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Barriers, Facilitators, and Nurses' Attitude toward Nursing Research Utilization

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ABSTRACT

Despite the increasing quantity and improving quality of nursing researches, incorporating research results into clinical practice remains a significant challenge. **Aim:** The study was aimed to assess the barriers, facilitators and the nurses' attitude toward nursing research utilization. **Design**: descriptive research design was used. A **convenient sample** of 172 nurses was selected from medical, surgical and pediatric departments from Sohag University hospital in the period from December 2015 to January 2016**.** An interviewing questionnaire sheet was used for data collection which divided into four parts; part 1: socio-demographic data of nurses and their experiences developed by the researchers**,** part 2: nurses' attitude toward nursing research utilization tool developed by Edet, (2008) & Majid et al., (2011), part 3: barriers to nursing research utilization tool developed by Funk et al., (1991), and facilitators nursing research utilization tool developed by Hutchinson and Johnston, (2004). **Results:** All of the nurses were female, and the mean age was 27.2+13.4 years. The nearly two thirds of them (65.7%) their highest educational level were diploma. The majority of the nurse (90.1%) had positive attitude toward nursing research utilization. The highest top barrier of research utilization reported by 62.2% of nurses was that nursing research written by English, followed by the nurse does not feel capable of evaluating the quality of the research (53.5%), the greatest facilitator as opined by 64.2% of nurses was translating the articles into Arabic language. **Conclusion:** Despite the majority of the nurse had positive attitude toward nursing research utilization, there are many barriers impede the nurse to integrate the research into practice. **Recommendation:** Translating the nursing research finding, conclusions and recommendations into Arabic language to be easy understandable to nurses and increasing time available for reviewing and implementing the research finding.

Key words: Barriers, Facilitators, Nurses' attitude, Nurses, Nursing research utilization**.**

INTRODUCTION

Nursing research utilization defined as, the process of synthesizing, disseminating and using research generated knowledge to make significant impact on the existing nursing practice. Research utilization has been associated with high quality nursing practice. Despite availability of research findings and evidences, nurses have been faced with many barriers which hinder them from utilizing research knowledge in their practice (**Chinomso et al., 2014**). Applying research evidence to daily clinical practice may not only enhance the quality of nursing care, but also can lead to enhanced

nurses' personal and professional performance (**Chien et al., 2013**).

The main purpose of nursing research is to validate and refine current knowledge and developing new knowledge in order to provide a base for evidence base practice in nursing (**Burns, 2010**). Research utilization is a term that was used since the early 1970s, predominantly by the nursing profession, to describe the integration of research evidence into daily clinical practice and refers to "process by which specific research-based knowledge (science) is applied in practice". This is a strategy to promote evidence base practice in nursing (**Squires et al., 2011**).

According to code of ethics, nurses are obliged to improve nursing care by applying research findings in the clinical practice. To achieve this, identifying barriers to, as well as facilitators of research utilization, would be a key strategy (**Kajermo, et al., 2008**). Despite increasing availability of research findings and broad consensus on the importance of its benefits in nursing discipline, using them in nursing practice remains, slow and arbitrary. This "gap between research and practice" is a worldwide phenomenon. So that, the patients often do not receives nursing care with acceptable quality. Therefore, it seems to be a priority to adopt modalities for increasing research use by nurses (**Squires et al., 2011 & Heydari et al., 2014**).

Nursing research moves into direction concerns the provision of an evidence-based patient nursing care and an advanced patient care-nursing quality. Although the research evolution in the nursing field, the efforts that aim at the bridging of the gap between theory and everyday clinical practice still remains a challenge for the nursing world. The translation of nursing knowledge into practice is called research utilization or research based practice. Despite the emphasis given at the research utilization, evidence so far shows that the gap between theory and practice cannot be fulfilled because of the occurrence of barriers (**Yava et al., 2009 & Strickland and O'Leary-Kelley, 2009**).

The gap between nursing research and practice has been associated with some barriers. These barriers have been analyzed by both quantitative and qualitative studies in many countries (**Tan et al., 2012**). A commonly recommended strategy for increasing research use in clinical practice is to identify barriers to change and then tailor interventions to overcome the identified barriers (**Kajermo et al., 2010**).

Significance of the study:

In recent years, nursing research outputs have grown rapidly, however there is also widespread recognition, that despite the large pool of available research evidence, the uptake of this evidence into clinical practice remains slow and nurses continue to practice using less effective interventions (**Majid et al., 2011**). It is well known that the incorporation of research findings into practice leads to less costs of health care, more personal productivity, longer and healthier lives for patients, and also will decrease pain and suffering of patients (**Al Ghabeesh et al., 2015**).

The practice of medical-surgical nursing requires specialized knowledge and clinical skills to manage actual or potential health problems that affect individuals. Medical-surgical nurses are committed to assisting the client in achieving the optimal level of function (**Academy of Medical-Surgical Nurses, 2012**). Also children

constitute an important and priority group especially in developing countries whereas, their numbers constituting up to two third of total population, vulnerability to morbidity and mortality and amenability to prevention of ill health and mortality, to a large extent, makes them candidate for special attention (**Mohsen et al., 2016**). Although the number of studies on research utilization is steadily growing, there are only a few specialty-specific studies. Hence in the current study the researchers would like to assess the barriers, facilitators, and nurses attitude toward nursing research utilization at medical, surgical and pediatric departments.

Aim of the study:

The aim of this study was to assess the barriers, facilitators and the nurses' attitude toward nursing research utilization.

Research Questions

The research questions identified for this study are as follows:

1- What are the barriers to research utilization?

2- What are the facilitators of nursing research utilization in practice?

3- What are the attitudes of nurses toward nursing research utilization?

Subjects and methods:

The study design: Descriptive research design was chosen in this study.

Setting: The study was conducted at medical, surgical and pediatric departments in Sohag University hospital to collect data from the nurses in the selected departments.

Subjects: The study involved all nurses working at medical, surgical and pediatric departments- Sohag University Hospital in Sohag City. Convenient sample was included 172 nurses, selected on the basis of the set inclusion criteria.

The inclusion criteria were, all licensed practical nurse (School Nurse and Technical Institute Nurse) and professional nurse (Baccalaureate nurse) who working at pediatric, medical and surgical departments. The study excluded the physician, student and nurses working at anywhere else.

Tool for data collection: An interviewing questionnaire sheet was used for data collection based on the review of the literatures and divided into four parts as the following:

Part 1: Included 11 questions developed by the researchers about the socio-demographic data of nurses and their experiences toward nursing research utilization as; gender, age, the highest completed level of nursing education, years of nurses' experience…..ect.

Part 2: Nurses' attitude towards research utilization tool by **Edet, (2008) & Majid et al., (2011),** included 16 questions about nurses' attitude towards research utilization as; research is not relevant to the day to day working in nursing, research expertise is considered in promotion to senior posts, nursing should become a research-based profession, nurses are too busy delivering care to spend time reading research materials, research often leads to real practical advances in nursing care, and research expertise is of value to the nurse in clinical practice ……ect. Answered

questions were presented in three options namely: agree, disagree and undecided.

For questions about nurses' attitude towards research utilization, in instances where the statements are positively worded, agreement is an indication of a favorable response and hence attracts a higher score, scores were assigned as follows: agree = 2; disagree = 1; undecided = 0; while in instances in which the statements are negatively worded the scores were reversed as follows agree = 1, disagree = 2, undecided = 0. The mean score was calculated percentage below the mean is regarded as holding negative attitude while percentage above the mean is regarded as holding positive attitude towards research conduct and utilization.

Part 3: Barriers to research utilization tool by Funk et al., (1991), included 29 items related to barriers for research findings utilization. Classified into four factors: (a) characteristics of the adopter: the nurse's research values, skills, and awareness, (b) characteristics of the organization: setting, barriers and limitations, (c) characteristics of the innovation: qualities of the research, and (d) characteristics of the communication: presentation and accessibility of the research. **Chau et al. (2008)** added the item 30 (research reports/articles are published in English and are difficult to understand).

Nurses that participated in the study using this tool, have to rate the extent to which they perceive each item as a barrier to research utilization, based on a four-point scale (1=to no extent, 2=to a little extent, 3=to a moderate extent, 4=to a great extent).

Part 4: Facilitators of nursing research utilization (FRU) tool developed by **Hutchinson and Johnston, (2004),** included 12 questions about facilitators of nursing research utilization as; translating the research articles into Arabic language, improving research knowledge, improving financial resources, improving the understandability of research reports, giving rewards for using research, improving availability/accessibility of research reports, conducting more clinically focused relevant research, more employees/sufficient staffing, increasing time available for research findings and improving nurses' attitudes toward research. The answered questions were presented in four options namely 1=to no extent, 2=to a little extent, 3=to a moderate extent, 4=to a great extent.

-The questionnaire was tested for its validity by 5 experts (in pediatric, medical and surgical nursing field).

-The designed questionnaire sheet was translated into Arabic language.

-Reliability of Arabic version was tested using Cranach's alpha test. The **Cronbach's alpha** of the nurses' attitude towards research utilization was 0.882. **Cronbach's** alpha value for the barriers and facilitators of nursing research utilization tools were 0.849.

Pilot study: A pilot study was carried out before starting of data collection on (10%) of participants (17 nurses). The pilot sample was not included in the total sample of the research work to ensure stability of the answers. Based on the results of the pilot study, modifications, and rearrangement of some questions were done. It also helped to estimate the time needed to fill in the questionnaire.

-The time taken for every questionnaire to be completed was about 20-30 minutes for each nurse.

Methods for data collection:

- An official letter was directed from the Faculty of Nursing, Sohag University to the hospital administrative authorities in order to obtain their acceptance to collect necessary data from the selected settings. Then, the permission was obtained from the hospital administrative authority.

- The researchers interviewed the participated nurses individually face to face and introduced them-self to them. Oral consent was obtained from all nurses in the selected departments.

- In order to increase the compliance, explanation of the aim and methodology of the study was done to nurses who agreed to participate in the study to obtain the necessary information and gave them a complete back ground about the study and its importance.

- After receiving permission from the nurses, the designed questionnaire sheets was distributed to one hundred and seventy two nurses to assess the barriers, facilitators and the nurses' attitude toward nursing research utilization.

- The researchers distributed the questionnaire sheet by hand to all nurses; participants were given 20-30 minutes to complete the sheet. The researchers were present all the time to clarify any ambiguity.

- Data collection for this study was carried out in the period from December 2015 to January 2016; it was done during the routine work of the hospital.

-The selected departments were visited daily at the study period when nurses on morning and afternoon shifts (during the routine work of the hospital), data were collected from the target nurses using the questionnaire sheets from the selected departments.

-Number of the questionnaire sheets were leaved with the head nurse of each department to distribute it to nurses on night shift and collected the following day.

Ethical consideration of the study:

Confidentiality of the researchers was asserted. Explanation of the aim and methodology of the study was done to nurses by the researchers. The right to refuse to participate in the study or withdraw from the study at anytime was emphasized to the nurses.

Statistical analysis:

The data were tested for normality using the Anderson-Darling test and for homogeneity variances prior to further statistical analysis. Categorical variables were described by number and percent (N, %), where continuous variables described by mean and standard deviation (Mean, SD). Chi-square test and fisher exact test used to compare between categorical variables where compare between continuous variables by t-test. A two-tailed $p < 0.05$ was considered statistically significant. All analyses were performed with the IBM SPSS 20.0 software.

Results:

Table 1 presented frequency distribution of socio-demographic data of the nurses, as illustrated in this table, all of the nurses (100.0%) were female, 52.3%

aged less than 30 years and the mean age was 27.2+13.4 years. More than half of nurses (51.2%) were from rural area. The nearly two thirds of them (65.7%) their highest completed level of formal nursing education were diploma, followed by 24.4% were technical education and 9.9% were baccalaureate. The majorities were licensed nurse and only 4.0% were professional nurse. 30.8% of the nurses their work experience ranging from 1 to 7 years and the mean years of nurses' experience were 9.5+6.8. Nearly one third (32.5%) were working at medical department, 35.5% working at surgical department and 32.0% working at Pediatric department.

Table 2 showed frequency distribution of the nurses according to their research experiences and utilization, as shown in this table; 21.5% of nurses never read nursing journals in the past year and more than half of the nurses (54.6%) had read only once. Nearly two thirds of nurses (64.0%) reported that they never utilize from research in practice. More than two thirds of them (72.7%) don't attended formal training in research methods during their professional training, and the majority (83.1%) don't attended research workshop previously.

Table 3 presented frequency distribution of nurses' attitude toward nursing research utilization. This table showed, among the nurses 42.4% of them disagreed with the statement that research is not relevant to the day to day working in nursing, 48.8% disagreed with the statement that research expertise is considered in promotion to senior posts, 47.7% supported the idea that nursing should become a research-based profession, nurses are too busy delivering care to spend time reading research materials was supported by 72.7% of them,

more than half (52.3%) of nurses opined that research often leads to real practical advances in nursing care, and 52.9% were of the opinion that research expertise is of value to the nurse in clinical practice.

Also table 3 illustrated, nearly two thirds (64.0%) of nurses posits that in practice very few nurse use research findings, 46.5% disagreed with the statement research is only relevant to nursing education not to nursing practice, 68.6% disagreed that they are aware of relevant research findings while 46.5% agreed with the statement that nurses are too busy to incorporate research findings into day to day nursing practice. 63.4% disagreed that they prefer using more traditional methods instead of changing to new approaches, 59.3% disagreed that they don't like people questioning my clinical practices, which are based on established methods, 42.4% agreed that evidence-based practice has only limited utility, and 61.0% agreed that workload is too high to keep up to date with all new evidence.

The nurses' positive attitude toward nursing research utilization was presented in figure (1), this figure showed the majority of the nurse (90.1%) had positive attitude toward nursing research utilization while only (9.9%) had negative attitude.

The relation between nurses' attitude toward nursing research utilization and their socio-demographic data was showed in table 4, as illustrated in this table, no statistical significant differences was found between nurses' attitude and the age, the level of education, the primary work area in the hospital, frequency of reading nursing journals in the past year, and frequency of research utilization in practice. While statistical significant differences was found between nurses' attitude and residence, years of nurses'

experience, attending formal training in research methods during their professional training, and attending research workshop previously.

Table 5 presented the all items of the four factors of barriers toward nursing research utilization according to nurses reporting, as showed in this table the top three great nurse factors of barriers were related to the nurse does not feel capable of evaluating the quality of the research (53.5%), followed by the nurse is isolated from knowledgeable colleagues with whom to discuss the research (40.1%), and the nurse is unaware of the research. The top three great setting factors of barriers were related to the nurse does not have time to read research (51.7%), followed by there is insufficient time on the job to implement new ideas (47.7%) and the nurse feels results are not generalizable to own setting (45.3%). The top three great quality of research factors of barriers were related to research reports/articles are not published fast enough (32.0%) followed by the nurse is uncertain whether to believe the results of the research (29.1%), and The amount of research information is overwhelming (20.3%). The top three great presentation of the research factors of barriers statistical analyses are not understandable (48.8%), followed by research reports/articles are not readily available (48.8%), and the research is not reported clearly and readably (40.7%).

Table 6 illustrated the rank order of the four factors of barriers toward nursing research utilization, as showed in this table, the setting factors of barriers was the top barriers for nurses towered research utilization (22.6+5), followed by nurse factors of barriers, presentation of the

research barriers, and quality of research factors of barriers (21.8+4.1, 19.3+4.5, and17.2+3.5 respectively).

Figure 2 showed the ten ranking order of barriers toward nursing research utilization according to nurses reporting, as illustrated in this figure, research written by English reported as the highest top barrier of research utilization by 62.2% of nurses, followed by the nurse does not feel capable of evaluating the quality of the research (53.5%), The nurse does not have time to read research (51.7%), statistical analyses are not understandable (48.8%), research reports/articles are not readily available (48.8%), the nurse feels results are not generalizable to own setting (45.3%), the facilities are inadequate for implementation (45.3%), the nurse does not feel she/he has enough authority (41.3%), the research is not reported clearly and readably (40.7%), and there is not a documented need to change practice (41.1%).

Figure 3 illustrated the ten rank order and percentage of items perceived as great facilitators of nursing research utilization, as shown in this figure, the translation of the articles in Arabic language was ranked as the greatest facilitator (64.2%), followed by improving research knowledge (56.8%), improving financial resources (54.4%), improving the understandability of research reports (53.3%), giving rewards for using research (50.9%), improving availability/accessibility of research reports (50.0%), conducting more clinically focused, relevant research (43.5%), more employees/sufficient staffing (33.9%) and increasing time available for research findings (33.1%) and improving nurses' attitudes (32.9%).

Table (1): Frequency distribution of socio-demographic data of the nurses (n=172):

Socio-demographic data of the nurses	No	%
Gender:		
Female	172	100.0
Age		
<30	90	52.3
30< 40	71	41.3
40< 50	5	2.9
50< 60	1	.6
60 and more	5	2.9
Mean age (years)	27.2+13.4	
Residence		
Rural	88	51.2
Urban	84	48.8
The highest completed level of formal nursing education		
Diploma	113	65.7
Technical	42	24.4
Baccalaureate	17	9.9
Nursing position		
Professional Nurse	17	4.1
Licensed Nurse	155	95.9
Years of nurses' experience		
<1	28	16.3
1< 8	53	30.8
8< 15	39	22.7
15< 21	49	28.5
21and more	3	1.7
Mean years of nurses' experience	9.5+6.8	
The primary work area in the hospital		
Medical department	56	32.5
Surgical department	61	35.5
Pediatric department	55	32.0

Table (2): Frequency distribution of the nurses according to their research experiences and utilization (n=172)

Nurses' research experiences	No	%
Frequency of reading nursing journals in the past year		
Never	37	21.5
Once	94	54.6
2-3	40	23.2
More than 3	1	0.7
Frequency of research Utilization in practice		
Never	110	64.0
All the time	13	7.6
Frequently	13	7.6
Sometimes	25	14.5
Seldom	11	6.4
Attending formal training in research methods during their professional training		
Yes	47	27.3
No	125	72.7
Attending research workshop previously		
Yes	29	16.9
No	143	83.1

Table (3): Frequency distribution of the nurses' attitude toward nursing research utilization (n = 172)

| Nurses' attitudes items	Agree		Disagree		Undecided	
	No	%	No.	%	No	%
1-Research is not relevant to day to day working	74	43.0	73	42.4	25	14.5
2-Research expertise is taken into account in promotion to senior posts	72	41.9	84	48.8	16	9.3
3-Nursing should become a research- based profession	82	47.7	56	32.6	34	19.8
4-Nurses are too busy delivering care to spend time reading research materials	125	72.7	36	20.9	11	6.4
5-Research often leads to real practical advances in nursing care	90	52.3	49	28.5	33	19.2
6-Research expertise is of value to the nurse in clinical practice	91	52.9	42	24.4	39	22.7
7-In practice, very few nurses use research findings	110	64.0	31	18.0	31	18.0
8-Research experience should not be taken into account in promotion to senior posts	71	41.3	53	30.8	48	27.9
9-Research is only relevant to nursing education not to nursing practice	48	27.9	80	46.5	44	25.6
10-Most nurses are aware of relevant research findings	36	20.9	118	68.6	18	10.5
11-Nurses are too busy to incorporate research findings into day-to-day nursing practice	80	46.5	61	35.5	31	18.0
12. I prefer using more traditional methods instead of changing to new approaches	40	23.3	109	63.4	23	13.4
13. I don't like people questioning my clinical practices, which are based on established methods	59	34.3	102	59.3	11	6.4
14. Most research articles are not relevant to my daily practice	66	38.4	44	25.6	62	36.0
15. I believe evidence-based practice (EBP) has only limited utility	73	42.4	69	40.1	30	17.4
16. My workload is too high to keep up to date with all new evidence	105	61.0	33	19.2	34	19.8
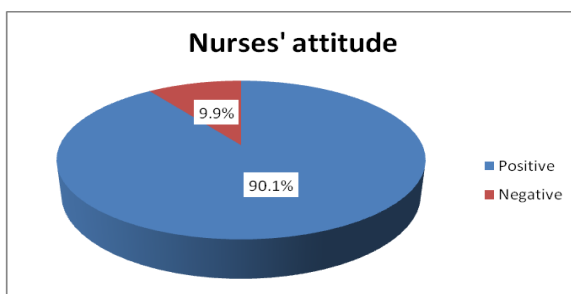
Figure (1): Nurses' positive attitude and negative attitude toward nursing research utilization

Table (4): The relation between nurses' attitude toward nursing research utilization and their socio-demographic characteristics

Socio-demographic characteristics	Nurses' attitude				P. value
	Positive (n=155)		Negative (n=17)		
	No.	%	No.	%	
Age					
<30	77	49.7	13	76.5	0.314
30< 40	67	43.2	4	23.5	
40< 50	5	3.2	-	-	
50< 60	1	0.6	-	-	
60 and more	5	3.2	-	-	
Residence					
Rural	75	48.4	13	76.5	0.028*
Urban	80	51.6	4	23.5	
The level of education					
Diploma	106	68.4	7	41.2	0.056
Technical	34	21.9	8	47.1	
Baccalaureate	15	9.7	2	11.8	
Years of nurses' experience					
<1	23	14.8	5	29.4	0.009**
1< 8	43	27.7	10	58.8	
8< 15	37	23.9	2	11.8	
15< 21	49	31.6	-	-	
21and more	3	1.9	-	-	
The primary work area in the hospital					
Medical department	47	30.3	9	52.9	0.127
Surgical department	58	37.4	3	17.6	
Pediatric department	50	32.3	5	29.4	
Frequency of reading nursing journals in the past year					
Never	37	23.9	-	-	0.121
Once	81	52.3	13	76.5	
2-3	36	23.2	4	23.5	
More than 3	1	0.6	-	-	
Frequency of research utilization in practice					
Never	101	65.2	9	52.9	0.076
All the time	11	7.1	2	11.8	
Frequently	9	5.8	4	23.5	
Sometimes	23	14.8	2	11.8	
Seldom	11	7.1	-	-	
Attending formal training in research methods during their professional training					
Yes	38	24.5	9	52.9	0.013*
No	117	75.5	8	47.1	
Attending research workshop previously					
Yes	19	12.3	10	58.8	0.000**
No	136	87.7	7	41.2	

*   Statistically significant differences   ** Highly statistically significant differences

Table (5): Barriers toward nursing research utilization according to nurses reporting (n = 172)

Barriers toward nursing research utilization	1=No extent		2=Little extent		3=Moderate extent		4=Great extent	
	No.	%	No	%	No	%	No	%
N- The nurse is unaware of the research.	40	23.3	25	14.5	52	30.2	55	32.0
N- The nurse does not feel capable of evaluating the quality of the research.	10	5.8	26	15.1	44	25.6	92	53.5
N- There is not a documented need to change practice.	27	15.7	40	23.3	36	20.9	69	40.1
N- The nurse is isolated from knowledgeable colleagues with whom to discuss the research.	8	4.7	72	41.9	69	40.1	23	13.4
N- The nurse is unwilling to change/try new ideas.	18	10.5	71	41.3	67	39.0	16	9.3
N- The nurse feels the benefits of changing practice will be minimal.	10	5.8	59	34.3	62	36.0	41	23.8
N- The nurse sees little benefit for self.	16	9.3	48	27.9	70	40.7	38	22.1
N-The nurse does not see the value of research for practice.	28	16.3	69	40.1	59	34.3	16	9.3
S- The nurse does not feel she/he has enough authority.	18	10.5	36	20.9	47	27.3	71	41.3
S- There is insufficient time on the job to implement new ideas.	11	6.4	31	18.0	48	27.9	82	47.7
S- Administration will not allow implementation.	20	11.6	83	48.3	38	22.1	31	18.0
S- The nurse does not have time to read research.	15	8.7	54	31.4	14	8.1	89	51.7
S- The nurse feels results are not generalizable to own setting.	8	4.7	45	26.2	41	23.8	78	45.3
S- The facilities are inadequate for implementation.	13	7.6	42	24.4	39	22.7	78	45.3
S- Physicians will not cooperate with implementation.	23	13.4	76	44.2	58	33.7	15	8.7
S- Other staff are not supportive of implementation.	23	13.4	82	47.7	44	25.6	23	13.4
R- The amount of research information is overwhelming	19	11.0	59	34.3	59	34.3	35	20.3
R- The literature reports conflicting results.	49	28.5	70	40.7	40	23.3	13	7.6
R- The conclusions drawn from the research are not justified	52	30.2	72	41.9	31	18.0	17	9.9
R- The research has not been replicated.	22	12.8	55	32.0	86	50.0	9	5.2
R- The research has methodological inadequacies	56	32.6	56	32.6	41	23.8	19	11.0
R- Research reports/articles are not published fast enough	25	14.5	34	19.8	58	33.7	55	32.0
R- The nurse is uncertain whether to believe the results of the research	17	9.9	21	12.2	84	48.8	50	29.1
P- Statistical analyses are not understandable	11	6.4	36	20.9	41	23.8	84	48.8
P- The relevant literature is not compiled in one place	26	15.1	98	57.0	29	16.9	19	11.0
P- Implications for practice are not made clear.	37	21.5	65	37.8	40	23.3	30	17.4
P- The research is not reported clearly and readably	35	20.3	27	15.7	40	23.3	70	40.7
P- Research reports/articles are not readily available	10	5.8	58	33.7	20	11.6	84	48.8
P- The research is not relevant to the nurse's practice	33	19.2	67	39.0	50	29.1	22	12.8
P- Research written by English	12	7.0	26	15.1	27	15.7	107	62.2

N=Nurse barriers   **S**=Setting barriers   **R**=Quality of *research* barriers   **P**= Presentation of the research barriers

Table (6): The rank order of the four factors of barriers toward nursing research utilization

The four factors of barriers scale	Range	Mean +SD
Setting barriers	9-32	22.6+5
Nurse barriers	8-29	21.8+4.1
Presentation of the research barriers	7-27	19.3+4.5
Quality of research barriers	7-25	17.2+3.5
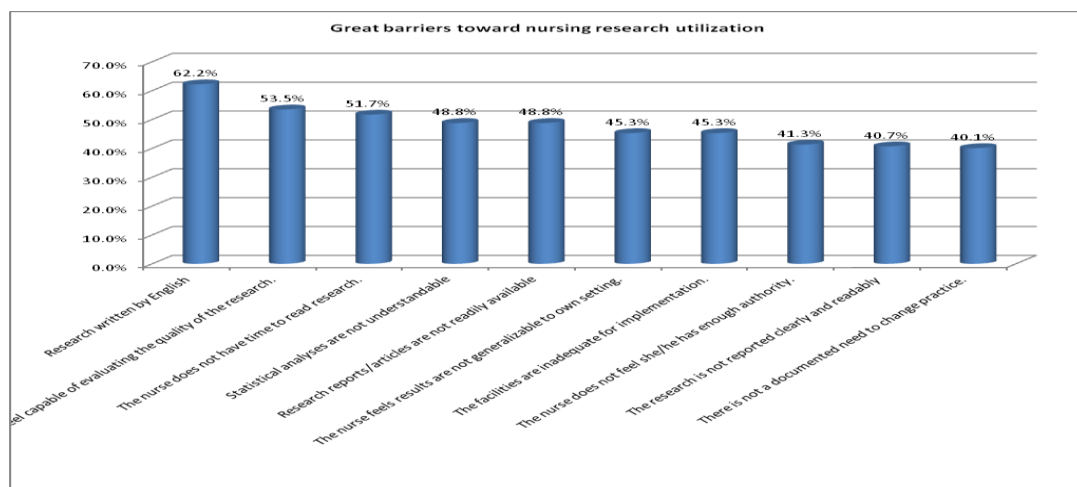
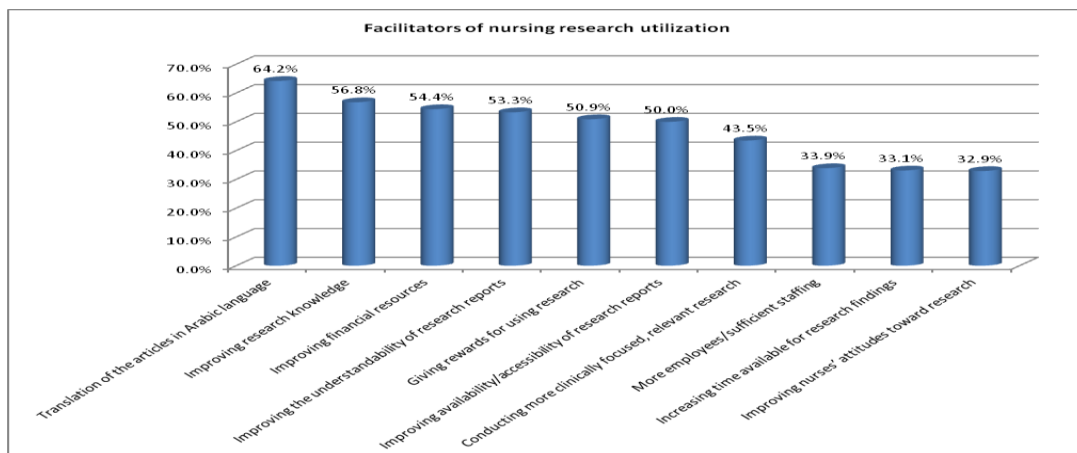**Figure (2):** The ten rank orders of great barriers toward nursing research utilization as perceived by nurses

Figure (3): The ten rank orders of facilitators of nursing research utilization according to nurses reporting

Discussion:

Research utilization has a role in developing and empowering the profession of nursing, improving the quality of care, and indicating the greatest change in nursing practice results. However, there are many barriers that prevent research utilization into clinical areas **(Al-Ghabeesh et al., 2014).**

As regard to the socio-demographic data of the nurses the present study mentioned that all of the nurses were female working at medical department, surgical department and Pediatric department. More than half of nurses aged less than 30 years and the mean age was 27.2+13.4 years. More than half of nurses were from rural area. The nearly two thirds of them their highest completed level of formal nursing education were diploma, followed by technical education and baccalaureate. The majorities were licensed nurse. Nearly one third of nurses their work experience ranging from 1 to 7 years **(Table 1).** These results were in line with other study finding in Sweden by **Björkström et al., (2014)** who stated that most of the respondents were women between 30-49 years. Also in line with a study in Saudi Arabia by **Omer, (2012)** who stated that nearly 90% were women, all had more than 1 year of work experience, and more than two thirds (65.6%) held a BSN, whereas almost one third (30.5%) held diplomas or associate degrees.

The current study presented that more than two thirds of nurses had read nursing journals in the past year only once. Nearly two thirds of nurses reported that they never utilize from research in practice. More than two thirds of them don't attended formal training in research methods during their professional training,

and the majority don't attended research workshop previously **(Table 2).** Other Turkish surveys, revealed that 72.2% of the nurses did not read research journals **(Uysal et al., 2010).** Also a study in Nigerian by **Adejumo and Guobadia (2013)** showed that majority, 40% of them read research articles occasionally. Also a study in Swede by **Björkström and Hamrine (2001)** reported that forty-six percent of nurses never or seldom utilized nursing research findings in their daily practice.

The finding of this study showed that the majority of the nurses had a positive attitude towards research in nursing **(figure 1),** which is in line with recent studies by **Björkström et al., (2014), Wangensteen et al., (2011) and Witzke et al., (2011)** which revealed that most of the respondents had a positive attitude towards nursing research. This study revealed despite the majority of the nurses had a positive attitude towards research in nursing, nearly two thirds of nurses posits that in practice very few nurse use research findings. This finding was matched with the finding of other study in Norway by **Stokke et al., (2014)** who stated that, the results showed that nurses were positive towards nursing research, but only practiced it to a small extent. These results may be related to; the nurses face many barriers especially setting barriers which impede the nurse to integrate the research finding in their practices.

Nurses were asked to indicate their attitude towards utilization of research. The range of responses was whether they agreed, disagreed, or uncertain about the statements **(Table 3).** Nearly half of nurses disagreed with the statement that research is not relevant to the day to day working in nursing, were of the opinion that research expertise is of value to the nurse in clinical

practice, and nearly three froths of nurses agree that nurses are too busy delivering cares to spend time reading research materials. These findings were agreed by other study in Nigeria by **Edet et al., (2011)** who stated that, 91.7% of nurses disagree with the statement that research is not relevant to day to day working, 70.0 % agree that nurses are too busy delivering care to spend time reading research materials, and 88.3% disagree that research expertise is of value to the nurse in clinical practice.

This study in **table 3** also illustrated that nearly half of nurses agreed with the statement that nurses are too busy to incorporate research findings into day to day nursing practice, more than half of nurses opined that research often leads to real practical advances in nursing care, nearly two thirds of nurses posits that in practice very few nurse use research findings, and nearly two thirds agreed that workload is too high to keep up to date with all new evidence. These findings were agreed by other study in Nigeria by **Edet, (2008)** who stated that, 61.0% disagreed with the statement that nurses are too busy to incorporate research findings into day to day nursing practice. (91.0%) agreed that research often leads to real practical advances in nursing care, and (62.0%) reported that in practice very few nurse use research findings.

The finding of the present study showed no statistical significant differences was found between nurses' attitude and age, the level of education although more than two thirds of diploma nurse show positive attitude toward research utilization, While statistical significant differences were found between nurses' attitude and years of nurses' experience, attending formal training in research methods during their professional training,

and attending research workshop previously **(Table 4).** Also a study in Indian by **Vijayalakshmi et al., (2014)** stated that, no significant association was found between nurses' attitude and the age and nurses with diploma showed a more positive attitude to nursing research.

The present study showed in **table 5** the highest great nurse barrier which reported by more than half of nurses was related to the nurse does not feel capable of evaluating the quality of the research. The highest great setting a barrier was related to the nurse does not have time to read research, reported by more than half of nurses. Nearly one third of nurses reported the highest great quality of research barrier was related to the research reports/articles are not published fast enough. The highest great presentation of the research barriers was related to the statistical analyses is not understandable. These findings were similar to previous study in Maldives by **Shifaza et al., (2014),** the biggest barriers reported for the organizational factors, nurse-related barriers, presentation and accessibility of the research barrier, and quality of the research barrier were insufficient time on the job to implement new ideas (70.7%), nurse does not feel capable of evaluating the quality of the research (67.7%), the respondents reported that difficulty in understanding the statistical analysis (83.3%) and more than half of the respondents (56.6%) felt that the nurse is uncertain whether to believe the results of research respectively.

As regard the four factors sub barriers (setting, nurse, research and presentation) in **table 6**, the setting subscale were the highest mean score barriers, followed by nurse barriers while the lowest mean score were related to the quality of research barriers. This finding indicating that barriers related to the setting was the most

influential barriers which impede the nurses from utilization of research in their practices. These findings were in opposite to the findings in Spanish by **Moreno-Casbas et al., (2011)** who stated that, across all respondents, issues related to the quality of research were rated as the greatest barriers to research utilization, followed by organizational barriers, barriers involving the communication of findings and finally, those related to nurses' values, awareness and skills.

The rank order and percentage of items perceived as great barriers are summarized in **figure 2**. The top three greatest barriers were identified to be, the research written by English reported by nearly two thirds of nurses, followed by more than half of the nurse does not feel capable of evaluating the quality of the research and the nurse does not have time to read research. The results of other studies by **Al- Ghabeesh et al., (2014) and Chien et al., (2013)** revealed that lack of time is the most mentioned barrier to research utilization and it is mentioned in more than 73.84%, followed by inadequate facilities and resources also mentioned by 34.72% and no enough authority to change practice reported by 30.38%.

These finding may be related to the nursing research is written by English language while the diploma nurses study by Arabic language this lead to nurses not understand the research finding and conclusion, also the shortage in nursing staff may lead to the nurses not have time to read or incorporate the research into nursing practice.

The rank order and percentage of items perceived as great facilitators are summarized in **figure 3**. The translation of the articles in Arabic language was ranked as the greatest facilitator reported by nearly

two thirds of nurses, followed by improving research knowledge and improving financial resources were reported by more than half of the nurse. These results were agreed with the results other study in Korea **by Oh, (2008)** who stated that translation of the articles into understandable language, presenting the results in an understandable way, information about the researches that carried out in their country and the availability of specific scientific nursing journals were the most suggested facilitators. Also a study in China by **Wang et al., (2013)** who identified that the top three greatest facilitators were enhancing managerial support (36.9%), advancing education to increase knowledge base (21.1%), and increasing time for reviewing and implementing

Conclusion:

The results of the study imply that nurses do not read widely the nursing research and journals. More than two thirds of nurses had read nursing journals in the past year only once. Nearly two thirds of nurses reported that they never utilize from research in practice. The majority don't attended research workshop previously. Nearly half of them disagreed with the statement that research is not relevant to the day to day working in nursing, nearly two thirds of nurses posits that in practice very few nurse use research findings.

Despite the majority of the nurse had positive attitude toward nursing research utilization however there are many barriers impeding the nurse to integrate the research into practice. The highest top barrier of research utilization reported by nearly two thirds of nurses was that research written by English, followed by the nurse more than half of nurses does not feel capable of evaluating the quality of the research and

does not have time to read research. The greatest facilitator as opined by nearly two thirds of nurses was translating the articles into Arabic language.

Recommendation:

- Nurses should be updating their knowledge and skills throughout their career by reading research articles.

- Practical training in research use is important and can improve nurses' use of research in clinical practice.

- Increasing time available for reviewing and implementing the research finding.

- Availability and access to recent literature in nursing setting

- Keeping nursing journals and other nursing research materials and implications within easy reach, making information available, making journals available to nurses on their wards, clinics and units.

- Translating the nursing research finding, conclusions and recommendations into Arabic language to be easy understandable to nurses.

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