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# PROCEEDING

## The 6th Padjadjaran International Nursing Conference

*"The Role of Nurses in advancing quality of care through application of conceptual models in areas of nursing practices and health"*

**23-24 May 2018**

**EL ROYALE HOTEL BANDUNG**
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6TH PADJADJARAN INC 2018 • BANDUNG-INDONESIA •

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Conference & Workshop Programmes

The 6th Padjadjaran International Nursing Conference

**Day First: Wednesday, 23rd May 2018**

| Time | Activities | Person in Charge |
|---|---|---|
| 07.30-08.30 | Registration | Team |
| 08.30-08.40 | Opening ceremony | |
| 08.40-08.55 | •Art Performance<br>Traditional Dance performance | Students of Faculty of Nursing Universitas Padjadjaran |
| 08.55-09.05 | •National Anthem<br>Indonesia Raya | All audience |
| 09.05-09.20 | •Welcome remarks | Chair of The 6th PINC 2018<br>Yanny Trisyani, S.Kp., MN., PhD |
| 09.20-09.35 | •Welcome remarks: | Dean, Faculty of Nursing<br>Henny S. Mediani, MNg., PhD |
| 09.35-09.55 | •Opening remarks: | Rector of Universitas Padjadjaran<br>Prof. Dr. med. Tri Hanggono Achmad, dr. |
| 09.55-10.00 | Do'a | |
| 10.00-10.20 | Keynote Speech: | Ministry of Health Republik Indonesia |
| 10.20-10.30 | Break | |
| 10.30-11.15 | Keynote speech:<br>Human caring theory, how it developed and how it is being used in the world today. | Prof. Dr. Jean Watson<br>(Watson Caring Institute, USA) |
| 11.15-12.00 | Plenary Session 1-1 | • Prof. Linda Shields MD, PH.D., FACN (AU)<br>• Assoc. Prof. Aranya Chaowalit, RN, PhD (Thailand)<br>• Assc. Prof. Dr. Khatijah Binti Abdullah Lim Geok Lim (Malaysia) |
| 12.00-12.20 | Discussion session | Moderator |
| 12.20-13.30 | Lunch Break & Pray | |
| 13.30-14.30 | Plenary Session 1-2 :Perspective Nursing Theory in Improving Nursing Practice | • Assc. Prof. Kusman Ibrahim, MNS., Ph.D (INA)<br>• Dr. Kathy Nelson, PhD, MA, RN (NZ) |
| 14.30-14.45 | Discussion session | Moderator |
| 14.50-15.35 | Plenary Session 1-3 Improving Nursing Care Service Through Safe And Quality Nursing Practice | • Assc. Prof. Ravani Duggan (Taiwan)<br>• Prof. Alison Hutton (AU)<br>• Henny Suzana Mediani, PhD (INA) |
| 15.35-15.55 | Discussion session | Moderator |
| 15.55-16.30 | Coffee Break & Pray | |
| 16.30-17.30 | Concurrent Session 1 | |
| 17.30-19.00 | Breakfasting | |
| 19.30-21.00 | Gala Dinner | |

**Day Second: Thursday, 24th May 2018**

| Time | Activities | Person in charge |
|---|---|---|
| 07.30 – 08.30 | Registration | |
| 08.30-09.15 | Plenary Session 2-1: quality of care for quality of life | 1.Sandra K. Cesario, PhD, RNC, FAAN (USA)<br>2.Prof. Agneta Schröder, Ph.D (Sweden)<br>3.Prof. Suryani, MHSc., PhD (INA) |
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| 09.35-09.50 | Break | |
| 09.55-10.40 | Plenary Session 2-2: (Improving quality of care through nursing research) | • Assc. Prof. Joan Edwards (USA)<br>• Assc. Prof. Esther Ching-Lan Lin (Taiwan)<br>• Yanny Trisyani (INA) |
| 10.40-11.00 | Discussion session | Moderator |
| 11.10-12.10 | Concurrent Session 2 and Poster Session 1 | |
| 12.10-13.10 | Break and Praying | Non-Fasting participants |
| 13.10-15.10 | Workshop | |
| 15.10-15.40 | Break & Praying | |
| 15.40-16.40 | Concurrent Session 3 and Poster Session 2 | |
| 16.40-17.30 | Closing | |
| 17.30-19.00 | Break Fasting | |

# Application of Evidence-Based Nursing Practice and Its Barriers in Padang, West Sumatera Indonesia

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## Abstract

Professional nurses, one of the human resources in the health field, have an obligation to carry out the nursing process, especially nursing based on scientific evidence. This study's aim was to describe the knowledge, attitudes, implementation towards evidence-based practice and its constraints in the Hospital. A quantitative research with descriptive approach was conducted in the Dr. M. Djamil Hospital Padang. A consecutive sampling technique was utilized with 139 respondents being selected and only 90 respondents completely filled in the questionnaires. The instruments used were Evidence-Based Practice Questionnaire (EBPQ) and BARRIERS Scale. Characteristics of respondents were 70.0% diploma education, mean (SD) age was 36.7 (7.95) years and 13.35 (8.37) years working time. The average EBP-related attribute score was higher than the average score of EBP knowledge/understanding, understanding of research terms, confidence and practice towards EBP. There is a need to improve knowledge and understanding of EBP and research and overcome the obstacles of EBP implementation in the practice of nursing service.

**Keywords:** application, barriers, evidence-based practice

## Introduction

Human resources is one of the input subsystems to achieve the goals of the health system. An important focus in human resources is the development and enabling of human resources as well as improving the quality of human resources in the health sector. Human resources in the health sector have the right to fulfill their basic needs (human rights) as social beings, competence, authority to dedicate themselves in the fields of health, ethics, moral noble, and dedicated in duty.

Professional nurses are one of the human resources in the health field. Nurses have an obligation to carry out the nursing process, especially nursing orders based on scientific evidence. In line with Mahanes, Quatrara, and Dale (2013) said that nurses are expected to stay up to date on a large number of institutional initiatives, best practice guidelines, and policies and procedures.

In nursing, evidence-based practice is important to provide high quality care. As the Institute of Medicine (IoM) claims that Evidence-Based Practice (EBP) is very important in improving and ensuring the quality of health services (Rn, Knops, Ubbink, & Rn, 2013). The IOM study in 2001 reported that patients received recommended evidence-based treatment measures of only 55% (Anne & Woods, 2013), whereas according to Bach (2005), evidence-based practice in care from the general population was provided for only 50 % (Wood & Payne, 2012). In the nursing profession, research findings as new information will be incorporated continuously in nursing practice (Pipe, Wellick, Buchda, Hansen, & Martyn, 2005). Unfortunately, nurses face real challenges when translating the best evidence in clinical practice (Pipe et al., 2005; Boström, Rudman, Ehrenberg, Gustavsson, & Wallin, 2013).

Several studies have been conducted to find out about knowledge, attitudes and awareness about EBP in different countries (Rn et al., 2013; White-Williams et al., 2013; McKenna, Ashton, & Keeney, 2004). Furthermore, A literature review found 37 articles showing that five barriers are clinical characteristics, nursing education, research habits and literature reading, facilitation of research use, and their relevance for nursing staff and clinical practice (Athanasakis, 2013). A study

showed that among surgeons, 90% are familiar with the term EBS, whereas nurses are only 40%. Common barriers for surgeons are contradictory results (79%) and inadequate report methodology (73%); and for nurses were EBS unconsciousness (67%) and unclear research report (59%) (Legemate & Ubbink, 2009).

Since the establishment of the Nursing Science Program, Andalas University has introduced research on nursing students. Students are asked to disseminate the results of their research in the field of nursing. It is based on the Nursing Academic Curriculum 2009, 2012 and is supported by qualified nursing tutors who are at the master level. Based on Ners 2009-2013 Curriculum, there are literature review lecture sessions. Therefore, nurses have been exposed to research articles and the importance of practice based on scientific evidence. However, there is no accurate data on the extent to which nurse knowledge and attitudes related to evidence-based practice and how evidence-based nursing practice is applied.

Little information is known about the use, knowledge, and attitudes towards EBP among nurses in hospitals in Indonesia, especially in Padang. Therefore, it is necessary to study the knowledge, attitudes and factors that influence evidence-based nursing practice (EBNP) among nurses in the hospital.

Further on the basis of observations it was found that the majority of hospital-run nurses rarely use evidence-based practice (EBP), as some of them do not understand EBP and its importance when asked by researchers. Thus the need for research is needed so that relevant policies and strategies can be recommended based on the study findings. The purpose of this study was to determine the knowledge, attitudes, implementation, and constraints towards evidence-based practice on nurse practitioners.

**Methods**

The research design is quantitative with cross-sectional approach. Population in this research is nurse staff in Dr. M. Djamil. Questionnaire that has been disseminated as much as 139 and returned as much 119. Moreover, the response

rate of study is high that is about 85.61%. Furthermore, from 119 questionnaires obtained found a number of characteristic data that is not filled completely and only 90 questionnaires that fill in complete questionnaires about evidence-based practice and barrier scale. Thus, the data that can be analyzed is as much as 90.

The instruments used are the Evidence-Based Practice Questionnaire (EBPQ) (Upton, Upton, & Upton, 2006; Beras et al., 2010 and BARRIERS Scale (Wang, Jiang, Wang, Wang, & Bai, 2013). EBPQ has 24 items compiled in three sub-scales of attitudes towards, knowledge, and use of EBP. BARRIERS Scale, covering 29 questions about the obstacles of applying research to practice, using 5 scales (Legemate & Ubbink, 2009)

Numerical variables are displayed in mean, standard deviation, median, minimum, and maximum. Caterogical variables are summarized by number and percentage. For the categorical endpoint, the difference in proportion will be estimated with 95% confidence interval (CI). Furthermore the p value ≤0.05 will be considered statistically significant. The statistical test was done computerized using SPSS version 23 software application.

**Results**

From the table 1, it is known that the average respondent aged 36.75 years where the highest age is twice the lowest age of 58 years. The average nurse has been working in this hospital for 13.35 years with the lowest and highest working period of 1 year and 37 years. Almost ¾ respondents are female. More than half of the 70% of the last education respondents are DIII followed by S1 / NERS of 14.4% and the remaining approximately 3.3% are still educated SPK. Almost half of respondents work in the Surgical Room that is 42.2%.

Table 1. Description of respondents viewed from age, sex, last education, work experience and inpatient room in Dr. M. Djamil Padang (n = 90)

| **Characteristics** | **f** | **Mean** | **SD** | **Min** | **Max** |
|---|---|---|---|---|---|
| **Age** (years) | 84 | 36.75 | 7.95 | 26 | 58 |
| Missing data | 6 | | | | |
| **Work experience** (years) | 78 | 13.35 | 8.37 | 1 | 37 |

| | | |
|---|---|---|
| Missing data | 12 | |
| **Gender** | **f** | **%** |
| Male | 14 | 15.6 |
| Female | 65 | 72.2 |
| Missing data | 11 | 12.2 |
| **Education** | | |
| Senior High School in Nursing | 3 | 3.3 |
| Diploma | 63 | 70.0 |
| Bachelor of Nursing | 13 | 14.4 |
| Missing data | 11 | 12.2 |
| **Room** | | |
| Pediatric-Maternity | 13 | 14.4 |
| Surgery | 38 | 42.2 |
| Non-surgery | 15 | 16.7 |
| Operation Room | 17 | 18.9 |
| Cardiovasculer Care Unit | 7 | 7.8 |

Table 2. Distribution of EBP understanding / knowledge responses, attitude towards EBP, understanding of research terms, action towards EBP and confidence to EBP

| **Aspects** | **f (%)** | **Mean (SD)** | **Minimum** | **Maximum** |
|---|---|---|---|---|
| *EBP understanding* | | 2.93 (0.96) | 1.00 | 5.00 |
| Good (≥ mean) | 57 (63.3) | | | |
| Not good (< mean) | 33 (36.7) | | | |
| *Attitude towards EBP* | | 3.32 (0.51) | 1.18 | 4.35 |
| Positive (≥ mean) | 45 (50) | | | |
| Negative (< mean) | 45 (50) | | | |
| *Understanding of research terms* | | 2.53 (0.79) | 1.00 | 4.00 |
| Good (≥ mean) | 45 (50) | | | |
| Not good (< mean) | 45 (50) | | | |
| *Action towards EBP* | | 1.95 (0.91) | 1.00 | 5.00 |
| Good (≥ mean) | 37 (41.1) | | | |
| Not good (< mean) | 53 (58.9) | | | |
| *Confidence to EBP* | | 2.72 (0.44) | 1.00 | 4.18 |
| Confidence (≥ mean) | 52 (57.8) | | | |
| Less confidence (< mean) | 38 (42.2) | | | |

Table 3. Frequency distribution and percentage of The Barrier Scale

| No. | Subscale and item | Very disagree | Disagree | Neutral | Agree | Very Agree |
|---|---|---|---|---|---|---|
| **Nurse subscale: The nurse's research values, skills and awareness** | | | | | | |
| | Item | f (%) | f (%) | f (%) | f (%) | f (%) |
| 1. | The nurse is unaware of the research | 10 (11.1) | 55 (61.1) | 22 (24.4) | 3 (3.3) | 0 |
| 2. | The nurse does not feel capable of evaluating the quality of the | 7 (7.8) | 43 (47.8) | 36 (40.0) | 4 (4.4) | 0 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | research | | | | | |
| 3. | The nurse is isolated from knowledgeable colleagues with whom to discuss the research | 11 (12.2) | 45 (50.0) | 31 (34.4) | 3 (3.3) | 0 |
| 4. | The nurse is unwilling to change/try new ideas | 15 (16.7) | 32 (35.6) | 41 (45.6) | 2 (2.2) | 0 |
| 5. | The nurse sees little benefit for self | 12 (13.3) | 37 (41.1) | 29 (32.2) | 12 (13.3) | 0 |
| 6. | There is not a documented need to change practice | 11 (12.2) | 39 (43.3) | 30 (33.3) | 4 (4.4) | 6 (6.7) |
| 7. | The nurse feels the benefits of changing practice will be minimal | 10 (38) | 38 (42.2) | 37 (41.1) | 5 (5.6) | 0 |
| 8. | The nurse does not see the value of research for practice | 16 (17.8) | 34 (37.8) | 34 (37.8) | 6 (6.7) | 0 |
| **Setting subscale: Setting barriers and limitations** | | | | | | |
| 9. | There is insufficient time on the job to implement new ideas | 5 (5.6) | 18 (20.0) | 57 (63.3) | 10 (11.1) | 0 |
| 10. | The nurse does not have time to read research | 4 (4.4) | 21 (23.3) | 43 (47.8) | 22 (24.4) | 0 |
| 11. | The nurse does not feel she/he has enough authority to change patient care procedures | 6 (6.7) | 23 (25.6) | 41 (45.6) | 20 (22.2) | 0 |
| 12. | The facilities are inadequate for implementation | 6 (6.7) | 13 (14.4) | 46 (51.1) | 23 (25.6) | 2 (2.2) |
| 13. | Other staff are not supportive of implementation | 3 (3.3) | 20 (22.2) | 54 (60.0) | 13 (14.4) | 0 |
| 14. | Physicians will not cooperate with implementation | 3 (3.3) | 35 (38.9) | 44 (48.9) | 7 (7.8) | 1 (1.1) |
| 15. | The nurse feels results are not generalizable to own setting | 2 (2.2) | 31 (34.4) | 50 (55.6) | 7 (7.8) | 0 |
| 16. | Administration will not allow implementation | 4 (4.4) | 27 (30.0) | 52 (57.8) | 7 (7.8) | 0 |
| **Research subscale: Qualities of the research** | | | | | | |
| 17. | The research has not been replicated | 0 | 18 (20.0) | 52 (57.8) | 20 (22.2) | 0 |
| 18. | The literature reports conflicting results | 0 | 19 (21.1) | 64 (71.1) | 7 (7.8) | 0 |
| 19. | The research has methodological inadequacies | 1 (1.1) | 31 (34.4) | 49 (54.4) | 9 (10.0) | 0 |
| 20. | Research reports/articles are not published fast enough | 0 | 18 (20.0) | 52 (57.8) | 20 (22.2) | 0 |
| 21. | The nurse is uncertain whether to believe the results of the research | 1 (1.1) | 31 (34.4) | 52 (57.8) | 6 (6.7) | 0 |
| 22. | The conclusions drawn from the research are not justified | 2 (2.2) | 21 (23.3) | 62 (68.9) | 5 (5.6) | 0 |
| **Presentation subscale: Presentation and accesibility of the research** | | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 23. | The statistical analyses are not understandable | 1 (1.1) | 21 (23.3) | 51 (56.7) | 17 (18.9) | 0 |
| 24. | The relevant literature is not compiled in one place | 1 (1.1) | 18 (20.0) | 42 (46.7) | 28 (31.1) | 1 (1.1) |
| 25. | Research reports/articles are not readily available | 1 (1.1) | 17 (18.9) | 47 (52.2) | 25 (27.8) | 0 |
| 26. | Implications for practice are not made clear | 1 (1.1) | 19 (21.1) | 53 (58.9) | 17 (18.9) | 0 |
| 27. | The research is not reported clearly and readably | 1 (1.1) | 25 (27.8) | 52 (57.8) | 12 (13.3) | 0 |
| 28. | The research is not relevant to nurse's practice | 1 (1.1) | 26 (28.9) | 47 (52.2) | 16 (17.8) | 0 |
| **Items not included in any of the subscales** | | | | | | |
| 29. | The amount of research information is overwhelming | 1 (1.1) | 21 (23.3) | 44 (48.9) | 22 (24.4) | 2 (2.2) |
| 30. | Research reports/articles are written in English | 6 (6.7) | 25 (27.8) | 49 (54.4) | 9 (10.0) | 1 (1.1) |

Table 2 illustrates the distribution of EBP understanding / knowledge responses, EBP attitude responses, understanding of research terms, actions against scientific evidence-based practices, and confidence in EBP on nurses at Dr. M. Djamil 2017. The average attitude score on evidence-based practice (EBP) is the highest among the other scores on average. Meanwhile action against EBP has the lowest average score. More than some of the respondents' understanding and knowledge about EBP is good. However, the understanding of research and attitudes toward EBP has the same percentage between good / positive and less good / negative that is 50%. Furthermore, some of the actions against EBP are not good. However, more than half of respondents have good confidence in EBP.

The table 3 showed the description of the frequency and percentage of respondents' answers to the barrier scale questionnaire. There are 5 (five) subscales of the nurse subscale, constraint and limitation subscale, research quality subscale, subscale of presentation and accessibility of research results, and item subscales not present on every subscale. Almost most respondents answered disagreed and neutral, while few respondents who answered agree even strongly agree on the subscale nurse. Unlike the case with other subscales, the answer spreads are disagreeable, neutral, and agree.

Table 4. Frequency distribution and average barrier scale score.

| Subscale | f (%) | Mean (SD) | Minimum | Maximum |
|---|---|---|---|---|
| *Adopter* | | 2.37 (0.60) | 1.00 | 3.75 |
| Low (≥ mean) | 48 (53.3) | | | |
| High (< mean) | 42 (46.7) | | | |
| *Organization* | | 2.80 (0.54) | 1.25 | 4.13 |
| Low (≥ mean) | 56 (62.2) | | | |
| High (< mean) | 34 (37.8) | | | |
| *Innovation* | | 2.85 (0.47) | 2.00 | 4.00 |
| Low (≥ mean) | 53 (58.9) | | | |
| High (< mean) | 37 (41.1) | | | |
| *Communication* | | 2.96 (0.63) | 1.00 | 4.00 |
| Low (≥ mean) | 65 (72.2) | | | |
| High (< mean) | 25 (27.8) | | | |
| *Others* | | 2.87 (0.64) | 1.00 | 4.50 |
| Low (≥ mean) | 63 (70.0) | | | |
| High (< mean) | 27 (30.0) | | | |
| *Total* | | 2.73 (0.44) | 1.70 | 3.83 |
| Low (≥ mean) | 48 (53.3) | | | |
| High (< mean) | 42 (46.7) | | | |

Table 5. Significance of relationships among variables

| **Knowledge towards EBP** | **Practice towards EBP** | | **Total** | ***p Value*** |
|---|---|---|---|---|
| | Good | Not good | | |
| | f (%) | f (%) | f (%) | |
| Good | 18 (31.6) | 39 (68.4) | 57 (63.3) | 0.016* |
| Not good | 19 (57.6) | 14 (42.4) | 33 (36.7) | |
| **Total** | **37 (41.1)** | **53 (58.9)** | **90 (100)** | |
| **Attitudes toward EBP** | | | | |
| Positive | 20 (44.4) | 25 (55.6) | 45 (50) | 0.520 |
| Negative | 17 (37.8) | 28 (62.2) | 45 (50) | |
| **Total** | **37 (41.1)** | **53 (58.9)** | **90 (100)** | |
| **Understanding of research terms** | | | | |
| Good | 26 (57.8) | 19 (42.2) | 45 (50) | 0.001* |
| Not good | 11 (24.4) | 34 (75.6) | 45 (50) | |
| **Total** | **37 (41.1)** | **53 (58.9)** | **90 (100)** | |
| **Self-confidence towards EBP** | | | | |
| Confidence | 22 (42.3) | 30 (57.7) | 52 (57.8) | 0.787 |
| Less confidence | 15 (39.5) | 23 (60.5) | 38 (42.2) | |
| **Total** | **37 (41.1)** | **53 (58.9)** | **90 (100)** | |
| **EBP's barrier** | | | | |
| Low | 11 (22.9) | 37 (77.1) | 48 (53.3) | 0.000* |
| High | 26 (61.9) | 16 (38.1) | 42 (46.7) | |
| **Total** | **37 (41.1)** | **53 (58.9)** | **90 (100)** | |

Table 4 shows the frequency distribution and average subscale score and the total score of the barrier scale. The subscale of presentation and accessibility of research results as barriers of almost ¾ is low, followed by other item subscales, constraint and constraint subscale, research quality subscale and consecutive nurse subscales of 70%, 62.2%, 58.9%, and 53.3%. In total, more than half of barriers are considered low with an average score of 2.73. Thus, most respondents rated the barrier of the five aspects low and others felt the barrier was high enough.

Table 5 shows that there is a significant relationship between understanding and knowledge of EBP and EBP actions, understanding of research terms and actions of EBP, EBP barriers and EBP actions with values of p value 0.016, 0001, and 0.000.

**Discussion**

This research describes knowledge, attitude, understanding of research term, confidence to EBP and EBP action on nurse in Padang City. The results show that more than a few nurses have the same EBP understanding / knowledge response or more than the average score. However, the average score of respondents' understanding of both EBP and research terms are in the medium range of 2.93 and 2.53. In line with research Rn et al. (2013) reported that nurses have a poor understanding of the term EBP. This moderate average score is probably caused by more than half of respondents (70%) have vocational education which at this level of education has not been studied about evidence-based practice and research articles.

Attitudes toward EBP have an average score higher than the average score of knowledge and action against EBP, ie 3.32. This good attitude is the basic capital to support the implementation of good actions as well. Several studies have reported that nurses have a positive attitude towards EBP and use of research in practice (Stokke, Olsen, Espehaug, & Nortvedt, 2014; Ammouri et al., 2014; Hussein & Hussein, 2013; Foo, Majid, & Mokhtar, 2011; Rn et al., 2013; (White-Williams et al., 2013; Chang, Russell, & Jones, 2010; Wilkinson, Hinchliffe, Hough, & Mphysio, n.d.; Chang et al., 2013; Butler, 2011). A study states that

nurses view the EBP application as increasing patient care outcome criteria, research findings useful in compliance with nursing practice, and EBP encouraging patient-centered care (Hussein & Hussein, 2013).

The average action score against EBP is the lowest among the others, which is 1.95. Unlike the case with (White-Williams et al., 2013) in Alabama with an average EBP action score approximately 2 times higher than the current research result, ie 3.41. This is possible because of the higher level of education and position / position as manager in the workplace so as to have a better action against EBP. Further Gagan & Hewitt-Taylor (2004) emphasize that the uptake and transfer of scientific evidence into practice is difficult and challenging.

Scott & Mcsherry (2008) stated that nurses need to have a good understanding of how to run evidence-based nursing (EBN) and what is the meaning of the concept and how it differs from other approaches to using evidence in action / evidence-based practice. Furthermore, the nurse needs to be made aware of and be involved with the process associated with obtaining evidence in practice and then identifying what is deemed incompatible with the right to inform their decisions and actions in practice.

In this study note that the average total score and each subscale is in the medium range of 2.73; 2.96; 2.87; 2.85; 2.80; and 2.37 respectively. This indicates that some respondents stated that the barrier felt strong enough while others felt the barrier was quite low. The nurse subscale as an adopter of value, skill and consciousness has the lowest average score among other subscales. The nurse considers that research is worthless of practice and even feels a little of EBP's benefit for itself is the top two items as a barrier on this subscale. However, the nurse item is not willing to change / try new ideas and the nurses do not care about the research being the lowest item.

Further on the organizational subscale it was found that insufficient facility items for applying EBP were ranked first as barriers followed by limited time reading of research results and the absence of nurse autonomy to change patient care procedures. This is in line with Brown, Wickline, Ecoff, & Glaser (2009) who

reported that organizational barriers such as lack of time and nurse autonomy as a perceived main barrier. Lack of facilities such as unpreparedness of information technology (IT) and library facilities may hinder the implementation of EBP. As Eizenberg (2010) reported that one of the variables that emerges as EBNP predictors is organizational support, whereas EBNP is more prevalent in workplaces providing computer and internet facilities.

Limitations of time ranks second in this study. Unlike the previous findings Mehrdad, Salsali, & Kazemnejad (2008) the lack of time is felt to be the fifth most frequently cited barrier in research use. Pettengill, Gillies, & Clark (1994) suggested that there is a need to investigate the concept of time in terms of personal factors such as motivation and aspiration. The subsequent barrier is a low nurse autonomy in patient care procedures. This is consistent with other findings and may be related to the low status and autonomy of nurses in all countries investigated (Fink, Thompson, & Bonnes, 2005) Schoonover, 2009). Like Olade (2003) the lack of nurse power and authority can generally stem from a tradition where nurses do not question nursing practice but focus on tasks assigned to them by co-workers in management positions or by medical staff.

Statistical tests show a significant relationship between EBP understanding / knowledge and EBP action; understanding of research term and action of EBP, barrier and EBP action, with p value 0.016, 0001, and 0.000 respectively. This result is consistent with Brown et al. (2009) that there is a significant relationship between barrier and EBP related practices, knowledge and attitudes.

**Conclusions**

Based on the result of research, it can be concluded that more than half of respondents have Nursing Diploma. Average attitude score exceeds the average score of knowledge / understanding related to EBP, isitlah research and action EBP. Then the statistical test shows the relationship between EBP knowledge / understanding, understanding of research term, EBP barrier and EBP action. Thus, there is an urgent need to increase the nurse's knowledge and skills on evidence-based practice and analyze research results as well as anticipate obstacles such as

good time management between practice and reading research literature, improving nurse autonomy in patient care practices, providing referral access facilities. This effort will certainly improve the implementation of scientific evidence-based practice.

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