



The Influential Factors in Students' Satisfaction with Kermanshah University of Medical Sciences, Iran (2015 - 2016)

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Abstract

Background: Attention to educational quality is a primary goal of the managers, professors, and policymakers of the community health system. Universities seek to meet students' needs and expectations and increase their satisfaction since student satisfaction is essential to the growth and improvement of educational organizations.

Objectives: The present study aimed to evaluate the influential factors in students' satisfaction with Kermanshah University of Medical Sciences (KUMS), Iran in 2015-2016.

Methods: This descriptive, cross-sectional study was conducted on 346 students of KUMS who were selected via stratified random sampling. Data were collected by a questionnaire used in similar studies. The influential factors were assessed in two dimensions of importance and satisfaction. Data analysis was performed using descriptive and inferential statistics at the significance level of 0.05.

Results: The mean scores of the important dimension, satisfaction dimension, and the gap were 174.6 ± 25 , 138.3 ± 24.3 , and 36.3 ± 33.3 , respectively. All the factors had a high degree of importance, and the highest level of relative satisfaction belonged to the factors of school atmosphere and educational effectiveness. Meanwhile, the lowest level of satisfaction was assigned to responsiveness to diverse populations. The most significant gap was observed in the factors of school's atmosphere and educational effectiveness, and the lowest value belonged to the factors of health and safety status of the school. In addition, the mean score of the gap in the female students (42 ± 33) was higher compared to the male students (26.9 ± 31.9 ; $P = 0.004$).

Conclusions: Since the level of student satisfaction with KUMS was not desirable in this study, it is recommended that the university administrators and staff increasingly improve the quality and quantity of the educational services at this institution.

Keywords: Students, Satisfaction, Medical Sciences

1. Background

Attention to the quality of education is the primary goal of the managers, professors, and policymakers of the community health system. Therefore, universities seek to meet students' needs and expectations and increase their satisfaction. Researchers believe that student satisfaction is a major contributing factor to the growth and development of educational centers (1). Since students are important elements and the main clients of higher education, their attitude is universally considered indispensable to the monitoring quality within universities (2, 3). Given the paramount importance of student satisfaction in the sur-

vival of universities, these institutions are progressively employing a customer-oriented approach to better meet students' needs (4, 5).

A study in this regard was performed by Sadeghi Bahmani et al. at Ardabil University of Medical Sciences (Iran), and the findings indicated that a lack of educational satisfaction could reduce the motivation and efforts of students in educational activities (6). To increase student satisfaction, universities must collect information about students' attitudes toward educational services and accommodate student satisfaction through reinforcing the positive influential factors and revising the negative ones (7). Several factors could affect student satisfaction, including in-

dividual and environmental factors. Some individual factors are age, gender, and personality (8). Researchers have also stated that the school's atmosphere, the quantity and quality of classrooms, equipment and facilities of the university, professors' teaching skills, and welfare services of universities are important environmental factors that affect student satisfaction (9, 10).

In the study by Weerasinghe and Fernando in Sri Lanka, the quality of university facilities, curriculum, and atmosphere were the foremost influential factors in the students' evaluation of the university (11). In the study conducted by Khosravi et al. at the Islamic Azad University of Tehran (Iran), factors such as school's atmosphere, student support services, educational efficacy, financial support, and the health and safety status of the schools most significantly affected student satisfaction (12). In addition, the research performed by Hakim at Ahvaz University of Medical Sciences (Iran) indicated that the educational environment of the university, teaching methods, and the assessment methods used by professors were the most significant influential factors in student satisfaction (13).

Another study in this regard was performed by Tabibi and Keyhan at the Islamic Azad University of Urmia (Iran), and the findings showed that from the perspective of students, six main factors affected their satisfaction, including personal characteristics, professional qualifications of schools, educational/research factors, managerial/administrative factors, welfare/career factors, and occupational/professional factors (14).

Given the sensitivity of medical science groups due to their direct relationship with human life and community health, the importance of their empowerment is doubled, and any factor increasing this ability is of great value (15).

2. Objectives

As student satisfaction with university plays a key role in the learning process and acquisition of skills by students, the present study aimed to evaluate the influential factors in student satisfaction with Kermanshah University of Medical Sciences (KUMS), Iran in 2015 - 2016.

3. Methods

This descriptive, cross-sectional study was conducted on the students of KUMS in 2015-2016. The sample population included all the students enrolled in the professional doctorate, master's, bachelor's, and associate courses at KUMS in the academic year 2015-2016. Considering the total number of students ($n = 3,324$), a sample size of 346 was estimated using the Krejcie-Morgan sample size table (16).

Notably, the participants were selected via stratified random sampling, and schools are considered as strata. Given the number of the students enrolled at each school, the sample population consisted of the students selected from the schools of pharmaceuticals (8.1%), medicine (25.4%), dentistry (5.2%), nursing and midwifery (16.2%), paramedics (25.4%), and health (19.7%).

Data were collected by the questionnaire used by Roozegar at Islamic Azad University of Tehran (17). The questionnaire has been developed based on the internationally used Noel-Levitz student satisfaction inventory (SSI) with confirmed validity and reliability (18).

In the present study, the validity and reliability of SSI were evaluated and confirmed at the Cronbach's alpha coefficient of 88%. The questionnaire used in our study consisted of 61 items, with 58 items including 11 factors and three items focused on the factor of responsiveness to diverse populations, which were assigned to the satisfaction dimension.

These factors were examined in two dimensions of importance and satisfaction, which were designed in the form of a four-point Likert scale so that the level of satisfaction would range from "totally satisfied" into "totally dissatisfied" and the level of importance would range from "totally important" to "totally unimportant". The higher scores represented higher levels of satisfaction; notably, the lowest and the highest levels of satisfaction were scored 61 and 244, respectively. By determining the importance of each factor, the participants would determine the factors with the most significant impact on their satisfaction.

In the importance dimension, we identified the influential factors in the students' satisfaction with university, and the student's satisfaction with the university was examined in the satisfaction dimension. To determine the gap, the students' scores in the importance dimension were compared with their scores in the satisfaction dimension. If the score was positive, it would indicate that the level of the students' satisfaction was lower compared to the importance of that factor. If it was negative, the level of the students' satisfaction would be higher than the importance of that factor. If the score was zero, it would indicate no gap in this regard.

The applied questionnaire investigated 12 influential factors in student satisfaction, including the efficacy of educational guidance and counseling, school's atmosphere, living in a university dormitory, student support services, students' freedom of speech, educational efficacy, financial support, the efficacy of student enrollment and admission, health and safety status of the school, superior services, student-oriented methods, and the responsiveness of the university to diverse populations.

The inclusion criteria of the study were being a student at KUMS, willingness and ability to complete the questionnaire, and written informed consent to participate. The exclusion criteria were the improper completion of the questionnaire and the inattention and impatience of the students in completing the questionnaire.

Data analysis was performed in SPSS version 18.0 (SPSS Inc., Chicago, IL, USA) using descriptive statistics for the criteria of central tendency and dispersion and inferential statistics for the normalization of data by the Kolmogorov-Smirnov test. Given the normality of the data ($P > 0.05$), the multi-factor analysis of variance (ANOVA), and Tukey's post-hoc tests were employed for paired comparisons. In all the statistical analyses, the significance level was set at $P < 0.05$.

4. Results

Among 346 students, 62.4% were female, 94.5% were single, and 55.8% lived in dormitories. The mean age of the students was 22 ± 1.3 years (range: 18 - 29 years). The mean score of the importance dimension was 174.6 ± 25 , while it was 138.3 ± 24.3 in the satisfaction dimension, and the mean score of the gap was 36.3 ± 33.3 . The obtained results also indicated that all the identified influential factors were significant. Accordingly, the two factors of school's atmosphere and educational efficacy were the most significant in this regard.

According to the findings, the highest relative satisfaction was reported with the factors of school atmosphere and educational efficacy, while the lowest level of satisfaction was associated with responsiveness to diverse populations. Moreover, a gap was observed between the current and desired status of KUMS. Given the significance of the identified factors, the satisfaction level of the students was not appropriate. The highest value of gap was also observed between the factors of school's atmosphere and educational efficacy, while the lowest value was reported for the health and safety status of schools (Table 1).

4.1. Importance Dimension

The obtained results indicated a significant difference in the total score of importance between the female (180.8 ± 22.9) and male students (164.5 ± 25 ; $P < 0.001$). Furthermore, a significant difference was denoted in the total score of importance between different schools of KUMS ($P = 0.004$). In this respect, the School of Nursing and Midwifery had the lowest score (161.72 ± 22.1), while the School of Medicine had the highest mean score (181.4 ± 22) (Table 2).

A significant difference was reported between the mean scores of seven factors, including the efficacy of educational guidance and counseling ($P = 0.005$), student support services ($P = 0.021$), school's atmosphere ($P = 0.008$), living in a dormitory ($P = 0.016$), educational efficacy ($P = 0.001$), efficacy of recruitment, assistance, and financial support ($P = 0.016$), and the health and safety status of the schools ($P = 0.003$). In all these factors, the School of Nursing and Midwifery had the lowest mean score.

According to our findings, the highest mean score belonged to the factor of educational guidance and counseling in the School of Health and the School of Dentistry, the highest mean score of student support services, educational efficacy, and the efficacy of recruitment, assistance, and financial support was observed in the School of Medicine, and the highest mean scores of the factors of living in a dormitory and the health and safety status were reported in the School of Pharmaceutics and School of Medicine.

4.2. Satisfaction Dimension

The obtained results demonstrated a significant difference in the total score of satisfaction in terms of marital status ($P < 0.001$) as the mean score of satisfaction in the single students (139.5 ± 23.8) was higher compared to the married students (117.6 ± 23.6) (Table 2). On the other hand, no significant difference was observed in the satisfaction dimension and its associated factors between the schools of KUMS.

4.3. Gap

Our findings showed a significant difference in the total score of the gap between the male and female students ($P = 0.004$) as the mean score of the female students (42 ± 33) was higher compared to the male students in this regard (26.9 ± 31.9). Moreover, a significant difference was denoted in the total score of the gap in terms of marital status ($P = 0.005$) as the mean score of the gap of the married students (54.7 ± 38) was higher compared to the single students (35.2 ± 32.8). A significant difference was also observed in the total score of the gap between different schools of KUMS ($P = 0.001$), with the lowest mean score reported in the School of Nursing and Midwifery (24.9 ± 27.5), and the highest mean score reported in the School of Medicine (44.1 ± 33) (Table 2).

Considering the identified factors, a significant difference was denoted in the mean score of the gap of factors such as school's atmosphere ($P = 0.014$), living in a dormitory ($P = 0.005$), and educational efficacy ($P = 0.011$). The lowest and the highest mean scores of the gap for the factor of living in a dormitory were reported in the School

Table 1. Mean Score of Importance Dimension, Satisfaction Dimension, and Gap for Each Factor

Factors	Importance Dimension	Satisfaction Dimension	Gap
Effectiveness of educational guidance and counseling	2.7 ± 14.9	2.8 ± 11.8	3.8 ± 3.1
Student support services	3.4 ± 21.3	3.5 ± 17.1	4.7 ± 4.2
School's atmosphere	7.4 ± 48.8	7.4 ± 38	10.8 ± 10.3
Living in a university dormitory	3.4 ± 20.9	3.6 ± 15.9	5 ± 4.9
Level of giving students a voice	2.6 ± 15.3	2.6 ± 11.8	3.5 ± 3.6
Educational effectiveness	5.1 ± 34.4	5.1 ± 26	8.4 ± 7.3
Effectiveness of recruitment, assistance, and financial support	2.9 ± 17.6	3 ± 14	3.6 ± 4.2
Health and safety status of school	2.4 ± 11.4	2.3 ± 10.1	3.2 ± 1.3
Superior service	3.4 ± 21	3.4 ± 17.3	4.5 ± 3.7
Student-centeredness	3.1 ± 17.9	3 ± 14	3.9 ± 4.3
Effectiveness of student enrollment and admission	2.6 ± 14.7	2.5 ± 12.4	3.4 ± 2.3
Responsiveness to diverse populations	-	1.9 ± 7.2	-
Total score of all factors	25 ± 174.6	24.3 ± 138.3	33.3 ± 36.3

Table 2. The Total Mean Score of Importance Dimension, Satisfaction Dimension, and Gap Based on Study Variables

Variables	N (346)	Importance Dimension	P-Value	Satisfaction Dimension	P-Value	Gap	P-Value
Gender			< 0.001		> 0.05		0.004
Female	215	180.8 ± 22.9		138.8 ± 24.8		42	
Male	131	164.5 ± 25		137.6 ± 23.5		26.9	
Marital status			> 0.05		< 0.001		0.005
Married	19	172.3 ± 24.5		117.6 ± 23.6		54.7	
Single	327	174.7 ± 25		139.5 ± 23.8		35.2	
Education level			0.002		> 0.05		> 0.05
Associate	10	140.2 ± 22.9		121.5 ± 25.9		18.7	
Bachelor's	202	173.5 ± 25.6		137.9 ± 23		35.6	
Master's	23	180.8 ± 17.8		129 ± 24		51.8	
Professional Doctorate	111	178.5 ± 22.7		142.5 ± 25.5		36	
Residency in dormitory			> 0.05		> 0.05		> 0.05
No	153	170.5 ± 26		136 ± 24		34.5	
Yes	193	179.7 ± 22.6		141.2 ± 24.3		38.5	
School			0.004		> 0.05		0.001
Pharmaceutics	28	176.5 ± 21.1		146.7 ± 29.1		29.8	
Medicine	88	181.4 ± 22		137.3 ± 25.3		44.1	
Dentistry	18	170.1 ± 21.2		144.3 ± 20		25.8	
Nursing and midwifery	56	161.7 ± 22.1		136.8 ± 25		24.9	
Paramedics	88	176 ± 25.5		136.2 ± 22.4		40	
Health	68	175 ± 28.9		139.2 ± 23.4		36	

of Nursing and Midwifery and School of Medicine, respectively. Concerning the factors of school's atmosphere and educational efficacy, the School of Dentistry had the lowest score, and the School of Medicine had the highest mean score.

5. Discussion

The present study aimed to assess student satisfaction with KUMS, and the obtained results suggested a significant difference between the importance of all the examined factors and student satisfaction. Moreover, the students were not satisfied with all the factors, including the efficacy of educational guidance and counseling, student support services, school's atmosphere, living in a dormitory, students' freedom of expression, educational efficacy, the efficacy of recruitment, assistance, and financial support, the health and safety status of the school, superior services, student-oriented approaches, the efficacy of student enrollment and admission, and responsiveness to diverse populations; the expectations of the students were beyond the current status of KUMS in this regard.

The study by Roozegar conducted at the Islamic Azad University of Tehran (Iran) showed a gap between student satisfaction and the importance of the surveyed factors (17). In addition, Mahmoodzadeh and Azarnia performed research at the Islamic Azad University of Shirvan (Iran), reporting that none of the studied factors (school's performance, educational management, student management, cultural management, and counseling office) had higher mean scores than the average score (19). In mentioned studies, students' expectations were beyond the current status of the university.

In the present study, all the factors were of significance, and the school's atmosphere and educational efficacy had the utmost importance. In the studies conducted by Al Sheikh in Saudi medical school, Weerasinghe and Fernando in Sri Lanka, and Khosravi et al. at the Azad University of Tehran, the school's atmosphere had the most significant impact on student satisfaction (10-12). In the study by Hakim at Ahvaz University of Medical Sciences, the educational environment of the university, teaching methods, and the method of assessment by professors (13), in the study by Tabibi and Keyhan at the Islamic Azad University of Urmia the factor of educational facilities and research (14), and in the study by Hamidifar et al., educational factors such as educational materials, assessment methods, and professors' teaching methods (9) were reported to be the most significant influential factors in student satisfaction.

In terms of the importance of school's atmosphere and educational efficacy, it could be stated that the school's at-

mosphere or the atmosphere governing the learning process is a reflection of the curriculum, which is the spirit of the curriculum in the educational environment of universities. The educational and learning environment and its facilities are an important determinant of motivating students to learn since the behaviors that lead to better learning also bring about academic achievement in students and increase their satisfaction with the university (14, 20).

In the present study, the highest relative satisfaction belonged to the factors of school atmosphere and educational efficacy. However, a gap was identified between the importance of all the examined factors and student satisfaction. Given the high importance of these factors, the level of satisfaction with these factors in the students of different schools was not desirable. The most significant gap was concerned with the school's atmosphere and educational efficacy, while the least significant gap was observed with the health and safety status of the school. In the study performed by Roozegar, the most significant gap was observed in the factors of educational guidance and counseling, students support services, and the efficacy of financial support by schools, while the least significant gap was denoted with the factor of the health and safety status of schools (17).

Although the factors of school's atmosphere and educational efficacy had the highest score of importance and satisfaction, the most significant gap was assigned to these factors as well. The high level of student satisfaction with these factors reflected the relatively favorable internal performance of the KUMS schools in the mentioned cases as the positive aspects of the university. Nevertheless, more gaps were identified in the two factors, highlighting the need for special attention in this regard. In terms of school's atmosphere, attention should be paid to sub-components such as the school's reputation, good experience with studying in the schools, attention to human interactions within the schools, freedom of speech in the schools, proper channels for effective communication with the school officials, attention to students' special problems, a pleasant school environment, dynamicity and motivation in the students, fair and respectful treatment of the students by the professors, diversity in the disciplines, valuable educational contents, attention to individual differences in the teaching process, use of advanced teaching methods, availability of the schools' professors, and the provision of timely positive feedback on students' progress could enhance student satisfaction (13, 14).

In this study, the factor of responsiveness to diverse populations (school's commitment to elderly, employed, and disabled students), had the lowest level of satisfaction. Therefore, schools must pay more attention and commitment to these special groups of students and the di-

iversity of students in schools, as well as their differences, problems, and particular conditions, and provide favorable conditions in schools to nurture students (21). Using a wide range of education and research approaches in different situations and providing training on changing the practice of serving upon the request of students could be considered as very important issues in the domain of research and education (22).

In the current research, a significant difference was observed between the male and female students in terms of the satisfaction dimension, and the mean score of the gap was higher in females. In other words, female students' satisfaction was less than the male students, and expectations raised by female students were also higher than males. It could infer that male and female student have different gender characteristics and may have different opinions, perceptions, and inferences in some cases, especially in educational issues. As a result, they will have different perceptions and inferences of educational and research factors affecting their satisfaction with the university. To solve this issue, revisions are required in treatments with female students by staff and professors, along with the need for appropriate mechanisms to express opinions and suggestions by female students and include their comments in curriculums (22). No significant difference was reported in the level of satisfaction between male and female students in the study by Tabibi and Keyhan at the Islamic Azad University of Urmia (14). The discrepancy in these results might be due to differences in disciplines, education levels, number of samples, students' expectations, cultural differences, and differences in the facilities, equipment, staff, and faculty members of each university.

According to the current research, the School of Nursing and Midwifery had the lowest mean scores of the importance dimension and gap, while the School of Pharmaceutics and the School of Medicine had the highest mean scores of the importance dimension and gap. Since disciplines such as medicine and pharmaceutics have constantly been employing educational services for almost a decade, the services provided by relevant schools are considered essential (20). In our study, the mean score of the importance dimension was higher in these students.

Among our participants, satisfaction was higher in the single students compared to the married ones; however, the mean score of the gap in the married students was higher than the singles. Therefore, it could be concluded that the particular state of married students requires more attention from the university.

5.1. Limitations and Implications

Our study had some limitations, such as a lack of cooperation on behalf of some students, and the different

viewpoints of these students could have affected the results. Therefore, it is suggested that the influence of students' willingness to partake be assessed through encouragement and counseling. The second limitation of our study is that we only evaluated the views of KUMS students. It is proposed that further investigations focus on the views of professors and staff toward university services for comparative purposes.

5.2. Conclusions

Since the level of student satisfaction in KUMS was not desirable, the university administrators and staff should increasingly improve the quality and quantity of services. Considering that student satisfaction is affected by multiple factors in the university, it is essential to examine different aspects of this variable and enhance student satisfaction with appropriate practical measures in the fields of education and research, while also offering appropriate services and facilities that are needed by students in terms of quantity and quality.

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Footnotes

Authors' Contribution: KJ and BM designed the study; KJ and LJ collected the data; LJ and SMA analyzed and interpreted the data; KJ and BM drafted the manuscript; KJ, BM, and RP coordinated the study and revised the manuscript to be submitted for publication. All the authors read and approved the final manuscript.

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