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Nurses and Evidence-Based Practice

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by

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Abstract

Evidence-based practice is a necessary part of providing quality patient care in nursing, and has been linked to lowering costs and bettering patient outcomes. However, evidence-based practice is commonly misunderstood or thrown aside by nurses due to time constraints in the nursing profession. The purpose of the MSN thesis was to explore nurses' current knowledge and appreciation of evidence-based practice based on previous research, as well as identifying gaps in the knowledge of the concept. A descriptive research design was utilized. Results indicated nurses do have an open mind and appreciation for evidence-based practice, but consider it time consuming and perceive themselves as lacking the skills necessary to perform evidence-based practice.

Keywords: evidence-based practice, understanding, nurses

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CHAPTER I

INTRODUCTION

Evidence-based practice is a necessary part of providing quality patient care in nursing. It has been linked to lowering costs, enhancing nursing education and new discoveries, and most importantly bettering patient outcomes. It has been shown that evidence-based practice betters patient outcomes by decreasing patient mortality rate (Emparanza, Cabello, & Burls, 2015). The Institute of Medicine (IOM) stressed the importance of evidence-based practice by adding the goal that 90% of clinical-based decisions will be evidence-based practice by 2020 (IOM, 2009). It is now 2018, and quickly approaching that time mark. In order to meet this goal, nurses must grasp the concept and usage of evidence-based practice.

Evidence-based practice use is taught during nursing education courses and is normally a part of hospital policies and standard patient care techniques. Nurses are at the frontline of delivering evidence-based practice care, therefore it is crucial nurses understand the significance of evidence-based practice. Although it has been proven that evidence-based practice improves patient care outcomes, do nurses understand and appreciate it fully?

Significance

Nurses are at the forefront of direct patient care and are the hands of evidence-based practice. The nurse's skills that are used daily must be up to date to ensure the best possible outcomes. It is imperative to the nursing profession. It is important that nurses use this practice but to ensure the usage, one must first make sure there is an understanding of evidence-based practice.

In a study by Pravikoff, Tanner, and Pierce (2005) only an alarming 46% of the nurses surveyed reported knowing what evidence-based practice was. In this same study, 27% of the nurses knew how to access electronic databases for evidence-based practice (Pravikoff et al., 2005). These statistics are alarmingly low. More than half of the respondents did not even know what evidence-based practice was and even fewer knew how to access evidence-based practice results.

Another study by Sigma Theta Tau International (STTI), the Honor Society of Nursing reports that 69% of the nurses they surveyed rated themselves of having a low understanding of evidence-based practice (Sigma Theta Tau International, 2006). A low understanding could mean that these nurses do not know how it is used in their field of practice.

Purpose

The purpose of the MSN thesis was to explore nurses' current knowledge and appreciation of evidence-based practice based on previous research as well as identifying gaps in the knowledge of the concept.

Theoretical or Conceptual Framework

In Sister Callista Roy's Adaption Model, adaptation arises when people respond positively to environmental changes, and it is the method and outcome of individuals who use conscious awareness, self-reflection, and choice to create human and environmental incorporation (Roy, 2009)). In this MSN thesis, Roy's Adaptation Model concepts will be used. Analysis of the data obtained from study participants who responded to the Evidence-based practice questionnaire can be found closely related to the concepts in the model of external stimuli, cognator coping process, and modes of adaption.

The model concept of External stimuli (environment, immediately confronts the person) is presented by the theory concept of the nurses' current knowledge of evidence-based practice, which will be obtained by the Evidence-based Practice Questionnaire (Upton & Upton, 2006). The model concept of cognator coping process which is a major coping process involving four cognitive-emotive channels: perceptual and information processing, learning, judgment, and emotion and is presented by the theory concept of the nurses' perception and attitude toward evidence based practice as indicated on the Evidence-based practice questionnaire. And lastly, the model concept of modes of adaptation is presented by the theory concept of the nurses' current use of evidence-based practice as perceived on the Evidence-based practice questionnaire. (Figure 1).

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                          Roy's Adaptation Model

   Environmental Stimuli    Cognator Coping Process           Modes of adaptation

        Knowledge of            Perceptions toward            Current use of
        evidence-based          evidence-based                evidence-based
        practice                practice                      practice

        Evidence-based          Evidence-based                Evidence-based
        practice questionaire   practice questionaire         practice questionaire
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Figure 1. Conceptual-Theoretical-Empirical Diagram

Thesis Question

The point of this thesis was to explore Registered Nurses' knowledge, attitude, and current use of evidence-based practice. The following thesis questions were approached:

- What are the nurses' knowledge of evidence-based practice?

- What are the nurses' attitudes in regards toward evidence-based practice?

- What is the nurses' current use of evidence-based practice in daily care?

Previous studies by Tuazon (2017) and Brown, Wickline, Ecoff, and Glaser (2009) show that nurses show little interest in evidence-based practice. This MSN thesis sets out to explore nurses' current knowledge and appreciation of evidence-based practice based on previous research as well as identifying gaps in the knowledge of the concept.

CHAPTER II

LITERATURE REVIEW

Considerable research can be found related to nursing and evidence-based practice. There seems to be common themes of directing nurses to use evidence-b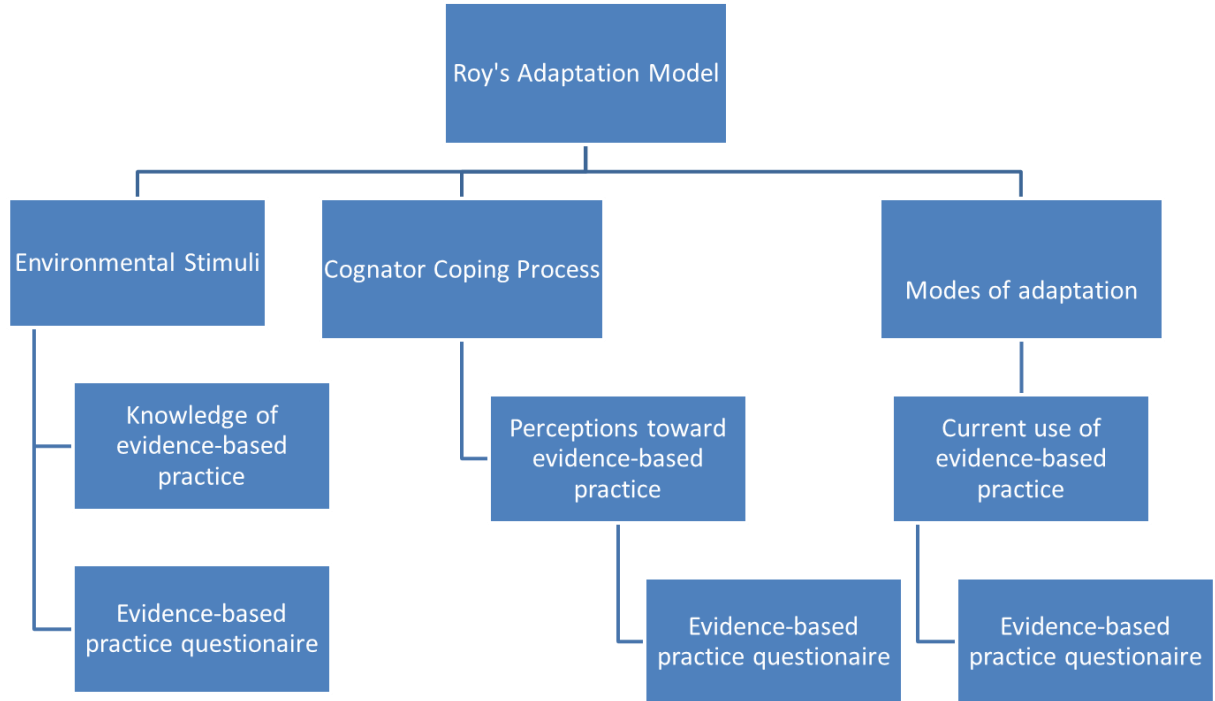ased practice and studies using evidence-based practice to solve a problem. The purpose of this MSN thesis is to explore nurses' current knowledge and appreciation of evidence-based practice based on previous research, as well as identifying gaps in the knowledge of the concept.

Review of Literature

The literature review was conducted to look at previous research on the topic and to assess for any breaches in the knowledge of the concept. To evaluate for this research the author used the source Cumulative Index for Nursing and Allied Health Literature (CINAHL) with the keywords of "nurses", "evidence-based practice" and "understanding evidence-based practice". The review of literature consisted of 20 articles ranging in date from 2008 to 2018. Fourteen of the research articles were descriptive, one was a mixed, two were qualitative, and three were quantitative.

Evidence-based Practice Mentoring

Friesen, Brady, Milligan, and Christensen (2017) assessed a group of nurses' understanding of evidence-based practice before and after a mentoring program about evidence-based practice. The specific goals for this study were to assess if an evidence-based practice education program could improve beliefs and implementation of evidence-based practice. The setting included medical surgical units compared across five different hospitals. Within the five facilities, evidence-based practice team leaders and resource

nurses were identified to be the mentors. There was a total of 169 registered nurses available for participation, 83 nurses took part in the pre-intervention stage which included an Evidence-Based Practice Implementation Scale and the Evidence-Based Practice Beliefs Scale. After the pre-intervention surveys the nurses went through a mentoring program. This included educational materials, educators, and librarians. Fifty-seven of the nurses completed the same surveys for the post-intervention.

In the findings there was a significant change in implementation of evidence-based practice when comparing the pre and post interventions ($t = 1.75$, $df = 56$, $p < .05$). There was not a significant change when comparing the same pre and post-tests with beliefs of evidence-based practice ($p > 1$). Limitations were identified as having a small sample size, having no control group, and the fact that it focused on nursing outcomes (Friesen et al., 2017).

Organizational Support

Munroe, Duffy, and Fisher (2008) wished to assess the knowledge and attitudes surrounding evidence-based practice before and after implementing the use of organizational support. The setting for this particular study was a rural community hospital located near a state university. Munroe et al. (2008) used a pretest posttest design to determine current knowledge, confidence, perceptions, and attitudes related to evidence-based practice. For the intervention (organizational support) the researchers appointed the group a nurse researcher who conducted three educational workshops over 10 weeks, and reviewed evidence-based practice on how it related to current policies. The response rate for this survey was 20% (n=40) for individual data collection periods.

Findings for this study included a significant difference in familiarity of evidence-based practice from 3% to 28% between pretests and posttests. Munroe et al. (2008) also found a significant improvement in the attitudes related to evidence-based practice in their t-tests (t = -2.055, p = 0.046). The limitations here were found to be a small sample with a very low response rate (Munroe et al., 2008).

Educational Intervention

Mollon et al. (2012) analyzed staffs' knowledge, skills, and attitudes of evidence-based practice before and after an educational intervention. In this study it included not only nursing staff, but case managers, respiratory therapists, physical therapists, dieticians, pharmacists, and other hospital staff. The design was a descriptive pretest and post. The pretest was one month prior and the posttest at two months after education. The setting was at Sharp Grossmont Hospital. There were 609 participants with 327 completing the pretest and 282 completing the posttest. The instrument used was the Clinical Effectiveness and Evidence-based Practice Questionnaire which is a self-report that measures practice, attitudes, and knowledge with evidence-based practice. The educational intervention was an online learning module made by clinical educators that was accessible on the facility's website. It provided an overview of evidence-based practice, as well as examples.

The results of this study showed no significant statistical findings in the effectiveness of the online educational intervention. There were some significant findings in that a graduate degree (beta = 0.25, p < .001), registered nurse, and attendance of evidence-based practice class (beta = 0.11, p = 0.43) were positive predictors. The

limitations were defined as small population, and not being able to tell if the subject actually read the educational material (Mollon et al., 2012).

Attitudes and Barriers to Evidence-based Practice

The following research by Brown et al. (2009) was completed to draw nurses' knowledge and attitudes to evidence-based practice and to investigate barriers around it. Brown et al. (2009) chose a convenience sample at an academic center in California. Out of 1,025 nurses 458 replied to the survey making their response rate 44.68%. Two questionnaires: The BARRIERS to Research Utilization Scale, and the Evidence-Based Practice Questionnaire were used in this research. The study called for recruited nurses by posting flyers in nursing units.

The findings were that the top score found in knowledge was: converting information needs into a question, research skills, and evaluating validity of material. For attitudes it was: limited time to read the research. Lastly, for practice it was formulated questions around clinical problems. The number one barrier that was identified was organization, followed by communication, adopter, and innovation. In the open-ended section four themes were found as barriers: lack of time, lack of knowledge, inadequate support, and culture (organizational and nursing resistance). Limitations were missing data and a small sample size from a single organization (Brown et al., 2009).

Self-reported versus Objectively Measured Knowledge

The purpose behind this specific study by Wonder et al. (2017), was to explore the knowledge of evidence-based practice of registered nurses and examine the differences between objective and subjective measures of the nurses' evidence-based practice knowledge. The setting took place during a 12 week period at an acute care

hospital in Midwestern USA with 163 participants. The tools that were used were the

Evidence-based Practice Knowledge Assessment in Nursing (EKAN) and the Evidence-

based Practice Questionnaire (EBPQ).

For the EBPQ, scores are measured one to seven, where seven equals the most

and one the least. The mean EBPQ score for nurses in the attitude section was 5.51,

knowledge/skills 4.68, and practice/use 4.48. There were no significant differences on

participants' level of education. The EKAN, with a maximum score of 20 had scores

where higher levels indicate increased difficulty. The nurse's scores ranged from 5-18

with a mean of 10.58. A significant difference was found in the mean EKAN sum scored

between participants who had a higher level of education when compared to those with a

lower education ($p < .001$). Limitations in this particular study included smaller sample

size in one organization and missing data from the tools (Wonder et al., 2017).

The Quick-EBP-VIK Survey

The unique purpose of this study by Connor, Paul, McCabe, and Ziniel (2017)

was to test out a new survey instrument called the Quick-EBP-VIK survey which is a 25

questionnaire to measure nurses' value, implementation, and knowledge of evidence-

based practice using a five-point Likert-type scale. In this descriptive study, the data was

collected via a web-based survey sent out to 1,177 recipients at a Magnet pediatric

hospital in the northeast in two different waves. A total of 382 nurses responded to wave

one of the survey and 131 completed wave two, sent out two weeks later.

In the findings there were no significant differences between respondents found in

wave one and two. The nurses scored high in value (mean score of 3.5 to 4.5), moderate

in knowledge (mean score 2.2 to 3.2), and low in implementation (mean score 1.3 to 2.3).

Similar limitations included a small population from a single pediatric hospital and missing data from the respondents (Connor et al., 2017).

Chief Nurse Executives and Evidence-based Practice

Melnyk et al. (2016) took a unique approach by looking at the level of implementation and beliefs in evidence-based practice by Chief Nurse Executives (CNE). This study was an anonymous online survey sent out to 5,100 CNEs in the United States identified by Elsevier, 267 completed the survey. A $100 gift card was given as incentive for completed surveys. Evidence-based practice beliefs was measured by the evidence-based Practice Beliefs Scale, a Likert–type 16 item scale. Implementation was measured by evidence-based practice Implementation Scale with the same Likert-type scale. Finally CNE priorities and budget investment in evidence-based practice were assessed by two questions: As a CNE, what are the top three priorities that you are currently focused on in your role? What percent of your annual operating budget do you spend on building and sustaining evidence-based practice in your organization?

The results for this survey included a high value for CNE beliefs about the value of evidence-based practice, but 25% said they were not clear about the steps in evidence-based practice, and 44% replied they were not sure they could implement it. More than 50% clicked the box that reported their organization used evidence-based practice "not at all to somewhat". In regards to budget, 74% of the CNEs invested 0-10% of their annual operating budget on sustaining evidence-based practice. Limitations included were a low response rate making for a smaller sample size, this is also subjective reported data from the CNEs themselves (Melnyk et al., 2016).

Nurses' Attitudes and Knowledge of Evidence-based Practice

The specific aim for this study by Linton and Prasun (2013), was to assess nurses' attitudes and current knowledge of evidence-based practice. The setting was a Midwestern US acute care facility with a total of 365 nurses available for questioning. Linton and Prasun (2013) used the Evidence-Based Practice Questionnaire for Nurses and the Attitudes to Evidence-Based Practice Questionnaire, both with Likert-scales with the surveys being accessed online. There were 286 nurses who completed the online questionnaire.

Mean scores for attitude to evidence-based practice ranged from 2.01-4.43. For knowledge of evidence-based practice, scores ranged from 3.37-4.37 and clinical effectiveness received scores ranging from 2.55-3.14. A significant correlation between attitudes and knowledge of evidence-based practice and age were found. There also was a positive relationship between confidence in ability to evaluate research and education (r = 0.179, p = 0.001). Limitations were identified as being only one convenience sample and alteration to the established instrument that was used (Linton & Prasun, 2013).

Nurses Perception of Evidence-based Practice Intervention

Sidani et al. (2016) research study wanted to look at nurses' perception of evidence-based practice interventions addressing patient outcomes. The setting was a large city in Eastern Canada, and the population included nurses recruited from three university care institutions in a large city in eastern Canada. A total of 110 nurses replied to the flyers sent out, but 56 nurses completed the interviews. The Intervention Acceptability Scale was used. The first section offered instructions for the rating task and explanations of the interventions' attributes to be rated. In the second section it showed a

description and the items to rate each of the evidence-based interventions looking at each patient-oriented outcome. After the nurses read the interventions and outcomes, an interview was conducted with each participant.

In the interviews it was found that with the category relevance to practice, the nurses agreed with the interventions except for massage, imagery, and relaxation. The nurses were not sure they could do this in their practice. Barriers to implementation included time constraints and if patients have cognitive or language restraints. Limitations to this study included the sample size and the use of an interview setting. Also, the fact that this study was done in Canada will be an added limitation (Sidani et al., 2016).

Evidence-based Practice Implementation and Beliefs in Doctor of Nursing Practice Students

The purpose of this study by Singleton (2017), was to investigate the use of a curriculum on evidence-based practice beliefs and implementation in Doctor or Nursing Practice-Family Nurse Practitioner (DNP-FNP) students. The sample for this study was students who were accepted to the FNP-DNP program from 2008-2012 at Pace University in New York. A total of 54 students were available for the entire study. Singleton used the Evidence-based Practice Beliefs Scale (EBP-B) which is a Likert-scale with 16 items and measures nurses' beliefs about their ability to implement evidence-based practice. Singleton (2017) also used the Evidence-Based Practice Implementation Scale (EBP-I), a self-report Likert-scale with 18 items that questions nurses about whether they have completed certain evidence-based practices in the last

eight weeks. Singleton gave these two test in the beginning of the DNP-FNP course and again at the completion of the program.

In the results section, Singleton (2017) found the pretest mean for the EBP-B to be 3.89 and the posttest mean was 4.25. For the EBP-I the pretest mean was 2.68 and the posttest mean was 3.61. The limitations included in the above study were identified as being a self-report scale with room for user error, a small, single sample size, and missing data (Singleton, 2017).

Meaning of Evidence-based Practice for ICU Nurses

Tuazon (2017) used a qualitative study was to identify how nurses felt about the implementation of evidence-based practice. The specific setting called for critical care nurses in a five-hospital system. Out of a possible 200 nurses, 15 nurses were identified for the process. Tuazon (2017) interviewed the participants with the same five questions. The questions consisted of how the nurses perceived EBP through the process: incorporation of nurse-contextual factors, through application of problem-solving and decision making, through integration of nursing expertise related to specific behavior problems, and lastly through patient values and preferences.

The findings were summarized as a general snapshot of what the 15 nurses had said in the interviews. The nurses generally had a clear understanding of the use and implementation process. The nurses identified barriers as lack of time, resources, and administrative support. The nurses believed that through critical care they are able to integrate EBP well. The nurses also identified that there was a correlation between their level of experience and their ability to solve problems and make decisions. Limitations

include the small convenience sample size, the use of the author's own questions, and the author interpreted his own findings. (Tuazon, 2017).

Educational Module for Improving Evidence-based Practice Skills

In this research article by Moore (2017), the goal was identified as looking at the effectiveness of an online evidence-based practice educational module through a pretest and posttest design. The setting of this study was a large regional hospital with 477 beds, with no research committee or evidence-based practice activities in place. The convenience sample included 197 RNs that completed the pretest and 134 RNs that completed the posttest. Out of this, 77 RNs' data was used. The instrument that was used was the Evidence-Based Practice Questionnaire. Participants were divided into three groups. Group one (17 RNs) was the experimental group who were assigned to a computer-based learning module about EBP. The members of Group two (24 RNs) were assigned a power-point learning module regarding pain management and EBP. Group three (36 RNs) was identified as the control group with no learning module assignment.

The findings in this study revealed the nurses' scored moderate in attitude, and low in practice and knowledge/skills. No statistical difference was found in the subscales with regards to years of nursing experience. There were also no significant differences reported in the pre and posttests between the groups. The specific limitations in this article were small sample size, use of a convenience sample, and lack of knowledge evaluation in retrospect to its evidence-based practice educational intervention (Moore, 2017).

Evidence-based Practice Beliefs of Nurses Dealing with Cancer Pain Management

The objectives of this research article by Eaton, Meins, Mitchell, Voss, and Doorenbos (2015) were identified as "to describe evidence-based practice beliefs and behaviors of nurses who provide cancer pain management" (Eaton et al., 2015). The research design was a descriptive cross sectional with mixed methods. The setting and population were 40 registered nurses at two inpatient oncology units in the Pacific North-west. The research tool included the Evidence-based Practice (EBP) Beliefs Scale and an interview was conducted with each nurse.

The findings were split into two groups, 22 RNs from an academic medical center and 18 from the community based regional medical center. In the findings it was reported that the two average group's scores were not significantly different for the EBP Beliefs scale (t [38] = -0.43, p = 0.75). Both groups seemed to agree with the positives of EBP, but their perceived level of implementation was low. It also identified a trend for more positive EBP beliefs and higher perceived EBP implementation amidst oncology certified nurses. Limitations included small selected sample size and self-reported data (Eaton et al., 2015).

Nephrology Nurses' Attitudes toward Evidence-based Practice

This descriptive study by Hain (2015), took a convenience sample of 84 nephrology nurses who were attending the Evidence-based Practice pre-conferences in California and Georgia with the goal of exploring nephrology nurses' beliefs about the value of evidence-based practice (EBP) and their ability to implement into practice. The instrument that was used was the Evidence-based Practice Beliefs Scale. The participants were asked to compete the instrument before the workshop and after.

Results of the study provided that the value of EBP was significantly higher after the workshop with a difference (t (51) = 6.17, p = 0.000). Limitations included the convenience small sample size and looking at nephrology nurses only (Hain, 2015).

Using a Web Course to Increase Evidence-based Practice Knowledge

Allen, Lubejko, Thompson, and Turner (2015) looked at evaluating the Oncology Nursing Society's web-based course titled "Developing Skills for Evidence-Based Practice" and measuring pretests and posttests from nurses who had completed it. The population included 225 nurses who had completed the web course and were asked to complete the Evidence-based Practice Questionnaire (EBPQ) before and after completion of the course.

The results indicated a statistically significant difference between pre-test and post-test knowledge scores (t [28] = -20.3, p = 0.00). Pre-test and post-test scores did not differ in regards to education. No significant correlations were found in regards to number of years of nursing experience and pre and post-test scores. Limitations were looked at as convenience sample size and no way of knowing if they actually completed the web course in full (Allen et al., 2015).

Patient-care Improvement Through Evidence-based Practice

This study by Crabtree, Brennan, Davis, and Coyle (2016), takes place at the Medical University of South Carolina which has a 700 bed medical center. At the facility their Center for Evidence-Based Practice partnered up with the Center for Professional Excellence and developed a 12 week project-based course to prepare nurses in evidence-based practice. In the course, Crabtree et al. (2016) provided the nurses with an overview of evidence-based practice, how to ask clinical questions, evaluate evidence, and apply

knowledge to current policies. In the population were mostly BSN nurses that worked in the ICU and typically had 0-5 years of experience. Crabtree et al. (2016) used their own pretests and posttests to measure the nurses' responses.

In the findings it was found: significant increase in nurses' confidence in critically reviewing literature (p < 0.001), their belief that evidence-based practice was necessary to nursing practice (p = 0.052), and their interest in improving skills necessary to use evidence-based practice (p = .002). Limitations included the use of a personal survey for pretests and posttests and a small convenience sample size (Crabtree et al., 2016).

Three Year Analysis of an Evidence-based Practice Integration

This research article's goal by Warren, Montgomery, and Friedmann (2016) was to assess registered nurses' beliefs about using evidence-based practice (EBP) and organizational readiness for EBP. The setting was at a community teaching hospital in Maryland. The tool used was the Evidence-based Practice Beliefs Scale (EBPB), the Evidence-based practice Implementation Scale (EBPI), and the Organizational Culture and Readiness for System-wide Implementation of EBP Scale (OCRSIEP). In the fall of 2007 efforts began to integrate EBP into daily practice. In 2008-2012 the emphasis on education and implementation continued with classes on EBP. The first survey was given in March of 2008 with 275 participants, the second survey was conducted in 2012 with 339 participants.

For the results, nurse leader scores on the EBPB scale were significantly higher than clinical nurses for both years but greater in 2008 (nurse leader: M = 61.15, SEM (age in years mean) = 1.23, clinical RN: M = 53.85, SEM = 0.65). A significant difference was found on the OCRSIEP scale as well as between the years and specific

roles with the difference being greater in 2008 (nurse leader: M = 61.28, SEM = 2.16, clinical RN: M =50.72, SEM 1.20). For the EBPI there was a significant difference with the roles (F ([1,590] = 48.711, p < 0.001) but not between the two years. Limitations to this survey included small sample size, nonresponses, and measurement error (Warren et al., 2016).

Strengths and Challenges of Implementing EBP in Healthcare Systems

Warren et al. (2016) research described registered nurses attitudes, beliefs, and perceptions about the willingness and application of EBP in a multihospital healthcare system. The setting was three hospitals in Washington, DC (two are acute care hospitals and one is for rehabilitation) and four community hospitals in Maryland. The cross-sectional design study used three questionnaires: The Evidence-Based Practice Implementation Scale (EBPI), the Evidence-Based Practice Beliefs Scale (EBPB), and the Organizational Culture and Readiness for System-Wide Integration of EBP Scale (OCRSIEP) with a convenience sample of 6,800 nurses. A total of 1,608 nurses responded to the surveys. The survey was sent out via SurveyMonkey.

The findings report that less than half (41%) of the registered nurses agreed they knew how to implement EBP. A percentage of 49% of nurses reported that in the past eight weeks they had not accessed EBP. On the OCRSIEP, 64% of nurses clicked the box under "none to somewhat" when asked to rate their organization's readiness for EBP. Limitations found were self-reporting data, and a low response rate (Warren et al., 2016).

Threats to Healthcare Quality, Safety, and Patient Outcomes

The aim of the cross-sectional descriptive study by Melnyk et al. (2018) was to describe evidence-based practice aptitude in nurses in the United States and see what

factors are important with EBP proficiency. A total of 2,344 nurses completed the online email sent survey from 19 different hospitals which consisted of the EBP Knowledge Scale, EBP Beliefs Scale (EBPB), EBP Implementation Scale (EBPI), Organizational Culture and Readiness for System Wide Integration of EBP Scale, and the EBP mentorship Scale.

It was found there were strong positive associations between EBP competency with EBP beliefs and EBP beliefs (r = .66) and EBP mentoring (r = .69). The younger age and higher education were significantly associated with advanced EBP competency (p < 0.001 for both). The competency of EBP were not significantly different between gender, race, or ethnicity and being in a Magnet organization or not. Limitations include multiple survey instruments, and self-reporting form the participants (Melnyk et al., 2018).

Perception of Evidence-based Practice

Koehn and Lehman (2008) examined registered nurses' perception, attitudes, and beliefs surrounding evidence-based practice. With 422 nurses at a large medical center in the United States responding to the descriptive, cross-sectional survey design. Koehn and Lehman used the Clinical Effectiveness and Evidence-Based Practice Questionnaire. The survey was given via paper copies over a two week period.

The findings were as followed, nurses scored themselves as moderate in practice and attitude and knowledge/skills were low. Statistically significant differences were found for attitudes in nurses with a BSN and higher education when compared to those with ADN (F (3, 403) = 6.01, P =0.001). For the most common barriers to implementing EBP they were found to be time and knowledge. Limitations included small size,

terminology of questions, and the hospital had just gained magnet status (Koehn & Lehman, 2008).

Summary of Findings

In the review of literature there was a common theme of subjects improving on evidence-based practice after an intervention or being reminded of evidence-based practice. This shows that nurses need education on evidence-based practice and there may indeed be a gap in knowledge as well as appreciation. In the results of these studies nurses with higher education seem to have a higher knowledge and appreciation of evidence-based practice. There are gaps in the literature or very little research when looking at the purpose of this MSN thesis to explore nurses' current knowledge and appreciation of evidence-based practice.

CHAPTER III

METHODOLOGY

The purpose of the MSN thesis was to explore nurses' current knowledge and appreciation of evidence-based practice based on previous research as well as identifying gaps in the knowledge of the concept. Evidence-based practice is necessary to the nursing profession and should be recognized by nurses.

Study Design

The study design for this MSN thesis is a descriptive design. The Evidence Based Practice Questionnaire (Appendix A) (EBPQ) was used to collect the data and was sent to the units for one week for the nurses to complete. Consent from the authors, Upton and Upton was obtained (Appendix B). Reminders were sent via flyers in the break room.

Setting and Sample

For the setting in this study it took place at a single organizational hospital in the piedmont region of North Carolina. Three medical-surgical units at the facility took part in the study. The inclusion criteria for this study was limited to Registered Nurses at this facility on the three medical-surgical units. No demographic information was collected to protect the identity of the nurses. There are approximately 30 nurses on each unit, so the projected sample size was 90. A convenience sample of nurses were asked to participate and invited via flyers on the units to participate in the research study.

Design for Data Collection

Three medical-surgical units were identified to participate in the survey, a respiratory med-surg unit (6 South), Nurses Improving Care for Healthsystem Elders (NICHE) unit, and an oncology med-surg unit (5 South). Permission was obtained from

the director of the nursing units, the research board of the facility, and the IRB at the University. To raise awareness of the survey and to invite the nurses to participate, flyers were sent out. Instructions to complete the survey were also in the flyer and placed in the nurses' mailboxes where the surveys are located. No identifying information was asked/included on the survey.

Measurement Methods

The data collection tool included the Evidence Based Practice Questionnaire (EBPQ) by Upton and Upton. The EBPQ is a self-reporting scale consisting of 24-items split into three subscales. The knowledge/skills subscale has 14 items that asks nurses to self-reflect on their knowledge and skills using a 7-point Likert-scale ranging from 1-7, one being poor and seven being best. Another subscale is the attitudes section consisting of four items, where the nurses are asked to select where they would place them self on a 7-point scale. The last subscale section is about practice/use of evidence-based practice. This section asks the nurses about the number of times they perform select evidence-based practice skills, over the past year using a 1-7 scale, with one equaling "never" and seven equaling "frequently."

The questionnaire as a whole has an internal reliability measured by Cronbach's alpha of .87. The subscales reliability are as followed: .85 for practice/use, .79 for attitude, and .91 in the knowledge/skills section (Upton & Upton, 2006). Construct validity was provided by moderate correlations among knowledge of a local evidence-based practice inventiveness and questionnaire scores. Also a discriminate validity was shown by a statistically significant difference among participants who knew the local initiative and those who were not aware. "The results indicated that those with knowledge

of the local initiative had a better attitude (t = 2· 5; d.f. = 332; P < 0·01), more frequent

practice that was evidence-based (t = 3·2; d.f. = 360; P < 0·02) and (unsurprisingly) better

knowledge of EBP (t = 5·2; d.f. = 360; P < 0·001" (Upton & Upton, 2006).

Data Collection Procedure

Nurses were asked to complete the survey where they felt comfortable, in the

break room or in private. After completing the survey, they placed it in a provided sealed

envelope and dropped it into a secured locked box. The box was monitored for completed

surveys and to maintain the security.

The data required for this thesis project was collected from the Evidence-Based

Practice Questionnaire at the end of the allotted time for returned questionnaires. It was

collected by the researcher. In the returned questionnaires from the locked box, the author

of this thesis calculated the mean score for each subscale and compared the results.

Protection of Human Subjects

To protect the participants, the questionnaires were kept in a secured, locked box

and the box was monitored by the author for securement. No demographic data was

collected in this survey. The survey and thesis project was approved through the facility

board of review as well as their Institutional Review Board and the Institutional Review

Board at the University. There were minimal risks associated to the subjects participating

in this study. A chaplain at the facility was available if needed for any counseling.

Data Analysis

The data collected was assessed by the researcher looking at the scores from the

completed surveys to answer the thesis questions. A mean score from each subscale was

calculated and compared.

CHAPTER IV

RESULTS

The title of this research study, Nurses and Evidence-based Practice, was a product of seeking to understand if nurses appreciate and understand the meaning of evidence-based practice in their field. Evidence–based practice is often found to be misunderstood or thrown aside due to time restraints. Its importance can be found by looking at improved patient outcomes.

Sample Characteristics

The final sample size for the returned Evidence-Based Practice Questionnaires was 34, which is a 37.7 % rate of response. There were no withdrawals or losses and all of the surveys that were turned in were completed in full. Out of the possible 90 nurses, 56 nurses chose not to respond to the survey. As seen in Table 1 below, the attitude subscale had the highest mean (5.03), followed by the practice subscale (4.95), and then the knowledge subscale (4.91).

Table 1

Subscale Means

Subscale	Minimum	Maximum	Mean
Practice	1.16	6.67	4.95
Attitude	3	7	5.02
Knowledge and Skills	2.36	6.57	4.91

Major Findings

The research question, "What is the nurses' current use of evidence-based practice in daily care?" was answered by analyzing the mean of the practice Subscale from each survey. Nurses were asked to score themselves from 1-7, with one indicating "never" and seven indicating "frequently" for each question. The mean score for the practice subscale was 4.95. Nurses indicated "evaluating outcomes of practice" was used most frequently (M = 5.21), whereas "critically appraised literature" was used less frequently (M = 4.91). (See Table 2.)

Table 2

Practice Subscale

Question from Category	Minimum	Maximum	Mean
Formulate clear question	2	7	5.06
Track down relevant evidence	1	7	4.91
Critically appraised literature	1	7	4.68
Integrate evidence with expertise	1	7	5
Evaluate outcomes of practice	1	7	5.21
Share info with colleagues	1	7	4.94

The research question, "What are the nurses' attitudes in regards toward evidence-based practice?" was also answered by taking the mean of the attitudes subscale of each survey. The nurses were asked to place themselves on a scale of where they would place themselves. Table 3 below shows means for each statement.

Table 3

Attitude Subscale

Subscale Question	Minimum	Maximum	Mean
Workload	1	7	3.65
Resent questioning vs. welcome questioning about clinical practice	3	7	5.47
EBP waste of time	3	7	5.88
Tried and trusted vs. change by evidence	2	7	5.12

The research question of, "What are the nurses' knowledge of evidence-based practice?" was answered by taking the mean of the knowledge subscale of each survey. On a scale from 1-7, one being poor and seven being the best, the nurses were asked to indicate how they would rate themselves for each skill. In this subscale, the average answer was 4.91.Table 4 shows the means for each question response.

Table 4

Knowledge and Skills Subscale

Subscale Questions	Minimum	Maximum	Mean
Research skills	1	7	4.65
IT skills	2	7	5.18
Monitoring and Reviewing of practice skills	3	7	5.12
Converting information needs into a question	1	7	4.24
Awareness of information types and sources	1	7	4.68
Able to identify gaps in your own practice	2	7	5.12
Knowledge of how to retrieve evidence	1	7	5.03
Ability to analyze critical evidence against set standards	2	7	4.76
Ability to determine the validity of material	1	7	4.65
Able to determine usefulness of material	1	7	5
Apply information to individual cases	3	7	5.12
Sharing of ideas and information with colleagues	2	7	5.24
Dissemination of new ideas about care to colleagues	2	7	4.85
Ability to review your own practice	2	7	5.41

Summary

Overall, participants scored themselves in each category over the median in the 1-7 scale which would be 3.5. For the practice subscale their mean concluded at 4.95.In this subscale there was a lower score for sharing information with colleagues (M=4.94). For the attitude subscale their mean was 5.03. Within this subscale it identified workload as a barrier to dealing with evidence-based practice (M =3.65). For the knowledge/skills subscale the mean was 4.91. This subscale revealed the nurses scoring themselves low in research skills (M =4.65).

CHAPTER V

DISCUSSION

For evidence-based practice to be successful, nurses must understand the purpose and appreciate its findings. The purpose of the MSN thesis was to explore nurses' current knowledge and appreciation of evidence-based practice based on previous research, as well as identifying gaps in the knowledge of the concept of evidence-based practice. The following research questions were posed: What are nurses' knowledge of evidence-based practice? What are nurses' attitudes in regards toward evidence-based practice? What are the nurses' current use of evidence-based practice in daily care?

Implication of Findings

The means for each subscale are listed: the highest mean scoring category was attitude (M = 5.03), then practice (M = 4.95), and lastly knowledge (M = 4.91). Just looking at the means from the categories attitude scored the highest, meaning the nurses have a positive outlook on evidence-based practice.

Nurses identified their workload as a barrier for keeping up with evidence-based practice. The mean score the "My workload is too great for me to keep up to date with all the new evidence" statement was 3.65, indicating nurses feel like they cannot keep up with evidence-based practice. However, other statements indicated participants welcome questions about their clinical practice (M = 5.47), view evidence-based practice as fundamental to the nursing profession (M = 5.88), and recognize nursing practice has changed because of evidence-based practice (M = 5.12).

Responses to the attitudes category in this MSN thesis correlates with previous research, having high scores for nurses' attitudes about evidence-based practice (Wonder

et al., 2017; Connor et al., 2017). Another similarity between this thesis and previous research is in this study nurses also identified workload and time being a significant barrier to keeping up with evidence-based practice (Tuazon, 2017).

There is a lower score for discovered critically appraised literature (M = 4.68), indicating participants in this study are not discovering evidence-based practice in literature as much. This finding is similar to the outcomes of previous research (Crabtree et al., 2016; Eaton et al., 2015), in which nurses scored themselves low in assessing critically appraised literature. Another finding in this category relates to sharing information with colleagues, (M = 4.94), signifying that participants do not talk amongst their coworkers about new evidence-based practice.

Lastly, the knowledge/skills subscale revealed the nurses scored themselves low in research skills (M = 4.65), converting information needs into a question (M = 4.24), and ability to determine the validity of material (M = 4.65). In other research studies, nurses also scored low in these areas (research skills, EBP formulation, and determining validity) in a pretest, but after a class or other intervention, scores improved (Allen et al., 2015; Munroe et al., 2008).

Application to Theoretical/Conceptual Framework

Roy's Adaption Model was used as the theoretical framework for this research. Adaptation arises when people respond positively to environmental changes, and it is the method and outcome of individuals who use conscious awareness, self-reflection, and choice to create human and environmental incorporation (Roy, 2009).

Evidence-based practice requires adaptation from the nurses. In this study it was shown that nurses scored themselves low in research skills (M=4.65) and said that their

workload is too great for evidence-based practice (M=3.65); this data will require adaptation for the nurses to use and understand evidence-based practice. The model concept of External stimuli (environment, immediately confronts the person) is presented by the theory concept of the nurses' current knowledge of evidence-based practice. In this research, the nurse's knowledge and current environment was low in research skills and evidence-based practice formulating steps. The environment will have to become "evidence-based practice friendly" so that nurses feel they can use and adapt it into their practice. The model concept of cognator coping process which is a major coping process involving four cognitive-emotive channels: perceptual and information processing, learning, judgment, and emotion and is presented by the theory concept of the nurses' perception and attitude toward evidence based practice as indicated on the Evidence-based practice questionnaire. The nurse's attitude was open and welcoming to evidence-based practice this is a positive sign and should be acted upon to involve them more in the practice. They welcome questions and have a positive outlook to EBP. And lastly, the model concept of modes of adaptation is presented by the theory concept of the nurses' current practice of evidence-based practice as perceived on the Evidence-based practice questionnaire. In this study it was found they do not know how to interpret critically appraised literature, and do not share this information with colleagues. The nurses did have some idea about their current skills of evidence-based practice. These modes of adaptation should be helped and made available for the nurses to expand on their evidence-based practice skills.

Limitations

The limitations in this study were identified as the restriction of the setting to a particular organization. Another limitation is identified as being a small sample size with a moderate response rate and that this was a survey with no pretest/posttest design.

Implications for Nursing

Results from this research imply that nurses do have a high appreciation and positive attitude toward evidence-based practice, however the results also indicated there is a need to improve nurses' research skills and knowledge of the evidence-based practice process of formulating research questions. Nurses do seem to have a positive outlook and open mind to learning more about evidence-based practice.

Future implications for nursing would be relaying the research process and implementing research skills into practice to ensure they have an understanding of its importance. Nurses would gain the knowledge to formulate their own research questions and learn how to access recent evidence-based practice to improve patient outcomes and better their practice.

Recommendations

Recommendations for future studies would include a larger sample size and conduct the research over a longer period of time. It would also be helpful to include a pretest/posttest design, which added a research class or educational session on evidence-based practice to determine if scores improved with an intervention. Additionally, this would increase the likelihood nurses had improved perception of research skills and formulating questions in practice.

Conclusion

In conclusion, the aim of this research was to evaluate the understanding and appreciation of evidence-based practice among nurses. Results concluded that nurses do have a positive outlook and attitude toward evidence-based practice, but feel they lack the time, research skills, and knowledge of how to access critically appraised literature to be fully involved. In light of this study nurses would benefit from evidence-based practice classes and sessions to become more involved in the process.

References

Allen, N., Lubejko, B. G., Thompson, J., & Turner, B. S. (2015). Evaluation of a web

    course to increase evidence-based practice knowledge among nurses. *Clinical*

    Journal of Oncology Nursing, 19(5), 623-627. doi:10.1188/15.CJON.623-627.

Brown, C. E., Wickline, M. A., Ecoff, L., & Glaser, D. (2009). Nursing practice,

    knowledge, attitudes and perceived barriers to evidence-based practice at an

    academic medical center. *Journal of Advanced Nursing*, 65(2), 371-381.

Connor, L., Paul, F., McCabe, M., & Ziniel, S. (2017). Measuring nurses' value,

    implementation, and knowledge of evidence-based practice: Further psychometric

    testing of the Quick-EBP-VIK survey. *Worldviews on Evidence-Based Nursing*,

    14(1), 10-21. doi:10.1111/wvn.12190.

Crabtree, E., Brennan, E., Davis, A., & Coyle, A. (2016). Improving patient care through

    nursing engagement in evidence-based practice. *Worldviews on Evidence-Based*

    Nursing, 13(2), 172-175. doi:10.1111/wvn.12126.

Eaton, L. H., Meins, A. R., Mitchell, P. H., Voss, J., & Doorenbos, A. Z. (2015).

    Evidence-based practice beliefs and behaviors of nurses providing cancer pain

    management: A mixed-methods approach. *Oncology Nursing Forum*, 42(2), 165-

    173. doi:10.1188/15.QNF.165-173.

Emparanza, J. I., Cabello, J. B., & Burls, A. J. (2015). Does evidence-based practice

    improve patient outcomes? An analysis of a natural experiment in a Spanish

    hospital. *Journal of Evaluation of Clinical Practice*, 21, 1059–1065.

    doi:10.1111/jep.12460.

Friesen, M. A., Brady, J. M., Milligan, R., & Christensen, P. (2017). Findings from a

    pilot study: Bringing evidence-based practice to the bedside. *Worldviews on*

    Evidence-Based Nursing, 14(1), 22-34. doi:10.1111/wvn.12195.

Hain, D. (2015). Continuing nursing education. Changing nephrology nurses' beliefs

    about the value of evidence-based practice and their ability to implement in

    clinical practice. *Nephrology Nursing Journal*, 42(6), 563-567.

Institute of Medicine. (2009). Leadership commitments to improve value in health care:

    Finding common ground – Workshop summary. Washington, DC: The National

    Academies Press. Retrieved from https://www.ncbi.nlm.

    nih.gov/books/NBK52847.

Koehn, M., & Lehman, K. (2008). Nurses' perceptions of evidence-based nursing

    practice. *Journal of Advanced Nursing* 62(2), 209–215 doi: 10.1111/j.1365-

    2648.2007.04589.x.

Linton, M. J., & Prasun, M. A. (2013). Evidence-based practice: collaboration between

    education and nursing management. *Journal of Nursing Management*, (1). 5.

Melnyk, B. M., Gallagher- Ford, L., Thomas, B. K., Troseth, M., Wyngarden, K., &

    Szalacha, L. (2016). A study of chief nurse executives indicates low prioritization

    of evidence-based practice and shortcomings in hospital performance metrics

    across the United States. *Worldviews on Evidence-Based Nursing*, 13(1), 6-14.

    doi:10.1111/wvn.12133.

Melnyk, B. M., Gallagher- Ford, L., Zellefrow, C., Tucker, S., Thomas, B., Sinnott, L.
T., & Tan, A. (2018). The first U.S. study on nurses' evidence-based practice
competencies indicates major deficits that threaten healthcare quality, safety, and
patient outcomes. *Worldviews on Evidence-Based Nursing*, 15(1), 16.
doi:10.1111/wvn.12269.

Mollon, D., Fields, W., Gallo, A., Wagener, R., Soucy, J., Gustafson, B., & Kim, S. C.
(2012). Staff practice, attitudes, and knowledge/skills regarding evidence-based
practice before and after an educational intervention. *Journal of Continuing
Education in Nursing*, 43(9), 411-419. doi:10.3928/00220124-20120716-89.

Moore, L. (2017). Effectiveness of an online educational module in improving evidence-
based practice skills of practicing registered nurses. *Worldviews on Evidence-
Based Nursing*, 14(5), 358-366. doi:10.1111/wvn.12214.

Munroe, D., Duffy, P., & Fisher, C. (2008). Research for practice. Nurse knowledge,
skills, and attitudes related to evidence-based practice: before and after
organizational supports. *MEDSURG Nursing*, 17(1), 55-60.

Pravikoff, D. S., Tanner, A. B., & Pierce, S. T. (2005). CE CREDIT Original research:
readiness of U.S. nurses for evidence-based practice. *American Journal of
Nursing,* 9. 40.

Roy, C. (2009). *The Roy Adaptation Model*. Upper Saddle River, NJ: Pearson Education.

Sidani, S., Manojlovich, M., Doran, D., Fox, M., Covell, C. L., Kelly, H., & McAllister,
M. (2016). Nurses' perceptions of interventions for the management of patient-
oriented outcomes: A key factor for evidence-based practice. *Worldviews on
Evidence-Based Nursing,* 13(1), 66-74. doi:10.1111/wvn.12129

Sigma Theta Tau International. (2006). EBP Study: Summary of findings. Available at:

> http://www.nursingknowledge.org/go/study. Accessed February 3, 2018.

Singleton, J. K. (2017). Evidence-based practice beliefs and implementation in doctor of

> nursing practice students. *Worldviews on Evidence-Based Nursing*, 14(5), 412-
>
> 418. doi:10.1111/wvn.12228.

Tuazon, N. (2017). A case study on the meaning of evidence-based practice among ICU

> staff nurses. *Journal of Nursing Practice Applications & Reviews of Research*,
>
> 7(1), 4-13. doi:10.13178/jnparr.2017.0701.0702.

Upton, D., & Upton, P. (2006). Development of an evidence-based practice questionnaire

> for nurses. Journal of Advanced Nursing, (4). 454.

Warren, J. I., McLaughlin, M., Bardsley, J., Eich, J., Esche, C. A., Kropkowski, L., &

> Risch, S. (2016). The strengths and challenges of implementing EBP in healthcare
>
> systems. *Worldviews on Evidence-Based Nursing*, 13(1), 15-24.
>
> doi:10.1111/wvn.12149.

Warren, J. I., Montgomery, K. L., & Friedmann, E. (2016). Three-year pre-post analysis

> of EBP integration in a magnet-designated community hospital. *Worldviews on*
>
> *Evidence-Based Nursing*, 13(1), 50-58. doi:10.1111/wvn.12148.

Wonder, A. H., McNelis, A. M., Spurlock, D. J., Ironside, P. M., Lancaster, S., Davis, C.

> R., & Verwers, N. (2017). Comparison of nurses' self-reported and objectively
>
> measured evidence-based practice knowledge. *The Journal of Continuing*
>
> *Education in Nursing*, 48(2), 65-70. doi:10.3928/00220124-20170119-06.

Appendix A

Evidence-Based Practice Questionnaire

Evidence Based Practice Questionnaire (EBPQ).

This questionnaire is designed to gather information and opinions on the use of evidence based practice amongst health professionals. There are no right or wrong answers for we are interested in *your* opinions and *your* own use of evidence in *your* practice.

1. Considering your practice in relation to an individual patient's care over the *past* year, how often have you done the following in response to a gap in your knowledge (please √ or X):

Formulated a clearly answerable question as the beginning of the process towards filling this gap:
Never ☐ ☐ ☐ ☐ ☐ ☐ ☐ **Frequently**

Tracked down the relevant evidence once you have formulated the question:
Never ☐ ☐ ☐ ☐ ☐ ☐ ☐ **Frequently**

Critically appraised, against set criteria, any literature you have discovered:
Never ☐ ☐ ☐ ☐ ☐ ☐ ☐ **Frequently**

Integrated the evidence you have found with your expertise:
Never ☐ ☐ ☐ ☐ ☐ ☐ ☐ **Frequently**

Evaluated the outcomes of your practice:
Never ☐ ☐ ☐ ☐ ☐ ☐ ☐ **Frequently**

Shared this information with colleagues:
Never ☐ ☐ ☐ ☐ ☐ ☐ ☐ **Frequently**

2. Please indicate (by √ or X) where on the scale you would place yourself for each of the following pairs of statements:

My workload is too great for me to keep up to date with all the new evidence	☐ ☐ ☐ ☐ ☐ ☐ ☐	New evidence is so important that I make the time in my work schedule
I resent having my clinical practice questioned	☐ ☐ ☐ ☐ ☐ ☐ ☐	I welcome questions on my practice

Evidence based practice is a waste of time
☐ ☐ ☐ ☐ ☐ ☐ ☐
Evidence based practice is fundamental to professional practice

I stick to tried and trusted methods rather than changing to anything new
☐ ☐ ☐ ☐ ☐ ☐ ☐
My practice has changed because of evidence I have found

3. On a scale of 1 to 7 (with 7 being the best) how would you rate your:

Please circle one number for each statement	Poor						Best
Research skills	1	2	3	4	5	6	7
IT skills	1	2	3	4	5	6	7
Monitoring and reviewing of practice skills	1	2	3	4	5	6	7
Converting your information needs into a research question	1	2	3	4	5	6	7
Awareness of major information types and sources	1	2	3	4	5	6	7
Ability to identify gaps in your professional practice	1	2	3	4	5	6	7
Knowledge of how to retrieve evidence	1	2	3	4	5	6	7
Ability to analyse critically evidence against set standards	1	2	3	4	5	6	7
Ability to determine how valid (close to the truth) the material is	1	2	3	4	5	6	7
Ability to determine how useful (clinically applicable) the material is	1	2	3	4	5	6	7
Ability to apply information to individual cases	1	2	3	4	5	6	7
Sharing of ideas and information with colleagues	1	2	3	4	5	6	7
Dissemination of new ideas about care to colleagues	1	2	3	4	5	6	7
Ability to review your own practice	1	2	3	4	5	6	7

Please return your questionnaire in the envelope provided.
All information will be treated as confidential and will not be traceable to individuals. By turning in this completed survey the individual is consenting to the study. Blank forms can be submitted.

Appendix B

Evidence-Based Practice Questionnaire Permission