

KNOWLEDGE OF AND ATTITUDES TOWARDS EVIDENCE-BASED PRACTICE AMONG MIDWIVES TAKING A SPECIALTY EXAMINATION ORGANIZED BY CENTER OF POSTGRADUATE EDUCATION FOR NURSES AND MIDWIVES

Jaroslawa Belowska¹, Mariusz Panczyk¹, Aleksander Zarzeka¹, Łukasz Samoliński¹, Halina Żmuda-Trzebiatowska^{2,3}, Barbara Kot-Doniec², Joanna Gotlib¹

¹ *Division of Teaching and Outcomes of Education, Faculty of Health Science, Medical University of Warsaw (POLAND)*

² *Postgraduate Training Centre for Nurses and Midwives, Warsaw (POLAND)*

³ *Division of Clinical Nursing, Faculty of Health Science, Medical University of Warsaw (POLAND)*

Abstract

The improvement of professional qualifications and participation in continuing education on the basis of the most recent study results constitute a precondition to ensure efficient and safe health services and to provide maternity care of the highest quality and efficiency.

Aim

The study aimed to assess knowledge of, attitudes towards, and skills of using Evidence – Based Practice (EBP) among midwives after completing a specialized training organized by the Center of Postgraduate Education for Nurses and Midwives (CKPPiP).

Materials and Methods

48 midwives taking part in the CKPPiP specialty examination in the summer 2014 session; mean age of 47.57 years (min. 32, max. 60, SD=6.502); mean length of service was 28.07 years (min. 7, max. 38, SD=6.494). 93.75% of the total worked full-time in a public hospital, 56.25% of all worked as senior midwives. 52.08% of the study participants had secondary education. Standardized *Evidence-Based Practice Profile Questionnaire* from the University of South Australia, quantitative analysis of the study results. Reliability analysis: Cronbach's α coefficient, STATISTICA 12.

Results

Reliability analysis for particular domains: Cronbach's α coefficient was between 0.882 and 0.975. As many as 66.6% of the midwives were aware of the importance and development of EBP in midwifery and the benefits resulting from using EBP. 37.5% of the study participants have never evaluated the methodological soundness of the scientific literature they had been using and have not referred it to their own diagnosis (20.8%). As many as 39.5% of all have never met the term of "systematic review". 56.2% of the study group said that they knew how to search for information in electronic databases of scientific literature and used them once a month (31.2%). Despite using EBP in making proper clinical decisions in their professional practice, midwives valued their own clinical experience more than study results (62.5%).

Conclusions

- 1 Since the level of knowledge of using Evidence-Based Practice among midwives who completed a specialisation programme is clearly insufficient, knowledge and skills of midwives with respect to this issue need to be urgently supplemented.
- 2 In order to improve the current level of knowledge of EBP among midwives, it is advisable to offer them further training and enhance their skills concerning methodology of research.
- 3 It is necessary for midwives to continuously update their knowledge of using the most recent study results in their professional practice.

Keywords: Evidence - Based Nursing, quality, nursing, safety, nursing care quality.

1 INTRODUCTION

It is necessary that health care professionals such as doctors, nurses, and midwives know how to use up-to-date study results in their everyday practice in order to provide efficient and safe nursing care of highest quality standards. The use of scientific evidence in clinical practice has beneficial effects not only on the safety of patients and medical staff, but it also improves the financial effectiveness and efficacy of the medical procedures [1-11].

The provision of healthcare services according to the current medical knowledge is one of the fundamental principles of practising as a midwife. Pursuant to the provisions of the Nurses and Midwives Act of July 15th, 2011 and by the nature of the profession and development of obstetrics, midwives are obliged to constantly update their knowledge and professional skills by participating in different kinds of postgraduate trainings and by self-education. A specialised training is one of such forms. Its objective is that a midwife gains specialist qualifications in a certain field applicable in healthcare [15].

All forms of professional development of midwives should take place on the basis of using the most recent research findings. Therefore, it is essential to be knowledgeable about the methodology of research, critical analysis of the results, and critical reading of scientific publications, i.e. of all key elements of *Evidence-based Midwifery Practice*.

A specialisation block of postgraduate trainings in obstetrics comprises five modules and a block of general vocational education in a total number of 1095 teaching hours. It aims at preparing midwives for providing comprehensive, continuous, and independent midwifery care to families during procreation period. The general vocational classes that are the same for all fields of various specialised trainings include also 15 hours of the *Research in Nursing* course that covers all issues associated with *Evidence-based Practice* [11].

2 AIM

The aim of the study was an attempt to assess the knowledge and attitudes of nurses after completing a specialised training in obstetric nursing on Evidence – based Practice (EBP) and skills of using the most recent study results in everyday clinical practice.

3 MATERIAL

The study involved a total of 48 midwives (women constituted 93.8% of all) who completed a specialised training and took specialty examinations organised by the Postgraduate Training Centre for Nurses and Midwives in Warsaw in summer session 2014. Mean age of the study participants was 47.57 years (the youngest person was 32, the oldest person was 60, SD=6.50). Marital status: 33 persons were married, 9 of the total were single, and 2 were widowed. The largest group of the respondents (25 persons) lived in a town up to 100,000 citizens, 14 persons lived in the country, 8 persons lived in a town between 100,000 and 500,000 citizens, and one person lived in a city over 500,000 citizens. Among the study participants, 27 persons graduated from a two-and-a-half years vocational medical school, 7 persons graduated from a bridging programme (first cycle degree), 9 persons completed a Master's degree programme, and 2 persons completed a summer vocational medical school. 25 midwives participating in the study had a secondary medical education, 11 persons had a Bachelor's degree, and 9 persons had a Master's degree. As many as 24 study participants said they had graduated from a postgraduate training and 8 persons completed another specialisation programmes. Mean length of service among the study participants amounted to 28.07 years (min. 7, max. 38, SD=6.49) 45 midwives worked in the public sector, 46 of the total worked full-time. As many as 27 study participants worked as senior midwife, 10 persons worked as charge midwife, 3 as operating room midwife, 1 as departmental nurse, 1 as nurse manager, 1 as operating theatre manager, and 1 as deputy departmental nurse.

4 METHODS

In the study we used the diagnostic probe method, the questionnaire technique. The study was carried out in April 2014. We used the 'Evidence-Based Practice Profile Questionnaire developed by a team of authors: McEvoy MP, Williams MT, Olds TS. of the School of Health Sciences, University of South Australia, Adelaide, Australia, published in 2010 in the *Medical Education* journal [12]. The authors of

the present study obtained the consent for its use. The questionnaire was validated and doubly translated by independent translators for the use in our own research. Participation in the study was voluntary and the questionnaire was anonymous.

The questionnaire consisted of 4 questions with the Likert scale or the nominal scale in the area of professional practice based on scientific evidence, 13 questions concerned personal information, education and employment and one question concerned an earlier encounter with the subject-matter discussed. Questions concerning evidence-based practice were divided into 7 subject domains:

- 1 Midwives' knowledge of and attitudes to EBP
- 2 Midwives' relation to expanding their EPB competence
- 3 EBP application in the professional midwifery practice
- 4 Knowledge of EBP terminology
- 5 Frequency of the application of individual EBP elements in everyday clinical practice
- 6 Level of EBP-related skills
- 7 Predispositions and barriers limiting the application of EBP by midwives

The obtained data were gathered in Microsoft Excel Sheet 2010 (v14.0).

Due to a small number of the study participants, data were presented only in a descriptive way using absolute figures. Numbers presented in tables do not total the number of study participants since not everybody completed the forms.

5 RESULTS

Questions asked at the beginning of the questionnaire aimed to assess the level of knowledge of and attitudes towards Evidence – Based Practice among midwives, rated by the respondents on a scale from 1 to 5, depending on the degree to which they agreed with a statement (1 - strongly disagree; 5 - strongly agree). Over 62% of the midwives were aware of the existence of EBP in their profession, and slightly more than half of the total knew the meaning of the term *Evidence-based Practice* (54%).

In the following part of the questionnaire, the respondents expressed their attitude towards broadening their competencies related to EBP on a scale from 1 to 5 (1- certainly not, 5- certainly yes). The midwives said that there was high probability of improving their skills and knowledge about EBP: nearly 61% of the respondents intended to use the best available scientific evidence to improve the quality of their own professional practice, and 62.5% of all wanted to use adequate scientific literature to update their knowledge.

The next questions in the questionnaire concerned the use of EBP in professional practice of midwives and they were also assessed on a scale from 1 to 5 (1 - strongly disagree; 5 - strongly agree). Most midwives participating in the study agreed with the statements presented in the questionnaire: More than 65% of the respondents said that they should use scientific evidence in their daily work more often, and 77% of all admitted that research findings were useful in work.

Questions asked in the next part of the questionnaire aimed to assess the level of midwives' knowledge of research terminology. The terms and issues in the questionnaire were assessed on a scale from 1 to 5 (1- never heard of it, 5- I understand it and I can explain its meaning to others). 29% of the study participants knew the terms "clinical relevance" and "randomised trial" quite well, and over 56% of all had never heard of the term "forest plot" or "publication bias" (52%).

In the following part of the questionnaire, the respondents assessed the frequency of using particular elements of *Evidence-based Practice* in their everyday clinical practice, using a scale from 1 to 5 (1- never, 5- every day). A vast majority of the midwives (81%) did not read research findings and 71% had never formally discussed scientific reports during scientific meetings in their workplace. Every fifth respondent had never referred study results to their own diagnosis and 37.5% had never evaluated methodological soundness of the scientific literature they had used.

The respondents were also asked to assess their skills related to *Evidence-based Practice* on a scale from 1 to 5, with 1 referring to "I definitely cannot", and 5 meaning "I definitely can". Although most midwives had no opinion on this issue, half of the study participants said they knew how to search for information in electronic databases of scientific literature (56%) and over 58% of the total knew the

main types of information and its sources. Every fifth respondent (21%) was confident in working with computers.

The last part of the questionnaire concerned predispositions and barriers that limit the use of EBP in midwives' workplace. 79% of the study participants expressed their willingness to learn new information, even though it was impossible for 67% of the midwives to update their knowledge on a regular basis due to the excessive workload. Support from colleagues is one of the greatest motivation for 46% of the study participants to use Evidence – based Practice in their practice and for 50% of all it is the support from the management staff. 8% of the midwives believed that their employer definitely did not require the use of EBP in their everyday clinical practice.

In the last question midwives were asked to indicate whether and where they had met the term of the "*Evidence – Based Midwifery Practice*". 19% of the respondents said that it was one of the classes at university, 23% of the total met the term EBP on a conference or training, 8% of all met it in their workplace, and only 42% of the study participants had never heard of Evidence-based Practice.

6 DISCUSSION

Searching for publications available in databases of the world scientific literature (PubMed, SCOPUS, EMBASE, PROQUEST, dates of searching: January 1, 2000-November 12, 2013, publication language: English, key words: *midwifery, evidence-based practice, evidence-based midwifery practice*) allowed for finding seven articles on practical skills concerning the use of elements of *evidence-based midwifery practice* [16-22] and five articles on using EBM and EBP by midwives [23-28].

In Polish scientific literature (Polish Medical Bibliography - Polska Bibliografia Lekarska – PBL) no publications were found on midwives' knowledge of and attitudes towards using study results in everyday clinical practice.

The present study results concern a group of midwives who completed a specialised training in obstetric nursing, i.e. persons who are willing to gain specialist qualifications and the title of a specialist in this field. Due to a small number of study participants and significant differences in education level of the respondents, the present study is just pilot and require a follow-up. Because of the nature of the study group, no publications on a similar group of midwives were found both in Polish and world literature. Therefore, articles on nursing were also used in the study [1,2,3,9,11]. Those publications were for reference only, emphasising the importance of using research findings in midwifery practice. Thus, the present study is innovative.

In the Polish literature there are numerous publications on incentives to improve professional qualifications by nurses and midwives [29, 30, 31, 32, 33, 34, 35]. A study by Tomaszewska conducted among a group of 220 nurses on two national conferences on nursing aimed to analyse expectations associated with professional development of nurses, perform self-assessment of their previous development, and define a professional issue that would be of their greatest interest during trainings. The study results demonstrated that professionally active persons were much interested in further professional development and upgrading skills. The study suggested that issues associated with the quality of work, burnout syndrome, legal aspects of the profession, and improvement of prestige status were of particular interest among nurses as far as continuing education was concerned. Financial difficulties, impediment caused by management staff, and limited access to courses and trainings were among factors limiting professional development [29].

Similar results were obtained by Jurczak et al., who studied a group of 153 midwives aged 24-60 from West Pomeranian Voivodeship, who completed or participated in any form of postgraduate training. The study aimed to find motivation for starting a postgraduate training course. The study demonstrated that midwives commencing a postgraduate training course were mainly focused on gaining detailed knowledge and obtaining the title of a specialist as well as a moral obligation for lifelong learning, and self-motivation of midwives had the greatest impact on the implementation of a plan for professional development [30]. Graf obtained similar results in her study conducted among 125 active nurses in Śląsk between November 2013 and January 2014. The study aimed to find positive and negative factors influencing professional development of nurses and answer the question on how professional development of nurses influences the improvement of the professional status. The study showed that desire for self-fulfilment, need for professional development, passion for the job, and support from the family were the main factors contributing to the professional development of nurses. The following issues were mentioned by nurses as major barriers to professional

development: the lack of financial motivation and too high costs of courses and trainings which are disproportionate to their earnings and the lack of the possibility of career advancement. It seems interesting that significantly greater proportion of respondents indicated peer jealousy (66%) than the lack of time (20%) as a barrier to professional development [31].

In a study by Nowicki et al. that enrolled 77 nurses participating in a specialised training in emergency nursing conducted between January and May 2010 as many as 98.70% of the respondents said that they were interested in improving their professional skills. The study participants were asked which forms of training they would be willing to participate in. Most of the respondents wanted to continue their education on a Bachelor's (45.45%) and Master's (36.36) degree programmes, slightly less of the total were willing to take part in qualification (20.78%), specialist and professional development (24.68% each) courses and specialised trainings (12.99%), while the smallest proportion of respondents were interested in doctoral studies (5.19%) [35]. Urszula Cisoń-Apanasewicz et al. obtained slightly different results among 95 nurses participating in various forms of postgraduate education. Specialist courses were indicated most often. Fewer nurses wanted to participate in specialised trainings. This was probably due to a long duration of such courses (2 years), necessity to commute to distant units for theoretical and internship classes, as well as a difficult state examination at the end of a specialised training. What surprised the authors was the fact that not all nurses understood the difference between qualification and specialist courses, and sometimes they did not even know which form of training they had completed [32].

Although most midwives participating in the study said that they were willing to improve their competencies in Evidence – Based Practice and develop their own skills in using adequate scientific literature and evidence, only 28% of the total found time to read the recent research findings and 39% of the respondents said that their present employers did not require them to use EBP in their everyday practice. This indicated that midwives were willing to take part in professional trainings closely related to their work rather than in general professional trainings in e.g. *Professional midwifery practice based on scientific evidence*.

Despite declarations of 60% of the respondents who said that they liked learning and they had management predispositions (30%), 27% of the midwives admitted that they were critical of new ideas. As many as 38% of the respondents believed that in their job, the management was constantly looking for new possibilities of learning and 50% of the total said that support from management was one of the greatest motivations to use EBP in professional practice. Therefore, it is surprising that such a small proportion of midwives based their professional practice on scientific evidence and are knowledgeable enough about this issue. Moreover, the attitude of midwives towards Evidence – based Practice seems inappropriate since 38% of the respondents indicated that there were no reasons for using EBP in their everyday clinical practice due to the lack of scientific evidence to support the efficiency of most professional activities. 62% of the midwives valued clinical experience more than research findings in making proper decisions in their practice, and 65% of all admitted that clinical experience was the best way to evaluate the efficiency of a certain activity.

The present healthcare system needs highly qualified and well-educated midwives whose skills and knowledge contribute to providing efficient patient care. This level of education and services can be achieved by a variety of forms of lifelong learning and postgraduate training as well as implementation of the basics of Evidence – based Practice into the everyday clinical practice.

7 CONCLUSIONS

- 1 Since the level of knowledge of using Evidence-Based Practice among midwives who completed a specialisation programme is clearly insufficient, knowledge and skills of midwives with respect to this issue need to be urgently supplemented.
- 2 In order to improve the current level of knowledge of EBP among midwives, it is advisable to offer them further training and enhance their skills concerning methodology of research.
- 3 It is necessary for midwives to continuously update their knowledge of using the most recent study results in their professional practice.

REFERENCES

- [1] Williams AB. Praktyka pielęgniarska oparta na faktach. Sztuka Pielęgowania 2013; 4: 14-15.

- [2] Kędra E. Praktyka pielęgniarska oparta na faktach - wymóg czy konieczność? *Problemy Pielęgniarstwa* 2011; 19 (3): 391-395.
- [3] Kózka M. Zastosowanie badań naukowych w praktyce pielęgniarskiej. *Pielęgniarka Epidemiologiczna* 2007; 2/3: 13-15.
- [4] Adams S, Barron S. Use of evidence-based practice in school nursing: Prevalence, associated variables, and perceived needs. *Worldviews on Evidence-Based Nursing* 2009; (6): 16-26.
- [5] Martin F. Why we do what we do: Implementation of practice guidelines by family nurse practitioner students. *Journal of the American Academy of Nurse Practitioners* 2008; 10: 515-21.
- [6] Aronson BS, Rebesch LM, Westrick-Killion S. Enhancing Evidence Bases for Interventions in a Baccalaureate Program. *Nursing Education Perspectives* 2007; 5: 257-62.
- [7] Florin J, Ehrenberg A, Wallin L, Gustavsson P. Educational support for research utilization and capability beliefs regarding evidence-based practice skills: a national survey of senior nursing students. *J Adv Nurs* 2012; 68 (4):888-97.
- [8] Jalali-Nia SF, Salsali M, Dehghan-Nayeri N, Ebadi A. Effect of evidence-based education on Iranian nursing students' knowledge and attitude. *Nurs Health Sci.* 2011; 13 (2): 221-7.
- [9] Logan PA, Angel L. Nursing as a scientific undertaking and the intersection with science in undergraduate studies: implications for nursing management. *J Nurs Manag.* 2011; 9(3):407-17.
- [10] Florin JA, Ehrenberg AB, Wallin LA, Gustavsson PC. Educational support for research utilization and capability beliefs regarding evidence-based practice skills: A national survey of senior nursing students. *Journal of Advanced Nursing* 2012; 68 (4): 888-897.
- [11] Morris JA, Maynard VB. The value of an evidence based practice module to skill development. *Nurse Education Today* 2007; 27 (6): 534-541.
- [12] Gotlib J, Belowska J, Panczyk M.. Evidence – based Medicine i Evidence – Based Nursing Practice – przegląd polskiego piśmiennictwa naukowego. *Problemy Pielęgniarstwa* 2014; 22(2): 223-227.
- [13] Gotlib J, Ściegłińska B, Belowska J. Pielęgniarki oddziałowe o codziennej praktyce klinicznej opartej na dowodach naukowych. *Medycyna Dydaktyka Wychowanie* 2014; 2: 8-10.
- [14] Uchmanowicz I, Rosińczuk J. *Badania naukowe w pielęgniarstwie i położnictwie*, wyd. Continuo Wrocław 2014, str. 87-100 ISBN 978-83-62182-38-1.
- [15] Ustawa z dnia 15 lipca 2011 r. o zawodach pielęgniarki i położnej (Dz. U. z 2011 r., nr 174, poz. 1039).
- [16] McEvoy MP, Williams MT, Olds TS. Evidence based practice profiles: Differences among allied health professions. *BMC Medical Education* 2010, 10:69 doi:10.1186/1472-6920-10-69.
- [17] Devane D, McCarthy B. Midwifery basics: understanding research (7). Understanding statistics in research papers, *Pract Midwife.* 2010 Jun;13(6):40-2.
- [18] Hall J, Midwifery basics: understanding research (5). Interpreting qualitative data, *Pract Midwife.* 2010 Mar;13(3):32-5.
- [19] Brennan M, Van Der Putten D, Midwifery basics: understanding research (4). Data collection methods and measurement, *Pract Midwife.* 2010 Feb;13(2):34-9.
- [20] Casey D, Devane D, Midwifery basics: understanding research (3). Sampling, *Pract Midwife.* 2010 Jan;13(1):40-3.
- [21] Devane D, Cooney A, Midwifery basics: understanding research (2). Research problems, purposes, questions and hypotheses, *Pract Midwife.* 2009 Dec;12(11):34-7.
- [22] Wickham S, Midwifery basics: understanding research (1). Sources of evidence and research, *Pract Midwife.* 2009 Oct;12(9):38-41.

- [23] Farrar D, Syson J, Germaine T, Airey R, Research midwives: look at the evidence! *Pract Midwife*. 2011 Jul-Aug;14(7):28-32.
- [24] Billie H, Implementing research evidence into practice: some reflections on the challenges *Evidence Based Midwifery* 11(3): 76-80.
- [25] Bogdan-Levis E.A, Sousa, A, The contextual influence of professional culture: Certified nurse-midwives' knowledge of and reliance on evidence-based practice, *Social Science and Medicine*, 62 (11), pp. 2681-2693.
- [26] Barroso, R, Toward Unification of the Midwifery Profession: Looking Back to Guide Us Now, *Journal of Midwifery and Women's Health*, 2010; 55 (1), pp. 2-4.
- [27] Gijbels H, O'Connell R, ; Dalton-O'Connor C, A systematic review evaluating the impact of post-registration nursing and midwifery education on practice, *Nurse Education in Practice* 10.2 (Mar 2010): 64-9.
- [28] Fullerton JT, Thompson JB, Severino R, The International Confederation of Midwives essential competencies for basic midwifery practice. an update study: 2009-2010, *Midwifery*. 2011 Aug;27(4):399-408.
- [29] Tomaszewska M, Cieśla D, Czerniak J. Możliwości doskonalenia zawodowego pielęgniarek – potrzeby a rzeczywistość, *Problemy Pielęgniarstwa* 2008; 16 (1,2): 40-47.
- [30] Jurczak A, Hoffman G, Augustyniuk K. Motywy podejmowania kształcenia podyplomowego przez położne województwa zachodniopomorskiego. *Perinatologia, Neonatologia i Ginekologia* 2012; 5 (1): 39-42.
- [31] Graf L, Śleziona M, Ptaszek G. Wpływ rozwoju zawodowego na wizerunek pielęgniarstwa. *Pielęgniarstwo Specjalistyczne* 2014; 4 (1): 171-176.
- [32] Cisoń – Apanasewicz U, Gawel G, Ogonowska D. Opinie pielęgniarek na temat kształcenia podyplomowego. *Problemy Pielęgniarstwa* 2009; 17 (1): 32–37.
- [33] Bidzińska E, Sobczak M, Rakowska K. Motywy podwyższania wykształcenia przez pielęgniarki Wojewódzkiego Szpitala Zespołowego w Elblągu. *Problemy Pielęgniarstwa* 2007; 15 (2,3): 197-202.
- [34] Palczewska A. Analiza kształcenia podyplomowego pielęgniarek i położnych na północno-wschodnim Mazowszu. *Problemy Pielęgniarstwa* 2008; 16 (3): 285–292.
- [35] Nowicki G, Chilimoniuk B, Goniewicz M. Możliwości i bariery rozwoju zawodowego pielęgniarek w opinii uczestników specjalizacji w dziedzinie pielęgniarstwa ratunkowego. *Problemy Pielęgniarstwa* 2012; 20 (4): 473–479.