

STUDENT SATISFACTION LEVEL, CLINICAL LEARNING ENVIRONMENT,
AND TUTOR PARTICIPATION IN PRIMARY CARE CLINICAL PLACEMENTS:
AN OBSERVATIONAL STUDY

ABSTRACT

Background: Competence evaluations in the clinical setting represent approximately 50% of the nurse training process. Factors, such as perceived learning environment and clinical nurse participation, may influence nursing student satisfaction during clinical placements.

Objective: To evaluate the relationship between the levels of nursing student satisfaction with clinical placements, the clinical learning environment, and the level of nurse tutor participation.

Design: A cross-sectional study.

Setting and participants: We included 61 nursing students and 45 clinical nurses from 35 primary care centres assigned to the Universitat Jaume I.

Variables and data collection: We assessed the overall level of student satisfaction with clinical placements, students' perception of the learning environment, tutors' level of participation, and socio-demographic variables.

Data analysis: We performed a descriptive analysis of the study sample, as well as correlation and simple linear regression analyses. Questionnaire results were analysed depending on the nature of the variables.

Results: The students' perception of the learning environment was 4.39 ± 0.48 points out of 5. The overall satisfaction level was 8.89 ± 1.22 points out of 10. Tutor participation level in students learning was 3.91 ± 0.58 points out of 5.

Conclusions: Both student perception of the learning environment in the clinical setting and their overall level of satisfaction with clinical placements in the primary care centres were considered high. Tutors were participative, but poorly satisfied.

Keywords: Nursing student; Nursing education; Clinical clerkship; Clinical Environment; Satisfaction

INTRODUCTION

Currently, evaluation of clinical placements is a main nursing training challenge as learning in the clinical setting represents approximately 50% of nursing training (NMC, 2010). Therefore, the results obtained from clinical placement evaluations can be used to foster the training of nurses, thereby improving healthcare quality.

Some factors influence both skill acquisition during training in the clinical setting and student satisfaction level. These factors include the students' perception of a good learning environment (Saarikoski et al., 2008) and an adequate participation of clinical nurses in the student learning process (Cervera-Gasch et al., 2018b). A previous study demonstrated that the abovementioned factors affect nursing student learning, mainly in hospital units (Bisholt et al., 2014). However, to our knowledge, no study has evaluated the relationship between these factors and the level of student satisfaction with clinical placements in the healthcare setting.

BACKGROUND

The new education paradigm implemented into the European Higher Education Area aims to recognise European education systems and be a world Higher Education leader (ENQA, 2005). In this context, nursing education and training have undergone marked qualitative and quantitative changes, including the modular theory-practical integration system wherein nursing students come with theoretical, practical, and clinical knowledge to acquire required competencies. This means that 50% of competencies are

acquired and evaluated in the clinical setting, which entails having to reconsider curricular designs to ensure that theoretical and practical elements have the same weighting (NMC, 2010).

With good quality guidelines in mind, it is important to study students' perception of the learning environment. In recent years, the clinical learning environment has been evaluated using several instruments (Hoven et al. 2014), some of which have aroused researchers' interest, such as the Clinical Learning Environment, Supervision and Nurse Teacher (CLES+T) scale (Saarikoski et al., 2008). This instrument has been better backed empirically and allows students to evaluate different relevant constructs, such as supervisory relationship, pedagogical atmosphere in the ward, the role of nursing teachers in clinical practice, the leadership style of the ward manager, and premises of nursing in the ward. This scale has been employed in different clinical settings such as hospitals (Bisholt et al., 2014), primary care centres (Frögerb et al., 2018), and old people's homes (Carlson et al., 2014), as well as in health study programs other than nursing, such as medicine (Möller et al., 2017) and post-graduate training (Ozga et al., 2020). It has been translated into and validated in several languages; moreover, it has been applied in different countries, including Spain (Vizcaya-Moreno et al., 2015). Thus, it is currently a multilingual instrument that is used to evaluate the quality of the clinical learning process in many contexts.

It is important to evaluate the competence of nursing students in the clinical setting, as well as contemplate the existence of an adequate participation of clinical nurses who teach students (hereinafter tutors) in the teaching-learning process. Several studies (Jokelainen et al., 2013; Skela-Savic et al., 2015; Forber et al., 2016) have indicated that effective teaching is mostly influenced by a prior training of tutors, which is a key

aspect that is used to guide and evaluate the acquisition of competencies in the clinical setting.

Currently, clinical learning and student teaching research is probably a major area of interest (Bland, et al., 2011). Studies conducted in Spain (Cervera-Gasch et al., 2018a; Cervera Gasch et al., 2018b) revealed that higher participation levels of tutors in student teaching are influenced by the following factors: work environment (primary healthcare centre, hospital, or old people's homes), interest in research and, especially a prior training of tutors to perform student teaching tasks. Conversely, we found no specific questionnaire assessing perceived student satisfaction level in the literature.

Most published studies focused on investigating the learning environment in the clinical setting. We attempted to examine perceived student satisfaction level in detail; furthermore, we considered the appropriateness of investigating the influence of students' perception of their learning environment, and that of tutor participation on student satisfaction level in the clinical setting.

Therefore, the purpose of this study was to evaluate the relationship linking the level of student nurse satisfaction with clinical placements, clinical learning environment, and level of participation of tutors during student clinical placements in primary care centres in Spain.

METHODS

Study design

Between November 2018 and January 2019, we conducted an observational cross-sectional study in the primary care centres of the Universitat Jaume I (UJI) (Castellón, Spain) during clinical placements.

Setting and participants

We included second-year nursing degree students and tutors who were involved during student clinical placements in the abovementioned primary care centres. In the UJI nursing degree program, each tutor teaches one or two students during the clinical placement period in the primary care setting.

We excluded students who had not completed the 260-hour period set out in the academic syllabus, as well as those who incorrectly answered or did not answer the questionnaire.

Variables and data collection

Socio-demographic variables such as age and gender were collected for both students and tutors. The tutors were asked about their academic level (Registered Nurse, Masters in Nursing, Nursing Specialist, or PhD) and occupational status at the health centre. Due to a variety of nursing contracts, occupational status was categorised as temporary contract (nurse contracted to cover low labour or patients with occupational diseases), occasional contract (nurse contracted for special service needs, such as unexpected increase in workload or to serve as a substitute for a nurse on vacation), indefinite substitute contract (nurse with a contract of indefinite duration, but without public official status), and permanent contract (nurse with public official status).

Student satisfaction with clinical placements was evaluated with a single question about satisfaction using a 10-point Likert scale (1: not at all satisfied; 10: very satisfied).

Student clinical learning environment was evaluated using the Spanish version of the CLES+T scale (Vizcaya-Moreno et al., 2015). This score reveals the students' perception of their clinical learning environment after performing the clinical practices. Akin to the original version (Saarikoski et al., 2008), this scale comprises 34 items, each evaluated using a Likert scale scored from 0 to 5, and grouped into five dimensions, which include: i) supervisory relationship (items 1 to 8); ii) pedagogical atmosphere in

the ward (items 9-21, 31); iii) role of the nurse teacher (items: 22-27); iv) leadership style of the ward manager (items: 28-30); and v) premises of nursing in the ward appreciated (items: 32-34). Both the original and Spanish scales presented internal consistency, as Cronbach's alpha was 0.956 and 0.950 in the original and Spanish versions, respectively. Factor analysis explained 66.4% of the total variance in its Spanish version.

The clinical placement tutors evaluated student participation using the Implication, Motivation, Satisfaction, Obstacles, Commitment (IMSOC) questionnaire (Cervera Gasch et al., 2017), which is self-administered and completed by clinical placement tutors. This questionnaire was designed to determine the level of nurse participation in the mentorship of nursing students. It contains 33 items divided into five dimensions (implication, motivation, satisfaction, obstacles, and commitment). Participants responded to items using a 5-point Likert-type scale in rising order (1: Completely disagree; 5: Completely agree). The abovementioned Likert scale had a suitable internal consistency (Cronbach's alpha 0.837) and an adequate temporal stability (CCI= 0.852); it explained 55.40% of variance with its five dimensions.

Data were collected in January 2019, at the end of the clinical placement period. To this end, two online questionnaires were employed: one for students (CLES+T, as well as the socio-demographic variables and the level of satisfaction with clinical placements) and the other for tutors (IMSOC and socio-demographic variables). Both students and tutors were sent emails with information about the rationale, objectives, and methodology of the study; they were informed that participation in this study was voluntary and their information would be anonymised. They received a link to the electronic questionnaire. Data of students and their respective tutors were linked using a list of clinical placement centres.

Statistical analysis

We performed a descriptive analysis of the study population and the results of the questionnaires, according to the nature of the variables. The overall scores of the questionnaires and those of their dimensions were analysed descriptively and presented as the mean and standard deviation (sd).

Thereafter, we performed a bivariate analysis of the study variables, the level of student satisfaction with the clinical placements, and the overall scores of the questionnaires and their dimension scores. Normality was tested using the Kolmogorov-Smirnov test. Based on statistical significance, the non-parametric Mann-Whitney U test was applied to compare two groups, and the Kruskal-Wallis test was employed to compare three or more groups.

The relationship between the level of student satisfaction with the clinical placements and CLES+T and IMSOC scores and their dimension scores was evaluated using Pearson's correlation test and simple linear regression analysis. Based on the results obtained after correlation and simple linear regression analyses, multiple linear regression analysis was performed using the level of student satisfaction with clinical placements as the dependent variable and the overall CLES+T score and its dimension scores as independent variables. Finally, a second multiple linear regression analysis was performed using the CLES+T score as the dependent variable and the overall IMSOC score and its dimension scores as independent variables. Both multiple linear regression analyses were performed using a stepwise method, wherein the dimensions that showed a significant association in the correlation and simple linear regression analyses were included one by one. All statistical analyses were performed using Version 21 of the SPSS programme for the IOS operating system. The level of significance was set at $p < 0.05$.

Ethical considerations

This study was approved by the Nursing Department and the Vice-Dean of the Nursing Degree Board of the UJI. The ethical principles of the Declaration of Helsinki were adhered to, as was the Organic Law 03/2018, of 5 December 2018, on Personal Data Protection. To avoid revealing participant identity, they were not required to fill in personal data, as well as email or IP addresses in the forwarded questionnaire. All the participants provided informed consent.

RESULTS

Sample description

Table 1 describes the socio-demographic variables of both study populations. Sixty-one nursing students and 45 tutors, working in 35 health centres, participated in the current study. Three students were excluded because they did not complete their clinical placement programs, and one student did not fill in the questionnaire. The mean student age was 22.92 ± 8.18 years, and 77% of the students ($n=47$) were female.

Of all the tutors, 75.6% ($n=34$) were female and their mean age was 46.82 ± 9.99 years; 80% ($n=36$), 4.4% ($n=2$), and 53.3% ($n=24$) of tutors were registered nurses, had a PhD, and were permanent contract workers at the centre where they worked, respectively.

INSERT TABLE 1

CLES+T score assessment

The mean overall CLES+T score was 4.39 ± 0.48 points out of 5. The best valued dimension was “supervisory relationship”, with mean score of 4.57 ± 0.54 point out of 5, whereas the worst valued dimension was “premises of nursing in the ward appreciated, with a mean score of 3.84 ± 0.83 point out of 5. There were significant gender

differences in the overall CLES+T score ($p=0.019$) and all its dimension scores, except for that of “supervisory relationship” ($p=0.357$) (Table 2).

INSERT TABLE 2

Participation of tutors in student teaching

The mean overall IMSOC score was 3.91 ± 0.58 out of 5 points. The best scored dimension was “commitment” (mean: 4.33; sd 1.06), whereas the worst scored was “satisfaction” (mean: 3.29; sd 0.80). The “implication” dimension score for male participants (mean: 4.36; sd 0.52) was significantly higher than that for females (mean: 3.89; sd 0.98) ($p=0.09$). No significant differences were found in the scores of the other variables (Table 3).

INSERT TABLE 3

Analysis of satisfaction level, learning environment, and participation of tutors

The mean overall level of student satisfaction with the clinical placements was 8.89 ± 1.22 points out of 10. There were significant gender differences in the level of satisfaction with clinical placements (male: 9.32 ± 1.32 points; female: 8.76 ± 1.32 points; $p=0.02$).

The overall level of student satisfaction with clinical placements significantly correlated with the overall CLES+T score ($R=0.665$; $R^2=0.442$; $p<0.001$) and all its dimension scores. Nonetheless, the correlation between the level of satisfaction with clinical placements and the IMSOC score ($R=0.312$; $R^2=0.097$; $p=0.068$) and its dimension scores was not significant (Table 4). A significant linear correlation was found between CLES+T and IMSOC ($R=0.404$; $R^2=0.163$; $p=0.016$) scores and all their dimension scores, except for that of the “obstacles” dimension ($R=-0.008$; $R^2=-0.030$; $p=0.966$) (Table 4).

INSERT TABLE 4

Table 5 shows the results of the multiple linear regression analysis. In the first multilinear regression analysis, we used student satisfaction level as the dependent variable and the CLES+T score and its dimension scores as the independent variables, and observed that only the CLES+T “pedagogical atmosphere in the ward” dimension showed a significant explanatory capacity of the level of nursing student satisfaction with clinical placements; this dimension explained 44.2% of variance (adjusted $R^2 = 0.442$; $F=27.976$; $p<0.001$). The second multiple linear regression analysis used the CLES+T score as the dependent variable and the IMSOC score and its dimension scores as independent variables. The overall IMSOC score displayed significant explanatory capacity (adjusted $R^2 = 0.222$; $F=10.691$; $p=0.003$), although the scores of its different dimensions did not demonstrate significant explanatory capacities.

INSERT TABLE 5

DISCUSSION

This study evaluated the relationship of the level of student satisfaction with learning environment in the primary care clinical setting and tutors’ participation in clinical placements. Very little evidence exists regarding the influence of both learning environments in the clinical setting in Spain and tutors’ participation on student satisfaction level, as most studies related to student satisfaction level were conducted in university learning environments (López-Entrambasaguas et al., 2019) and simulation rooms (Alconero-Camarero et al., 2020). Nevertheless, our results reveal that the abovementioned factors are important for not only improving the level of student satisfaction with clinical placements, but also acquiring competencies.

In line with previous studies (Bos et al., 2015; Frögerb et al., 2018), our study focused on the primary care setting because recent evidence indicates that this setting predicts better levels of participation for tutors (Cervera-Gasch et al., 2018b).

Compared to men, more women participated in our study (both as students and professionals), which is normal as nursing is practiced by predominantly women (Hung et al., 2019). We obtain significant results when comparing gender differences in both satisfaction levels and CLES+T scores, unlike other studies (Bisholt et al., 2014; Gustafsson et al., 2015). Our findings provide scope for future research in relation to student satisfaction level, considering that men better value their learning environment, and thus feel more satisfied with their health care clinical placements. Compared to a previous study (Amsalu et al., 2020), students in our study were relatively younger because our study was conducted with university students.

The tutors in our study were middle-aged and predominantly women, probably because older tutors are less implicated in student teaching as they frequently present with burnout syndrome (Molina-Praena et al., 2018). This finding might be related to the results obtained with the questionnaire about tutor participation in teaching students since the “satisfaction” dimension obtained a low score, which indicates that tutors are not satisfied with teaching students. One of the worst valued aspects of the “satisfaction” dimension was relationship between the placement centre and the university. This aspect might be related to that described by Moseley and Davis (2008) and Broadbent et al. (2014), who indicated that tutors should possess adequate knowledge about the situation their students, and realise that planning prior to clinical placements is crucial for successful student learning.

In our study, students’ evaluation of the CLES+T score corroborated with the findings of Bos et al. (2015), whose surveyed students gave a high overall score. The best valued

dimension in the Spanish version of the CLES+T scale (Vizcaya-Moreno et al., 2015) was “supervisory relationship”, similar to the findings of Gustafsson et al. (2015), Doyle et al. (2017), and Bergjan et al. (2013). However, these results differed from those obtained in other studies conducted in Italy (Comparcini et al., 2014), where the “supervisory relationship” dimension was the worst valued dimension. Furthermore, the worst valued dimension in our study was “premises of nursing in the ward”; students perceived that tutors were not effectively transmitting their pedagogical experience to students. This finding supported the results obtained by Mbakaya et al., (2020), who mentioned that the lack of tutors’ support negatively affected students’ clinical learning experiences.

Although evaluated using a Likert scale, the overall level of student satisfaction with clinical placements was high, which reinforces the idea that carrying out clinical placements in favourable environments motivates students and helps them to acquire knowledge. It is necessary to design and validate a specific tool that reveals the level of nursing student satisfaction in a clinical setting in Spain.

Multiple linear regression analysis demonstrated a direct relationship between the overall level of student satisfaction with clinical placements and the CLES+T score, specifically for the “pedagogical atmosphere in the ward” dimension, which is thought to be fundamental in relation to student learning activities and competency acquisition in the clinical setting. This is probably because students feel engaged in the placement unit and well accepted by tutors; moreover, students perceive that the clinical setting is a good learning environment (Donough & Van der Heever, 2018). However, this hypothesis should be confirmed by conducting further studies in Spain.

Using the IMSOC score, we also observed a direct relationship between tutors’ participation and the clinical learning environment. This may be a key aspect that may

guide the future distribution of students in clinical placement settings; placement settings with more engaged tutors are better learning environments that might indirectly impact student satisfaction. Our results confirm those obtained by Saukkoriipi et al. (2020), who demonstrated that more engaged tutors create a positive clinical learning environment that helps students to attain their learning goals, thereby improving their expectations and satisfaction levels.

As regards tutors' participation, we emphasise the importance of selecting professionals with high participation levels because the student tutoring responsibility acquired by clinical nurses does not always ensure goal-related learning. Thus, selecting nurses to actively participate in this teaching-learning process seems necessary (Maciá Soler et al., 2014), as does implementing continuous tutor training to increase their confidence in student teaching.

Regarding the practical implications of this study, we showed a relationship between the learning implication in the clinical setting and the involvement of tutors, the IMSOC questionnaire being a predictor of a good learning environment. This is the first study that evaluated the abovementioned relationship in the field of primary care.

Our study has some limitations. First, the study had a small sample size and was conducted in the Castellón province (Spain). Moreover, the proportion of men in the study population was very low; therefore, the results cannot be extrapolated. Hence, we emphasise the need to interpret our results with caution. Large-scale studies should be conducted in specialised healthcare settings to overcome these limitations.

CONCLUSION

Students' perception of the clinical learning environment and their overall level of satisfaction with clinical placements can be considered high. Tutors in this setting were participative, but poorly satisfied.

We found a relationship between student satisfaction level, students' perception of learning in the clinical setting, and the participation of clinical professionals in student teaching. Moreover, we found a direct relationship between tutor participation and the clinical learning environment. However, it is necessary to carry out longitudinal studies with larger samples to verify this relationship.

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