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Original research article

The relationship of clinical learning environment to nursing students' academic motivation

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ABSTRACT

Objectives: Nursing education is a process that includes theoretical and practical learning and requires the acquisition of theoretical knowledge and skills. Nursing students need a positive clinical practice environment in order to apply their knowledge and skills, due to the fact that the clinical practice settings play an important role in the nursing profession. This study was carried out to explore the relationship of clinical learning environment to nursing students' academic motivation.

Methods: One hundred and twenty seven (127) nursing students who had been training at Giresun University, Faculty of Health Sciences, were enrolled in this descriptive study. The data were collected using the 'Clinical Learning Environment Scale' and the 'Academic Motivation Scale'.

Results: In this study, 34.6% second class, 37% third class and 28.4% fourth class of nursing students were surveyed. The mean scores of clinical learning environment and academic motivation were 66.7 ± 8.7 and 68 ± 10.9 , respectively. There was a statistically significant difference between the scales ($r = 0.254, p < 0.05$).

Conclusion: One of the prerequisites for the training of qualified students is to provide nursing students with a qualified clinical environment. It was found that nursing students' academic motivation increased as the quality of their clinical learning environment improved.

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Introduction

Nursing is a practice based discipline [1]. Nursing education is a process that needs to make observations and comments, and it requires the acquisition of theoretical knowledge and skills [2]. During the educational process,

nursing students practice various methods and techniques while preparing for their future duties. Because nursing is a practical profession, clinical practice follows theoretical knowledge and laboratory and clinical practice [2, 3, 4]. Clinical practice is unavoidable and is the most important part of professional nursing education. This part of the education is a significant experience for nursing students

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[5]. The education provided during clinical practice helps students acquire professional skills, critical thinking and knowledge that will be necessary for them to learn throughout their lives, and helps them to be able to make independent nursing decisions. Students need to be in health care settings with healthy or ill individuals to be able to transfer knowledge that they have acquired into practice [2, 3].

The factors that influence academic success are different for every student; however one of the major predictors for academic achievement for both male and female students is academic motivation [6, 7, 8]. Academic motivation is defined as the production of the energy that is required for academic studies [9]. Motivation is an important key in the training field. Intelligence is not the only predictor of academic achievement and retention for nursing students. To reach the specific goal in nursing education and to achieve of qualified education, academic motivation is important. A student who is not high motivation is not ready for learning. Parallel to this, if there is not important reason that would promote learning the student does not improve the interest for learning [10, 11].

Motivation is classified as intrinsic motivation, extrinsic motivation, and amotivation which is based on the “self-determination theory” that was developed by Deci and Ryan in 1985 [12]. According to intrinsic motivation, the main reason in performing a specific homework is the individual’s pleasure and satisfaction. Intrinsic is not possible under the condition of control and repression because self-determination is necessary for intrinsic motivation [13]. In the case of extrinsic motivation, the individual performs a duty or activity to get important results for him or herself or for extrinsic award [14]. Amotivated individual is referred to someone who has not received any motivation for performing his/her activities and thus from doing any kind of activity. Amotivation is somewhat like the concept of “learned helplessness” [15].

The main purpose of this study is based on the relationship of the quality of the clinical learning environment to nursing students’ academic motivation. The clinical learning environment is an interactive network of forces influencing student learning outcomes in the clinical setting [5, 16], and while ward-based, hospital learning environments remain fundamental, multidimensional milieus for nurse education, a study conducted by Chan [17] has indicated that not all practice settings are able to provide student nurses with positive clinical learning environments. Recent studies have employed both quantitative and qualitative techniques to measure the quality of clinical learning environments by the use of evaluation scales, supervision instruments and phenomenological approaches [3, 4, 16, 18]. Chan [17] developed the *Clinical Learning Environment Inventory* (CLEI) tool that explored intrinsic factors (i.e. innovation, personalization, satisfaction, task orientation, involvement). Several studies have found a meaningful relationships between academic motivation and learning outcomes (i.e. school grades, effort, satisfaction with academic activities, etc.) [11, 19, 20, 21, 22]. In accordance with earlier studies, even though there are studies regarding the clinical learning environment and academic

motivation, a study that explores the effect of clinical learning environment on nursing students’ academic motivation has not been found in the literature.

Materials and methods

Aim

This study was an attempt to find the answers to the following the questions:

- How do nursing students evaluate their clinical learning environment?
- How do clinical practices affect nursing students’ academic motivation?

Study setting and design

A descriptive survey design was used to explore the relationship of clinical learning environment to nursing students’ academic motivation. Participants were all second, third and fourth year undergraduate students in the Bachelor of Nursing Science Degree at the University of Giresun. One hundred and twenty seven (127) nursing students were enrolled in this study. In this study, sampling was not used and the research population consisted only of students.

Instruments

The data was collected by researchers using the demographic form for students, ‘Clinical Learning Environment Scale’ and ‘Academic Motivation Scale’. The demographic form included socio-demographic characteristics of the students (i.e. age, gender, class, high school graduated, reason for choosing nursing as a profession, the expectations of nursing students in the clinical practice, etc.). The *Clinical Learning Environment Scale* was developed by Dunn and Burnett in 1995 [18] and its validity and reliability in a Turkish setting was tested by Sarı in 2001 [23]. Cronbach’s alpha value of the scale is 0.82. This scale consists of 20 items (i.e. item 1: Nursing students learn more from other nursing students on the unit than from the nursing staff, item 4: Nursing students are expected to obey Registered Nurses’ instructions without asking questions, item 9: I’m happy with the experience I have had on this ward, item 14: Nursing care is individualised for each patient on this unit, item 18: This experience has made me more eager to become a Registered Nurse, item 22: The patients’ needs really are given first priority). The scale is a 5-point Likert type. 5; strongly agree 4; agree 3; neither agree nor disagree 2; disagree 1, strongly disagree. The highest possible score is 110 and the lowest possibly score is 22 in this scale. The increase in the total number of points indicates that students have found the clinical learning environment to be appropriate.

The *Academic Motivation Scale* was developed in Turkey by Bozanoglu in 2004 [9]. Cronbach’s alpha value of the scale is 0.87. This scale consists of 20 items (i.e. item 2:

Everything I learned causes more curiosity, item 4: I'm not interested in those taught in school, item 7: When I have a choice I usually choose homework that is bother for me, item 10: I would like to work on the issues that are more difficult, item 12: I always liked to work in new and different issues, item 15: I would like to help others with something I learned, item 17: I try so much to learn something even though course grade will not been given, item 20: I feel like mostly to do an enjoyable crossword puzzle in the exams). The scale is a 5-point Likert type 5; strongly appropriate 4; appropriate 3; undecided 2; inappropriate 1, strongly inappropriate. The highest possible score is 100 and the lowest possible score is 20 in the scale. The score increase indicates that academic motivation is higher.

Data collection

Turkish nursing education programmes last 8 semesters and clinical training usually begins in the second semester and continues concurrently with theoretical courses until the end of the fourth year. Nursing students are trained in university and government hospitals, gaining experience caring for patients in various wards in Turkey. Clinical nursing education is conducted by nursing school faculty, who accompany students one-on-one during contacts with patients. The faculty member who is present at the clinical site acts in cooperation with the clinical nurse and takes full or partial responsibility for patient care.

The data was collected during *Medical, Surgical, Gynaecology* and *Psychiatry* clinical practices of nursing students during the 2010 and 2011 academic period in this study. Nursing students were trained in two government hospitals in conjunction with their theoretical courses such as Medical Nursing, Gynaecology Nursing and Psychiatry Nursing in fall semester. After written consent was obtained from the director of institution, the questionnaires were administered to each of the classes (second, third and fourth classes) one by one after the completion of their clinical training at the end of semester. First year students had been excluded from the study because they had minimal clinical contact during clinical practice of first year course. Before it was applied, verbal permission was obtained from the responsible lecturer of the lesson. At the end of each lesson, required statements as to the study were posed to the students, special permission was obtained, adequate time was given and they were asked to respond to the questionnaire. Nursing students completed the forms within approximately 15–20 min.

Data analysis

The Statistical Package for Social Sciences (SPSS, Chicago, IL) for windows version 16.0 was used for data entry and analysis. Nursing students' demographic variables, clinical learning environment and academic motivation were evaluated using the percentage distribution and mean. To make a comparison of the means of the clinical learning environment and academic motivation, the Pearson Correlation test was used. Variance analysis is used to evaluate the difference of the average points of the classes in the clinical learning environment and the academic

motivation scale. The statistical significance level was set at $p < 0.05$.

Ethical considerations

The study was conducted according to the ethical guidelines set out in the Declaration of Helsinki, and written consent was obtained from the director of the faculty. The aim of the study was explained to the students and they were guaranteed anonymity and confidentiality. As no experiments on humans were conducted, no ethics committee was involved.

Results

The nursing students' socio-demographic characteristics are shown in Table 1. One hundred and twenty-seven (127) undergraduate students of the Faculty of Health Sciences in Giresun completed the questionnaire. The mean age of the students was 21.2 years, with a standard deviation 1.57 years. Approximately 82.7% of the sample was female. Of the respondents in this study, 44 (34.6%) were second-year students, 47 (37%) were third-year students and 36 (28.3%) were fourth-year students. 44.1% of the students implied that they preferred the nursing profession due to the fact that they were able to find work easily after graduation. 45.7% of the students expect to have research opportunities in the clinical practice (Table 1).

Table 1 – Socio-demographic characteristics of nursing students ($n = 127$)

Age (Mean $\pm$ SD)	21.2 $\pm$ 1.57	
	N	%
Gender		
Female	105	82.7
Male	22	17.3
Class		
Second class	44	34.6
Third class	47	37.0
Fourth class	36	28.3
Reason of choosing the profession		
Easier to find a job after graduation	56	44.1
Voluntarily	47	37.0
Family wish	13	10.2
Random	11	8.7
The expectations of nursing students in the clinical practice ^a		
Maintaining the care and treatment of patients	24	18.9
Best attitudes of health care members	42	33.1
Having good physical conditions in hospitals	45	35.4
Having sufficient materials in hospitals	52	40.9
Empathetic approach of the teaching staff	36	28.3
Having research opportunities	58	45.7

^a Marked more than one option.

In the study, 36.2% of the students reported that they thought the purpose of clinical practice was that *theory learned in the classroom integrated with clinical practice*. 50.4% of the students indicated that they wanted to use the nursing process and group teaching, 48% individual teaching, 46.5% observation and 45.7% case presentation in the clinical practices.

The comparison of the mean of the clinical learning environment scale and academic motivation scale are presented in Table 2. The mean scores of the clinical learning environment and academic motivation were respectively 66.7 ± 8.7 and 68 ± 10.9 . A positive correlation was found between clinical learning environment and nursing students' academic motivation ($r = 0.254, p < 0.05$). As the scores of students' clinical learning environment are higher, their academic motivation scores also increased (Table 2).

Table 2 – The comparison of the 'Clinical Learning Environment Scale' and the 'Academic Motivation Scale'

	Clinical learning environment	
	<i>R</i>	<i>p</i>
Academic motivation	0.254 ^a	0.004
^a Pearson correlation.		

Statistical analysis showed that there was a significant difference statistically between classes ($p < 0.05$). Clinical learning environment scores gradually decreased from the second class to graduation and as the scores that nursing students gained from the clinical learning environment were lower, their academic motivation also decreased (Table 3).

When the scales were compared within classes, the difference between the clinical learning environment and academic motivation of the second class was found to be statistically significant ($p < 0.05$), although there were no differences between the scales of the third and fourth classes ($p > 0.05$) (Table 4).

Discussion

The Turkish nursing education programme lasts 4 years and leads to a bachelor degree in nursing [24]. Nursing students starts clinical training from the second semester.

Nursing students take clinical training either after the completion of their theoretical courses or in conjunction with them. Some situations because of the lack of nursing faculty members in Turkey, the excess number of students per nursing instructor for clinical practices, the lack of qualitative and quantitative conditions of clinical practice settings and utilization of nursing students as a "labor" in clinical practices are seen as negative effects in clinical training [2, 25]. The quality of the clinical learning environment (i.e. physical environment, teaching staff, nurses and other health professionals) is important for nursing students' learning and academic motivation during their clinical education [16, 26]. Clinical training sessions also play a key part for nursing students and a positive assessment keeps them motivated [27]. Therefore, nursing students, although are learned theoretically all skills during education period, are graduated without enough experience and insufficiency of practices. Additionally, this also reduces the academic motivation of nursing students during education.

44.4% of the students who were involved in the study have chosen nursing due to the fact that it is easier to find a job after graduation from the study (Table 1). Similarly, Kosgeroglu and colleagues [29] has mentioned that nursing students chose the nursing profession by chance ($n = 409$), voluntarily ($n = 815$) and family preference ($n = 300$) in Turkey. In this study, the nursing students in the clinical practice mentioned that 50.4% wanted to use the nursing process and group teaching, 48% individual training, 46.5% observation and 45.7% case study. Similarly to our findings, in a study by Aygin and Çınar [29], 38.9% wanted the nursing process, 24.2% observation and 13.9% individual training as the number one among the desired methods to be used in clinical practices. It is thought that these findings are linked to what the students perceive that the nursing process approaches in clinical practice fields is a uniquely systematic and scientific approach to the nursing profession while deciding the needs of the patients, and other educational methods and techniques are not specific to the nursing profession since they are used in several other courses.

36.2% of the students mentioned that they would like to apply their theoretical knowledge to practice in clinical applications. In a study by Peyrovi et al. [30] which examined Iranian nursing students' experiences in clinical practice, it was stated that the students thought that going to a clinical site after receiving theoretical education was very effective in transferring theoretical information into practical knowledge, and that they thought that their

Table 3 – The comparison of the scales between classes

	Mean $\pm$ SD			Statistical evaluation
	Second class	Third class	Fourth class	
Clinical learning environment	69.9 $\pm$ 8.17	66.7 $\pm$ 7.81	62.6 $\pm$ 9.09	$F = 7.598$ $p < 0.05$
Academic motivation	69.0 $\pm$ 9.23	70.5 $\pm$ 10.74	63.5 $\pm$ 12.11	$F = 4.630$ $p < 0.05$

Table 4 – The comparison of the scales within classes

	Mean $\pm$ SD		Statistical evaluation
	Clinical learning environment	Academic motivation	
Second class	69.9 $\pm$ 8.17	69.0 $\pm$ 9.23	$R = 0.371^a$ $p = 0.013$
Third class	66.7 $\pm$ 7.81	70.5 $\pm$ 10.74	$R = 0.088^a$ $p = 0.557$
Fourth class	62.6 $\pm$ 9.09	63.5 $\pm$ 12.11	$R = 0.190^a$ $p = 0.266$

^a Pearson correlation.

experiences in the clinical setting would be beneficial to them in their future interactions and also outside of the work environment. However, for many years the theory practice gap has been a problem in nursing students' clinical education, as indicated by many studies [31, 32, 33], although nursing students indicate that they want to integrate theory and practice in the present study. Elcigil and Sari [2] stated that students have said that they experience difficulty in transposing the theoretical knowledge they study in their courses to the clinical setting. Nursing students have also indicated that some clinical skills that they had learned in the skills laboratory are not practiced quite in the same way in the hospital. In another study, student nurses said that the greatest stress for them during their clinical training was to fill in the gap between theory and practice [34]. Students are confronted with real cases during clinical practices and are prepared for their new role as a nurse. If these practices are structured well, they can help to bridge the gap between theoretical courses and practice [35, 36, 37]. In a study conducted by Corlett [31] on the perceptions of nursing instructors and student nurses on the theory practice gap could be viewed positively as a means of developing students' problem-solving skills, and attempts should be made to minimize its impact.

When the students are asked about their personal expectations of clinical practice, 18.9% of the students replied that they wanted to take part in care and treatment applications actively, 28.3% teaching assistants wanted to be more understanding, 33.1% medical staff wanted to behave nicely, 35.4% wanted the physical conditions of the hospitals (study rooms, dressing rooms etc.) to improve, 40.9% wanted hospitals to have sufficient equipment and equipment rooms, 45.7% wanted to have research opportunities (Table 1). In the study by Suen and Chow [38], students have found the friendly behaviour played out in the mentorship relationship was inadequate. Viverais-Dresler and Kutschke [39] have stated that student nurses have ranked relationships as the third most important category. "Being accessible" was rated as the most important factor. Elcigil and Sari [2] indicated nursing students want to be guided sufficiently by their educators

during clinical practice. In the present study, it shows that the students wanted to have better hospital conditions and have better searching opportunities. Similarly Elcigil and Sari [40] stated that students reported that the clinics and the hospitals with good physical conditions, had a positive influence on their clinical learning. Nursing students also indicated a room for students should be in the clinic for meeting, reading, or leaving their bags, books in their study.

When Table 2 is examined, it is found that there is a statistically significant and positive relationship between the points taken by the students from the clinical learning environment scale and their academic motivation level ($r = 0.254$, $p < 0.05$). It is observed that the students do not think that the clinical practice setting is sufficient and accordingly their academic motivation level is low. However, the motivation level of the nursing students on their profession makes the professional success and goals in their occupation higher. Also, motivated students invest more time in their courses [41, 42] and are more likely to complete their study programmes, whereas unmotivated students are more prone to drop out [43]. The social context of a learning environment can influence the motivation that students experience [44]. Therefore, clinical educators play an important role in the clinical experiences of the nursing students. An important function of the educator during clinical practice is to give support to the nursing students [27, 35]. If the clinical education does not provide the student with the support needed for the planning and fulfilment of the student's tasks, the clinical learning period may be ineffective [3].

In this study, the average of the total points awarded by the second year students to Clinical Learning Environment Scale is 69.9, third year students 66.7, and fourth year students 62.6 and it is discovered by variance analysis that this difference is statistically significant ($F = 7.598$, $p < 0.05$) (Table 3). The difference between the clinical learning environment and academic motivation of the second class is found to be statistically significant ($p < 0.05$) (Table 4). In this study, first year students had been excluded from the study because they have minimal clinical contact during clinical practice of first year course. As the students progress to senior years, the portion of clinical component gradually increases. IP and Chan [45] reported that there were significant differences ($p < 0.001$) in all mean scores of the second year students with the third and fourth years students although the difference between the mean scores of the third and fourth year students was insignificant in their study. The students find clinical learning environment to be appropriate as the students' progress to their senior years. This situation can be linked to the fact that clinical practice settings cannot meet the increasing needs of the students.

A limitation of the present study is the small sample size, which prevents any definite conclusion from being drawn from the findings. For future studies, consideration can be given to the use of a combination of quantitative and qualitative methods, in addition to a larger sample size.

Conclusion

The general objective of nursing education is teaching nurses to be capable and to have the knowledge to care for patients in diverse settings. The clinical learning environment is an essential component of the students' education and it cannot be substituted. At the end of the study, it was found that the clinical learning strategies most preferred by the nursing students were nursing process, group teaching, individual teaching, observations and case presentation. It was also found that as the mean scores of the second year students gained from the clinical learning environment increased, their academic motivation also increased.

Nursing is a practice-based profession. Clinical education is a major component of the nursing curriculum. It is important because it allows the nursing students to understand practice and facilitates the acquisition of knowledge. This study shows that the students found the clinical practice settings to be inadequate. Therefore, it is proposed that the physical environment of clinical practice is improved and research opportunities are given to the nursing students. A room for students should be in the clinic to hold their meetings for physical conditions. Nursing students should be respected by staff nurses because the feeling of being an important member of the team increases motivation to learn.

The clinical instructor also plays an important role in providing an effective clinical education. Educators may increase their positive feedback in order to increase student motivation. Therefore, the clinical instructors should "act as a role model" and create an effective learning environment for the students. It is also suggested that clinical instructors clearly explain at the beginning of practice what they expect from students and what criteria they will use for evaluation, provide positive feedback to increase motivation, direct students to the relevant literature so they can learn the latest developments in nursing, and share knowledge about situations that students may never experience firsthand.

Conflict of interest

No conflict of interest has been declared by the authors.

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