

Relationship Between Perception of Constructivism Learning-based Approaches and Self-actualization in Nursing Students

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Abstract

Background: For successful clinical education in a suitable environment and condition, nursing students can be assisted in acquiring the necessary knowledge and skills.

Objectives: The present study investigated the relationship between the understanding of the learning environment based on constructivism and self-actualization in Kerman University of Medical Sciences nursing students in 2021.

Methods: This cross-sectional study utilized a descriptive-analytical method. The study subjects consisted of 160 undergraduate nursing students selected by the census. The information was collected using a demographic profile questionnaire, social constructivist learning environment perception questionnaire, and Ahvaz Self-Actualization Inventory (ASAI). The data were analyzed using Pearson correlation, linear regression, and chi-square tests in SPSS software.

Results: The mean score of understanding the environment based on constructivism and its dimensions was reported as 191.88 ± 30.50 , and that of self-actualization was 81.23 ± 12.99 . There was a significant positive relationship between understanding the environment based on self-actualization and constructivism and also between all dimensions of understanding the environment based on constructivism and self-actualization ($P < 0.050$).

Conclusion: The total score of the constructivist-based learning environment predicted self-actualization in nursing students. Self-actualization may change with a change in the dimensions of this approach. The constructivist approach can improve the self-actualization of nursing students, promote their active participation in building knowledge, and increase their interactions, enhancing abilities, talents, and self-actualization. The constructivist learning environment can lead to the growth and development of nursing students in educational environments and increase their interest in academic achievements in education, research, and employment.

Keywords: Understanding, Learning Environment, Self-actualization, Constructivism, Nursing Students

Background

Learning is a relatively stable change in potential behavior defined as reinforced practice (1). In this definition, learning involves practice and experience that can be influenced by teaching quality, motivational goals, prior knowledge, preparedness, talent, and learning environment (2). The learning environment has five characteristics, "connection with life, uncertainty, critical expression, joint supervision, and negotiation with students" based on the constructivist approach (3).

The constructivist learning theory is based on the scientific and philosophical theories of scientists such as

Piaget, Vygotsky, Bruner, and John Dewey, who highlighted the learner's active role in understanding and accumulating knowledge and science (4). This theory emphasizes situational learning, indicating that knowledge depends on related situations, objectives, and assignments. This teaching approach, which includes the learner's active participation, highlights the teacher's role as a facilitator and emphasizes practical and objective learning situations and authentic experiences (5-7). The situational learning concept, which is also stressed in the constructivist theory, claims that knowledge cannot be separated from practice, and

if this is neglected, knowledge will be separated from the context (8, 9). According to this approach, education should be conducted in natural and original environments (10-12). The constructivism theory is very popular in nursing education as an alternative approach to traditional learning (4).

In modern psychology, self-actualization is defined as the accomplishment of potential inner abilities and talents (13). This concept is elaborated in detail in Abraham Maslow's theory which argues that self-actualization is the highest level of needs and can be fulfilled if lower-level needs are fulfilled (14). When the basic needs are fulfilled to some extent, self-actualization needs can be addressed (15). Maslow believed that only one percent of society could achieve self-actualization. This contradicts the findings of later research demonstrating that this can be achieved by a greater proportion of people (16). Based on the research findings, Neto stated that self-actualization is the highest need of learners and is related to realizing their potential talents (17). Without a doubt, medical schools are the main responsible bodies for training competent human resources to address the needs and expand health systems (18), and their main objective is to empower the alumni to fulfill the needs of the health systems; to realize this, they should learn required knowledge and skills (8).

In their study on training based on a constructivist approach in midwifery externs and interns, Nili Ahmedabadi and Mustafazadeh realized that in midwifery clinical training (internships), this approach could improve the scientific standing, satisfaction, and self-confidence of the students and led to deep and permanent learning and self-efficiency (19).

Haghyeghi and Karshki, in a study on the role of the constructivist learning environment on the components of the student's progress goals, realized that this learning environment had a significant positive effect on the components of the progress goals and a role in the student's progress objectives (20). Shipunova et al. investigated the role of students' self-actualization in adapting to the e-learning environment and concluded that the low mean self-actualization level they observed highlighted the need for monitoring first-year students in choosing their educational path in an online environment (21).

Having investigated Turkish nursing students' understanding of the clinical learning environment and its relationship with academic motivation and decision-making, Akta and Karabulut concluded that nursing students' academic motivation increased in a high-quality clinical learning environment (22). In research on the relationship between self-actualization obstacles

and choice of career among nursing students of Atatürk University, Ay and Yurttas found that addressing self-actualization obstacles increased their desire to choose their jobs (23).

The constructivist approach and related methods are of great importance in the education of healthcare professionals. The nature and atmosphere of the education of these professionals emphasize the need for constructivist approaches that consider the situation and application of authentic scenarios. Moreover, this approach, which includes in-depth information processing, improves learning and can lead to self-actualization. Nonetheless, research in this field regarding nursing education is sparse.

Objectives

Therefore, the present study investigated the relationship between understanding the constructivist learning environment and self-actualization in a cohort of nursing students.

Methods

This cross-sectional study was carried out in 2021 using a descriptive-analytical method. The learning environment was the Faculty of Nursing and Midwifery of Kerman University of Medical Sciences. Sampling was performed by the census, and all students were included. The sample size was 217, but 57 dropped out, giving a response rate of 74%. Totally, 160 people completed the questionnaire, and their data were analyzed. The inclusion criteria included completing at least one internship semester and being willing to participate. Any transfer or leave during the study and unwillingness to cooperate were considered exclusion criteria. This research was conducted after obtaining ethical approval (with the code of IR.KMU.REC.1400.309) from the Research and Technology Deputy of Kerman University, and all ethical principles were strictly followed.

The instruments included a demographic characteristics questionnaire and the Ahvaz Self-Actualization Inventory (ASAI). Due to the COVID-19 pandemic and the limited availability of all students for data collection, the questionnaire was designed on the Porsline website, and data collection was conducted electronically (<https://survey.porsline.ir/>).

Perception of the social constructivist learning environment questionnaire: This questionnaire contains 45 questions in eight components, including "conferring the learning process to the learner, encouraging teamwork, and exchange of ideas between people, authentic learning, emphasis on previous learning, considering different viewpoints, self-evaluation,

problem-oriented approach, and the facilitating role of the teacher" scored on a five-point Likert scale of "never, rarely, sometimes, often, and almost always" rated 1 to 5, respectively. Cronbach's Alpha coefficient for the whole questionnaire was reported as 0.94, and retest reliability was 0.90, indicating its appropriate internal consistency and reliability (20).

ASAI: This scale has 25 questions on a four-point Likert scale (never = 1, rarely = 2, sometimes = 3, often = 4) scored based on the students' self-actualization and awareness level with a minimum score of 25 and a maximum score of 100. Its Cronbach's alpha coefficient has been calculated as 0.92 (15).

The Kolmogorov-Smirnov test was used to check the normality of data distribution. The mean and standard deviation were calculated for quantitative variables such as age and scores. Pearson's correlation coefficient was used to assess the relationship between self-actualization and understanding of the learning environment, and linear regression was used to predict self-actualization through understanding the learning environment based on constructivism. Moreover, the chi-square test was used to determine the relationship between qualitative variables.

Ultimately, data were analyzed using SPSS version 26 software (IBM Corporation, Armonk, NY). The confidence level of 95% and the significance level of $P < 0.05$ were considered in all tests.

Results

The results demonstrated that the mean age of the students was 21.5 ± 2.2 years and their mean grade point average was 16.6 ± 1.5 . Most respondents were single (93.8%), female (80.6%), and dormitory residents (75.0%). For the assessment of the understanding of the learning environment and self-actualization, the mean scores were calculated, which are presented in Tables 1.

Table 1. The Mean scores understanding of constructivism environment and its dimensions in nursing students

Dimensions	Mean (SD)	Max	Min
Possession	47.46 (6.92)	60	21
Teamwork	33.14 (7.86)	48	12
Authentic learning	23.30 (5.93)	36	9
Former	20.16 (4.87)	30	11
Different view	17.25 (4.33)	24	6
Self-assessment	17.85 (3.92)	24	9
Problem-orientating	16.25 (3.90)	24	9
Education	16.68 (3.56)	24	9
Cumulative constructivism	191.88 (30.50)	250	130

Pearson's correlation coefficient was used to assess the relationship between the understanding of the

learning environment based on constructivism and self-actualization, which showed a significant positive relationship in all dimensions ($P < 0.001$) (Table 2).

The results demonstrated a significant positive relationship between the variable of constructivism-based understanding of the environment and self-actualization in nursing students. The results of linear regression to predict self-actualization variables according to the understanding of the learning environment based on constructivism indicated that the total score of the understanding of the learning environment according to constructivism could predict self-actualization in nursing students. Based on this, the constructivist-based learning environment perception variable could predict 30% of the variance in self-actualization (Table 3).

Regarding the relationship between the individual characteristics of the research participants and the understanding of the learning environment based on constructivism and self-improvement, no statistically significant difference was observed ($P < 0.05$).

Discussion

The present study of Kerman University of Medical Sciences nursing students demonstrated that the mean score of understanding of the learning environment according to constructivism and the dimensions of "learning, possession of the learning process, encouraging teamwork and exchange of ideas, authentic learning, emphasis on previous learning, considering different viewpoints, self-evaluation, and the teacher's role as a facilitator" was higher than the moderate level, which indicates that the students had a high understanding of the learning environment based on constructivism. This averages about the problem-oriented approach were below average in problem solving. In the literature search, no similar study on nursing students was found. Therefore, comparisons are made in other fields. Our results are consistent with Karsheki et al.'s research on non-medical students of Ferdowsi University of Mashhad (24).

In the study of Gherissi et al. in Tunisia on midwifery and women's health students, the surveys highlighted the constructivist model and declared it an efficient approach to women's health services (25).

Table 2. Correlation between Self-actualization and understanding of constructivism environment and its dimensions in nursing students

Self-actualization	Statistical indicator	
	Correlation Coefficient	P
Comprehension of the constructionist-learning environment	0.54	< 0.001
Possession of learning to the learner	0.44	
Encouraging teamwork and exchange of ideas	0.39	
Authentic learning	0.52	
Emphasis on previous learning	0.31	
Considering different views	0.27	
Self-assessment	0.38	
Problem-based approach	0.45	
Facilitator role of the educator	0.50	

Table 3. The Results of Linear Regression self-actualization through of understanding the learning environment based on constructivism

Predictive variable	B	Standard error	Beta	T	P value
Constant variable	36.46	5.51	-	6.61	< 0.001
Comprehension of a constructionist working environment	0.23	0.02	0.54	8.22	
R = 0.54, R ² = 0.30, ADJ R ² = 0.29					

Moreover, Tadesse et al., in their study on Ethiopian students, emphasized the importance of a constructivist environment and believed that it facilitated academic progress (26). As nursing students need to have high problem-solving and critical thinking capacities, student-centered approaches based on problem-solving should be employed in training methods, first in simulated and then in real environments, to expand their abilities. The results of Karami and Silaneh's research to design internship training environments from chaotic to constructivist demonstrated that with a constructivist and holistic approach to creating learning environments, the focus of internship activities would be on real working environment tasks and projects, and the current environments may move towards constructivism (27).

The self-actualization mean scores in the present study demonstrated high capacities of self-actualization among Kerman University of Medical Sciences nursing students. In their research on Golestan University of Medical Sciences students, Sanagoo et al. observed that students' self-actualization was at good and excellent levels (28), which is consistent with the present study. In another study, Shafipour Mutlaq and Mulla Ahmadi reported the moderate self-actualization level of middle school teachers in Isfahan (29), which contradicts our results. This would be expected considering the differences between the studied populations. Moreover, Ay and Yurttas in Turkey introduced self-actualization obstacles as influencing factors in the choice of nursing students' field (23). Furthermore, Hosseini Dolatabadi et al. mentioned self-actualization as an effective coping strategy in their research among Gilan University students (14).

In this research, we investigated the relationship between personal and academic characteristics and the level of understanding of the environment based on constructivism and self-actualization. The independent t-test showed no significant difference in the mean scores of self-actualization and understanding of the environment based on constructivism according to demographic characteristics. In the study of Sanagoo et al., the level of self-actualization of Golestan University of Medical Sciences students was higher in female and dormitory students (28). The difference in research population and the number of study subjects could explain the difference in the results; also, they included all the students of the University in their study (28). This has remained obscure regarding the relationship between the understanding of the learning environment and individual characteristics in the research conducted in this field.

The present study demonstrated a significant relationship between environment perception based on constructivism and self-actualization in nursing students. Shipunova et al. highlighted the role of self-actualization in adapting to the e-learning environment (21). Akta and Karabulut concluded that students' understanding of the clinical learning environment relates to academic motivation and clinical decision-making (22). Nili Ahmedabadi and Mostafazadeh showed that in midwifery clinical education (internship), the constructivist approach promoted the scientific standing, satisfaction, and self-confidence of midwifery students, resulting in profound and lasting learning and independence. Based on the constructivist approach, midwifery training should be based on real environments with practical instruments, and students'

active and participatory role should be highlighted, besides the role of instructors as facilitators (13). Considering the similarities between nursing and midwifery education, the results of Nili Ahmadabadi and Mustafazadeh's study (19) can be aligned with the objectives of the present study. Moreover, the Barzegar Bafroi et al. study demonstrated that the constructivist learning environment leads to academic progress and education effectiveness (3), which can be considered in line with the results of the present study in terms of positive outcomes.

The present study indicated that student-centered learning methods take advantage of practical applications, objective training, learners' active participation, the facilitator role of the teacher instead of the mere information transfer role, and the use of real projects, which can play an essential role in creating a constructivist environment; because of the development of critical thinking, it also leads to self-actualization. The present research was conducted on nursing students. It is suggested that similar research be conducted on other health sciences students. Also, it would be recommended to seek the tutors' opinions about the constructivist learning environment, students' self-actualization, and related factors.

Conclusion

The nature of nursing education demands a curriculum that can engage students with a real learning environment and assist, guide, and support them to achieve independence. This has been considered in current curricula. However, teachers can facilitate such endeavors and design and implement projects based on the creative mind. Constructivist environments can create a cooperative atmosphere among students, promote problem-solving skills, and enhance reasoning and creativity for the flexible establishment of a targeted and efficient learning internship environment. The present study demonstrated that the total score of the constructivist-based learning environment could predict self-actualization in nursing students. Therefore, it is expected that the constructivist learning environment can stimulate the growth and development of nursing students in educational environments and generate interest in academic progress and career choice.

Supplementary Material(s): is available here [To read supplementary materials, please refer to the journal website and open [PDF/HTML](#)].

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