

Academic Motivation in Nursing Students: A Hybrid Concept Analysis

Abstract

Background: Taking into account the breadth of the concept of motivation and its importance for nursing students, it is imperative to clarify the concept of academic motivation. This study is an attempt to analyze the concept of academic motivation in nursing students. **Materials and Methods:** The study was carried out in 2018 as a combined literature review and qualitative research. Hybrid concept analysis model was employed to clarify the concept at three phases. At theoretical phase, articles indexed in credential databases were searched using keywords “academic motivation” and “nursing.” Totally, 30 articles were analyzed. At fieldwork phase, 12 nursing students were interviewed. At conclusive phase, the findings of the two earlier phases were analyzed. After determining the attributes, antecedents, and consequences, a final definition of academic motivation in nursing student was introduced. **Results:** Academic motivation has six main attributes including “being an internal process,” “purpose oriented,” “variable,” “unique,” “driving force of educational performance,” and “facilitator of learning and educational achievement.” In addition, antecedents and consequences of academic motivation in the nursing students were revealed and a general definition of the concept was codified. **Conclusions:** Academic motivation of nursing students is a broad and multi-dimensional concept that is affected by various personal, family, social, educational, and professional factors. Moreover, it is a factor in achieving academic success, better quality of learning, creativity, academic satisfaction, reduction of anxiety, continuing education, and training competent nurses.

Keywords: *Concept formation, Iran, motivation, nursing, students*

Introduction

Motivation is one of the main concepts of education.^[1] It is a psychological construct in the learning process and considerably related to educational achievement in university and continuance of studies.^[2] Some authors have reported a significant relationship between academic motivation and some of educational outcomes like student’s marks, active and regular attendance, and satisfaction with educational activities.^[3-5] Academic motivation is associated with academic efforts, depth of information processing, and the use of self-regulated cognitive and metacognitive strategies. On the contrary, it is related to self-efficacy perception and goal establishment.^[1]

Like every education field, motivation is a critical factor in nursing education.^[5,6] It is important for nursing students who are faced with different demands from their patients.^[5] To help others during their

professional lives, nursing students need long-standing motivation.^[6] Providing quality nursing services needs motivated students to acquire a great deal of information and skills and to keep learning and relearning during their professional lives.^[4] With the aging population, the need for professional nurses has increased, and nursing educators must improve academic motivation and achievements in nursing students in order to increase the number of professional nurses.^[7]

Taking into account the breadth of the concept of motivation and its importance in nursing students, the necessity of clarifying the concept of academic motivation, the characteristics, and the effective factors in nursing students is not questionable. Analyzing the concept is a fruitful method to clarify it.^[8] Clarifying the concept of academic motivation in nursing students is a step toward a better perception of the concept and adoption of reasonable steps toward a higher academic motivation in nursing students. Thereby, this study is an

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attempt to analyze the concept of academic motivation in nursing students following the Hybrid Model.

Materials and Methods

The study is a combination of literature review and qualitative research that was conducted in 2018. Hybrid concept analysis model was employed to clarify the concept. The model is one of the techniques to develop and elaborate on the concepts and to develop theories.^[9] In nursing field, the method is used to remove abstract and ambiguous nature of concepts so that they can be surveyed in their actual context and ground.^[9] The reason for adopting the Hybrid Method was the fact that elaborating students' viewpoints along with literature review results in a better and more reliable perception of the concept. The Hybrid Model is comprised of theoretical phase, field work phase, and conclusive analysis phase,^[9] which are explained in detail in what follows.

The principal focus of theoretical phase was on developing a foundation for deep analysis and concept refinement in the later phases. This phase included concept selection, literature review, dealing with concept meaning, and measurement. It ended with identifying a working definition for the fieldwork phase. At theoretical phase, literatures published on academic motivation of nursing students were searched in credential index databases including PubMed, ScienceDirect, Proquest, Web of Science, and Wiley Online Library using the keywords "nursing student" and "academic motivation." To combine the keywords, advanced search option was used in all databases. The search was conducted during June 2018. Inclusion criteria for the literature were "published in English," "original or review articles," "availability of full text," and "appearance of the searched keywords in the 'Keyword' section of the literature." No time limitation was included, and 344 articles were found. Based on further survey of the titles and abstract and availability of full text, and after removing duplicate papers, 44 papers entered full text review stage and 30 of them were found related to academic motivation of nursing students and pertinent majors. To extract attributes and factors pertinent to the concept of academic motivation, the articles were reviewed thoroughly and a summary of each was prepared. As a result, the attributes of academic motivation, antecedents, and consequences were determined. This stage was completed by codifying an operational definition of academic motivation, which was then used in the fieldwork phase.

The purpose of fieldwork phase was to corroborate and refine the concept formed at the first phase with emphasis on the experimental component of the process. At this step, a qualitative data collection method was used to have a better understanding of the concept. At fieldwork phase, data gathering was done through face-to-face and semi-structured interviews. The participants were

12 undergraduate students of nursing at different years who were selected through purposeful sampling. Inclusion criteria were being a nursing student at different years and willingness to participate in the research. Interviews were conducted in the School of Nursing and Midwifery, Iran University of Medical Sciences. The characteristics of participants are presented in Table 1. The questions asked during the interviews had been designed to clarify the concept of academic motivation and the effective factors in nursing students. For instance, "as a nursing student, how do you describe academic motivation?" "what makes you more interested in studying?" and "what makes you study better?" The average duration of interviews was 45 min. Interviews were recorded with the permission of participants. The recording was transcribed verbatim immediately after each interview. Data analyses were performed along with data gathering process using conventional content analysis methods. In this way, the interviews were reviewed several times for encoding. During the reviewing, the initial codes were extracted and categorized according to the similarities and differences so that categories and subcategories were extracted. The key and important attributes of the academic motivation concept in nursing students were determined based on the obtained categories. To improve the credibility of the data at this phase, the transcribed and encoded interviews would be provided to the participants for confirmation (Member check). Moreover, to ensure confirmability of the data, all the interviews, codes, and categories were provided to an independent researcher to examine the codes and categories (Peer check). At conclusive analysis phase, the results of the last two phases were combined so that the extracted codes at the theoretical and fieldwork study phases were compared. The codes that could be integrated were identified with a common name, and non-merging codes remained as separate codes. Finally, a comprehensive definition of the academic motivation concept in nursing students was achieved.

Table 1: Demographic characteristics of participants

Variables	Classification	n (%)
Age	18-22	7 (58.30)
	23-27	4 (33.30)
	28-32	1 (8.30)
Gender	Female	9 (75)
	Male	3 (25)
Years of education	1	3 (25)
	2	3 (25)
	3	3 (25)
	4	3 (25)
Being native	Yes	3 (25)
	No	9 (75)
Average score	18-20	3 (25)
	16-17.99	8 (66.70)
	14-16.99	1 (8.30)

Ethical consideration

The study received ethical approval code (IR.IUMS.FMD.REC1396.9321199002) from the Ethics Committee for Research of Iran University of Medical Sciences. At fieldwork phase, the researcher outlined the goal of the study to the participants and obtained an informed letter of consent from them. For anonymity, a code was used instead of the name of participants.

Results

Theoretical phase

Definition of the concept

The term “motivation” is defined as reason(s) to do something or demonstrate a specific behavior, or desire or inner personal desires to do something,^[10] desire to do something,^[11] and an action or process that gives an individual the reason to do something.^[12] One of the first papers on motivation was published by Levin in 1935, where motivation was defined as a positive or negative movement toward a specific goal.^[7] Motivation is a multi-aspect construct, and many theories have dealt with it.^[13] Literature review indicated that different types of motivation have been surveyed. Ryan and Deci^[14] argued that not only different levels of motivations exist, but motivation itself is of different types. There are several theories on motivations and one of the most renowned of them, which is widely studied and referenced by articles on academic motivation in particular, is self-determination theory.^[15] The theory states that human beings have natural tendency toward progress and self-determination.^[15] According to the theory, different types of motivation can be pictured as a spectrum with “lack of motivation” and “inner motivation” at the each end and “external motivation” at the middle. Self-determination increases by moving from lack of motivation toward inner motivation. Inner motivation indicates complete self-determination.^[14,16] Students with inner motivation feel a driving force for learning and are interested in success and good education achievements.^[17] These students usually find education as a chance to satisfy their curiosity and are interested in acquiring knowledge. On the contrary, students with external motivation try to satisfy others.^[18] In fact, achieving the outcomes (e.g., a good mark or avoiding negative consequences) mirrors external motivation.^[17]

Attributes of the concept

Literature review indicated six key attributes for the concept academic motivation including “a process in nature,” “purposefulness,” “an internal matter,” “influenced by internal/external factors,” “driving force for endeavor and education performance,” and “a facilitator of learning and education achievement.” Academic motivation was defined by the majority of articles as a “process,” so that

rather than being an intrinsic characteristic of the student, it is a variable and complicated process.^[19] Motivation as a process entails physical and mental activities of the students.^[20,21] Some papers distinguished motivation and motive so that the former is a process that leads to purposeful activities and ensures continuance of the activities and the latter is a need or desire that causes motivation.^[22] “Purposefulness” was another attribute of academic motivation. Motivation is a process that motivates and fosters purposeful activities.^[23] This attribute is needed for realization of personal and organizational goals.^[24] In fact, motivation triggers purposeful desire in the brain.^[20,25,26] Motivation is defined as “internal/external desire.” Academic motivation is an internal force or desire that leads one’s behavior toward learning and progress.^[26-29] According to research works, academic motivation is “influenced by internal and external factors.” As noted earlier, self-determination theory describes internal and external sources of motivation. Internal motivation deals with internal factors like the joy of learning and external factors include receiving a preferred evaluation.^[14,17] Another attribute of academic motivation, which frequently appears in papers, is “driving force of endeavor and education performance.” Academic motivation is defined as the generator of energy needed for educational achievement that directs studying behavior and affects educational performance.^[17,26,28,30,31] Academic motivation, in many articles, is represented as a “facilitator of learning and educational achievement.” Motivation is one of the main factors effective in educational achievement, and it is positively related to learning outcomes.^[18,27,32] Motivation is the key for educational success and a facilitator of learning.^[33] That is, a decrease in academic motivation results in academic failure of the students.^[34]

Antecedents of the concept

Antecedents of academic motivations uncovered at theoretical phase included a variety of factors that can be categorized into four categories as follows: (1) Personal factors including desire to learn,^[35] positive academic self-concept,^[36] academic self-efficacy,^[4,30,35] self-regulation,^[26,27] personal needs like competency/self-determination/attachment,^[14,18,27] student’s interest/values/beliefs/goals like positive attitudes toward and interest in nursing,^[4,17,18,26] desire to help others,^[28,37,38] and professional identity^[29]; (2) social factors including family/teachers/society’s attitudes toward nursing^[29,35]; (3) educational factors including educational planning,^[38] curriculum and course contents,^[17,28] goal awareness,^[4] classroom and university environment,^[28,35] using theoretical learning in clinical setting, quality of clinical learning environment,^[29,31,35,38] human relationships,^[26,29,35] perceived support,^[39] characteristics of teachers, and efficiency of trainers^[29,38]; and (4) professional specification of nursing including the role of a nurse,^[29] professional and financial benefits,^[40] and job security.^[18,32]

Consequences of the concept

The academic motivation consequences, determined through literature review, were success and higher educational achievements,^[17,32] higher learning quality,^[4] facilitated learning-teaching process,^[28,30] educational satisfaction,^[31] education continuance,^[7,26,32,38,40] lower anxiety,^[28,36] more creativity,^[28] and training competent nurses.^[31,35]

Measurement of the concept

There is no specific tool for assessing the academic motivation of nursing students. There are several instruments for examining academic motivation in general. The Academic Motivation Scale (AMS) is one of the most frequently used instruments to assess academic motivation in various academic environments.^[1] It is based on self-determination theory and composed of seven subscales assessing three types of intrinsic motivation (to know, to accomplish things, and to experience stimulation), three types of extrinsic motivation (external, introjected, and identified regulation), and a motivation.^[41] The AMS and other tools for assessing academic motivation emphasize on the internal and external motivations that were discussed earlier.

Operational definition of the concept

Based on the literature review, an operational definition of academic motivation in nursing students is “an internal process affected by internal and external factors like personal/social/educational/professional factors that motivate and steer students’ educational endeavor and performance toward better realization of learning and educational achievements.”

Fieldwork study

Based on qualitative content analysis of the interviews with the nursing students, 163 initial codes were extracted, which were then decreased into 10 subcategories and five categories [Table 2]. The categories were “internal force, an incentive to achieve educational success, variable, unique, and multi-factor.” Each one of these categories are further discussed below.

Internal force

According to the participants, academic motivation is an internal force that made them work harder and study more. “*I think motivation is an internal thing, an internal will that makes you study more and work harder*” (Participant A).

An incentive to achieve educational success

According to the participants, having incentive was essential for having hard working attitude and high educational performance. Incentive was effective in achieving educational success so that it would not be easy to attain without incentive. “*Without motivation, no attempt and work are expected and without them the student’s cannot be successful*” (Participant F).

Variable

According to the participants, motivation changes with time and different situations. “*Motivation is not a constant thing. All changes and ups and downs of life change one’s priority and motivation to spend time and energy on the courses*” (Participant B).

Unique

The participants stated that motivation is unique in terms of level and nature. “*I believe that each person’s motivation is unique so that one is highly motivated and one is less motivated; it also is unique in terms of its nature, so that one studies hard for the sake of knowledge and another one does the same for sake of better job opportunities*” (Participant H).

Multi-factor

The participants argued that there were several factors effective in academic motivation of nursing students, which were categorized into internal/external factors based on definitions. Most of these factors were external and some were internal. The latter are those that bring in an inner sense of satisfaction and joy. They are mostly related to interests, values, and beliefs and represent personal and characteristics factors. In this category, desire to acquire information and knowledge, looking after patients, interest in nursing profession, altruistic attitudes, and desire to help patients are notable. “*I desire acquiring information and knowledge and being a knowledgeable nurse. Being limited to physical tasks is not something I fancy*” (Participant G). The participants highlighted several external factors effective in their academic motivation such as family, education, and professional affairs that are summarized in Table 2. As to family factors, the participants mentioned family support and concern about educational performance as an effective factor. “*When the family pays attention to educational function of the student, the student is more motivated to study harder*” (Participant C). According to the participants, educational factors that affect academic motivation include educational environment specifications and teacher’s characteristics. The former include competitive environment in classroom, quality of clinical education environment, and facilities in educational environment. “*The competitive environment in the classroom motivates me to study harder and gain higher marks*” (Participant D). Characteristics of teachers that are mentioned by participants include speech skills, teaching method, providing incentives, teacher–student communication, and finding relationships between theoretical material and real-life/clinic situations. “*I was not good at studying during the early semesters; however, I was lucky to find this teacher during the third semester who was very good in teaching and managing classroom. Because of that, I found the classroom no longer a boring environment and was more successful in learning things*”

Table 2: Categories, subcategories and codes determined based on the fieldwork study

Codes	Subcategories	Categories
Inner power, inner energy, intrinsic impetus, Esoteric force	Inner strength	Inner force
Wish, intention, desire, need to have something	Will	
Passion, emotion, eagerness, feel pleasure	Enthusiasm	
Cause of accomplishment, necessary for success, achievement condition, progress factor	Cause of success	An incentive for better educational performance
Stimulus for trying, driving factor, reason of effort	Incentive for endeavor	
Tend to have good work, Sense of being superior, desire to do better	Desire to have better performance	
Engage in educational activity, attend in class, improved studying	Studying better	
Depend on field, depend on background, variable in different background	A function of the background	Variable
Variable in time, variable in place, depending on condition	Variation of motivation depending on the condition	
Effect of life events on priority, effect of stress, success, grief, happiness on motivation	Change of motivation with life events	
Reduce motivation during school years, increase motivation during school years	Change of motivation during the years of studying	
uncommon, exclusive, special, incomparable	Unique to each person	Unique
Personal, individual matter, inherent, Dependent on self	A personal matter	
Gaining information and knowledge, looking after patients, interest in nursing profession, altruistic attitudes, helping patients.	Internal factors that create motivation	Multi-factor
Family factors like being concerned about educational performance of the student and being supportive.	External factors that create motivation	
Educational factors including classroom/clinical environment, competitive environment, educational facilities, supportive environment; characteristics of teachers like speech skills, teaching style, providing incentive, communication with students, finding relationship between theoretical materials and real life/clinical implications.		
Specification of nursing profession like promotion opportunities, high salary, job status, professional growth chance, exciting work experience, tasks diversity, and gaining the knowledge that would be useful in real life.		

(Participant E). Promising specifications of nursing profession as seen by the participants were promotion opportunities, high salary, job status, professional growth chance, exciting work experience, tasks diversity, and gaining knowledge that would be useful in real life. *"We are sure about availability of job opportunities or good salary. These give us motivation to continue the program"* (Participant I).

Conclusive analysis

Comparison of the results of theoretical and fieldwork phases revealed that the students' ideas about academic motivation were highly consistent with what was found in the articles. The literature review indicated six attributes for academic motivations including a process in nature, purposefulness, an internal matter, a function of internal and external factors, a driving force of endeavor and educational performance, and a facilitator of learning and educational achievement. Each one of these attributes emphasize on one aspect of motivation and might overlap with each other. As found in the literature review, the concept of academic motivation had antecedents that were explicitly and implicitly related to the concept. Most of these antecedents were personal factors, which seem reasonable given that the motivation is an inner

force. Social and educational factors and professional specifications of nursing were other factors that contributed to formation of academic motivation in nursing students either implicitly or explicitly.

Fieldwork study results showed that the concept of academic motivation was an inner force, unique, an incentive for educational achievements, and affected by multiple factors. It is the outcome of internal and external personal factors. The internal factors were mostly related to the student's interests, values, and beliefs, while the external factors included family, academic, and professional factors. These factors are in fact the antecedents that create academic motivation in nursing students, which is highly consistent with the findings of reviewing the published articles.

The results obtained by reviewing the articles showed that academic motivation was related to the consequences of educational achievement, higher quality of learning, educational satisfaction, continuance of studying, lower anxiety level, higher creativity, and training competent nurses. Fieldwork study results also indicated that motivation results in higher educational achievement and performance.

Based on the results of theoretical and fieldwork phases, a comprehensive definition of academic motivation in

nursing students is as follows: “Academic motivation is an inner process, purposeful, unique, and variable and it is affected by internal personal factors like interests, values, and beliefs and external factors like social, family, academic, and nursing professional factors so that it triggers and steers educational performance and endeavor of the students toward better learning performance and goals and higher educational achievements.”

The empirical support of the fieldwork was congruent with literature review. This makes it clear that academic motivation is a significant and applicable concept to nursing education and practice. The findings showed that academic motivation is the driving force for learning efforts and academic achievements and that it can promote nursing education. Furthermore, promoting academic motivation in nursing students will lead to graduation of qualified nurses, which ultimately improves the quality of nursing care.^[31,35]

Discussion

The study contributed to clarifying the concept of academic motivation in nursing students. As the findings showed, the concept as realized by the nursing student was consistent with the definition of the concept by research. In addition, academic motivation in nursing students was characterized with attributes like “an inner process, purposeful, unique, variable, and affected by internal/external personal factors.” It acts as a driving force for realization of objectives and a facilitator of learning and educational achievement.

Literature review revealed that the concept of motivation was described as a process. Linnebrink and Pintrch^[19] believed that, given the social-cognitive model, rather than being an intrinsic characteristic of students, motivation was a complicated and variable process. Schunk *et al.*^[21] believed that instead of a product, motivation was a process that is demonstrated in one’s behavior. Taking into account the definition of process as a series of actions and inputs in order to achieve a specific outcome,^[11] assuming motivation as a process is supportable. As the results recommended, there are antecedents for motivation like personal, social, academic, family, and professional factors that trigger activities based on a purpose and lead to emergence of the outcome—that is, educational achievement. Purposefulness is one of the main attributes of academic motivation, which was found both in theoretical review and fieldwork phase. In fact, purposefulness of motivation concentrates all activities and works of an individual in a specific direction. Uniqueness and variable nature of motivation were found based on interviews with the students. Individuals with different personalities have different motivations and priorities. In addition, one’s motivation varies depending on the situation. Students might demonstrate a high level of motivation in one situation and no motivation at all in

another.^[34] The participants mentioned different factors as the causes of motivation and most of them were external factors. According to Deci and Ryan,^[14] motivation can be triggered either internally or externally. Students that are motivated internally have the required motivations to learn, work, and achieve success.^[14] Many authors have emphasized on internal motivation as the research results have shown that students with internal motivations have higher tendency to overcome educational challenges, stronger educational self-image, more creativity, and better educational performance.^[14,36] In addition, excessive reliance on external motivation (e.g., marks) is a risk for personal engagement and moralities of students.^[18] One of the main attributes of the concept of academic motivation based on literature review and interviews with students was that motivation is a driving force and steers one’s educational performance. Many authors have adopted this attribute to give a definition of the concept of motivation, and there is almost a consensus on this definition. In fact, it is motivation that drives a behavior, leads it in a specific direction, and improves its efficiency.^[42] Facilitating learning and educational achievement was another key attribute of academic motivation. Many studies have defined motivation as a key to learning^[28,30,33,43] and educational success of students.^[17,18,32]

As to limitations, at the theoretical phase, only English-language literature was used and limited databases were searched due to lack of access. In addition, at the fieldwork phase, only nursing students were interviewed and faculty members and nursing educators were left of the study.

Conclusion

Academic motivation of nursing students that was conceptualized in this study is a broad and multidimensional concept, which is affected by various personal, family, social, educational, and professional factors. By understanding the factors affecting academic motivation, it is possible to make appropriate planning to improve academic motivation in nursing students. On the contrary, academic motivation in nursing students was a factor in achieving academic success, better quality of learning, creativity, academic satisfaction, reduction of anxiety, and training competent nurses. Improvement of nursing student’s academic motivation and training competent nurses led to quality of patient care. The findings may be helpful for development of tools to survey academic motivation of nursing students. The results reported here prepare the ground for further studies on developing theories of academic motivation in nursing students.

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Conflicts of interest

Nothing to declare.

References

1. Stover JB, Iglesia G, Boubeta AR, Liporace MF. Academic motivation scale: Adaptation and psychometric analyses for high school and college students. *Psychol Res Behav Manag* 2012;5:71-83.
2. Alt D. College students' academic motivation, media engagement and fear of missing out. *Comput Human Behav* 2015;49:111-19.
3. Vecchione M, Alessandri G, Marsicano G. Academic motivation predicts educational attainment: Does gender make a difference. *Learn Individ Differ* 2014;32:124-31.
4. Bråten I, Olaussen BS. The motivational development of Norwegian nursing students over the college years. *Learn Health Soc Care* 2007;6:27-43.
5. Zhang ZJ, Zhang CL, Zhang XG, Liu XM, Zhang H, Wang J, *et al.* Relationship between self-efficacy beliefs and achievement motivation in student nurses. *Chinese Nurs Res* 2015;2:67-70.
6. Miers ME, Rickaby CE, Pollard KC. Career choices in health care: Is nursing a special case? A content analysis of survey data. *Int J Nurs Stud* 2007;44:1196-209.
7. Heid CL. Motivation and Persistence among BSN Students in Northeast Ohio: A Correlational Study [Dissertation]. University of Phoenix; 2014.
8. Walker LO, Avant KC. Strategies for Theory Construction in Nursing. 4th ed. Upper Saddle River, NJ: Pearson Prentice Hall; 2005.
9. Schwartz-Barcott D, Kim HS. An expansion and elaboration of hybrid model of concept development. In: Rodgers BL, Knafel KA, editors. *Concept Development in Nursing: Foundation, Techniques, and Application*. 2nd ed. Philadelphia: W.B. Saunders; 2000. p. 129-59.
10. Oxford English Dictionary [Internet]. Available from: http://www.oxforddictionaries.com/us/definition/american_english/motivation/. [Last cited on 2018 May 09].
11. Cambridge Dictionary [Internet]. Available from: <http://dictionary.cambridge.org/dictionary/english/motivation/>. [Last cited on 2018 May 09].
12. Merriam-Webster Online Dictionary [Internet]. Available from: <http://www.merriam-webster.com/dictionary/motivation/>. [Last cited on 2018 May 09].
13. Cretu DM. A model for promoting academic motivation. *Procedia Soc Behav Sci* 2015;180:751-8.
14. Ryan RM, Deci EL. Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemp Educ Psychol* 2000;25:54-67.
15. Patrick H, Williams GC. Self-determination theory: Its application to health behavior and complementarity with motivational interviewing. *Int J Behav Nutr Phys Act* 2012;9:1-12.
16. Deci EL, Ryan RM. *Handbook of Self-Determination Research*. Rochester NY: University of Rochester Press; 2004.
17. Nilsson K, Stomberg M. Nursing students motivation toward their studies - a survey study. *BMC Nurs* 2008;7:1-7.
18. Rose S. Academic success of nursing students: Does motivation matter. *Teach Learn Nurs* 2011;6:181-4.
19. Linnebrink EA, Pintrich PR. Motivation as an enabler for academic success. *School Psych Rev* 2002;31:313-27.
20. Bengtsson M, Ohlsson B. The nursing and medical students' motivation to attain knowledge. *Nurse Educ Today* 2010;30:150-6.
21. Schunk DH, Pintrich PR, Meece JL. *Motivation in Education. Theory, Research and Applications*. New Jersey: Pearson Education Inc; 2008.
22. Seif, A. *New Psychology: Psychology of Learning and Education*. 7th ed. Tehran: Douran Publication; 2015.
23. Pintrich PR, Schunk DH. *Motivation in Education: Theory, Research, and Applications*. 2nd ed. Upper Saddle River, NJ: Merrill Prentice Hall; 2002.
24. Aung MN, Somboonwong J, Jaroovanichkul V, Wannakrairot P. Assessment of preclinical students' academic motivation before and after a three-day academic affair program. *Int J Gen Med* 2015;8:373-80.
25. Yukseoglu SM, Karagüven M. Academic motivation levels of technical high school students. *Procedia Soc Behav Sci* 2013;106:282-8.
26. Stull A. *Nursing Students Decision to Stay the Course: A Qualitative Case Study*. [Dissertation]. Lincoln: University of Nebraska; 2008.
27. Parlett DK. *A Comparison of Associate and Bachelor Degree Nursing Students' Motivation*. [Dissertation]. Walden University; 2012.
28. Kosgeroglu N, Acat MB, Ayranci U, Ozabaci N, Erkal S. An Investigation on Nursing, Midwifery and Health Care Students Learning Motivation in Turkey. *Nurse Educ Pract* 2009;9:331-9.
29. Hanifi N, Parvizi S, Joolae S. Motivational journey of Iranian bachelor of nursing students during clinical education: A grounded theory study. *Nurs Health Sci* 2013;15:340-5.
30. Hassankhani H, Mohajjel Aghdam A, Rahmani A, Mohammadpoorfard Z. The relationship between learning motivation and self-efficacy among nursing students. *Res Dev Med Educ* 2015;4:97-101.
31. Karabulut N, Aktas Y, Alemdar D. The relationship of clinical learning environment of nursing students' academic motivation. *Kontakt* 2015;1:9-15.
32. Shakurnia A, Alijani H, Khajeali N, NiakanKalhori SR. Nursing students' motivation and satisfaction, Do the motivation and satisfaction of nursing students change during their study years? *J Health Med Nurs* 2015;15:28-34.
33. Aktas YY, Karabulut N. A survey of Turkish nursing students' perception of clinical learning environment and its association with academic motivation and clinical decision making. *Nurse Educ Today* 2016;36:124-8.
34. Pace AC, Ham AL, Poole TM, Whaib KL. Validation of the MUSIC model of academic motivation inventory for use with student pharmacists. *Curr Pharm Teach Learn* 2016;8:589-97.
35. Sarikoc G, Oksuz E. Academic motivations and academic self-efficacy of nursing students. *J Clin Anal Med* 2017;8:47-51.
36. Khalaila R. The relationship between academic self-concept, intrinsic motivation, test anxiety, and academic achievement among nursing students: Mediating and moderating effects. *Nurse Educ Today* 2015;35:432-8.
37. Jirwe M, Rudman A. Why choose career in nursing. *J Adv Nurs* 2012;68:1615-23.
38. Newton JM, Kelly CM, Kremser AK, Jolly B, Billett S. The motivation to nurse: An exploration of factors amongst undergraduate students, registered nurses and nurse managers. *J Nurs Manag* 2009;17:392-400.

39. Metz AM, Cech EA, Babcock T, Smith JL. Effects of formal and informal support structures on the motivation of native American students in nursing. *J Nurs Educ* 2011;50:388-94.
40. Usher K, Usher K, West C, Macmanus M, Waqa S, Stewart L, *et al.* Motivation to nurse: An exploration of what motivates students in Pacific Island countries to enter nursing. *Int J Nurs Pract* 2013;19:447-54.
41. Vallerand RJ, Pelletier LG, Blais MR, Briere NM, Senécal C, Vallières EF. The academic motivation scale: A measure of intrinsic, extrinsic, and amotivation in education. *Educ Psychol Meas* 1992;52:1003-17.
42. Tohidi H, Jabbari MM. The effects of motivation in education. *Procedia Soc Behav Sci* 2012;31:820-4.
43. Abootorabi R. How I could improve academic motivation of my students in an industrial high school? *Procedia Soc Behav Sci* 2011;15:571-5.