up with the new research findings and read articles to update their knowledge because investigators are continually reporting new research findings. Most nurses are likely to skim or browse these resources quickly. But, there are some problems as lack of information technology skills and access to researches articles, lack of native language references, that most research is published in a foreign language.

Nurses working in the university hospitals appear to be quite better than those working in hospitals of the Ministry of Health in the reported of facilitators and barriers of evidence based practice. This could be because nurses in University hospital are more involved in nursing research, have the opportunity to attend academic meetings and seminars and regularly look for information, research or evidence to support their nursing practice, due to their work in university hospital where the main aim is the research. This result is in consistent with other researchers [3]. The findings of this study revealed that the barriers are negatively correlated to facilitators of using evidence based practice. Also, statistical significant differences among the two studied groups were found. The UH nurses have better and statistically significant improvement in all items of facilitator factors than those from Ministry of Health.

The common facilitators of using evidence based practice that reported by the studied nurses included enhancing administrative support and encouragement, cooperative and supportive colleagues and improving the understandability of research reports. These findings are supported by several other studies. For example, Shifaaz et al. (2014) found that support, encouragement, and recognition from the management and administration were the most frequent facilitators for research utilization [9]. El-Said et al. proved that improving the understandability of research reports, enhancing administrative support/ cooperative and encouragement with colleagues are the key facilitators for implementing evidence based practice in Yanbu General Hospital, Kingdom of Saudi Arabia [21]. However, important barriers are still obstructing the implementation of EBP in daily clinical practice such as time constraints, knowledge gap and poor availability of evidence, occur consistently among nurses [11, 22].

The present study clarified that the common barriers of scientific research practice related to nurse experienced included: incapability to evaluate quality of research, no access to the library. This finding agreed with the findings of El-Said and her colleagues who found that the nurse does not have time to read research, insufficient time to go to the library to read or to implement findings from research [21]. The nurse does not have time to read research and insufficient time on the job to implement new ideas is barriers perceived by the nurses in the present study. Also, Dalheim et al. reported that the greatest barriers were lack of time and lack of skills to find and manage research evidence [20].

Majid and his colleagues [23] found that the top three barriers to adopting EBP in two public hospitals in Singapore were lack of time, inability to understand statistical terms, and inadequate understanding of the jargon used in research articles. Insufficient time on the job could be because most nursing practices are more tradition based than evidence based, which might result in the increased workload. However, it could also be due to poor time management, and the fact that there is shortage in nursing personnel and the on-duty nurses are usually loaded with nursing and non- nursing duties that constrain their ability to read a research article. In addition, there is lack of internet facilities in the workplace and lack of authority. Since the BARRIERS to Research Utilization Scale was developed, the Internet has become an important tool for gathering information. Medical databases, journals that disseminate research and large international guideline databases are now available free of charge for health care personnel [13].

VI. Conclusion and Recommendations

From the findings of the present study, the researchers can be concluded that about half of the nurses in Assiut University Hospitals participated neither in research nor in implementation of development of guidelines at all compared to about three quarters of nurses of Ministry of Health. Nurses in both groups reported facilitators and barriers to evidence based practice and use of scientific research. However, nurses in University Hospitals reported fewer barriers and more facilitators to use EBP than their colleagues in Ministry of Health.
The following recommendations could help in implementation and use of evidence based practice by the nurses:
1   Evidence-based practice should be included in the curricula of nursing education of students.
2   In-service training of the nurses specially those working in hospitals of Ministry of Health on skills of evidence-based practice to reduce barriers to using research evidence and to increase use of research evidence in clinical practice.
3   Encourage nurses to attend nursing conferences, scientific meetings, and involve them in the developmental activities.
4   Enhance understanding the value of research and apply evidence based practice in their hospitals.
5   Empower nurses to take active role in organizational change and implementation of evidence practice research findings.
6   A reward system may be needed to enhance evidence based practice development and achievements in Assiut hospitals.

References

[1].   J. McDonald and J. Smith, Evidence-based health care and community nursing: issues and challenges. Australian Health Review, 24 (3), 2001, 133- 140.
[2].   E.M. Brown, Appraisal and Application of Research in Evidence-Based Practice for Nurses (Second Edition), Jones and Bartlett Publishers, 2012.
[3].   D.T. Ubbink, H. Vermeulen, A.M. Knops, D.A. Legemate, K. Rengerink, M.J. Heineman, Y.B. Roos, C.J. Fijnvandraat, H.S. Heymans, R. Simons and M. Levi, implementation of evidence-based practice: outside the box, the hospital Journal of Medicin, 9 (2), 2011, 87-93.
[4].   A. Richardson, M. Miller and H. Potter, Developing, delivering, and evaluating cancer nursing services: searching for a United Kingdom evidence base for practice. Cancer Nurs, 25 (5), 2002, 404- 415.
[5].   C.L. Carlson and D.J. Plonczynski, Has the barriers scale changed nursing practice? An integrative review. J Adv Nur, 63 (4), 2008, 322- 333.
[6].   M.P. Nix and C.M. Clancy, Translating research into evidence-based nursing practice and evaluating effectiveness. Journal of Nursing Care Quality, 21 (3), 2006, 195- 202.
[7].   J. Buchan and L. Aiken, Solving nursing shortages: a common priority. Journal of Clinical Nursin, 17 (24), 2008, 3262- 3268.
[8].   N. M. Solomons and J.A. Spross, Evidence based practice barriers and facilitators from a continuous quality improvement perspective: an integrative review. J Nurs Manag, 19 (1), 2011, 109-120.
[9].   F. Shifaza, D. Evans and H. Bradley,Nurses' Perceptions of Barriers and Facilitators to Implement EBP in the Maldives. Advances in Nursing, Volume 2014, Article ID 698604, 7 pages. At website: http://dx.doi.org/10.1155/2014/698604
[10]. L.L. Williams What goes around comes around evidence based management. Nurs Adm Q, 30 (3), 2006, 243-251.
[11]. D.R. Thompson, J.P. Chau and V. Lopez, Barriers to, and facilitators of, research utilisation: a survey of Hong Kong registered nurses. International Journal of Evidence-Based Healthcare, 4 (2), 2006, 77– 82.
[12]. A.M. Hutchinson and L. Johnston, Bridging the divide: a survey of nurses' opinions regarding barriers to, and facilitators of, research utilization in the practice setting. Journal of Clinical Nursing, 13(3), 2004, 304–315.
[13]. S.L. Pagoto, B. Spring, E.J. Coups, S .Mulvaney, M.F. Coutu and G. Ozakinci Barriers and facilitators of evidence-based practice perceived by behavioral science health professionals. Journal of Clinical Psychology, 63(7), 2007, 695–670.
[14]. S.G. Funk, M.T. Champagne, R.A. Wiese and E.M. Tornquist, Barriers: the barriers to research utilization scale. Applied Nursing Research, 4 (1), 1991, 39- 45.
[15]. E.M. Rogers, Diffusion of Innovations, Free Press, New York, NY, USA, 5th edition,.2003.
[16]. C.E. Brown, M.A. Wickline, L. Ecoff and D. Glaser, Nursing practice, knowledge, attitudes and perceived barriers to evidence-based practice at an academic medical center. J Adv Nurs; 65, 2009, 371- 381.
[17]. B. Heater, A. Becker and R. Olson, Nursing interventions and patient outcomes: a meta-analysis of studies. Nurs Res, 37(5), 1988, 303- 307.
[18]. C.J. Goode, D.J. Tanaka, M. Krugman, P.A O'Connor, C. Bailey , M. Deutchman and N.M. Stolpman, Outcomes from use of an evidence-based practice guideline. Nurs Econ, 18 (4), 2000, 202- 207.
[19]. T.J. Turner Developing evidence-based clinical practice guidelines in hospitals in Australia, Indonesia, Malaysia, the Philippines and Thailand: values, requirements and barriers. BMC Health Serv Res, 9, 2009, 235.
[20]. A. Dalheim, S. Harthug, R. ONilsen and M. Nortvedt, Factors influencing the development of evidence-based practice among nurses: a self-report survey. BMC Health Services Research, 12, 2012, 367- 377. At website: http://www.biomedcentral.com/1472-6963/12/367
[21]. E.S. El-Said, H.N. Zaki and S.S. Jakalat Barriers and Facilitators for Implementing Evidence Based Practice among Nurses at Yanbu General Hospital - Kingdom of Saudi Arabia. Life Science Journal, 10 (3), 2013, 920- 932.
[22]. K. Parahoo, Barriers to, and facilitators of, research utilization among nurses in Northern Ireland. Journal of Advanced Nursing, 31 (1), 2000, 89– 98.
[23]. S. Majid, B. Luyt , X. Zhang , Y. Theng, Y. Chang and I. Mokhtar, Adopting evidence-based practice in clinical decision making: nurses' perceptions, knowledge, and barriers . J Med Libr Assoc; 99 (3), 2011, 229– 236.