

ANALYSIS OF ATTITUDES OF NURSES TOWARDS USING SCIENTIFIC LITERATURE IN EVERYDAY CLINICAL PRACTICE

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Abstract

Nursing practice based on a modern nursing model obliges nurses to participate in continuing education and develop their professional skills, which is also required by the Nurses and Midwives Act of July 15, 2011. The use of the most recent scientific literature that is the source of reliable information about nursing contributes significantly to improve knowledge of nurses, inspires the research career development and participation in continuing education.

Aim

The aim of the study was to analyse attitudes of nurses towards using scientific literature in everyday clinical practice based on evidence (*Evidence-based Nursing Practice*).

Materials and Methods

1027 nurses (33 men, 3.2% of the total), mean age was 42.60 years (min. 21, max. 69, SD=8.16), mean length of service of 20.86 years (min. 0, max. 40, SD=9.32). As many as 32.23% of the study participants had secondary medical education (n=331), almost half of the total (44.79%, n=460) worked full-time in a town hospital, 31.84% of all (n=327) worked as a senior nurse; most study participants (61.73%, n=634) completed a postgraduate training. An anonymous standardised questionnaire called "*Evidence-Based Practice Profile Questionnaire*" from the University in Southern Australia. Four domains of the questionnaire (two of them were based on the Likert scale, the remaining two were based on a nominal scale) were used in the present analysis, 37 questions out of 74 were close-ended questions. Statistical analysis: Cronbach's α coefficient, STATISTICA 12.

Results

Cronbach's α coefficient used for the analysis of reliability of the entire questionnaire amounted to $\alpha=0.867$ and in selected domains, based on the Likert scale, it was also high ($\alpha=0.922$, $\alpha=0.825$, $\alpha=0.941$). As little as 13.53% of the nurses (n=139) tried to gain new knowledge of Evidence-based Practice and develop their skills related to the access to and assessment of scientific evidence relevant to professional practice (17.13%, n=176). Only 3.31% of the study participants (n=34) admitted that they saw no purpose in reading scientific literature to update their knowledge and improve their professional practice (2.33%, n=24). 16.94% of the study group (n=174) strongly agreed with the statement: "Scientific reports are useful in my day-to-day professional practice" and 35.05% of all valued clinical experience more than study results in decision-making process in their professional practice. 18.11% of the total said that searching for relevant scientific evidence did not apply to professional practice of nurses. Moreover, as many as 17.91% of the total (n=184) have never read any of the published studies. 56.07% of all (n=603) expressed their willingness and need to increase the use of scientific literature in their everyday practice.

Conclusions

- 1 In order to ensure nursing care of the highest standards in terms of the quality of services, the use of scientific literature in professional practice of nurses should become its integral part.
- 2 The level of knowledge of nurses about the role and importance of specialist scientific literature as an essential tool in modern clinical practice was clearly insufficient among the study group.

- 3 In order to improve the knowledge of nurses about the importance and benefits of using the most recent study results in clinical practice, the introduction of retraining courses in this respect needs to be considered.

Keywords: scientific literature, nurses, attitudes, knowledge, evidence-based practice.

1 INTRODUCTION

Nursing practice based on a modern nursing model obliges nurses to participate in continuing education and develop their professional skills, which is also required by the Nurses and Midwives Act of July 15, 2011. The ability to make use of and apply up-to-date scientific research findings by health care workers, doctors, nurses or midwives, in their everyday professional practice is absolutely necessary to ensure effective and safe patient care which would satisfy the highest quality standards.

In health sciences, adequate decision-making requires not only an adequate clinical diagnosis but also knowledge of scientific data and determination of the degree of their credibility. Hence the ever growing emphasis on the use of scientific research findings in the professional practice of midwives which is intended to contribute favourably not only to the safety of both the patient and the medical personnel but also to the effectiveness of the medical procedures performed. The use of the most recent scientific literature that is the source of reliable information about nursing contributes significantly to improve knowledge of nurses, inspires the research career development and participation in continuing education.

A meta-analysis by Heater et al. indicates a clear increase of the quality of patient care by using *Evidence-Based Nursing Practice* compared to a traditional model of nursing. Growth in involvement of nurses in treatment plan observed in Poland as well obliges nurses to use the best available scientific evidence and make legitimate and reasonable clinical decisions [1].

Moreover, global trends show that the use of the most recent scientific literature in nursing contributes significantly to the improvement of knowledge of nurses, inspires the research career development and participation in continuing education. With the continuous development of medical science and technology, the area and level of complexity of knowledge and nursing skills lead to the fact that, regardless of their level of education or length of service, in certain areas nurses are more and more often obliged to gain specialist qualifications [2].

2 AIM OF STUDY

The aim of the study was to analyse attitudes of nurses towards using scientific literature in everyday clinical practice based on evidence, known as *Evidence-based Medicine* and *Evidence-based Nursing Practice*.

3 MATERIAL

The study enrolled a total of 1027 female and male nurses. Women constituted a vast majority of the group (N=994, 96.8%). Mean age of the group amounted to 42.60 years (min. 21, max. 69, SD=8.16). The length of service among the study participants was 20.86 years (min. 0, max. 40, SD=9.32). The largest number of study participants had secondary medical education (N=331, 32.22%), slightly less proportion had a Bachelor's degree (N=276, 26.87%), 258 persons had a Master's degree (25.12%), and five persons had a PhD degree (0.48%). Over half of the respondents completed postgraduate courses and workshops (N=638, 62.12%) that were directly associated with their profession: 161 nurses graduated from qualification courses (15.67%), 217 nurses completed specialisation programmes (21.12%), 107 nurses graduated from specialist courses (10.41%), and 22 nurses completed skills improvement courses (2.14%).

A vast majority of the study participants were employed in the public sector (N=682, 66.40%) and only one in ten respondents worked in the private sector (N=122, 11.87%). Over 70% had a contract of employment (N=737, 71.76%), nearly half of the study participants worked in a department of a town hospital (N=448, 43.62%), and 16.45% worked in a ward of a teaching hospital (N=169). One out of five persons said that he or she was employed as senior nurse (N=205, 19.96%) and charge nurse (N=158, 15.38%). The remaining persons worked in the following positions: nursing specialist (N=34, 3.31%), departmental nurse (N=32, 3.11%), nurse anaesthetist (N=13, 1.26%), operating room nurse (N=12, 1.16%), nurse coordinator (N=11, 1.07%), director of nursing and occupational health nurse

(N=4, 0.38%), head nurse and specialist in epidemiology (N=3, 0.29%), operating theatre manager and teacher of the profession (N=2, 0.19%). Nearly 6% of the respondents ticked a position other than those mentioned (N=24, 2.33%).

4 METHODS

A diagnostic survey carried out through a questionnaire was used to meet the aim of the study. The study was conducted between January and July 2014. Participation in the study was voluntary and the questionnaire was anonymous. The Evidence-Based Practice Profile Questionnaire used for the study was developed by a team of researchers, including McEvoy MP, Williams MT, Olds TS. of the School of Health Sciences, University of South Australia, Adelaide, Australia [3]. The questionnaire comprised 74 questions with the Likert scale or a nominal scale with regard to evidence-based professional practice and 14 questions concerning personal data, level of education, and employment.

Main questions (74) were divided into seven thematic domains: 1. Knowledge of and attitudes towards EBP among nurses; 2. Attitudes of nurses towards expanding their EBP competencies; 3. Using EBP in professional nursing practice; 4. Knowledge of terms associated with EBP; 5. Frequency of using particular elements of EBP in everyday nursing practice; 6. Level of skills related to EBP; 7. Predispositions and barriers to using EBP by nurses. The present analysis was based on four domains from the questionnaire relating to the use of scientific literature by nurses (2, 3, 5, 6); two of them were based on the Likert scale and the other two were based on the nominal scale (a total of 37 questions). The survey was validated and translated twice by two independent translators and used for our study. A review and comparison of both translations showed their very high similarity. A reverse translation of an agreed Polish version was not performed and a final version of the questionnaire was not checked by bilingual persons. The authors of the present study were granted permission by the authors of the questionnaire to use this tool in a study conducted by Warsaw Medical University.

The data were collected in the Microsoft Excel 2010 (v14.0) program. Cronbach's alpha coefficient used for evaluating the internal compliance of the results was estimated to define the reliability level of selected domains. In compliance with the *Nunnally criterion*, a level of reliability was established at $\alpha > 0.70$ [4]. STATISTICA version 12 (StatSoft, Inc.) licenced to Warsaw Medical University was used to perform statistical analyses.

5 RESULTS

In the evaluation of the degree of reliability of the questions based on the Likert scale (domains 3 and 6; a total of 24 questions) the total level of the internal compliance of the measurement findings was high and amounted to $\alpha = 0.867$. A detailed analysis of reliability showed that in the case of Domain 3 the questions fell into two separate groups which cross-measured the same set of features and properties of the respondent. That is why this domain was divided into two sub-domains 3a and 3b. The results of the reliability analysis for questions based on the Likert scale is given in Table 1.

Table 1. Results of the reliability analysis for individual domains of the questionnaire based on the Likert scale.

Subject scope of the domain	α -Cronbach Coefficient
3a: Application of EBP in professional nursing practice	0.922
3b: Application of EBP in professional nursing practice	0.825
6: Level of EBP-related skills	0.941

In the second domain nurses participating in the study expressed their attitudes towards expanding their EBP competencies. To the question concerning the use of adequate scientific literature for updating knowledge (Fig. 1) the greatest number of the respondents answered that they were very likely (n=293, 28.52%) or certain (n=292, 28.43%) to start such a scientific activity.

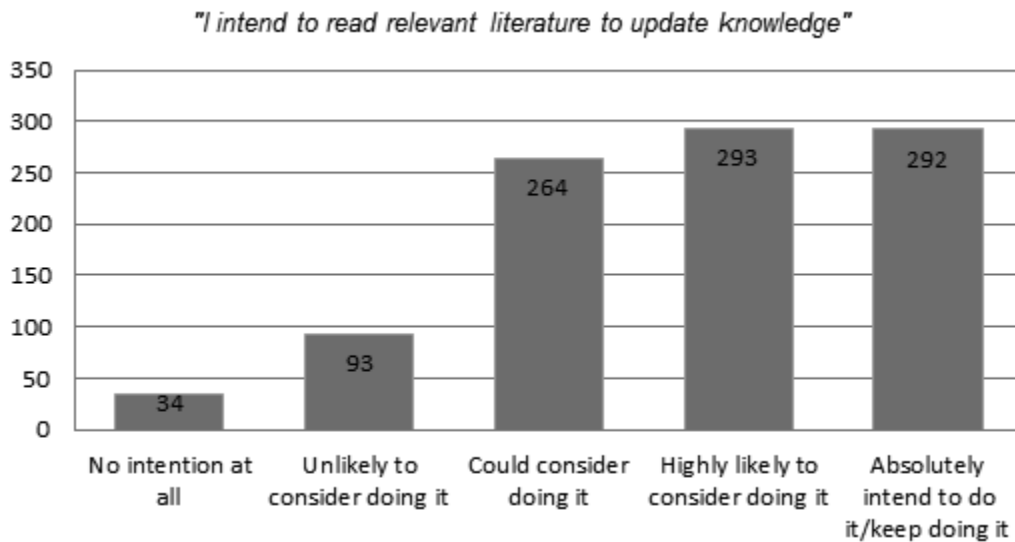


Fig. 1. Answers of nurses about using adequate scientific literature.

The nurses were also asked about their attitudes towards using the best available scientific evidence for the improvement of the quality of their own professional practice. Although nearly 100 persons expressed their negative attitude (n=99, 9.63%), over 30% of the respondents were willing to improve the level of their services by using up-to-date scientific evidence (n=319, 31.06%), which is shown in Fig. 2.

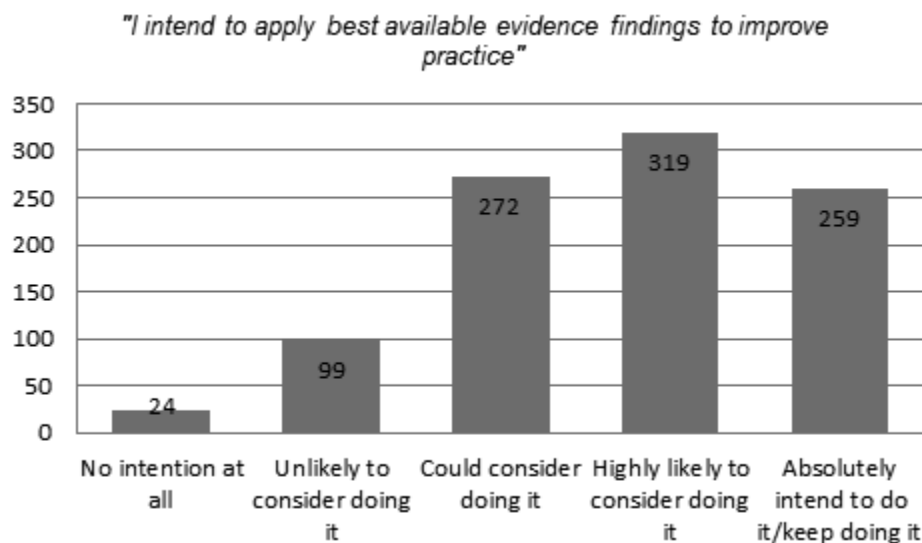


Fig. 2. Answers of study participants about improvement of quality of their professional practice by using EBNP.

In the next domain, the study participants assessed the value of research findings and their usefulness in everyday clinical practice. A vast majority of nurses believed that adequate scientific evidence was useful in everyday practice and only a small proportion of the respondents said otherwise (Fig. 3).

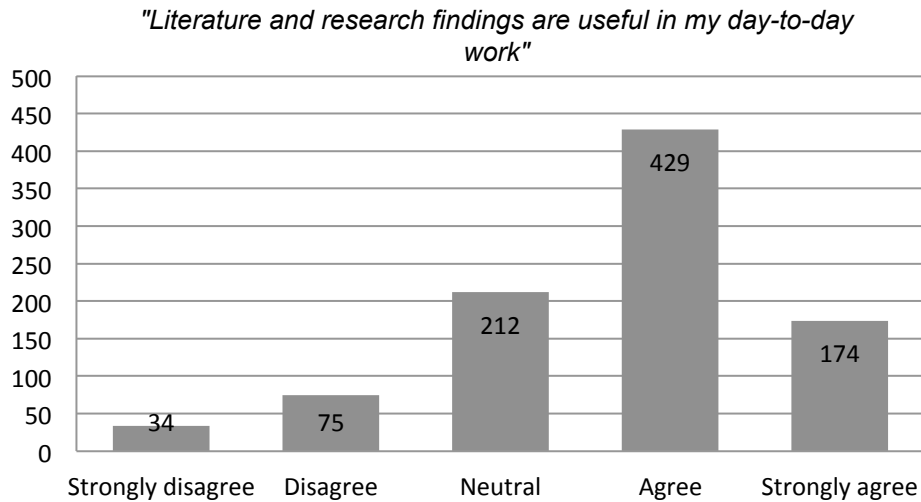


Fig. 3. Attitudes of nurses towards research findings in professional practice.

In the third domain the respondents were asked about their inner need to use scientific evidence. Over 40% of the nurses admitted that they should use scientific evidence more often in their practice (n=427, 41.57%) and more than 170 of the respondents expressed their firm intention to do so (n=174, 14.5%, Fig. 4).

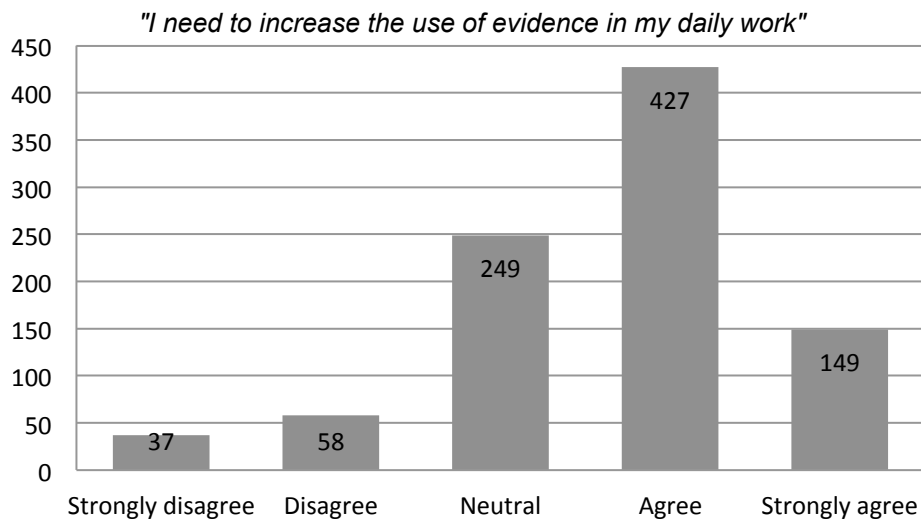


Fig. 4. Feelings of respondents towards the need of using scientific evidence in everyday practice.

In the sixth and last domain, the nurses expressed their attitudes towards the usefulness of scientific evidence in nursing practice. Clinical experience was valued more than research findings by over 30% of the study participants (n=360, 35.05%). Nearly 30% of the respondents had no opinion on this issue (n=304, 29.6%, Fig. 5).

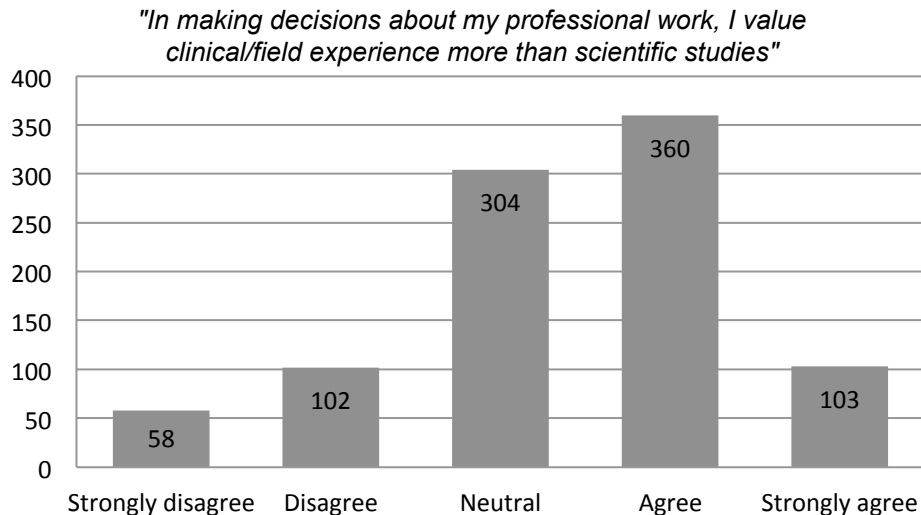


Fig. 5. Attitudes of nurses towards usefulness of scientific evidence in professional nursing practice.

6 DISCUSSION

In the available Polish scientific literature (Polish Medical Bibliography - Polska Bibliografia Lekarska – PBL) there are review and original papers emphasising the importance of using research findings in nursing practice and evaluating knowledge of and attitudes towards EBP among students of Nursing and various groups of nurses [3-10].

The available world scientific literature (PubMed, SCOPUS, EMBASE, PROQUEST, search dates: January 1, 2000-November 12, 2013, publication language: English, key words: *nursing, evidence-based practice, evidence-based nursing practice*) provided a number of publications concerning opinions on and attitudes towards *evidence - based nursing practice* among different groups of nurses [11-20]. The literature demonstrated that the level of knowledge of EBP among nurses from different countries was significantly higher than that of Polish groups of nurses. Still, the barriers and difficulties with introducing EBP to everyday clinical practice resulted from similar systemic problems: the lack of time, limited access to up-to-date scientific evidence, and lack of support from management staff [11-20].

A study by Majid et al. involved a total of 1486 nurses from two public hospitals in Singapore. Although more than 64% had a positive attitude towards EBP, the excessive workload made it impossible to use current scientific evidence. The respondents named also the lack of time, unfamiliarity with statistical terms, and difficulties with interpretation of the specific language of scientific publications as a huge barrier. The nurses admitted that trainings in evidence-based professional practice, more time off work, and mentorship of nurses with a huge clinical experience and length of service could encourage them even more to introduce EBP to their daily work [18]. In our study, over 40% of the respondents (n=427) said that they should use scientific evidence more often in their everyday nursing practice, however, only 12.7% of the study participants found time to read research findings (n=131).

Although nurses participating in the study were aware of the importance and development of modern evidence-based nursing practice and benefits resulting from it, the level of their knowledge was far too low compared to their opinions. Although over 55% of the study group said that they knew how to search for information in electronic databases of scientific literature, almost 31% of the total used them once a month or less frequently. Our study results are reflected in a study by Melnyk et al. conducted in Connecticut, South Carolina, New Jersey, and West Virginia among 160 nurses. The study by Melnyk et al. showed that the mere awareness of the existence, strong will, and willingness to improve the quality of health services by using EBP led to a development of nursing, regardless of the lack of sufficient knowledge [20]. Those nurses who strongly believed in the effectiveness of EBP in improving the quality of nursing care demonstrated a wider range of using scientific evidence in their practice ($r=0.40$, $p=0.001$) [20].

The healthcare sector both in Poland and in the world experiences major changes in the development of and increase in the number of studies. A group of nurses is just one of the recipients of those

changes since it is them who provide healthcare services and have a significant contact with patients. The adoption of innovative methods, including the introduction of EBP into everyday nursing practice to ensure effective and possibly the best patient care plays an important role in achieving success and recognising the paradigm of Evidence-Based Practice as "an appropriate balance" in nursing practice.

7 CONCLUSIONS

- 1 In order to ensure nursing care of the highest standards in terms of the quality of services, the use of scientific literature in professional practice of nurses should become its integral part.
- 2 The level of knowledge of nurses about the role and importance of specialist scientific literature as an essential tool in modern clinical practice was clearly insufficient among the study group.
- 3 In order to improve the knowledge of nurses about the importance and benefits of using the most recent study results in clinical practice, the introduction of retraining courses in this respect needs to be considered.

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