

## Research Article

# RELATIONSHIP BETWEEN EDUCATIONAL BEHAVIOURS OF TRAINERS AND ACADEMIC MOTIVATION IN A NURSING STUDENTS: A CROSS SECTIONAL STUDY

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## Abstract

**Introduction:** Motivation is important as one of the major factors for incidence of behaviour in all behaviours such as learning, performance, perception, accuracy, recall, forgetting, thinking, creativity and emotions. The interaction of trainers and nursing students plays a significant role in clinical education and achieving educational objectives.

**Aim:** Considering the wide role of nursing trainers in students leaning clinical experience and their motivation, and based on qualitative studies done so far, the present research was performed to investigate the relationship between educational behaviours of clinical trainers and motivation toward science learning among nursing students.

**Methods:** This cross sectional study was performed on 200 nursing students, third-eighth semester, at a nursing faculty from 1 January to 30 July 2019 at Zanjan university of medical sciences, Iran. The students were included though census. Confidence interval of 95% and a significance level of P-value less than 0.05 was considered significant.

**Results and Conclusion:** The mean age of the students was 22 years. This study showed that the level of educational behaviours of clinical trainers had a direct correlation with the score of learning motivation subscale of students. It also had a direct significant correlation with the total score motivation toward science learning ( $p=0.01$ ). The behaviours of clinical trainers and understanding of nursing students about the characteristics of trainers are important in creating motivation, facilitating learning, and improving nursing education. *ASEAN Journal of Psychiatry, Vol. 24 (1) January, 2023; 1-10.*

**Keywords:** Clinical Education, Nursing Students, Academic Motivation, Clinical Experience, Creating Motivation

## Introduction

Today, in many educational programs organized science which plays a significant role in acquiring many skills such as science learning, process of conceptual changes, critical thinking,

and science learning strategies [1-3]. Motivation is important as one of the major factors for incidence of behaviour in all behaviours such as learning, performance, perception, accuracy,

recall, forgetting, thinking, creativity and emotions [4]. Learning motivation can be promoted and modified through components such as the teaching methodology, curriculum, educational and verbal policies, and teacher-learner interaction [5,6]. The students who have good interpersonal relationships with their trainers have a greater motivation to fulfill the educational objectives. Extensive research has suggested the importance of trainer-student interaction to achieve the educational objectives [7,8]. In addition to promoting learning motivation among students, proper communication is also beneficial for trainers, causing them to experience less burn out and have greater satisfaction with their job and pedagogy [9,10]. The results of the research by Yilmaz O suggested that even communication between trainers and students through cellphone, computer, and the internet in the virtual media is effective for motivation toward science learning among students [11]. The motivation and interaction of trainers and students are also significant in nursing education [12]. The performance of trainers is one of the facilitating factors for learning in the clinical education of students [13]. This is because interpersonal interactions of trainers are internalized in students as one of the important dimensions of curriculum, causing induction of a positive attitude to the occupation, professional identity, enhanced self-confidence, and learning [14,15]. Definitely, these characteristics are among the important missions of nursing trainers for successful entrance of students to this profession and undertaking the roles assigned [16,17]. This professional activity requires much sense of responsibility, precision, and vigilance, and any kind of deficit in the training of this group will definitely have an adverse effect on the quality and quantity of healthcare services [18,19]. Von Elmvia modern scientific methods, promotion of the scientific knowledge of learners and supporting them to acquire scientific information, values, and attitudes as well as continuation of scientific studies with complete satisfaction in both the place of receiving education and outside it are among the most

important objectives of the educational system. One of the most important components here is motivation toward learning.

Erik mentioned the performance of trainers as one of the facilitating factors for students learning in clinical education. In a study performed in Iran, it was also found that the characteristics of clinical trainers such as the trainer's personality, communication skills, no stress, good temper, and supporting students in clinical practice have been of more interest to students compared to teaching as well as assessment methods [20,21]. Hanifi, et al. conducted a qualitative research on the role of clinical trainers in clinical education motivation of nursing students and found that the trainer's behaviour towards students is very important for enhancing the motivation of students [22]. According to their research, the students stated that support, encouragement, authority, and trainer's communication with students, informal talks, and friendly relationship suggesting the trainer's trust and respect will cause enhanced self-confidence and learning motivation in them [23]. Thus, effective communication between the trainer and learner, consultation, creating challenges, and providing suitable feedbacks are important for promoting learning motivation in students [24-27]. Nursing educators play a key role as a motivating factor for students [28-31]. Thus, considering the wide role of nursing trainers in students leaning clinical experience and their motivation, and based on qualitative studies done so far, the present research was performed to investigate the relationship between educational behaviours of clinical trainers and motivation toward science learning among nursing students.

## **Materials and Methods**

**Design and participants:** This cross sectional study was performed on 200 nursing students, third-eighth semester, at a nursing faculty from 1 January to 30 July 2019 at Zanjan university of medical sciences, Iran. The students were included through census. The inclusion criteria were: Students studying in the third semester and

above, at least one year of experience of apprenticeship at hospital. The first and second year students were excluded. STROBE guideline was used for the report in this study [32].

Out of the 200 distributed questionnaires, only 172 were completed (response percentage: 86%). The mean age of the participating students was

21.9 (SD=2.9). Most students were female (n=97), were studying at academic semester less than 4 (n=100), had GPA of 16-18 (n=107), were single (n=141), and were surgery ward apprentices (n=83). Most trainers had master's degree (n=139) and were officially employed (n=48) (Table 1).

**Table 1. Demographic characteristics of participants.**

Variable		No.	%	Variable		No.	%
Age group	Less than 20	48	27.90%	Trainer's degree	Bachelor's	16	9.30%
	21-22	79	45.90%		Master's	139	80.80%
	23 and above	45	26.20%		PhD	17	9.90%
Gender	Female	97	56.40%	Marital status	Single	141	82.00%
	Male	75	43.60%		Married	31	18.00%
Group academic semester	Less than 4 semesters	100	58.10%	Type of employment	Contract per hour	15	8.70%
	Semesters 5-8	69	40.10%		Plan based	54	31.40%
	More than 8 semesters	3	1.70%		Commitment based	2	1.20%
Group GPA	Less than 14	5	2.90%		Contractual	17	9.90%
	14-16	41	23.80%		Official	84	48.80%
	16-18	107	62.20%				
	18-20	19	11.00%				
Apprenticeship ward	Clinic	12	7.00%				
	Internal ward	3	1.70%				
	Surgery ward	83	48.30%				
	Paediatrics	50	29.10%				
	Emergency	19	11.00%				
	ICU	2	1.20%				
Student job	Management	3	1.70%				
	Yes	32	18.60%				
	Bo	140	81.40%				

**Instruments:** The data collection instruments consisted of three parts. The first part involved a demographic questionnaire (age, gender, academic semester, student job, GPA, marital status, type of apprenticeship, place of education, the times the student has passed apprenticeship by the same trainer, the trainer's level of education, academic grade of the trainer, type of trainer employment, students). Clinical educational behaviors questionnaire: This

questionnaire consisted of 44 items, 22 items about personal educational behaviors and 22 about professional educational behaviors. The response to items was in the form of 5-point Likert scale. The total score ranged between 44 and 220. The units acquiring a score lower than 50% of the maximum score were defined as poor, 50-75 as average, and above 75 as strong educational behaviors. The validity of this questionnaire has been confirmed by 15 nursing

stunners and nursing trainers. Also, the reliability of this questionnaire has been confirmed with a Cronbach-alpha of 0.94 [33]. Students Motivation toward Science Learning (SMTSL): This standard instrument was developed by Tuan, et al. in 2005 [34]. This instrument consists of 35 items with 6 subscales: Self-efficacy, active learning strategy, science learning value, performance goal, achievement goal, and learning environment stimulation for assessing the extent of motivation toward science learning. This questionnaire has been developed using a 5 degree Likert scale beginning from absolutely disagree, disagree, no idea, agree, and absolutely agree. The items 1-7 are related to self-efficacy, 8-15 active learning strategy, 16-20 science learning value, 21-24 performance target, 25-29 progress target, and 30-35 the learning environment stimulation. Items 4-7 as well as 21-24 are negative while others are positive. The scoring for positive items from absolutely disagrees to absolutely agree is 1-5, while for negative items, it is reverse. The sum of scores of items related to the subscales constitutes the total score of the scale. Investigation of the reliability of this instrument in Iran has been performed with a Cronbach-alpha of 0.83 by Zare, et al. [35].

**Data collection:** After receiving an introduction letter, the researcher referred to the three educational hospitals affiliated to Zanjan university of medical sciences. Initially, the educational objectives were explained for the students. Data collected using face to face interviews. The questionnaires were distributed among those who were willing to participate and had completed written informed consent form. The participants were given 15 minutes to complete the questionnaires. The average time to complete the questioners was  $18 \pm 4.1$  min. After the completion, the questionnaires were

**Ethical considerations:** This study was confirmed in the ethics committee of biosciences with the ethics code of ZUMS.REC.1395.115. Written and oral consent forms were taken from

all of the participants. They were also assured that their information would remain confidential.

**Data analysis:** To describe the demographic characteristics, descriptive tests (percentage, frequency, mean, and standard deviation) were used. Spearman correlation coefficient test was utilized to investigate the relationship between the educational behaviours of trainers and academic motivation. SPSS Version 18.0 for windows (SPSS Inc., Chicago, IL, USA) was used to analyse the data. Confidence interval of 95% and a significance level of P-value less than 0.05 was considered significant.

## Results

The results of this study indicated that the educational behaviours of clinical trainers had a significant direct correlation with the motivation toward learning science score across all subscales of the learning motivation of students. It had also a significant direct correlation with the total score ( $p < 0.001$ ,  $r = 0.88$ ). In univariate analysis of correlation between the level of educational behaviours of trainers and their learning motivation scores according to Spearman correlation coefficient, the level of professional educational behaviours of clinical trainers was directly and significantly correlated with the score of the subscales of active learning strategy ( $r = 0.007$ ,  $r = 0.205$ ), science learning value ( $p = 0.001$ ,  $r = 0.244$ ), performance goal and achievement goal ( $p = 0.044$ ,  $r = 0.154$ ), learning environment stimulation ( $p = 0.038$ ,  $r = 0.159$ ), and total score of science learning motivation ( $p < 0.001$ ,  $r = 0.302$ ). According to the results of the research, the level of personal educational behaviours of clinical trainers was directly significantly correlated with the score of subscales of active learning strategy ( $p = 0.009$ ,  $r = 0.199$ ), performance goal and achievement goal ( $p = 0.013$ ,  $r = 0.190$ ), learning environment stimulation ( $p = 0.006$ ,  $r = 0.210$ ), and total score of science learning motivation ( $r = 0.342$ ,  $p < 0.001$ ) (Table 2).

**Table 2. Investigating the relationship between educational behaviors of trainers and academic motivation among students.**

<b>Dimensions of educational behaviours</b>				
<b>Dimensions of motivation toward science learning</b>		<b>Level of educational behaviours of nursing clinical trainers (total)</b>	<b>Level of personal educational behaviors of clinical trainers</b>	<b>Level of professional educational behaviors of clinical trainers</b>
Score of self-efficacy subscale	Correlation coefficient	0.154	0.199	0.124
	P value	0.043	0.009	0.104
Score of active learning strategy subscale	Correlation coefficient	0.166	0.072	0.205
	P value	0.03	0.347	0.007
Score of science learning value subscale	Correlation coefficient	0.24	0.128	0.244
	P value	0.002	0.094	0.001
Score of performance goal subscale	Correlation coefficient	0.019	0.025	0.003
	P value	0.803	0.74	0.967
Score of achievement goal subscale	Correlation coefficient	0.204	0.19	0.154
	P value	0.007	0.013	0.044
Score of learning environment stimulation subscale	Correlation coefficient	0.224	0.21	0.159
	P value	0.003	0.006	0.038
Total score of science learning motivation	Correlation coefficient	0.288	0.243	0.302
	P value	0.001	0.001	0.001

	Total participants	172	172	172
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**Discussion**

Since educational behaviours of trainers play a significant role in student learning, accordingly it seems essential to modify and foster the educational behaviours of trainers. Typically, students pay attention to three characteristics of clinical trainers including nursing capability, teaching ability, and personality. Clinical trainers should develop innovative solutions to fulfil these issues and continue their attempts on showing effective and proper clinical behaviour. Other characteristics of clinical trainers that are important to students include availability, being a good role model, emphasis on the importance of clinical methods. The findings of another research indicated that nursing students evaluate the behaviour of clinical trainers based on the following criteria: a) personal affection for patients and taking care of them, b) creating an atmosphere of mutual respect, c) considering limitations or mistakes, d) realistic view regarding expectation on the students' performance, and e) promoting the knowledge of students about professional responsibilities.

In univariate analysis of the correlation of the level of educational behaviours of trainers with learning motivation scores according to Spearman correlation coefficient, the level of educational behaviours of clinical trainers showed a direct significant correlation with the score of all subscales of learning motivation for students as well as the total score of motivation for learning science. In line with these findings, Broeckelman-Post, et al. also indicated that misbehaviour of trainer will have a negative impact on students. Broeckelman-Post, et al. explained that "the students who experience a suitable cognitive experience find tendency towards that, because they receive energy from it and become excited. Accordingly, proper behaviour of trainer regarding clinical issues leads to enhanced motivation in students for learning clinical matters". In multiple analysis of the relationship of the level of educational behaviours with motivation toward science

learning among students, logistic regression was used. In this method, the score of motivation toward science learning was considered as a response variable which was categorized into two groups: Score below average=0 and score above average=1.

Based on the findings, from among the two educational behaviour scores (personal and professional) in the unmatched final model, only the score of personal educational behaviours of clinical trainers has been considered in the logistic regression model *via* backward LR method as a predictor associated with learning motivation. In this regard, upon increase of one score in the personal educational behaviours of clinical trainers, the chance of a high score of average motivation toward science learning among students had increased. Other research has also shown that improper clinical behaviour of trainer is associated with diminished emotional learning, reduced communication motivation among students, and increasing use of antisocial behavioural techniques by students. Cultural effects as well as previous experience and sociability of students cause some behaviour of trainers to be interpreted as "useful", while others may interpret the similar behaviours as improper. The results of present study showed the trainers and students need more specific courses for improving behaviours of clinical trainers. According to the results of the present study and the direct relationship between educational behaviours and academic motivation, it is suggested that educational courses be held for teachers to learn and improve educational behaviours, as well as the use of appropriate incentive approaches and new study methods among students to increase their motivation to learn.

**Conclusion**

Apprenticeship and internship play a significant role in nursing education during the bachelor's program. Thus, very skilful trainers with profound knowledge and high practical qualifications are required. Accordingly, clinical trainers should enjoy very effective characteristics so that they could facilitate

education of students in clinical practice. In order to facilitate learning and improve nursing education, the behaviours of clinical trainers and understanding of nursing students about these characteristics are significant. Overall, this study indicated that the clinical behaviour of trainer is associated with learning motivation among students.

**Limitations:** The limitations of this study included the following: It was performed only at one medical sciences university. Hence, the results cannot be generalized to all universities of the country. Accordingly, it is suggested that similar studies be conducted at other universities. This research only investigated nursing students. Concerning the challenges of view on nursing in the society, motivation among nursing students is considered a challenging topic. Accordingly, it is suggested to investigate this issue among other students. This study was descriptive, which should be considered when analyzing the results.

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