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Evaluation of Academic Performance, Academic Motivation, Hope for the Future and Life Satisfaction of Pharmacy Students of a Medical School

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ABSTRACT

Background: This study sought to investigate the evaluation of academic achievement, academic motivation and hope for the future and life satisfaction of pharmacy students of the Ahvaz Jundishapur University of Medical Sciences and their relationship with the school years passed.

***Methods*:** The samples in this study were all pharmacy students studying in the college of pharmacy, the Medical University of Ahvaz in the year 2014-2015. In order to collect data with regard to hope, life satisfaction, motivation and academic satisfaction, the questionnaire of Snyder hope Scale (1991), Satisfaction with Life Scale questionnaire (SWLS), lepper motivation scale (2005) and Bahrani and Jokar questionnaire (1378) were used respectively. Moreover, data on Academic performance were acquired using the GPA of the students and number failed course of students in each entry and the data were analysed by using SPSS 20.

***Results*:** The results did not indicate any significant different in an investigation of five class of students and from four variables of hope, academic motivation, academic achievement and life satisfaction. But contrast test for combined group showed that academic motivation and academic performance in freshmen students (student who just entered university) are significantly higher than the other four inputs. Third-year students possess less academic motivation than other students. Senior students' academic performance was also significantly lower than of students from other years of their curriculum.

***Conclusion*:** Freshmen students face challenges of the new environment, and this affects their academic performance. Besides in the third year of pharmacy school curriculum, pharmacy students pass the basic exam and the main pharmaceutical courses start for them, this might be the reason that their intrinsic motivation increase.

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Introduction

University as a Socio-cultural institution is one of the most valuable resources for developing a society. For its decisive role in the production of knowledge (research) and transfer of knowledge (training), this institution has been considered as an indicator of countries' development.

Satisfaction in a part of life could be effective on the

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consent of other parts of life. For example, when students are satisfied with their education, they might be more satisfied with other areas such as economics, society, culture and politics (1).

Educational satisfaction means the individual's consent in role and experience as a student. Evaluation of academic satisfaction could be regarded as an index to improve performance, help students through their education and indicate university's success (2). Moreover, it is considered to be a very important component of hope for the future, life satisfaction, and academic performance.

Since the students are the capital and specialized human resources of the society and the future health of the community is to be entrusted them, motivation to achieve academic performance does have a significant importance. It seems that there is a mutual interaction ring among academic satisfaction, efforts, performance, and outcomes. In this case, the increase in the individual's effort causes for the individual to make more performance and further improvements. With the addition of performance, academic satisfaction also improves in person. Satisfaction, alongside performance and advances, create a friendly and supportive atmosphere for the student that increases individual's knowledge and satisfaction respectively (3). Life satisfaction and academic performance are important and influential factors in students hope for future. In fact, life satisfaction is the objective assessment of the quality of personal life. Studies have shown that Probation occurs at a higher rate in the students who are less satisfied with their course (4).

There are many difficulties for pharmacy educators. They are responsible for high-quality educational programs and the different needs of pharmacy students. Besides they must keep these students motivated, and help the progress of education programs in both traditional and nontraditional ways (5). Due to a high sensitivity of learning in pharmacy students who are directly dealing with health and body of people and their important role in educating health care to the public community, research about motivation, satisfaction and academic performance, especially in medical students is considered vital.

Besides, hope is the motivating factor and plays an important role in helping humans to achieve their goals (6). Synder (1995) defines hope as the "the process of thinking about one's goals, along with the motivation to move toward these goals (agency) and the way to believe those goals" (7). In this definition hope is not only an emotion, but it is a motivational system of active cognitive (8). As a result, hope helps students to look at the problems as challenges, and concentrate on success, which eventually increases their chance to reach their goals (9). Also, hope empower students to plan strategies for attaining goals, allow them to remain focused and leads them to study better and create better-learning environments (8).

On the other hand, motivation acts as a strong force in teaching-learning process (10). It is one of the most important issues affecting students' progress. Academic motivation is a learning requirement (11). Motivation gives strength and direction to behavior and helps to maintain continuity of learning (12). The quality of the learner' motivation is one of the main concerns of the researchers. As Vansteenkiste and Deci (2006) noted "Quality of motivation refers to the type or kind of motivation that underlies learning behavior. It can be distinguished from the quantity, level, or amount of motivation that learners display for a particular learning activity" (13). Quality of motivation indicated that Learners can be intrinsically motivated (involving in an action with expectation for external reward and for own desire) or extrinsically motivated (engaging in an action for the external reward or avoiding the punishment) (14). University students must accomplish several goals. They need to master knowledge in their field and at the same time they need a good grade to prove their competence. This means mastery and performance goals cannot be separated, and they can lead to both intrinsically and extrinsically motivation for university student (15).

Due to the direct connection between the learning and academic performance of learners, it is necessary to consider this issue in order to create a successful and dynamic education system. Academic achievement is itself, an important index of evaluating the performance of the education system whose factors divide into three categories: physiological, psychological and environmental. The course satisfaction is associated with academic achievement (16).

Due to this fact, this study intends to investigate and compare factors of achievement, motivation, and hope for the future and life satisfaction in pharmacy students studying in the academic year of freshman to fifth.

Methods

This was a cross-sectional study. Data collection tools in this study are standard questionnaires.

In order to measure academic motivation in students, Harter questionnaire (1980) modified by Lepper, Corpus, and Iyengar (2005) was used. Question format designed by Harter (1981) was to assess intrinsic versus extrinsic motivation. Harter (1981) scale consider extrinsic motivation and intrinsic motivation as two opposites end (17). Lepper et al., (2005) challenged this assumption that intrinsic and extrinsic motivation are contrast polar. They modified Harter (1981) scale by asking independent questions for intrinsic and extrinsic motivation (18). This is scale thirty three-item on a five- point Likert scale ranged from strongly disagree to strongly agree, which seventeen-item assess intrinsic motivation, and sixteen item evaluate extrinsic motivation.

Lepper et al., (2005) reported the reliability of this scale 0.90 by Cronbach's alpha method (18). This questionnaire

Table 1. Mean and standard deviation for each of variables of each year of students pharmacy curriculum.

	Academic extrinsic motivation		Academic intrinsic motivation		Life satisfaction		Hope		Academic satisfaction		Academic performance	
	Mean	Standard deviation	Mean	Standard deviation	Mean	Standard deviation	Mean	Standard deviation	Mean	Standard deviation	Mean	Standard deviation
Fifth-year	46..32	6.63	56.67	10.26	24.4	7.07	22.48	5.81	49.25	11.03	13.86	3.2
Fourth year	43.63	8.48	55.07	10.68	21.25	8.82	25.25	7.83	48.85	11.81	14.88	0.91
Third year	43.62	7.34	59.24	8.19	23.08	6.28	22.14	5.7	52.43	8.62	14.93	2.93
Second year	43.91	7.72	53.96	11.97	26.57	6.01	20.55	4.93	53.14	10.25	15.4	1.20
First year	43.98	8.30	50.16	12.77	24.77	7.06	23.13	6.55	49.81	9.42	15.55	1.38

were translate and validate by Bahrani (2009). He tested the reliability of this test and reported the Cronbach's alpha as 0.85 and test and retest alpha as 0.86 for the intrinsic motivation and Cronbach's alpha as 0.69 and test and retest alpha as 0.72 for extrinsic motivation (19). In the present study, the reliability of the questionnaire was obtained 84.0 and 0.83, using two methods of Cronbach's alpha and split-half respectively.

Hope

In order to measure the hope in students, the scale of Snyder et al., (1991) was used. It is a twelve item on an eight-point likert scale ranged from strongly disagree with a score of 1 to strongly agree with the score of eight (19). Four questions deviants are omitted to increase test accuracy. Snyder et al., (1991) reported the test's reliability 0.85 through retest after three -weeks (20).

In the research that conducted by Kermani, Khoda Panahi, and Haidari (2011) translated hope scale into Persian and validated it. The validity of this scale was obtained 0.86 for the hope's total scale through Cronbach›s alpha (21).In the present study, the reliability of hope questionnaire was obtained 0.73 and 0.72 through methods of Cronbach›s alpha and split-half respectively.

Life Satisfaction

The scale of life satisfaction (SWLS) of Diener (1985) was used to measure life satisfaction. This is five-item on seven-point Likert, which score from one (strongly disagree) to seven (strongly agree). The internal consistency of the questionnaire equals (Cronbach›s alpha) 0.93 and correlation with other tests which examine the common areas equal 0.89 (22). Khosravi (2005) translated this scale to the Persian and reported the Cronbach alpha as 0.88 and 0.86 by test and retest method (23). In the present study, the reliability of life satisfaction questionnaire was obtained 0.91 and 0.86 through methods of Cronbach's alpha and split-half respectively.

Academic satisfaction

The scale academic satisfaction scale of Bahrani and Jokar (2008) was used to measure academic satisfaction. This questionnaire consists thirteen items, which six of them are designed negatively In order to avoid bias. The questionnaire is on a five-point Likert scale ranged from strongly disagree to strongly agree (24). In the present study, the reliability of academic satisfaction questionnaire was obtained 0.84 and 0.83 through methods of Cronbach's alpha and split-half respectively. Moreover, the students' Academic performance was calculated using the mean GPA of students in each academic input, the number of students dropping out each entry, data were collected by questionnaires, and also GPA were received from the Education Department.

Population and sampling

The study sample was available and the total population sample of pharmacy students of Jondi Shapour University of the Medical Sciences was distributed in various inputs studying in the 94-93 (2014-2015) school year in Ahvaz. The population was 158 students, of which 57 were male and 101 were female and their age range was between 18 and 42 years.

The data analysis was done by software SPSS 20. The ANOVA test was used in order to investigate the significant difference between academic years in hope academic motivation. This test is used when the aim is to compare more than groups' mean (25). In current study the significance of differences of meaning for each variable were compared in various academic year. The level of significance was considered at 0.05. The ANOVA test was run by SPSS version 20 application.

Results

Table 1 reveals mean and standard deviation of the sample divided by education level in four variables; motivation, hope, life satisfaction and academic satisfaction.

ANOVA test results for all variables are presented in Table 2.

The ANOVA test results indicated that there are no significant difference among years of education in terms

Table 2. Results of one way ANOVA test.

	F	Degrees of freedom (df)	Sig.
Academic extrinsic motivation	0.55	4	0.699
Academic intrinsic motivation	3.088	4	0.018
Life satisfaction	2.38	4	0.055
Hope	2.28	4	0.063
Academic satisfaction	1.11	4	0.352
Academic performance	2.21	4	0.072

Table 3. Result of Post Hoc Scheffe test for intrinsic motivation.

	Mean Difference (I-J)	Std. Error	Sig.
First year- third year	-9.08558	2.79289	.036

Table 4. Results of combined comparisons.

Variable	Groups compared	(T)	Value of Contrast	standard error	Degree of freedom	The significance level
Intrinsic Motivation	Compare all the years(combined) with the first year	3.07	24.31	7.89	153	0.002
	Compare the third year with all of the years(combined)	-2.14	-21.11	9.84	153	0.034
Academic performance	Compare the last year with the rest of the years(combined)	2.63	1.32	2.01	115	0.01
Hope	Compare the fourth year with the rest of the years(combined)	2.24	2.7	1.2	153	0.02

of extrinsic motivation (F=0.55 and p= 0.7), in terms of life satisfaction (F =2.38 and p= 0.05), in terms of hope (F= 2.3 and p= 0.06), academic satisfaction (F=1.1 and p=0.3) and educational attainment (F =2.1 and p= 0.07), but there is significant different between years of the education in term of intrinsic motivation (F =3.1 and p= 0.02).

Post Hoc Scheffe test was done for the Multiple Comparisons of the groups for intrinsic motivation. The result is presented in Table 3.

Intrinsic motivation for the student in year three is significantly more than the student in year one (about 9.08). Combined comparison (contrast test) indicated difference among several years. The results have been shown in Table 4.

Results of the combined comparisons indicate that the first year students' academic motivation is significantly lower (T=3.07 and p= 0.002) from the students' in rest of the years combined and the academic motivation of third year students is significantly higher (T=2.14 and p=0.034) than the rest years combined. Last year Students' average scores are significantly lower (T=2.63 and p =0.01) than other years' combined. Moreover, the results have shown that hope in last year students is significantly higher (T=2.49 and p=0.01) than the students in other years combined.

Discussion

The result indicated no significant difference in the terms of academic satisfaction, life satisfaction, extrinsic motivation, hope, and academic performance between five different years of pharmacy school curriculum, although there was a significant difference in intrinsic motivation. Pharmacy students at their third year of their curriculum were significantly higher on intrinsic motivation.

Although it is not significant, students' academic performance have decreased each year and the last year students' progress is lower than all of the students in other years. The reason might be due to the employments of students in pharmacies in years later. As job hours increases in pharmacies, the students spend fewer hours to study. It is a challenge for working student to adjust their time for studying and work (26). This could be an important reason for students' decreased GPA and progress. Moreover, the freshman students have recently entered university and passed the entrance exam. These students have

studied under lots of pressure for this test which has its side effects on their psychological health. Psychological damage arising from the entrance examination can be considered equivalent to test apprehension. Usually, before the exam is taken, students are deeply concerned about the test and types of abuses, excuse making, and anxiety reactions are seen in their behavior due to the stress come ahead of the exam. This situation might be followed by various psychological damages and in many cases causes physical damage to the individual (27). One of these damages could be decreased motivation in students. For another, this reduction might be caused by entering a new environment, students are unfamiliar with the university and teaching methods and courses, even some of these students come from other cities, and all of these new situations can be overwhelming for freshmen students (28).

After a while, students become more familiar with applications of their field of study which enhance their motivation and academic performance. When students are not aware of applications of their study, knowledge wouldn't be treated as a tool but as some kind of facts in their minds. When learning and content are separated, learning alone is considered as the end product of learning rather than as a tool to use and solve problems. The existence of such a state can reduce students' motivation and learning (29). Learning context without knowing their applications could reduce learning and causes loss of motivation. For instance, Herrington and Oliver suggest situational learning in order to increase academic motivation and learning. Situational learning means that learning in the real situation could increase students' motivation and learning (30).

In the third year of pharmacy school curriculum, pharmacy students pass the basic exam and the main pharmaceutical courses start for them. Students are anxious to study these courses, and they wish to master them (28). This might be the reason that their intrinsic motivation increase significantly. Starting the major courses do impact students (31), but this effect does not last long. Intrinsic motivation decrease again after the third year, even though these changes is not significant, student go back to their attitude of "just what is necessary to pass the test" (28). This finding is on the contrary to Hastings & west (2005) findings, their result indicated that freshmen pharmacy student are significantly more motivated than the rest of pharmacy students.

As result indicated pharmacy student hope is significantly higher than the rest of years combine, this might be due to the facts that pharmacy students have their first experience of working in the pharmacy. This situation can lead to the increase of hope in them.

There several limitations to this study. This research was conducted longitude. Therefore some other factor might have affected students' perception and these variables. Besides a wider sample could lead to more specific results.

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