

Research Article

Baccalaureate nursing students' perceptions of learning and supervision in the clinical environment

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Abstract

This study is an exploration of nursing students' experiences within the clinical learning environment (CLE) and supervision provided in hospital settings. A total of 357 second-year nurse students from all universities in Cyprus participated in the study. Data were collected using the Clinical Learning Environment, Supervision and Nurse Teacher instrument. The dimension "supervisory relationship (mentor)", as well as the frequency of individualized supervision meetings, were found to be important variables in the students' clinical learning. However, no statistically-significant connection was established between successful mentor relationship and team supervision. The majority of students valued their mentor's supervision more highly than a nurse teacher's supervision toward the fulfillment of learning outcomes. The dimensions "premises of nursing care" and "premises of learning" were highly correlated, indicating that a key component of a quality clinical learning environment is the quality of care delivered. The results suggest the need to modify educational strategies that foster desirable learning for students in response to workplace demands.

Key words

baccalaureate student, clinical learning environment, mentorship, preregistration education, clinical placement, nursing.

INTRODUCTION

"The preparation of nurse practitioners for clinical practice has far-reaching consequences" (Rutherford-Hemming & Jennrich, 2013, p. 118). In a fast-paced and complex healthcare environment, the educational goal of a nursing baccalaureate curriculum is the graduation of better-prepared nurses capable and committed to quality and safety improvement of care. Since nursing is a practice-focused profession, knowledge and skill are acquired through formal education in institutions and through experience in the clinical area, with the latter forming the "clinical learning environment" (CLE) (Gaberson & Oermann, 2010). Everything that surrounds the student nurse is CLE, including the clinical settings, the equipment, the staff and the patients, the mentor, and the nurse teacher (NT) (Papp *et al.*, 2003). This was recognized as essential in the whole nursing curriculum (Papastavrou *et al.*, 2010) in preparing students for the realities of their professional role; making sense of their knowledge; and contributing to safe, competent, and contemporary care (Egan & Jaye, 2009). This exposure supports the integration of theory into their clinical reasoning practice

(Henderson *et al.*, 2011), and allows preconceived ideas of various clinical areas to be challenged (Halcomb *et al.*, 2012) through the use of real clinical situations, collaborative activities, interactions, and students' active engagement with the CLE (D'Souza *et al.*, 2013). The social complexity and unpredictability that characterizes the CLE, provides student nurses with the opportunity to combine cognitive, behavioral and emotional skills (D'Souza *et al.*, 2013), clinical problem-solving abilities, and critical thinking skills (Doody & Condon, 2012), and enhances self-confidence, efficacy, and personal leadership capabilities (Cristiansen *et al.*, 2014). The importance of CLE is highlighted in the Directive 2005/36/EU, in which clinical practice represents 50% of the nursing program (European Commission Directive, 2005; Cyprus Nursing and Midwifery Laws, 214/1988-1(I)2012).

The importance of clinical education, as a determinant of quality nursing, has led to the shift of nursing education being service led to education oriented, followed by the introduction of initiatives, such as the supernumerary status of students (Pollard *et al.*, 2007) and supervision models in clinical practice (Henderson *et al.*, 2006), that empower the academic success and the reliability of students (Papp *et al.*, 2003; Saarikoski *et al.*, 2007). Furthermore, the reforms concern strategies that support stakeholders in creating a positive CLE (Hutchings *et al.*, 2005), and improve learning through experience, reflection (Hosoda, 2006), and student engagement in evidence-based nursing and e-learning (D'Souza *et al.*, 2013).

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Nurse education in Cyprus

Cyprus followed the Western European trends of nursing education reformation, adopting an academic profile. Nursing education shifted away from the traditional (diploma) nursing school to higher education institution (HEI) in 2007, allowing more competent graduates to be incorporated in the healthcare system (Papastavrou *et al.*, 2010). The duration of study is four years, covering 240 ECTS (European Credit Transfer and Accumulation System), including 90 credits of clinical practice based on European directives (Salminen *et al.*, 2010). Academic training is provided by four educational institutions, which award a bachelor degree in nursing. Cyprus is one of the very few countries in Europe with only the option of a university degree in nursing. The transfer to HEI has brought about crucial changes in clinical learning, such as the introduction of two clinical supervision models: the mentor, described as an experienced member of the nursing team (staff nurse), and the NT, described as the teacher employed by the educational institution. Another change is the establishment of supernumerary status (removing students from clinical rosters). During their clinical placement, students work alongside the staff nurse mentor on a regular basis. The staff nurse mentor plans their training with the support and cooperation of the NT. The transition to a more academically-orientated educational system was followed by the reformation of the NT role, in which the NT is responsible for both theoretical (laboratory teaching) and clinical teaching. Contrary to previous practice, the clinical teaching time has been reduced, and the NT now acts as a liaison between the educational institutions and the clinical area without being involved in patient care. That new challenge in their role is also visible in other European countries, despite the differences in the application of the nursing program (Warne *et al.*, 2010).

This study builds on knowledge gained by previous work on Cypriot nursing students' perspectives about the CLE at college level (Papastavrou *et al.*, 2010). In the light of the recent transition of nursing education into the tertiary sector, the use of the same internationally-accepted tool, the Clinical Learning Environment, Supervision and Nurse Teacher (CLES+T) instrument, to evaluate students' clinical experience would be beneficial as a comparison, and also to raise awareness of the components that synthesize CLE as a learning area and the role of the supervision model in "teaching" support. Therefore, this paper focuses on Cypriot baccalaureate students' perceptions of their learning and supervision in their clinical placement. The transferability of current data to national and international levels would help to modernize the nursing curriculum and harmonize it with the prerequisites of the Bologna agreement (Collins & Hewer, 2014).

Background

Since 1980, international efforts have been made to support and monitor the clinical education of students for qualification at the point of registration (Lewin, 2007). The quality of CLE is an essential factor in determining the quality of

students' clinical experience (Hosoda, 2006), thus the quality of nursing care, as it is dependent on the skills, knowledge, and attitudes of the nursing workforce (Holland & Lauder, 2012). Empirical studies have illustrated the transition of interest of CLE. Initially, the ward manager was the key factor in students' clinical learning, then more supportive and individualized supervision models were developed in order to ensure that the novice learner had a safe practice environment and an effective role model (Holland & Lauder, 2012). According to Lewin (2007), a quality training workplace includes "the interested learner (the seed), affecting fruitful access to it (the sowing) and the supporting clinical and human educational resources (the soil)" (p. 239). This fosters an increased capacity for self-direction and initiatives, and an environment that stimulates, offers opportunities, and facilitates learning (Barrington & Street, 2009). Therefore, a supportive CLE focuses on strategies concerning not only the practice experience, but also the personnel who engage with the learner (Hamshire *et al.*, 2012; Holland & Lauder, 2012).

The literature used for this paper on assessing students' perspectives reflects the idea that a positive CLE enhances positive learning outcomes. A successful learning environment is created through an inspirational pedagogical atmosphere, good organization of nursing care (Saarikoski & Leino-Kilpi, 2002; Papastavrou *et al.*, 2010), student orientation (Mattila *et al.*, 2010), the length and the continuity of clinical placement (Warne *et al.*, 2010), and the prominent influence of positive interpersonal relationships. Nursing staff, mentors, NT (Saarikoski *et al.*, 2009), managers (Henderson *et al.*, 2011), and patients (Cristiansen *et al.*, 2014) are the key figures in the development of students' interpersonal relationships. In particular, higher levels of satisfaction were reported when were treated with respect and appreciation, and were valued and included as part of the team, having thus the potential to make their own contributions in the provision of care (Mattila *et al.*, 2010). Their satisfaction also increased when they received constructive feedback on their professional performance (Cristiansen *et al.*, 2014). The length of time spent in clinical activities did not guarantee the quality of learning results (Gaberson & Oermann, 2010), therefore effective and productively-planned clinical time by the mentor and the NT is vital.

Improper placement approaches, such as ignoring and exploiting student nurses as workers and confining them to mandatory jobs and routine tasks, led to unpleasant experiences (Hamshire *et al.*, 2012). Therefore, a negative clinical placement experience might act lead to discontinuing a program (Hamshire *et al.*, 2012), and could affect the learner's preference for the nursing sector as their first choice of employment (Andrews *et al.*, 2005).

The wider context of the study involves the exploration of how nursing students in Cyprus perceived clinical learning and supervision in the clinical settings, as nursing has adapted to the university system. In particular, the study sought to answer the following questions: (i) How do students perceive the various aspects of the CLE?; (ii) How do students perceive the supervisory relationships with their staff nurse, mentors, and NT?; and (iii) How satisfied are students with the CLE as support to their learning?

METHODS

The study was a descriptive, correlation survey. The data were collected between January and March 2011.

Setting and participants

The instrument used in this study was distributed to all second-year baccalaureate nursing students ($n = 380$), who studied in four universities in Cyprus that offer a four-year program in nursing studies. The selection of second-year students was made on the basis that, in contrast with the other subsequent years of baccalaureate studies, the second-year students undertook clinical placement in a hospital environment two days per week for a period of 7–8 weeks and were supervised by both nursing staff mentors and NT simultaneously. Second-year students are also considered to be the best informants, as they have sufficient clinical experience to be able to comment on situations without being influenced by the norms and values of nursing (Chun-Heung & French, 1997).

Data collection

The Greek version of the CLES+T scale was used (Saarikoski *et al.*, 2008). This is a widely-used instrument that makes comparison to other studies possible. It can be used as one part of the total quality assurance of the nurse-education program (Bergjan & Hertel, 2013). The instrument is subdivided into six dimensions: ward atmosphere (4 items), leadership style of the ward manager (4 items), premises of learning on the ward (6 items), premises of nursing on the ward (4 items), supervisory relationship (8 items), and the role of the NT (9 items), divided in three subtitles: (i) NT enabling integration of theory and practice; (ii) cooperation between placement staff; and (iii) relationship between students, mentors, and the NT. Each subtitle was separated into three items. To these dimensions, the students responded using a five-point Likert-scale, where 1 = fully disagree and 5 = fully agree, and 3 being a neutral response. Additionally, one further structured question was included: In your experience, who was the most important person in helping you better understand the core concepts and practice of nursing? The responses offered were: (i) teacher most important; (ii) mentor most important; and (iii) both as important. Finally, one question evaluated student total satisfaction from their recent clinical placement in a five-point scale (1 = fully dissatisfied and 5 = fully satisfied). The validity of the Greek version of the instrument has been checked in previous research conducted with Cypriot nursing students (Papastavrou *et al.*, 2010; Warne *et al.*, 2010).

The questionnaires were personally administered to the students just after they had completed their clinical placement during a nursing laboratory lesson. After completion, the questionnaire was returned in a closed envelope and placed in a box left in the laboratory.

Ethical considerations

Before conducting the study, approval was given by the university board of each university. Permission to use the

Table 1. Reliability and descriptives of the dimensions (Clinical Learning Environment, Supervision and Nurse Teacher scale)

| Dimensions | Mean | SD | Cronbach's α |
|--|------|------|---------------------|
| Ward atmosphere | 3.75 | 0.92 | 0.821 |
| Leadership style of the ward manager | 3.69 | 0.95 | 0.851 |
| Premises of nursing on the ward | 3.86 | 0.87 | 0.851 |
| Premises of learning on the ward | 3.54 | 0.95 | 0.876 |
| Supervisory relationship (mentor) | 4.18 | 0.98 | 0.962 |
| Role of the NT | 3.95 | 0.99 | 0.946 |
| NT enabling integration of theory and practice | 4.07 | 1.04 | 0.919 |
| Cooperation between placement staff and NT | 3.92 | 1.13 | 0.917 |
| Relationship between student, mentor, and NT | 3.97 | 1.12 | 0.907 |

NT, nurse teacher; SD, standard deviation.

research instrument was obtained by Dr Miiko Saarikoski. The developers of the Greek version Dr Evridiki Papastavrou and Dr Ekaterini Lambrinou also provided permission to use the translated version. The participants were informed about the purpose of the study, and confidentiality and anonymity was outlined verbally. The completion and return of a questionnaire was considered informed consent. Data were collected and stored in a manner compliant with data-protection regulations.

Data analysis

Data were analyzed using SPSS 18.0 for Windows (SPSS, Chicago, IL, USA). Descriptive statistics were applied (demographic, mean, standard deviation). One-way ANOVA was used to assess the mean differences in satisfaction in relation to the six dimensions, as well as the method of supervision. The relations between the dimensions were measured with Pearson correlation coefficients. Statistical significance level was set at $P < 0.05$.

RESULTS

A total of 357 questionnaires were returned (response rate: 94%). The majority of the respondents were female (62.2%). The means of all dimensions varied between 3.54 and 4.18, and the Cronbach's alpha coefficient ranged from 0.82 to 0.96 (Table 1).

In examining the frequency of individual sessions with the supervisor (mentor), 35.3% of students reported that they had no individual meeting with the mentor, 26.6% reported meetings less than twice during their clinical placement, and 37.8% reported that they had supervision sessions more than once a week. ANOVA test showed that students who had more frequent sessions with their supervisor were more satisfied ($F = 3.295$, $P = 0.01$). In the exploration of students' exposure to a professional role model in the specific question, the majority of students (58.26%) stated that the mentor was

Table 2. Differences in satisfaction of supervisory relationship, according to the method of supervision

| Method of supervision | Satisfaction mean | Satisfaction SD | ANOVA F-statistics | P-value |
|-------------------------------------|-------------------|-----------------|--------------------|----------|
| Unsuccessful supervisory experience | 3.14 | 1.30 | 28.569 | < 0.001* |
| Team supervision | 4.03 | 1.02 | | |
| Successful supervision | 4.26 | 1.03 | | |

*Significant if $P < 0.001$. SD, standard deviation.

Table 3. Correlation matrix of the dimensions (Clinical Learning Environment, Supervision and Nurse Teacher scale)

| Dimensions | Leadership style of the ward manager | Premises of nursing on the ward | Premises of learning on the ward | Supervisory relationship (mentor) | Role of the nurse teacher |
|--------------------------------------|--------------------------------------|---------------------------------|----------------------------------|-----------------------------------|---------------------------|
| Ward atmosphere | 0.586** | 0.573** | 0.615** | 0.362** | 0.376** |
| Leadership style of the ward manager | | 0.590** | 0.539** | 0.320** | 0.356** |
| Premises of nursing on the ward | | | 0.666** | 0.454** | 0.470** |
| Premises of learning on the ward | | | | 0.528** | 0.481** |
| Supervisory relationship (mentor) | | | | | 0.588** |

**Correlation significant at the 0.001 level.

the most important person who helped them better understand the fundamental concepts of practice, only 13.45% indicated that it was the NT, and the remaining 28.29% stated that they were both important.

Regarding the method of supervision, the six alternatives were combined into three categories based on the methodology used by previous similar research (Papastavrou *et al.*, 2010; Saarikoski *et al.*, 2009). The first three were combined alternatives: (i) the student did not have a named supervisor; (ii) a personal supervisor was named, but the relationship with this person did not work; and (iii) the named supervisor changed during the training course. These were referred to as “unsuccessful supervisory experience” (18.5%). Alternatives four and five: “the supervisor varied according to shift or place” and “the supervisor had several students”, respectively were referred to as “team supervision” (26.1%). The alternative six were referred to as “successful supervision”, where students had a named mentor and the relationship worked in practice (55.5%), which also reported the highest satisfaction (mean = 4.26). Satisfaction proved statistically significant between the three groups ($F = 28.569$, $P < 0.001$) (Table 2). Tukey’s post-hoc analysis compared the groups pairwise and showed that the differences were statistically significant between the unsuccessful supervisory experience and the other methods – the team and successful supervision ($P < 0.001$) – but no statistical difference was found between the team and successful supervision ($P = 0.463$).

In the dimension “role of the NT”, the subtitle, “NT enabling integration of theory and practice”, had the highest mean score (4.07). The lowest mean (3.92) was reported for “Cooperating between placement staff and NT” (Table 1). Regarding the NT’s visits to the clinical placement, 15.6% of the student reported that they were not visited by the NT during their allocation, 24.4% were visited one-to-two times, and 59% were visited more than three times.

Additional results using Pearson’s correlation coefficient showed a positive significant correlation between the six dimensions pairwise ($r = 0.320$ – 0.666 , $P < 0.001$) (Table 3). There was a strong correlation between “premises of nursing on the ward” and “premises of learning on the ward”; however, there was a weak correlation between “leadership style of the ward manager” and “supervisory relationship (mentor)”, followed by “the role of the NT” ($r = 0.356$). The three subtitles that referred to the NT role were highly correlated ($r = 0.712$ to $r = 0.748$, $P < 0.001$).

DISCUSSION

Nursing students gave the highest scores to the supervision they received from their mentor and the NT. Their supervisors helped them gain a sense of professional identity, while at the same time, meeting their individual learning needs. This finding highlights the importance of effective cooperation between these two models to exert influence on clinical instruction and the establishment of a good learning environment where theory and practice complement each other (Saarikoski *et al.*, 2009). The students, in particular, considered the mentor as the most important person who helped them better understand the fundamental concepts of practice. Similar findings were observed in the phenomenological study of Papp *et al.* (2003), in which the mentor’s conduct seemed to have a significant influence on students’ experiences compared to the NT as facilitator. In the case of dispute, the students valued the opinion of the mentor over that of the NT. However, in a recent study (Löfmark *et al.*, 2012), the supervision by the NT was estimated to be greater in the fulfillment of learning outcomes compared to mentors. These conflicting views suggest the need to upgrade, enrich, and clarify the role of the NT. Carnwell *et al.* (2007) commented that the role of each supervision model fosters

different types of relationships: mentors focus on individual students, and NTs focus on the curriculum and knowledge acquisition. The important role of the mentor (referred to as "clinical educator") in the outcome of future health practitioners was also indicated in a cross-sectional survey by Brown *et al.* (2013).

Based on the results of this study, the relationship with a mentor was valued as an important parameter. In addition, the majority of students reported that they had successful supervision, and their level of satisfaction varied according to the frequency of individual meetings. Therefore, a shift away from the supervision system to a more individualized style can be suggested. This is considered to be one of the advantages and improvements offered by the reformation of the traditional nursing education system in Cyprus, and follows the trend in most European countries where the use of mentors and individualized supervision is common (Saarikoski *et al.*, 2007; Warne *et al.*, 2010). It is suggested that the relationship between a mentor and a satisfied student is correlated (Saarikoski *et al.*, 2007). However, the current study found no significant change in students' satisfaction, whether the students experienced team supervision or successful mentorship. Remarkably, this finding was not observed in other similar studies, showing students' ability to benefit from both approaches of supervision. In accordance with other studies, team supervision was a positive experience and a good alternative to traditional supervision (Felton *et al.*, 2012). Casey *et al.* (2011) reinforced that peer assessment allows the student to receive constructive feedback, enhances their confidence, and gives them the opportunity to learn in an enjoyable way. Additionally, Lindquist *et al.* (2012) noted that the diversity of views and experiences of group supervision enables students to be tolerant of different opinions and attitudes. This leads to professional competence and personal growth through awareness of their strengths and weaknesses.

Although the mentor–student relationship was regarded as being important in helping to build theoretical knowledge and practical interventions for practice situations, the relationship with the leadership style of ward manager was found to be problematic, as it had the lowest statistically-significant correlation in the study, even lower than an earlier study ($r = 0.488$, $P < 0.001$) (Papastavrou *et al.*, 2010). This could reflect the poor learning organization of the nursing unit for two reasons. First, the ward pace, that is, workload, inadequate resources, recurrent considerations of roles, and mentors treated as service provider rather than educators by the unit managers (Hutchings *et al.*, 2005). Second, the ward manager and the staff involved in the teaching and supervision of students might be unfamiliar with the new, modified program. In addition, the positive evaluation found in the study regarding the dimension "role of the NT" supports the assumption that "it is a visible indicator of cultural, educational change resulting from the development of nurse educational system" (Warne *et al.*, 2010). The highest mean of the subdimension that referred to the role of the NT, "NT enabling integration of theory and practice", indicates that more emphasis is placed on the role of the NT as a liaison, coordinator, supporter of students, and mentor. In their qualitative study of students' views, Price *et al.*, (2011) identified the

need of the NT to be visible and available at regular intervals. Visits are seen to facilitate academic and emotional support and the establishment of the student–mentor relationship. However, the lowest mean that was reported in the relationship with other staff led to conclusions similar to those of previous studies (Saarikoski *et al.*, 2009; Warne *et al.*, 2010), where the NT was seen as a "visitor" within the clinical area. This role is seen as both an advantage and a disadvantage: an advantage because there is time for reflection and discussion with the students and mentors, and a disadvantage because the NT is not seen as a member of the nursing team and often feels unwelcome (Saarikoski *et al.*, 2009).

With regard to the interpersonal relationships developed between staff and the students presented in the dimension "premises of learning on the ward", students felt disappointed. This could be attributed to a lack of familiarity between the staff and the students as a consequence of the relatively-short clinical rotation. As a result, students were not necessarily seen as integrated members of the health team. Warne *et al.*, (2010) concluded that the duration of the clinical placement appeared to influence the level of overall student satisfaction, as students were likely to gain a clearer understanding of the role of the nurse. Hutchings *et al.* (2005) suggested that a 7-day-per-week shift rotation maximized students' learning opportunities, and also highlighted the need to determine the number of learners who can be accommodated in particular clinical areas. However, the highest correlation between the dimensions "premises of nursing on the ward" and "premises of learning on the ward" indicated that students were relating learning environment with a clearly-defined nursing philosophy, an unproblematic information flow, and clear documentation of care and individualized patient-care approach. These findings are similar to those of a previous study (Papastavrou *et al.*, 2010). It has been well documented that a thorough and patient-centered shift report, rather than -task-oriented documentation, promotes learning.

Finally, students' satisfaction was indicated as the most reliable index of positive clinical learning environment, a factor greatly influenced by their experience in the clinical setting (Chuan & Barnett, 2012). Satisfaction significance with the six dimensions of the instrument confirmed the suggestions of previous studies that students' satisfaction increases when there is a positive team spirit, orientation, support, respect, acceptance (Papp *et al.*, 2003; Mattila *et al.*, 2010), mutual knowing, trust, and communication (Gillespie, 2002), and clinical actions end with communal reflection and feedback (Cristiansen *et al.*, 2014). Finally, the level of satisfaction is related to the level of motivation, indicating that a positive clinical environment was both the result of and the reason for student satisfaction.

Limitations and recommendations

The sample involved only second-year nursing students, so the results cannot be generalized to the whole nursing program, as needs differentiate based on year levels. Further research that assesses the differences in perception and need for supervision between junior and senior students is

recommended. Clinical placement was undertaken mainly in medical and surgical wards. According to the literature, students' experiences vary according to ward characteristics, such as type of illness, the pace of patients' movement in the healthcare system, and the responsibilities of the team (allocating time for teaching, learning, patient care, and other commitments) (Dolmans *et al.*, 2008). Therefore, it would be wise to extend the trials with the CLES+T scale to other healthcare settings and include students of all year levels. Another issue is that nursing performance is a combination of academic and clinical fieldwork coursework. The gap between theory and practice is an issue that has concerned nursing education since its earliest years. This is the reason why the CLES+T scale could be used to analyze correlations with the academic side of the curriculum in order to find parameters that affect the quality of the collaboration between the academic and clinical area.

Conclusion

The supervisory relationship between students and mentor and NT was found to be a crucial variable in the context of this study. The collaboration between mentors, NT, and nursing staff is viewed positively, and is beneficial in influencing positive clinical learning. There is a need for student satisfaction and perception of a positive clinical experience to be seen as relying on a "structured approach".

Many challenges have characterized the new era in nursing education in Cyprus, but the core issue is that students apply what is learned in the classroom to patient care through teamwork, good role models, and advocacy. The findings of this study prompt the need to: (i) clarify the roles of the two clinical models; and (ii) strengthen the collaboration between educational and clinical areas. Therefore, it is suggested that mentors should be properly prepared so as to be pedagogically orientated and aware of the curriculum content on which students are supervised (Brown *et al.*, 2013).

Today, mentors are given enhanced educational preparation, although this preparation varies across Europe. The fact that the data of this study are comparable with the results of other European countries gives allows for conceptual dialogue regarding clinical placement.

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CONTRIBUTIONS

Study Design: MD, EP, MT.

Data Collection and Analysis: MD, EP, GE, MT.

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