

Original Article

Nursing Students' Views on their Clinical Placement in Pediatric Hospitals of Athens, Greece

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Abstract

Introduction: The clinical practice of undergraduate nursing students in pediatric nursing is a large and important part of their training for the development of knowledge, skills and change of attitudes and behavior regarding the care of children.

Aim: To investigate the views of nursing students on the implementation of the training program in pediatric nursing course in real clinical environment.

Material and Method: The study population consisted of 175 students of the Nursing Department of the Technological Educational Institute of Athens trained in clinical practice course at Children's Hospitals. The data collection was performed using a structured, anonymous questionnaire. We examined four areas of clinical training : (a) general features of clinical practice, (b) educational goals achievement, (c) characteristics of clinical teacher and (d) self-assessment of students. Data analysis was performed with the IBM SPSS 21.0.

Results: Internal reliability of the questionnaire was excellent (Cronbach's alpha was 0.92). Ninety-three percent of the participants were women while mean age was 22.3 years (0.37). The organization of the clinical course, the application of the clinical course and the application of the clinical practice were evaluated by the students as being from very good to excellent (82.3%, 69.1% and 70.3% respectively). Ninety-five percent argued that the content of the clinical courses met the initial objectives. Ninety-six percent of students answered that the educational goals of clinical practice were set at the beginning of the practice, whereas 65.1% answered that the teacher was qualified. The score in the field "general features of clinical practice", "educational goals achievement", "characteristics of clinical teacher", "students self-assessment" was 15.3, 17.6, 27.2 and 42.3 respectively.

Conclusion: Greeks nursing students have a positive perception of the clinical learning environment in pediatric hospitals, although there is still room for improvement. The presented scale is an appropriate tool for the evaluation of clinical practice by students.

Key words: clinical education, clinical environment, nurses, pediatric hospital, students

Introduction

The nursing education requires a combination of theoretical, laboratory courses and clinical practice. Students should be trained in the clinical setting, as well as in the theoretical development of the course, so that the theory be integrated into the practice (Davies, Whenam, Glover, Jones, & Murphy, 1999). The clinical learning environment and supervision of the student has been identified by many studies as important learning factors (Papastavrou, Lambrinou, Tsangari, Saarikoski, & Leino-Kilpi, 2010; Perli et al., 2009; Warne et al., 2010). The nursing student must learn by practicing under the supervision of clinical education teachers. (Papastavrou, Lambrinou, Tsangari, Saarikoski, & Leino-Kilpi, 2010; Warne et al., 2010).

Background

Clinical Exercise is a very important educational process and provides opportunities for students to develop their clinical skills through practice in real clinical environment. Regarding the clinical training of students, clinical practice is a necessary step in order for the students to practice in a "real" hospital environment («real» world) (Egan & Jaye, 2009).

Experiences in clinical environments are powerful skills that contribute to shaping the attitudes and behaviors of students, developing learning, clinical practice and professional culture (Henderson, Cooke, Creedy, & Walkeret 2012). The acquisition of skills and knowledge of students, which are required for the development of critical thinking and confidence, is the target of clinical education (Papp, Markkanen, & von Bonsdorff 2003; Elcigil et al., 2007). The quality of the clinical learning environment is considered as an important factor for determining the quality of clinical student experience (Papp, Markkanen, & von Bonsdorff. 2003; Yim & Chan, 2004; Perli & Brugnonli, 2009; D'Souza et al., 2015). The clinical field is an essential and irreplaceable facet in preparing student nurse for their professional role and has been acknowledged as central to nursing education (Lee, 1996; Dunn & Hansford, 1997; Chan & Wan, 2007).

The clinical environment includes all that surrounds their nursing students, including the operating rules of the nursing department, staff,

patients and the clinical practice teacher. (Papp, Markkanen, & von Bonsdorff 2003).

In contrast to traditional classroom settings, clinical training takes place in a complex social context. The effects of the environment affects less the process of teaching in classroom than in the clinical area of the hospital. Students should combine the use of cognitive, psychomotor and affective skills to meet the needs of the patient in real hospital environment.

Patient safety must be maintained during the student's education, under the supervision and guidance of clinical practice teacher who should follow patients' needs and the needs of students (Chan., 2001; Papp, Markkanen, & von Bonsdorff 2003).

Australian researchers described the clinical learning environment as an interactive network of forces within the clinical setting that influence the students' clinical learning outcomes (Dunn & Burnett, 1995). It is within this environment that students develop their attitudes, competence, interpersonal communication skills, critical thinking and clinical problem-solving abilities (Dunn & Hansford, 1997, Chan & Ip, 2007). The clinical learning environment in pediatric nursing has specificities related to the specific needs of the care of the child and the parents' care. Students are required to have specialized knowledge and skills through their training in a simulated environment of pediatric nursing. Clinical practice teachers are required to have increased supervision during training of students in the care of young patients. Moreover, the process of learning is not easy and simple process (White & Evan, 1991, Theofanidis & Fountouki, 2006).

Aim

The purpose of this study was to investigate the nursing students' views on the implementation of a training program in pediatric nursing course in real clinical environment.

Method

Design

A cross-sectional study was contacted and a scale consisted of 34 items it was created. Student nurses answered the questionnaire during the last

week of their clinical education in Pediatric Nursing.

Setting

The study was conducted during the clinical course of pediatric nursing in three Pediatric Hospitals in Athens of Greece :i) "P. & A. Kyriakou Children's Hospital, ii) "Ag. Sofia" Children's Hospital iii) and Pentelis Children's Hospital, Nursing students were trained in different clinical departments (University-pediatric Clinic, Surgery Clinic, Orthopedic Clinic, Pediatric-Obstetrics Clinic, emergency department, Intensive Care Unit, otorhinolaryngological Unit). Clinical course of pediatric nursing is taught during the 5th semester of undergraduate program.

Sample

The study population consisted of students of the Nursing Department of the Technological Educational Institute of Athens trained in clinical practice of Pediatric Nursing during the academic period 2011-2013. Response rate was 96.1% (175/182).

Instrument

The questionnaire was created by researchers and consisted of 34 questions. Questionnaire included questions about demographic characteristics and four areas of clinical practice: (a) general features of clinical practice (4 items),(b) educational goals achievement of clinical practice (4 items),(c) characteristics of clinical teacher (6 items) and (d) self-assessment of students (9 items). Questions of the first field were scored on a five-point scale Likert type ("poor", "moderate", "good", "very good" and "excellent" with a score of 1, 2, 3, 4 and 5 respectively). Questions of the other three fields were scored on a five-point Likert-type scale also, but with different answers were ("strongly disagree", "disagree", "not agree/not disagree", "agree" and "strongly agree" with a score of 1, 2, 3, 4 and 5 respectively). There were also questions which evaluated the contribution of textbooks to students' education and the contribution of nurses and doctors in their training.

The score for each of the four fields was the sum of the responses to each question. Thus, the range of score in the "general features of clinical

practice" scale and the "educational goals achievement of clinical practice" scale was 5-20, in the "evaluation of clinical teachers" scale was 6-30 and in the "students self-assessment" scale was 9-45. Larger values indicated better assessment.

For the validity of the instrument, a group of nursing professors confirmed that the content and the structure of the questionnaire were satisfactory. To minimize response errors a pilot study was conducted among 20 students in order to detect any understanding problems by participants.

Internal reliability of the questionnaire was excellent. Cronbach's alpha for the questionnaire at all was 0.92 (0.9 for the "general features of clinical practice" scale, 0.94 for the "educational goals achievement of clinical practice" scale, 0.93 for the "characteristics of clinical teacher" and 0.9 for the "self-assessment of students" scale.

Statistical analysis

Continuous variables are expressed as mean (standard deviation) and categorical variables as absolute and relative frequencies. The normality assumption was evaluated both using Kolmogorov-Smirnov criterion ($p > 0.05$ for all variables) and normal probability plots. Quantitative variables followed normal distribution. Differences between groups were evaluated using χ^2 test for categorical variables and student's t-test (for two groups) or analysis of variance (for more than two groups) for continuous variables. Correlation between two continuous variables was assessed by the use of Pearson's correlation coefficient. All tests of statistical significance were two-tailed, and p-values of less than 0.05 were considered as significant. Statistical analysis was performed using IBM SPSS 21.0 (IBM SPSS Statistics 21.0 for Windows, SPSS Inc., Chicago, IL, USA).

Ethical Considerations

The study was approved by Ethics Committee of the three Children's Hospital of Athens. The research does not expose individuals to any justified or unjustified risk. The students received written and oral instructions on how to complete the questionnaire and the purpose of the study. It

became clear that the questionnaires were anonymous, the participation was voluntary and that any refusal to complete the questionnaire would not have any impact. The completed questionnaires were delivered to the researcher delivered in sealed envelopes.

Results

Mean age of the students was 22.3 years (0.37), 93.1% were females (n=163) and 6.9% (n=12) were males, while 90.2% (n=147) were attended at the third year and 9.8% (n=16) at the fourth year. Descriptive characteristics of the scores on the four subscales of the questionnaire are presented in Table 1.

General features of clinical practice

Mean score of the subscale was 15.3 (± 2.9). Eighty-two point three percent of students replied that the organization of the clinical course from clinical teacher was from very good to excellent. The content of the clinical course was evaluated by 69% as fully and absolutely relevant with Pediatric Nursing course. Sixty-nine percent evaluated the implementation of the clinical course as very good to excellent. The answers of the students on the "general features of the clinical practice" are presented in table 2.

Educational goals achievement

Mean score of the subscale was 17.6 (± 2.4). Ninety-six percent of the students replied that goals were set at the beginning of clinical practice and that the educational objectives were clear and sharp, while 94.8% evaluated that the content of the clinical course met the initial objectives and that the content of the clinical application was interesting for students.

Characteristics of clinical teacher

Mean score of the subscale was 27.2 (± 3.0). In particular, 98.2% of the students responded that the clinical teacher was qualified and consistent to the start time and in clinical practice time during the whole clinical training. In addition, 97.6% responded that the clinical teacher was always prepared for actual course of clinical practice according to the guide program of pediatric nursing while 94.6% replied that the professor had transmissibility and maintained the interest of students in high levels. Ninety-six

percent responded that the clinical teacher encouraged dialogue and was able to resolve queries in clinical setting while 97.7% replied that the clinical teacher encouraged critical thinking and reflection of students during clinical practice.

Self-assessment of student

Mean score on the subscale was 42.3 (± 5.1). Ninety-six percent of the students responded that they actively participated in clinical practice, 98.8% answered that they acquired knowledge while 96.5% responded that they acquired skills by participating in clinical practice.

Additionally, 96.4% responded that they changed attitudes and behavior in pediatric patient care issues after their participation in clinical practice, while 94.6% and 85.2% answered that they got clinical experiences from nurses and doctors of the pediatric hospital respectively. Ninety percent responded that they used interpersonal relationships to improve their skills, while 88.5% used all their capabilities.

The answers of the students on the "educational goals achievements", "clinical teacher evaluation" and "students' self-assessment" scales are shown in Table 3. On the contribution of nurses and the hospital doctors, 79.9% (135/169) and 71.3% (=110/167) of the students responded that nurses of Children's Hospital and doctors helped positively in their clinical training respectively. Regarding the evaluation of tools of clinical practice, 79.6% (137/174) of the students responded that the book of Pediatric Nursing covered the content of the course and contributed positively to the development of theoretical knowledge, which applied in clinical practice. Eighty-three percent (141/174) of the students responded that the textbook of clinical practice guide has contributed to the effective implementation of clinical practice.

Relations between gender, age, year of study and clinical practice with the scores on four scales are shown in Table 4. We found that the fourth-year students had statistically significant higher assessment scores in all scales except "general features of clinical practice" scale compared to third-year students. Gender, age and clinical practice laboratory were not related with the scores on four scales.

Table 1.Descriptive characteristics of the scores on the four subscales of the questionnaire

Scale	Mean	Standard deviation	Median	Minimum value	Maximum value
General features	15.3	2.9	16.0	4.0	20.0
Educational goals achievement	17.6	2.4	18	8	20
Characteristics of clinical teacher	27.2	3.0	28	13	30
Students self-assessment	42.3	5.1	43	22	50

Table 2.Answers of students on the "general features of clinical practice" subscale

Organization of clinical course	
Poor	2 (1.1)
Moderate	6 (3.4)
Good	23 (13.1)
Very good	106 (60.6)
Excellent	38 (21.7)
Content of clinical course	
Aboutrelevant	4 (2.3)
Moderately relevant	12 (6.9)
Relevant	38 (21.7)
Fully relevant	92 (52.6)
Absolutely relevant	29 (16.6)
Implementing of clinical course	
Poor	3 (1.7)
Moderate	8 (4.6)
Good	43 (24.6)
Very good	94(53.7)
Excellent	27 (15.4)
Implementing of clinical practice in total	
Poor	4 (2.3)
Moderate	7 (4.0)
Good	41 (23.4)
Very good	96 (54.9)
Excellent	27 (15.4)

Values are expressed as n (%).

Table 3. Answers of students on the “educational goal achievement” , “clinical teacher evaluation” and “students’ self-assessment” subscales

	Absolutely agree	Agree	Nor agree/nor disagree	Disagree	Absolutely disagree
	N (%)	N (%)		N (%)	N (%)
Educational goals achievement					
Educational goals were set at the beginning of the clinical practice	96(55.2)	71(40.,8)	-	7(4)	-
Educational goals were clear and sharp	93(53.1)	74(42.3)	-	8(4.6)	-
The content of the clinical course met the initial objectives	60(34.5)	105(60.3)	-	8(4.6)	1(0.6)
The content of the clinical course was interesting	90(52)	78(45.1)	-	4(2.3)	1(0.6)
Characteristics of clinical teacher					
The clinical teacher was qualified and consistent to the start time		45(25.7)	-	4(2.3)	-
The clinical teacher was prepared	117(66.9)	52(29.7)	-	4(2.3)	-
The clinical teacher was fully qualified	114(65.1)	57(32.6)	-	4(2.3)	-
The clinical teacher was contagious and maintained high interest	80(47.3)	80(47.3)	-	9(5.3)	-
The teacher encouraged dialogue and enable to solve questions in clinical setting	105(60.3)	62(35.6)	-	6(3.4)	1(0.6)
The teacher encouraged critical thinking and reflection	114(65.1)	57(32.6)	-	4(2.3)	-
Students self-assessment					
I actively participated in clinical practice	71(42.5)	89(53.5)	-	7(4.2)	-
I acquired knowledge	76(46.1)	87(52.7)	-	2(1.2)	-
I acquired skills	74(43.8)	89(52.7)	-	6(3.6)	-
I changed attitudes and behavior in care issues	72(42.6)	91(53.8)	-	6(3.6)	-
I used the interest on experiences from nurses of pediatric clinical	62(37.1)	96(57.5)	-	7(4.2)	2(1.2)
I used the interest on experiences from doctors of pediatric clinical	51(30.4)	92(54.8)	-	22(13.1)	3(1.8)
I used relationships to improve skills	56(33.3)	96(57.1)	-	11(6.5)	5(3)
I used all of my abilities	55(31.6)	99(56.9)	-	14(8)	-
I am satisfied with the performance	55(33.3)	10(61.4)	-	9(5.4)	-

Table 4. Relations between gender, age, year of study and clinical practice with the scores on four subscales

	General features of clinical practice score	P-value	Educational goals achievement score	P-value	Characteristics of clinical teacher score	P-value	Students self-assessment score	P-value
Gender		0.4 ^a		0.53 ^a		0.69 ^a		0.64 ^a
Male	15.9 (4.4)		17.2 (3.3)		27.6 (4.9)		42.9 (6.0)	
Female	15.2 (2.8)		17.6 (2.3)		27.2 (2.9)		42.2 (5.0)	
Age	0.12 ^b	0.11 ^b	0.11 ^b	0.21 ^b	0.11 ^b	0.21 ^b	0.02 ^b	0.85 ^b
Year of attendance		0.11 ^a		<0.001 ^a		<0.001 ^a		<0.001 ^a
Third	42.1 (5.2)	15.3 (3.1)	17.5 (2.4)		27.1 (3.1)		42.1 (5.2)	
Fourth	45.5 (2.7)	16.0 (1.5)	19.1 (1.2)		29.5 (0.6)		45.5 (2.7)	
Clinic		0.32 ^c		0.49 ^c		0.21 ^c		0.54 ^c
Pediatric University Clinic	15.3 (2.8)		17.4 (2.4)		27.4 (2.8)		41.7 (5.5)	
Surgical clinic NHS	15.8 (2.9)		18.0 (2.2)		27.8 (2.8)		42.0 (5.4)	
Orthopedic Clinic NHS	14.5 (3.1)		17.8 (2.7)		27.3 (3.1)		43.3 (4.4)	
Pediatric-Obstetrics NHS	15.3 (2.9)		17.3 (2.7)		44 (27.2)		42.8 (4.4)	

^a t-test ^b Pearson's correlation coefficient ^cAnalysis of variance

Values are expressed as mean (standard deviation) unless otherwise indicated

Discussion

We found that the nursing students were satisfied with the organization and implementation of clinical training in pediatric hospital. Similar results are mentioned by other researchers in Europe (Johansson et al., 2010; Skaalvik, Normann, & Henriksen 2011; Warne et al., 2010). The majority of the sampled students assessed that the content of the clinical courses met the learning objectives at the start of clinical practice, and relevant to the subject of clinical training, which is the pediatric nursing.

The role of clinical practice teacher has been emphasized as important in providing support for

nursing students (Kelly, 2007; Staun, Bergström, & Wadensten, 2010; Papp, Markkanen, & von Bonsdorff 2003). Specifically, in our study the majority of students were satisfied with the organization of the clinical course by the clinical teacher. Students, who had a personal relationship with the clinical teacher, tend to have a more positive experience of clinical education than those who do not. It was found that the rotation of clinical teachers has a negative effect on satisfaction and learning process of students. In the study of Papastavrou et al (2010) it is argued that the use of several clinical teachers can complicate the learning of nursing students, as the rotation of teachers affect the learning

process in the clinical setting. Similar results are highlighted by Sundler et al (2014). It is also argued that the interaction between the instructor and the student is important during the clinical practice of nursing students (Plakht, Shiyovich, Nusbaum, & Raizer 2013).

The majority of the sample answered that the clinical teacher encouraged dialogue, resolved questions in clinical setting and urged the critical thought and concerns of students. Similar views are expressed by Cook (2005) and Lin et al (2013). Trainers should be aware that their behavior when teaching is perceived by students and affect the results of their learning. This could interact in the relationship between student and teacher and in the evaluation of clinical education from the perspective of the student. Moreover, the educational culture is considered of great importance for the learning process. In the study of Papastrat and Wallace (2003) it is highlighted that the educational culture promotes open educational dialogue between students and teachers. When students feel that their teachers support them in any educational process, they can potentially learn more things even the negative experiences in their clinical education (Lin, Wu, Lin, & Lee 2014).

Some studies (Papp, Markkanen, & von Bonsdorff 2003; Henderson, Winch, Grugan, Henney, & McCoy, 2005; Midgley, 2006; Henderson et al., 2010) found that when the educational process is applied consistently, then confidence and independence, regarding the clinical skills, are developed among students. It has been suggested that, when nursing students get experiences from different clinical settings and different clinical approaches, students learn to expand their horizons and develop more easily their critical thinking (Kajander-Unkuri et al., 2014).

Regarding the self-assessment, the majority of students responded that they actively participated in clinical practice, they acquired knowledge and skills from their participation in the training process. Overall, the students recognized that they changed attitudes and behavior in pediatric patient care issues from their participation in clinical practice.

The majority of students use their interpersonal relationships to improve their skills and all their capabilities during their education. In total, students feel satisfied with their performance in clinical education. Students consider human relationships as a top priority in the clinical learning environment. Campbell et al (1994) found that students of nursing feel vulnerable during clinical practice and need understanding and respect of everyone involved in their education. A large percentage of the sample responded that nurses and doctors contributed positively to a climate of trust, adaptation, and acceptance during clinical practice in real education environment. Similar results were found by Anthony and Yastik (2011). Also, this is supported by Campbell et al (1994) who highlighted that students need the understanding and respect by health professionals.

Limitations

The fact that the study was based on the information from one Nursing School is a limitation. Therefore, the results may be not representative. However, it is essential to highlight that the three hospitals where the study was carried out are the biggest Pediatric Hospitals in Athens. More studies from other pediatric hospitals or pediatric clinics of the Greek region are essential in order to compare the findings. Moreover, it would be useful to make a comparative study with the same tool among students training in other clinical environments such as pathological or surgical clinics for adults.

Conclusion

Totally, the nursing students in the present study were satisfied with the clinical learning environment. Furthermore, this organization and supervision was important in terms of pedagogical atmosphere and the relationship of students and clinical teachers. The willingness of nursing students is to be able and obtain the knowledge to care of pediatric patients in health care settings. The hospital, as a clinical learning environment, allows nursing students to realize the real nursing problems of patients. Clinical teachers of nursing have to succeed an effective collaboration with health care organizations and

health care professionals. Moreover, the development of this questionnaire highlights the need of a scale in order to measure the learning needs of nursing students and their interaction with the clinical learning environment. Flexible and multiple learning strategies, such as workbooks, online learning, and simulation laboratories, have been proposed to meet the needs of students as learning tools (Lee and Lin., 2013; Wright, 2012). Further investigation of satisfaction of clinical teachers regarding the efficiency of students in a hospital environment clinical training may be required. Moreover, it is necessary to explore the learning outcomes of students with measurable data. It would, also, be advisable to investigate the view of the multidisciplinary team of the hospital about the participation and contribution of students in health care in a pediatric hospital. Finally, satisfaction of young patients and their parents from the contact and communication with students would be important to be reflected.

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