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Assessment of nurses for updating themselves with research at selected hospitals and health centers, West Gojjam zone, Amhara regional state, Ethiopia.

By

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Acronym and Abbreviations

- **EBP**:- Evidence Based Practice
- **AHRQ**:- Agency for Health Care and Research Quality
- **NPS**:- National Patient Safety foundation
- **RW**:- Ruanda
- **UG**:- Uganda
- **ICUS**:- intensive care Units
- **MD**:- medical docter
- **OPD**:- out patient department
- **MW**:- Medical ward
- **SW**:- Surgical ward
- **ART**:- anti retro viral therapy
- **MESH**:- Medical subject heading

Abstract

Introduction Medical and health care is one of the most dynamic human discipline and large amount of money are spent annually of high quality and sophisticated research resulting in an exponential growth in health care literature. If so implementation of the newly innovated research in to practice has a significant improvement in patient quality of care.

Objective-To assess nurses updating themselves with literature and put into practice.

Method- these study use institutional based descriptive cross sectional study. the study area is west Gojjam zone, one of zones which is present in Amhara regional state. West Gojjam is one of zones of two Gojjam zones. It major city administration is newly selected city called Finote Selam city 386 Km from Addis in North West.

Results – from the total respondents, 384, identified for the study, there is no non response rate. Most respondents(52.3%) are diploma nurse and the list in number were msc nurse. From total study participant most of them had an experience of 6-10 years(53.4%). 67% has no habit of updating and 33.1% has habit of reading professional knowledge. Almost all respondents(100%) agreed that there was barrier to access. A number of barriers identified was no internet access(78.13%). Not knowing to find articles(83.6%). Lack of understanding to interpret statically term and jargon(84.9%). Managerial problem(70.6%). Absence of training(44.5%).

Conclusion and recommendation

The study shows almost all study participants(100%) responded that there are barriers for upading research litrature into practice. Among the barriers identified by thisd study lack of understanding to interpret stastical term and jargon (84.9%) takes the highest percentage. As indicated by the study participant for suggested solutionhealth sector stakholders sould stand on improving accessibility that will used for improving litrature searching skill.

1.1 Introduction

Medical and health care is one of the most dynamic human discipline and large amount of money are spent annually of high quality and sophisticated research resulting in an exponential growth in health care literature. If so implementation of the newly innovated research in to practice has a significant improvement in patient quality of care. Regularly new and more effective medicine, medical devices and procedures are invented to the objective of health professionals to give best care to patients. In addition to using traditional and well established procedures, health care practitioners are adopting innovative interventions that are based on best, EBP, so that it gains quick popularity. Historically care of patient was influenced by experience and opinion of those involved in providing treatment but now EBP mark shifts among traditional emphasis on authoritative opinions to emphasis on data extracted from prior research. A meta analyses done by heater et al improves patient care as compared to traditional practice EBP provides nurses with a method to use critically appraised and scientifically proven evidence for delivering quality health care to a specific population(1). A research done on adoption of EBP for nurse in South Africa, the top 3 barriers for adopting EBP were lack of time, inability to understand statically term and inadequate understanding of jargon used in research articles(17). Nurses in Singapore have the idea of EBP but have limited skill in area of literature search. The same research in South Africa, it impulse that librarians need to be part of providing an ongoing training for clinical nurse in searching evidence and training for nurses about how to search EBP and implement(17).

1.2 Statement of the Problem

Evidence based practice (EBP) is a conscientious and judicious use of current best evidence in conjunction with clinical expert and patient values to guide health care decision (12). Best evidence includes empirical evidence from randomized controlled trails, descriptive and qualitative research, use of information from case report, scientific principles and expert opinion.

However, a sufficient research base is not available and health care decision making is derived principally from non research evidence source such as expert opinion and scientific principles as more research is done in a specific area the research evidence must be incorporated in to EBP (15)

Implementation strategies also need to address both the individual practitioner and organizational perspective (15). when practitioner decide individually what evidence to use in practice, considerable variability in practice pattern result, potentially resulting in different patient outcomes (1) for example from an individual perspective of EBP would have the decision about the use of evidence based endo-tracheal suctioning techniques to respiratory therapist. Some individual may be familiar with research finding for end tracheal suctioning while others may not. This is likely result in different and conflicting practice being used. However from an organizational perspective endotracheal suctioning policies and procedures based on research are written, the EBP information is integrated in to the clinical information system, and adoption of these research practice by nurses and other practitioner is systematically promoted in to the organization. These includes, assuring that the practitioner has the necessary knowledge skill and equipment to carry out the evidence based endotracheal suctioning practice. The organization governance supports use of these practice through various councils and committees such as practice committee, staff education committee and inter disciplinary EBP work group (3)

1.3 Significance of the study

These problem will be purposeful enough and aimed to assess the trends of nurses in west Gojjam to read literatures in selected hospital and health centers at that area. On the other hand, the research will try to assess factors affecting to read literature and put in to practice. Specially these study contributes a lot for the developing nursing profession standards for giving care if the nurse updates themselves with literature because these study will identify factors and even provide recommendation to alleviate the barriers for EBP that will advance the health care system in general

2. Literature review

2.1. EBP researchs in Africa

A research done on barriers that affect EBP in Uganda and Ruanda most reported barriers were researchs were not reading available (60%), facility in adequate for implementation (66%) in sufficient time to read literature (63%), in sufficient time to implement new idea (53%).

Barriers to access

RW 3%, Ug 49%, no internet access

RW 57%, 38% slow internet

RW 21%, Ug 41% no computer access

RW 43% Ug 42% no access to articles in internet

RW 33%, Ug 29% not knowing where to find articles

RW 58%, Ug 39% no time to search for articles

30% felt researcher not relevant for Africa

Nurses in Singapore , as in other countries, support the idea of evidence based practice (EBP) but have limited skills in the area of literature searching and understanding evidence, which limits their use of evidence – based practice

Only a small number of nurses were able to pick an appropriate search strategy for a given topic, indicating a lack of basic literature searching skills .

Sufficient literature searching knowledge is essential to retrieve current relevant and accurate evidence. However a majority of nurses do not know how to properly use Boolean and proximity operators . Indexing truncation, or limits. (17)

Librarians need to be part of providing ongoing training for clinical nurses in searching the evidence, especially in hospitals promoting EBP.

Training is needed for clinical nurses to be able to achieve the use of EBP, and librarians can support this goal by teaching the search strategies portion of an EBP skills course.

This study's instrument could be used by librarians as need assessment tools to measure their own clinical nurse's information literacy skills, if justification is needed locally.(17)

Overviews of EBP

Medical and health care is one of the most dynamic human disciplines, and large amounts of money are spent annually on high – quality and sophisticated research, resulting in an exponential growth in health care literature. Regularly, new and more effective medicines, medical devices, and procedures are invented. One major objective behind all these efforts is to help doctors, nurses, and medical technicians provide the best possible care and treatment to patients. In addition to using traditional and well-established procedures and practices, health care practitioners are adopting innovative interventions

Historically, care of the patient was influenced by the experiences and opinions of those involved in providing treatment [1]. EBP marks a shift among health care professionals from a traditional emphasis on authoritative opinions to an emphasis on data extracted from prior research and studies [2, 3]. A meta-analysis done by Heater et al. demonstrated that nursing practice based on evidence improves patient care, as compared to traditional practices [4]. Moreover, as nurses are increasingly more involved in clinical decision making, it is becoming important for them to utilize the best evidence to make effective and justifiable decisions [5].

2.2. CHALLENGES AND BARRIERS TO ADOPTING EVIDENCE-BASED PRACTICE (EBP)

A number of studies investigating nurses' perceptions show that nurses generally view EBP positively and consider it important to better patient care [6]. Nevertheless, it is a fact that the pace of accepting and implementing EBP is rather slow [7]. Several previous studies have tried to investigate possible barriers to adopting EBP. One barrier that some studies revealed was the enormous amount of health care literature, published in a variety of sources, which makes it almost impossible for individual medical professionals to keep up to date. It is estimated that around 8,000 articles relevant to family practice are published monthly, and a family medicine practitioner would need to dedicate approximately 20 hours a day to stay abreast of new evidence [8].

Several authors have identified other barriers to the acceptance, adoption, and implementation of EBP. Funk et al. designed a questionnaire called "BARRIERS" to investigate nurses' views regarding problems in using research findings. The top two barriers cited were "not having enough authority to change patient care procedures" and "having insufficient time on the job to implement new ideas." Griffiths et al. also reported that lack of time, lack of resources, and difficulty in understanding statistical analysis were the top barriers to adopting EBP by community nurses. O'Connor and Pettigrew investigated the perceived barriers to implementing EBP for therapists working in Southern Ireland [12]. The most significant barrier they reported was the lack of time to search for, understand, and interpret research findings. Other barriers to adopting EBP include inadequate access to information technology (IT), limited IT skills, and lack of information searching skills. Due to its wider adoption in today's medical fields, the barriers to implementing EBP have received more and more attention in recent studies. Through a comparison of participants' experiences with EBP across three distinct health professions. Asadoorian et al. demonstrated that both individual factors and workplace structure act together as enhancer and barrier to EBP. McInerney and Suleman discovered a significant number of barriers encountered by academic health care practitioners in implementing EBP in a South African institution, which include lack of knowledge pertaining to EBP, lack of access to research findings, insufficient evidence, and insufficient time [16]. Through a review of the mainstream literature, Solomons and Spross found that barriers and facilitators to EBP adoption

occur at both individual and institutional level, and the most common barriers were lack of time and lack of autonomy to change practice (17)

Implementation of EBP places additional demands on nurses to apply credible evidence to individual client situations through searching related evidence, using clinical judgments, and considering client values and system resources . To effectively apply the EBP process, in addition to the basic skills required to undertake nursing work, a nurse must have the ability to: (1) identify knowledge gaps, (2) formulate relevant questions, (3) conduct an efficient literature search, (4) apply rules of evidence to determine the validity of studies, (5) apply the literature findings appropriately to the patient's problem, and (6) appropriately involve the patient in the clinical decision making [19]. Previous literature also highlights the challenges for new nurses because EBP involves reconciling client values with evidence and clinical judgment, which may be particularly difficult for them due to their limited experience[17].

The literature review suggests that although nurses possess a positive attitude toward EBP and consider it fundamental to their practice, several institutional and personal barriers obstruct its smooth implementation. However, the majority of these studies were done in North American, European, and other developed Western countries. No comprehensive study on this topic could be found for Southeast Asia, an area of the world with a different work culture and environment. This study was conducted in a developed Asian country, Singapore, which provides an interesting context, having both characteristics associated with the developed Western world but also exhibiting Asian values and work culture. The purpose of this study was to investigate perceptions of registered nurses, working in public hospitals in Singapore, toward adopting EBP in their practice. The areas covered by this study included the understanding, beliefs, and attitudes of nurses toward EBP; barriers preventing them from adopting EBP; their training needs; information sources they prefer; and finally, their literature searching skills. The findings of this study will be useful for hospital and nursing management in Singapore, as well as in some other Southeast Asian countries, to develop an appropriate strategy to promote EBP among their nurses and overcoming associated barriers. As EBP is an information-intensive activity, findings of this study will also be useful for medical libraries in developing comprehensive training programs to improve the literature searching and utilization skills of nurses (17)

Demographic information

The nurses were also asked if they had attended any training related to EBP. An overwhelming majority (82.7%) of the nurses revealed that they had not participated in any specific training on the implementation of EBP in patient care.[17]

Beliefs and attitudes toward EBP

A set of 5 statements were used to investigate the overall beliefs and attitudes of nurses toward integrating EBP into their patient care. It was found that 64.3% of the nurses either “disagreed” or “strongly disagreed” with the statement that they preferred using traditional methods than new patient care approach. Another 52.8% of the nurses disagreed with the statement that they do not like people questioning their clinical practices that are based on established methods. It appeared that the nurses were open to adopt new health care approaches and not overly dedicated to traditional technique[17]

Similarly, 52.1% of the nurses also disagreed that most of the research articles that they had come across were not relevant to their daily nursing practices. However, more nurses agreed than disagreed that, due to heavy workload, they cannot keep up to date with all new evidence. On the whole, it appeared that a clear majority of the nurses had a positive attitude toward new nursing techniques, provided they were given adequate time off from work to learn and adopt such techniques, including EBP.[17]

confidence in their ability to adequately express their information needs and translate these needs into a well-crafted clinical question. For almost all the remaining statements, the mean scores occurred in a very narrow range of 2.96–3.17, which indicated that the participating nurses perceived themselves to possess moderate levels of skills to undertake different EBP activities.[17]

Perceived ability of nurses to undertake different evidence-based activities

A statistical test was performed to investigate possible relationships between the ability to undertake EBP activities and other related variables. A weak relationship was found between the ability of the nurses to implement EBP and their length of experience. This means nurses with longer nursing experience were likely to be more confident in implementing EBP activities. It was interesting to note that for all individual EBP activities, the mean scores of nurses who had a bachelor's or master's degree in nursing was higher than those who had either a certificate or diploma or post-basic or advanced diploma. In addition, the relationship between the overall self-efficacy of nurses and their highest professional qualifications was found to be highly significant. Indicating that nurses who had higher professional qualifications were likely to have better self-perceived abilities to undertake different EBP-related activities. Similarly, a highly significant relationship was found between the overall self-perceived ability of nurses to undertake different EBP activities and their participation in EBP training courses. Those nurses who attended EBP-related training were likely to feel more competent in their abilities to implement EBP. Moreover, a significant interactive effect was also found between the ability to undertake EBP activities and the 3 variables discussed above.[17]

Supporting factors in adopting EBP

Nurses were asked to indicate the importance of different factors that were likely to help them in adopting EBP, the most important of which was the provision of adequate training in this area, closely followed by the availability of protected time to learn and implement EBP. Another factor that they thought could help in adoption was mentoring by nurses who had adequate experience with implementing EBP. In addition, nurses also expected support from their nursing management and access to a system for comprehensive literature searching in implementing EBP.[17]

Barriers to adopting EBP

Nurses were asked about the barriers that prevented them from implementing EBP. A set of 9 statements were used to capture their responses. It was worth noting that a very high percentage of nurses did not express any opinion for most of these statements, probably because they were either not practicing EBP or had only limited knowledge of this practice. More than 53% of the

nurses either ~~–agreed~~” or ~~–strongly agreed~~” with the statement that the major barrier to their adoption of EBP was the lack of time at their workplaces to search and read research articles. The next 3 barriers, identified by more than 47% of the nurses, were their inability to understand statistical terms, inadequate understanding of technical jargon used in research articles, and difficulty in judging the quality of research articles and reports. Another 46% of the nurses either ~~–agreed~~” or ~~–strongly agreed~~” that they do not get sufficient time to change their current patient care practices.[17]

Barriers to adopting EBP

The statistical test revealed that the effect of 2 variables, ~~–highest nursing qualification~~” and ~~–attending EBP training~~” , were significant at the 0.05 level. Nurses who had a degree or higher qualification and those who had attended EBP training tended to face fewer barriers in adopting EBP. This finding also endorsed the finding reported above, that nurses said that EBP training was the most important factor that was likely to encourage them in implementing EBP.[17]

Desired areas of EBP training

As shown in the above section, appropriate EBP training was perceived to be likely to reduce barriers and resistance to adopting EBP. The nurses were asked to identify EBP activities for which they would like to receive training. The two areas considered the most important were ~~–identifying clinical issues for implementing EBP~~” and ~~–understanding what is EBP~~”. There was also a high demand for training in the remaining EBP areas: Mean scores for implementing recommendations to practice, understanding research and statistical terms, synthesizing evidence, and conducting critical appraisals and literature searches all fell in a very narrow range , clearly indicating that nurses felt that they needed training in almost all of the mentioned areas to effectively adopt and implement EBP.[17]

A statistical test was used to investigate the possible effect of the perceived importance of EBP training and other related variables. A significant relationship was found between the perceived importance of EBP training and participation in previous EBP training , years of nursing experience , and highest nursing qualification . This means that those nurses who had previously

attended EBP training considered it useful. Similarly, nurses who had more experience and higher nursing qualifications were also likely to appreciate EBP training.[17]

Use of information sources for nursing care

Access to relevant, accurate, and current information is becoming crucial for nurses to keep their knowledge up to date and adopt EBP. It was, therefore, considered desirable to explore how frequently nurses used different information sources to fulfill their information needs. In the questionnaire, these information sources were presented under three broad categories: print, electronic, and human information sources.[17]

A 5-point scale was again used, and, among the printed information sources, medical reference sources were the most frequently used, closely followed by health care pamphlets and information made available by health care companies and hospitals. The use frequency of textbooks and journals, which included published research articles that can be used as evidence, was quite low. It was, however, not surprising that newspapers were not frequently used by nurses for getting health care-related information.[17]

Among the electronic information sources, websites providing information about a specific disease, medicine, or treatment were the most frequently used sources, followed by electronic information sources provided by the respective hospitals, including their hospitals' standard operation procedure. However, the reported use of Internet resources, nursing e-books, digital medical and nursing libraries, medical databases, UpToDate and MD Consult, and EBP-related blogs was quite low.[17]

The most frequently used human sources were nursing supervisors, ward or department colleagues, and nursing management staff.[17]

To determine the overall popularity of different types of information sources, the combined mean scores for printed, electronic, and human sources were calculated.[17]

It was interesting to note that the use of human sources for getting nursing care information was at the top . Human information sources were closely followed by print sources .[17]

Use frequency of different information sources

It was worth noting that the use of electronic information sources received the lowest score. The low use of electronic information sources by nurses is a matter of concern because a considerable amount of the latest research information is now only available in electronic format. The low use could be due to limited literature searching skills of nurses, to be discussed in the following section. However, it is a still matter of concern as nurses also rated conducting literature searching as the least important of the areas in which they needed EBP training.[17]

Information searching skills

The nurses were asked to indicate how frequently they used different search features provided by online databases and web search engines. The “quick/basic search” option was used more often than the “advanced search” option. Among Boolean operators, the “AND” operator was used most frequently and “NOT” operator was used the least frequently . However, the mean scores for all Boolean operators were quite low.[17]

With respect to attended EBP training , and nurses who had up to 5 years' experience tended to use advanced search options more frequently.[17]

Familiarity with search operator

When asked if they knew how the use of different Boolean and proximity operators would change their search results, 92.1% of the nurses said that they were not familiar how the use of different proximity operators would change their search output. The percentage of nurses not familiar with Boolean “AND,” “OR,” and “NOT” was 75.9%, 77.2%, and 85.2%, respectively. Once again compared to nurses with other qualifications, graduate nurses had comparatively better understanding of Boolean and proximity operators.[17]

Assessment of developing search strategy

To assess their actual skills in developing an effective search statement by using Boolean operators, the nurses were given a simple hypothetical topic, “Effect of cigarettes on lung cancer.” Use of certain other search features, such as truncations and proximity operators, were avoided to keep these statements simple. Similarly, extensive use of synonyms was also avoided. The nurses were asked to pick the most appropriate statement from a list of 5 possible search statements. The option of using the exact search topic, “Effect of cigarettes on lung cancer” was chosen by 41.1% of the nurses. Most (85.7%) of those who chose this option had indicated earlier that they usually used quick or basic search options for searching for information. Another 24.0% of respondents selected the option to use only 1 keyword, “cigarettes,” and a phrase, “lung cancer.” Only 13.2% of the nurses picked a comparatively more appropriate statement, using some synonyms of the concepts “cigarette” and “lung cancer” and grouping them in parentheses. A higher percentage of nurses (20.7%) who had previously attended EBP training selected this statement than those who had not attended any such training (11.7%).

Selection of search statements

The majority of the nurses working in public hospitals in Singapore had a positive attitude toward EBP, which was consistent with some previous studies . Nurses who had longer experience in nursing were likely to be more confident in implementing EBP, supporting the finding of Ferguson and Day, who reported that new nurses, due to limited practical knowledge and experience, felt less confident and willing to engage in EBP . Similarly, those nurses who had attended EBP training considered themselves more comfortable in integrating EBP into their practice.[17]

This study also explored the factors that were likely to encourage nurses in adopting EBP. Availability of adequate time appeared to be the most important factor for nurses to learn and implement EBP. As EBP is a multistep process, nurses need sufficient time to identify clinical issues where EBP can be implemented, translate these issues into well-formulated clinical questions, locate the best available evidence through literature searching, conduct a critical appraisal of the retrieved evidence, formulate and apply an intervention, and assess the effectiveness of the applied intervention. Several previous studies also highlighted lack of time as

a major barrier to adopting EBP . Hospital management needs to make necessary adjustments in the work schedule of nurses to ensure sufficient time for them to learn and implement EBP.[17]

Two other barriers to adopting EBP that this study identified were inadequate understanding of statistical terms and the technical jargon used in research articles. This finding was consistent with studies conducted by Griffiths et al. and O'Connor and Pettigrew . Unfamiliarity with statistical and research terminology could be a serious barrier for nurses with a certificate or diploma in nursing who might not be sufficiently exposed to such jargon. A well-designed training program is likely to overcome these problems to some extent.[17]

An obvious deficiency of many previous studies on this topic was inadequate coverage given to information-related competencies. As medical and health care literature is growing exponentially, all health care professionals, including nurses, need to possess good searching skills to quickly retrieve current, relevant, and accurate information. Inadequate search skills can result in missing crucial information or retrieving too much information that could cause information overload and anxiety.[17]

The overwhelming majority of the nurses in this study did not know how the use of Boolean and proximity operators could change their search outcomes. The reported use of different search operators was also quite low. Nurses' limited familiarity with Boolean operators was also evident from the very small percentage of nurses who chose an appropriate search statement for a given hypothetical topic. The use frequency of certain other useful search features—such as MeSH terms, truncations and wildcards, search limits, and index browsing—was also quite low. All of these responses are a cause for concern. As clinical issues and related clinical questions are usually very complex, proper understanding and appropriate use of different search features is desirable to retrieve relevant and quality evidence. The low use of online medical databases by these nurses was probably due to lack of adequate search skills and searching experience. These findings were consistent with Young and Ward's study, which identified a lack of information searching skills as a barrier to implementing evidence-based medicine by general practitioners in Australia. A segment on literature searching skills needs to be included in EBP training programs. Even hospitals not actively pursuing integration of EBP in nursing practice need to

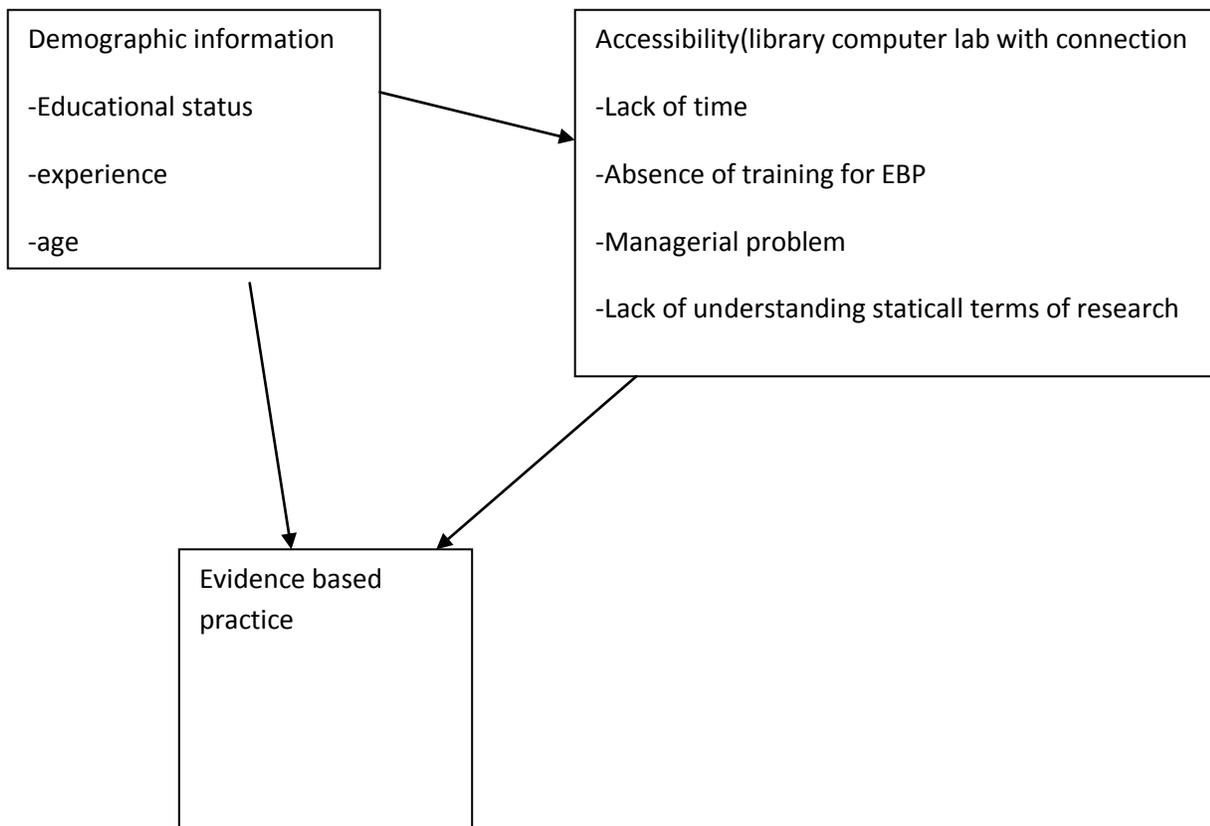
impart basic searching skills to nurses to help them benefit from the huge volume of medical and health care information.[17]

Data for this study were collected from two public hospitals in Singapore, and, therefore, care should be exercised when generalizing its findings to other types of hospitals. A comprehensive study involving other public, private, and specialized hospitals could yield more conclusive data. Similarly, findings of this study cannot be fully generalized to public hospitals in other Southeast Asian countries due to different standards and available resources. A cross-country study would help compare awareness of, perceptions of, competencies in, and barriers to integrating EBP in nursing practices in these countries.[17]

through certain qualitative research techniques, such as interviews and focus group discussions, could further this study.[17]

As nurses play a crucial role in the delivery of health care, they need to embrace new and innovative techniques to provide effective and best possible treatment to their patients. Like many previous studies, this study also discovered a positive attitude among nurses toward EBP. However, at the same time, it was found that several institutional and personal barriers were hindering nurses from adopting EBP. Hospital management can easily overcome some of these barriers through arranging EBP training and providing time off from work for nurses to learn and implement new techniques. Another important finding of this study was that nurses preferred to consult their supervisors and colleagues to obtain needed information. Hospital management can create a conducive environment and provide socializing opportunities for nurses to promote peer-to-peer information and knowledge sharing. Similarly, as EBP is an information-intensive activity, library and information professionals working in hospitals can play a significant role in developing basic information literacy skills, particularly literature searching skills, among nurses and other medical practitioner.[17]

2.3 Conceptual framework



3. objective

3.1 General Objective

To assess for nurses update themselves with literature and put into practice in selected hospitals and health centers West Gojjam, Amhara regional state, Ethiopia, 2015 .

3.2 Specific Objectives

- To assess nurses whether they are updating themselves with literature or not
- To assess nurse willingness to put the literature into practice.
- To identify factors affecting evidence based practice

4. Methods

4.1. Study design:

The study used institutional based cross sectional study design was employed.

4.2. Study area Study period: -

The study area is west Gojjam zone , one of the zones which is present in Amhara regional state. West Gojjam is one of zones of two Gojjam zones. Its major city administration is newly selected city called Finote Selam city 386 Km from Addis in North west .A tour from Addis to west Gojjam come across the Abay river and its fantastic surrounding mountain. The peoples of west Gojjam mostly generates in come through agriculture. West Gojjam has 18 woredas hospitals, health centers, and has 1856 nurses totally. the study was conducted from January- June, 2015.

4.3. Sources population:-

Nurses who are working in hospitals and health centers in west Gojjam.

4.5. Sample size determination:-

used single proportion formula to determined the sample size.

Where

N: Required sample size

Z_{a/2}: the standard normal value with 95% confidence interval =1.96

P= estimated proportion of nurses who EBP (assumed 50%) because I have taken 50% due to absence of prior research done in Ethiopia.

D= Margin of error 5%

Therefore $N = \frac{(1.96)^2 \times 0.5 \times 0.5}{(0.05)^2}$

=384

4.6.Sampling methods:-

Simple random sampling method was used to select health centers and hospital from West Gijjam and from this study participants also selected simple random sampling method to get the required amount of ample size which was 384..

4.7.Data collection procedure

As already statured questionnaire is prepared data was collected from hospitals and health centers in west Gojjam zone. First the principal investigator arranges the data collector and supervisor. And facilitates orientation and training for data collector and supervisor.

4.8.Data quality control

The collected data was assured its quality through reducing the factors that decrease the internal quality day to day checking of the collected data for consistency.

4.10. Eligibility criteria

Inclusion criteria:- being a nurse in the study area and sample study who is voluntary

Exclusion criteria:- nurses who have sever mental illness other health professionals , assistant nurse, involuntariness.

4.11. Data processing and analyses

Biostatistical data analyses method was used in order to form association between variables of dependent and independent variables and finally to draw conclusions (stastical methods like OR).

4.12. Variables

4.12.1. Dependent variables:-

nurse updating themselves with literature and put in practice

4.12.2. Independent variables:-

being a diploma, or BSC or MSC nurse, library access in the institution.

- Internet access ,age, availability of time,
- Ability to understand jargon terms of the research literature,
- Service year, training on evidence based practice

4.13. Operational definitions

.Evidence – Based practice(EBP):- when nurses act or treat patients / or perform their day to day activities with the new literatures .

4.14.Ethical consideration

The thesis were approved by ethical committee of Addis Ababa university department of nursing and midwifery and then letter of approval has given to the principal investigator .It respects the dignity, privacy, and confidentiality of respondent that breaches the given ethical right.

4.15. Dissemination of the result

The finding will be given to west Gojjam zone health bureau and finally the paper will be sent to journals for possible publication . Besides one copy will be given to post graduate library for reference if possible, it will be published in journal and serve as good reference.

5. Result

Among the study sample respondents most of nurses was females(57%) followed by male(42.7%). Concerning educational status or nursing qualification, diploma nurses covers the largest proportion(52.3%) while Msc nurses was the least . Coming to experience most professionals among study respondents have an experience of 6-10 years that cover 53.4% from the total percentage experience. 84.4% work at health center , 15.6% work at hospital

Table 1 Frequency distribution of respondents by their socio demographic characteristics

Variables		Frequency	percentage
Sex	Male	162	42.7%
	Female	220	57.3%
Educational status	diploma nurse	201	52.3%
	Advanced diploma nurse	117	30.5%
	Bsc nurse	57	14.8%
	Msc nurse	9	2.4%
Experience	1-5 years	110	28.6%
	6-10 years	205	53.4%
	>10years	69	18%
Place of work	Hospital	60	15.6%
	Health center	324	84.4%
Area of work	Adult OPD	170	44.3%

	MW	49	12.8%
	SW	40	10.42%
	ART	45	11.72%
	Emergency	79	20.6%

Majority of the respondents,67%, have habit of updating their professional knowledge. Out of those who have the habit , majority of them (67.7%) update their knowledge when they face difficulty while they were working, where as 22.1% of them update their professional knowledge regularly. And 74% of them update in their work place,8% of them use internet cafes wher as 18% use their personal electronic medias. Such as mobile phone, personal computers etc.. only 15.6% of the study participants have access in their institution of which 68% of them use libraries and 32% have computer center with internet connection in their institutions.

Table 2. Percentage distribution of respondents by their reading habit and accessibility of materials.

Variable		Frequency	Percentage
Habit of updating their professional knowledge	Yes	127	32.3
	No	257	67.7
If yes whom give you that literature	Institution manager	9	2.34
	Local NGO'S	257	67
	Regular access to our library	78	20.3
	Visiting computer lab with internet connection	40	10.42
When?	Regularly	28	22.1
	When facing difficulty	86	67.72
	To test new guideline for treatment	13	10.23
Where do you update?	Work place	94	74.02
	Internet cafes	10	7.9
	Personal electronic medias	23	18.11
Material access in the institution	Yes	60	15.6
	No	324	84.4

The first in rank ,barrier was inability to understand stactical terms of research and jargon(84.9%). The second in rank of accessibility problem was they have no knowledge of searching articles frome internet using “pub med” and henary principle of searching research articles(83.6%), no internet access(78.3%), managerial problem(70.6%) and absence of training (44.5%) how to search articles was the major problems.

Table 3 frequency distribution of barrier to access in the health institution

Variable		Frequency	Percent
Is their any barrier to access for updating	Yes	384	100
	No	-	-
Barriers to access	No internet access	300	78.13%
	No access to articles in the internet	300	78.13%
	Lack of time	25	6.5%
	Not knowing to find articles	321	83.6%
	Lack of understanding to interpret stactical term and jargon	326	84.9%
	Managerial problem	271	70.61%
	Absence of training for finding research articles from the internet	171	44.5%

From the total of respondents who has a habit of reading new literature (127) or 33.1 (%) , more than half (70,55.12%) put that new knowledge in to practice and from thse who said they have put in to practice, more than half (74.3%) said it was effective the respondents who put research in to practice they responded it was effective(74.3%) not effective, (15.7%) ,and no change .(10%). The sampled health professionals who hasn't put new research literature into practice has listed the following reasons, no access to new research literature(50%) luck of ability to interopret research literature, management problems , financial problems ., others(--)

Table 4 percentage distribution of respondents by their successful answers to questions asking about implementations(\practic\l) of EBP and barriers.

Variable		Frequency	Percentage
Have you ever put new knowledge into EBP in your day to day activity	Yes	70	55.12%
	No	57	44.9%
If yes , what was its outcome	Effective	127	74.3%
	Not effective	52	15.7%
	No change	11	10%
Have you done research when you graduate	Yes	384	100%
	No	-	
If yes have you put into practice	Yes	-	
	No	384	100%

Mostly suggested solution by respondents was accessibility issue(79%), followed by training(17%).

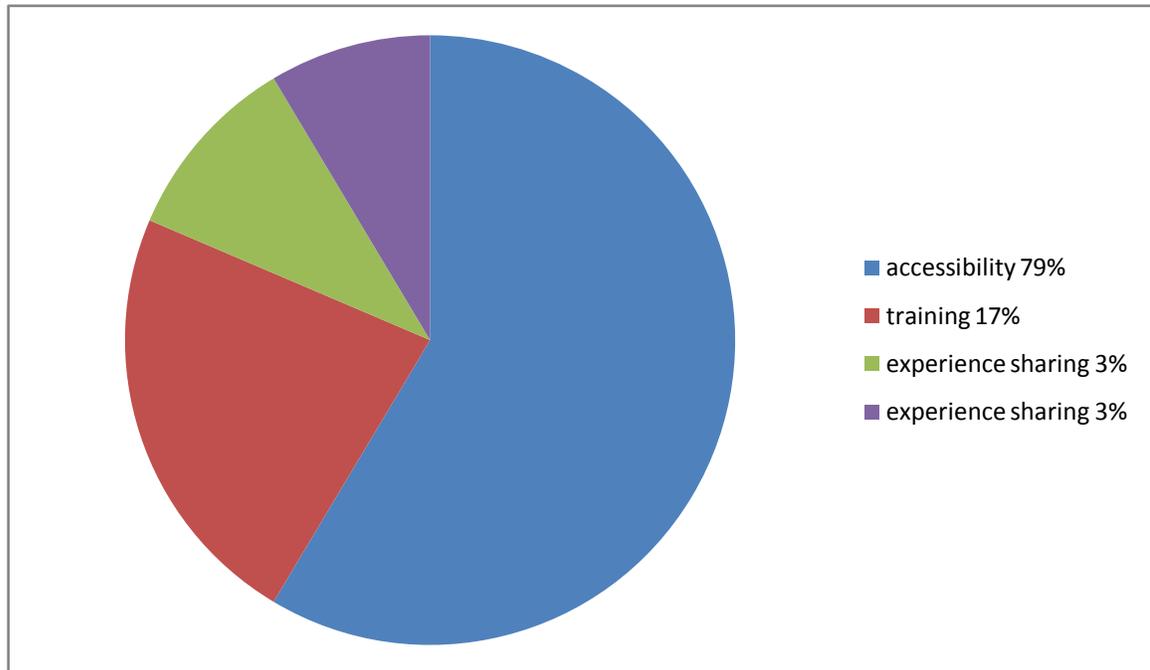


Fig: 1 distribution of respondents suggested solution

6. Discussion

Socio demographic characteristics

It was found that 52.3% of the nurses has certificate of diploma which is higher than the research done in Singapore(41%) while 30.5% of nurses has advanced diploma also higher than advanced diploma holders of Singapore nurses who had responded the barriers to EBP(14.8%). The percentage who hold bachelor and masters degree, 14.8% and 2.4%, respectively. And in parallel to Singapore demographic information, 41.4% and 2.3% respectively. The member of bachelors in these study area was far less than Singapore respondents while the master degrees nurses were almost the same. May be due to sample size variation and lack of common understanding between these study and Singapore's study. A majority of nurses work in the health center(84.4%) in the study and 15.5% of nurses work at hospital but all the study respondents conducted at Singapore worked at hospitals. In these study most of the respondents perform their day today activity in the adult OPD(40.61%), 18.8% in the pedi OPD, 17%, in in the emergency .9.1% in the MW and 6.5% in the SW. in Singapore study hospitals, majority of nurses work in the inpatient department which is higher compare to that of (47.2%). 21% in the ICUS and 7.1% in OPD which is less than these study, in emergency,2.5% and operating theatre,12.1%(17)

These study finds that majority of health professionals(nurse) in the sample study had an experience of 6-10 years 53.4% but in Singapore 21.1% of nurses had upto6- 10 years of experience which is less than that of these study. The finding gets 28.6% of them had an experience of 1-5 year and 18% of them had an experience of >10 years which is less than done in another research(27%) but majority of respondents in another study less than in 1-5 years of experience(51.1%), that difference may be due to freshly admitted nurses were greater than these finding or university of admission of health professionals at that area were greater than those study and may be due to lack of common understanding about what EBP means. From the 384 respondents they were asked habit of updating (reading) professional knowledge. And 33.1% of them said yes we update while 66.9% of respondents said that they hadn't habit of updating (reading) new professional knowledge or new literature which is comparable with the literature done on dual analyzed research of Uganda and on Ruanda on reading habit of research literature

that 60% of the respondents were not read literature. In the same study of Uganda and Ruanda 30% of nurses felt that research is not relevant for Africa (17%). From the respondents who answered ye we update, 67% of them answered that when facing difficulty, 22% of them said they read regularly and 10.2% of them responded that they read because of to test new guideline. These finding tells us that from all respondents 74% of them perform updating at work place library, 8% at internet café, 18% use personal electronic medias. (13)

The finding tried to assess holistically factors that affect EBP. As the questionnaire was structured from demographic characteristics to accessibility barriers including lack of professional knowledge like understanding medical jargon, analyzing research statics easily etc... so these thesis aimed to compare and contrast according of the investigator. These thesis explores that almost all respondents agree that there is accessibility barriers (100%). The barriers found were so many. Majority(78.13%) of the nurses responded that the internet access is in question which is comparable with the research done in Uganda (49%) but in contrast with the research done on accessible barriers in Ruanda which they said that ~~no~~ "no internet"(3%). In addition , it is also comparable with that of barriers research in Ruanda and Uganda that 57% and 38% answered that they have faced the difficulty of slow internet connection. These difference between these finding and the research done on Uganda and Ruanda may be occurred due to lack of deep understanding of technology importance to health quality. Similarly the thesis found that most of nurse professionals have no any knowledge of finding/accessing articles from the internet (83.6). and 78.3 of them has no access to articles because it may be due to lack of knowledge finding articles from the internet which can be comparable with the thesis done in Uganda (42%) and Ruanda(43%) but in contrast to that with similar research (Uganda and Ruanda)29% and 33% respectively. These gap has occurred may because of prior technology transfer in Uganda and Ruanda and recent popularity for these thesis finding(17).

besides this thesis has a large number of respondents who had lack of understanding research statical term to understand or difficulty of interpreting jargon(84.9%). On the contrary to these finding, was Singapore hospital nurses who were asked about their problem while applying or adapting EBP in the work place that more than 47% of nurses identified inability to understand statical terms, inadequate understanding of techniqual jargon and difficulty in judging the quality of research articles and reports . these result gap may be due to less popularity or less skill in

understanding evidence based practice or incorporation of information technology skill with health science skill was low in these finding than other researched countries(17).

The other barrier cited by the thesis participant were lack of time to read ,understand, and implement the recent literature in to practice which were 6.5% of the total respondent which was low compared to barrier investigation in Ruanda and Uganda hospitals 58% and 39% , respectively interns of lack of time. These may be due to burning issue in the study area was not as the case was true for Uganda and Ruanda or may be due to higher patient flow in hospitals of Ruanda and Uganda as most of the work place for these study area was in health centers.(17)

The study participants who cited managerial problem as a barrier were 70.61% and absence of training for finding research articles from internet 44%.

Generally, the investigator put the barrier in rank as follows . from the result seen and top page discussions observed the top barriers that were affecting the study participants in rank was, accessibility barrier, (100%) such as internet access(78%) computer lab with connection and library(78%). The second barrier identified was lack of understanding stastical terms and medical jargon. Thirdly, not knowing to find articles (83.6%) fourthly, managerial problem(70.61%), fifthly, absence of training (44.5%). sixthly, lack of time. Comparing these result with research literature investigated in south Africa where the top three barriers were lack of time, inability to understand medical jargon and inadequate understanding of stastical term but similar with the study in south Africa by mcclenery and suleman barriers encountered by acadamic health care practioners in implementing EBP, lack of access pertaining research articles, insufficient finding, and insufficient time (17)

Conclusion and recommendation

The study shows almost all study participants(100%) responded that there are barriers for updating research literature into practice. Among the barriers identified by this study lack of understanding to interpret statistical term and jargon (84.9%) takes the highest percentage. As indicated by the study participant for suggested solution health sector stakeholders should stand on improving accessibility that will be used for improving literature searching skill.

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Annex

Questionnaire individual consent form

Hello my name is **Mengistu Mekonnen**, I am MSC nursing student at Addis Ababa university department of nursing and midwifery who wants to do my thesis on assessment of nurses for updating themselves with literature and put in practice in selected hospitals and health centers.

The purpose of this study is to assess factors that determine nurses update them selves with literature and put into practice.

I would like to assure your name is not displayed to any where .So I kindly requests you to give your genuine responses.

- I agree _____
- I disagree _____

Biographic data

- Age

20-25 26 -30

31 – 35 36 – 40

- – 45 46 50

- Sex Male Female

- Educational statues

- Diploma nurse

- Advanced - diploma

- BSC nurse

- MSC nurse

- Others _____

- Experience < 1 year

1 – 2 years 3 - 4 years 5 - 6 years

7 – 8 years 9 – 10 years >10 years

- Pace of work

- Hospital b. heath center

- Area of work

- OPD d. pediatric

- Lack of time
- Managerial problem
- Lack of ability to interpret new finding in the research
- Other _____
- If there is colleague who takes training on some updates is there away to share that training
 - Yes B. No
- Is there a nurse who serves for a reference when facing difficulty
 - Yes B. No

Practices

- Have you ever read new researchers literature for new knowledge
 - Yes B. No
- Whom give you that literature
 - Institution manager
 - Local NGO's
 - My self
 - Regular access to our library
 - By visiting computer lab with connection
- Have you put that new knowledge into your day to day activity for patient care.
 - a. Yes B. No

- Training on how to interpret research
 - Experience sharing
 - Collaborative participation including NGO's
 - Other _____
- Have you done research when you graduates
 - a. Yes b. No
 - If yes to question no 2 above, have you tried to put the research finding into practice?
 - a. Yes b. No
 - If your response to question no 3 is no what was the reason?
 - I am reluctant
 - No permission
 - Lack of resource
 - Time constraint
 - Other reason specify _____

Thank you for your time!!

Declaration

I, **Mengistu Mekonnen**, the undersigned declare that this thesis is my original work and has not been presented in this or any other university for a similar or any other degree award and all sources of materials used for this proposal have been fully acknowledged

Name: **Mengistu Mekonnen**

Signature: _____

Date: _____

Place: Addis Ababa University College of Health Sciences, School of Allied Health Sciences
Department of Nursing and Midwifery, Post Graduate studies.

This proposal has been submitted for examination for approval

Advisor: Yohannes Ayalew (RN, BSc, MSc, Lecture)

Signature: _____

Date: _____

Place: Addis Ababa University College of Health Sciences, School of Allied Health Sciences
Department of Nursing and Midwifery.