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Evaluation of Perinatology Nursing Certificate Program

Nuran Komurcu^a, Nurdan Demirci^a, Hatice Yildiz^a, Zubeyde Eksi^{a*}, Ozlem Can Gurkan^a, Dilek Coskuner Potur^a, Sena Dilek Sayin^a, Fatma Cosar^a, Aysegul Durmaz^a, Cigdem Gun^a

^a*Marmara University, Faculty of Health Sciences, Nursing Department, Department of Obstetrics and Gynecology Nursing, İstanbul, Turkey.*

Abstract

"Due to reasons connected with pregnancy and labour, each year approximately 600,000 women die in the world without having any other health problems. Reducing the number of mother and baby deaths is among the objectives of the Ministry of Health in Turkey. To achieve the desired goals, it is necessary to maintain perinatal services without any problems, to standardize care and to provide patient satisfaction. In this issue, health professionals, especially nurses and midwives play an important role. For this reason, thanks to the cooperation of Istanbul Provincial Directorate of Health with Marmara University Faculty of Medical Sciences Nursing School Department of Obstetrics and Gynecology Nursing, training was planned to educate nurses and midwives working in the field of Perinatology, who have an important role in woman health. **Objective:** The training aims to educate the nurses and midwives who work in the perinatal field, in the importance of women's health in order to make them more competent in the service they provide. **Material and Method:** A prospective intervention was planned and implemented as a study. A total of 129 midwives and nurses who work in the perinatology units of hospitals in Istanbul that are affiliated to the Ministry of Health, and who completed the "Perinatology Nursing Certificate Program", including 80 hours theoretical and 80 hours clinical practice, constituted the sample of this study. The study was implemented six times between April 2009 and November 2010, and in each program, 20-25 midwives/nurses received training. Data was collected via a questionnaire, a theoretical and practical evaluation form, a post-education three months evaluation form, and preliminary testing before and final testing after the training. **Findings:** It was determined that the average age of the participants was 32.10 ± 5.92 and their average work duration was 11.23 ± 7.31 . While the theoretical training average preliminary test score was 62.16 ± 11.60 , the final test score average was 89.35 ± 5.26 . In the third month following the training, 43% and 28.8% of the midwives/nurses stated that they observed a development in their level of knowledge and skills respectively. Also, 92.2% of them indicated that the care they provide improved and 84.6% stated that patient satisfaction was affected in a positive way. **Result:** It was confirmed that training programs devoted to the field of expertise after graduation have a positive effect on the knowledge and skills of employees and on the service they provide.

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INTRODUCTION

The time in between conception and birth is called the prenatal period, and duration between the 20th week of gestation and the first week of the newborn is called the perinatal period. Pregnancy is an important developmental process affecting the health of particularly the mother and the baby, as well as the family and the community. In this process, health care professionals, especially the midwives and nurses, play important roles in maintaining and improving the health of the mother and the fetus, assessing the risks, and performing necessary interventions (1).

Nearly 600.000 women, who have no other health problems, die each year from pregnancy and birth related causes. Maternity related deaths occur during gestation, at birth or in the postnatal period. This shows the importance of perinatal monitoring and care. The purposes of programs designed by the United Nations Development Programme,

which carries out development programs on an international scale, is to prevent mother and baby deaths, and improve maternal health (2,3). Within their 21st century health goals, WHO emphasized the importance of accessibility and quality of reproductive health, antenatal, perinatal and child health services in order to reduce maternal and newborn mortality rates (4). Reducing the number of mother and newborn deaths, and improving maternal health is also included in the goals determined by the Ministry of Health in Turkey. In order to reach the intended goals, there is a need for properly run perinatal services, standardized care, and patient satisfaction. In this respect, the Ministry of Health is carrying out various activities to standardize and improve care (5).

According to data from Turkey Population and Health Research (TNSA 2008), the rate of getting prenatal care is 92%. However, the Ministry of Health is carrying out various activities to standardize and improve care (5).

According to data from TNSA 2008 in Turkey, the cumulative fertility rate is 2,16 (5). The results of Turkey National Maternal Mortality Study (2005) show that in Turkey, the maternal mortality rate is 38.2 (\pm 2.8) in every 100,000 live births. Primary causes of death include hemorrhage (32%), toxemia (20%), infection (14%), indirect obstetric death (15%), and embolism (10%) (6). In sum, the majority of mother deaths occur right before, during or after birth; hence the importance of perinatal monitoring and care.

It is recommended that necessary actions should be taken to launch certification programs that will enable midwives and nurses to specialize in this area in order to improve health indicators during the perinatal period in which illness and death occur most in women, and to improve the quality and accessibility of perinatal services (7).

Consequently, for the purpose of educating midwives and nurses working in the field of perinatology, which is highly important in women's health, an education plan has been prepared with the collaboration of Provincial Health Directorate of Istanbul and Marmara University Faculty of Health Sciences Department of Obstetrics and Gynecology Nursing. The purpose of the study is to evaluate the efficacy of the perinatology training provided for the nurses and midwives working in the field of perinatology to gain the necessary knowledge and skills.

MATERIALS AND METHODS

Design:The study was designed and carried out as a prospective intervention study between April 2009 and November 2010.

Population and Sample:All the midwives and nurses working in the perinatology units of hospitals in Istanbul under the Ministry of Health formed the population for this study. 129 people who successfully completed the "Perinatology Nursing Certification Program" (PHSP), comprising of 80 hours of theoretical and 80 hours of clinical practice courses were included in the sample for the study.

Methods: Prior to commencing the study, the Perinatology Nursing Certification Program, comprising of 80 hours of theoretical and 80 hours of clinical practice courses, was prepared by the investigators with the collaboration of Provincial Health Directorate of Istanbul. All the nurses within the province, who work in the field of perinatology, were initially planned to be included in the program however, due to the Ministry of Health's actions in standardizing the certificates, the program was carried out 6 times and then suspended. Later, the Perinatology Nursing Certificate Program was carried out 6 times and 20 – 25 midwives/nurses underwent training in each program session.

The theoretical sections of the program were taught by 27 academics specialized in obstetrics and gynecology nursing that work in various universities and clinical nurses with master's degrees within the province of Istanbul.

A pre-test before and a post-test after the program were administered to the PNCP participants to evaluate the efficacy of the theoretical courses. The midwives and nurses with master's degrees who were appointed by the Provincial Health Directorate, evaluated the clinical application practice sections of the program in the settings where the clinical practice sessions took place. A third month evaluation form was given on the 3rd month following the end of the program to evaluate how the participants were contributing to the establishments they work in. Lecture notes used in the PNCP were printed as a certification program booklet and given to the participants (8).

Collection of Data: Study data were collected using a Participant Identification Form, comprising of 6 questions intending to evaluate demographic and educational characteristics of participants; a pre- and a post-test, comprising of 50 questions prepared by the educators; a Perinatology Nursing Certification Program Practical Evaluation Form, comprising of 25 questions prepared by the investigators to evaluate the practical skills of the participants; and a Post-Program Third Month Evaluation Form, comprising of 12 questions aiming to evaluate the participants' reflections at the establishments they work.

Evaluation of Data

The investigators evaluated the data by using SPSS (Statistical Package for Social Science) 14.0. In the evaluation, frequency distribution and Pearson's correlation were used.

FINDINGS

Data gathered from a total of 129 participants were evaluated in the study. It was determined that the participants' average age was 31.20 ± 5.94 years, duration of professional work was 11.23 ± 7.31 years, and duration of professional work at a gynecology clinic was 6.84 ± 6.02 years.

It was also determined that 14.7% of the participants held high school, 45% of the participants held two-year (associate's) degree, and 40.3% of the participants held bachelor's or master's degree diplomas. Data also showed that following graduation, 68.2% of all participants got certifications in various fields and 61.2% attended in-service trainings at the hospitals they work.

Table 1. The statistical comparison of PNCP participants' scores in pre- and post-tests (n = 129).

	X ± SD	r	P
Theoretical Score (Pre-test)	62.16 ± 11.60	0,272	p < 0,05
Theoretical Score (Post-test)	89.35 ± 5.26		

It was determined that participants' scores in the post-test are 27.19 points higher than their scores in the pre-test. A slight positive correlation was seen between the participants' pre- and post-test scores ($r = 0,272$; $p < 0,05$) (Table 1). The participants' average score was 79.06 ± 18.66 .

There was no statistically significant correlation between the participants' pre-test scores, educational background, previous certifications or in-service trainings, and professional work durations.

A 3rd month feedback was received from 40.3% of the participants. 92.3% of the participants stated that there was improvement in the quality of their care, and 84.6% mentioned that there was an increase in patient satisfaction under their care.

Table 2. The Distribution of Ways That The Participants Share The Experience Gained From the PNCP on the Third Month After The Program (n = 51).

Sharing of Theoretical Knowledge*	n	%
During application or process with short explanations when necessary.	46	88,5
By using the booklet at the clinic or leaving it at the clinic for others to use.	13	25
By preparing an In-Service Training Program.	4	7,7
Sharing of Skills Gained in PNCP Practice Courses*	n	%
I have corrected previous mistakes we used to make in the application or process.	16	30,8
I haven't change anything in the application or process.	12	23,1
I didn't have to start a new application or process.	11	21,2
I know that changes need to be made in the application but the resources were insufficient.	9	17,3
I have started a new application.	5	9,6
I have started a new application but other nurses did not want to perform it.	1	1,9

* "n" is higher due to multiple answers

It was determined in the third month evaluation that 94.6% of the participants recommend the program to their friends, and also that they share their knowledge and skills at the workplace in various ways (88.5% during application or process with short explanations when necessary, 25% by sharing the program materials with their friends, and 7.7% by preparing an in-service training) (Table 2). 98.1% of the participants mentioned that they share their knowledge that they recently acquired in the certification program with their friends, and 53.8% said that they also share it with the doctors.

Table 3. Participants' Thoughts on the Knowledge and Skills They Gained in the Program on the Third Month After The PNCP.

	n	%
My knowledge level has increased in specific subjects.	22	43.2
My knowledge level increased significantly.	17	32.7
My self-confidence has increased.	11	21.2
My knowledge level has increased.	10	9.2
My knowledge level remained the same.	2	3.8
My clinical application skills have improved in specific applications.	15	28.8
My clinical application skills have improved.	13	25.0
My clinical application skills remained the same.	12	23.1
My clinical application skills have improved significantly.	8	15.4
My self-confidence has increased.	7	13.5

In the 3rd month evaluation after PNCP, 43.2% of the participants stated that their knowledge levels have increased in specific subjects, and 28.8% of the participants stated that their clinical application skills have improved in specific applications (Table 3).

DISCUSSION

Data from a total of 129 participants were evaluated in this study. The reason that more than half of the participants have gone through trainings after graduation might be in regards to the Ministry of Health increasing the number of training and certification programs, and encouraging midwives and nurses to attend (9).

In our findings, as Woods & Theron (1995) also mention in their study, the statistically significant difference between the pre- and post-test scores supports the fact that education increases individuals' knowledge levels (10). Janssen et al. (2005) determined in their study that the prenatal education program increased the care scores of nurses (11). Similarly in this study, higher clinical application scores (79.06 ± 18.66) of the participants were observed.

The sharing of knowledge within the perinatal team is highly important. In order to accomplish these, midwives and nurses need to arrange and ensure the continuance of in-service trainings and continuous education programs (7). In our findings, it is revealed that participants share the knowledge they acquired from the program mostly with their colleagues, and some of them with the doctors at the clinic. The sharing of knowledge is gratifying. The sharing is mostly done with short explanations and through training materials during an application. In fact, it is more desirable that the sharing would be through training programs they prepare themselves.

The ratio of participants introducing new applications in their clinics is low (9.6%) however; it can be interpreted as an indicator to the rise in self-confidence levels of these nurses and a role of an agent of change for them.

The nurses and midwives at the perinatology clinics need to be self-assured. This self-assurance is possible through the increase in knowledge and skill levels. The confident attitude of nurses and midwives is reflected in the care and felt by the patients. In his study evaluating the opinions on supportive attitude of the nurses, Kizilkaya (1997) determined that patients are most impressed with the nurses showing self-confidence and being respectful, thus increasing their confidence in the nurses significantly (12). In this study, it was observed that the self-confidence of the nurses increased with the certification program. Similarly, Janssen et al. (2005) also observed that the perinatology nursing program increased the self-confidence of nurses in some applications (11). This will indirectly reflect on patient care. Furthermore, the "My clinical application skills have increased." statement in the study may indicate that newly acquired applications through the program are reflecting at the clinic.

Finally, it is clearly seen that well-planned certification programs after graduation increase the knowledge and skill levels of nurses and midwives.

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*Corresponding author. Tel.: +90 0 216 418 16 06 – 1156; fax: +90 0 216 418 37 73.
E-mail address: zubeydeeksi@gmail.com