Compare the Performance of Counselors with the Students’ Expectations at Mazandaran University of Medical Sciences in 2015

Azita Balaghafari1, Fattane Amuei2, Nassim Ghahrani3, Hasan Siamian1

ABSTRACT

Introduction: Universities and academic environments are tackling challenges and transformation. Thus, mentally, spiritually and socially supporting students and academics and interacting with them seems necessary. This study aimed to compare the performance of counselors with the students’ expectations at Mazandaran University of Medical Sciences in 2015.

Methods: In this cross-sectional study, 359 students of Mazandaran University of Medical Sciences were selected by using stratified random sampling. Cochran formula was used to determine the sample size. Two questionnaires have been employed to collect the data in order to assess the students’ perspective on the consultants’ performance’s current and optimum status. To determine the validity, content and face validity have been used and the reliability was defined through Alpha-Cronbach coefficient and that of the current status was calculated as 0.925 and the optimum condition as 0.925. To analyze the data from the non-parametric binomial test, Wilcoxon and Kruskal-Wallis tests were applied.

Results: A meaningful difference has been found between the optimum stats of the consultants’ performance. So that, 15% has been considered inappropriate and 85% appropriate. Given the performance of the consultants, there is a critical difference. There is a meaningful difference between the current and optimum performance of the consultants, so that the mean rating status (178.43) is higher than that of the current status (90.69). No critical difference has been observed between the current and optimum condition in ANS at significance level 0.278 and RPA Cat significance level 0.879.

Keywords: Counselors, students, Counseling, Mazandaran, Iran.

1. INTRODUCTION

Goal of measurement of the quality assessment of students’ satisfaction is identification of weak and outdated sections of medical education (1). For the assessment of teaching at the faculties the opinion of students is very important (2, 3). University is the foundation of cultural, social, economic and political development of every society. Universities are directly in charge of training and promoting the future makers of the country (4). Consultation and guidance refers to a set of activities in which it helps an individual to overcome their problems and teaches them to have self-recognition and perceive their relationships with others and correct them (5) and it is a dynamic and focused relationship on the participation of the teacher and student and consistent with students’ requirements. The goal behind consultation is to guide students in order to improve their educational objectives and gain their ideals (6).

The students expect the consultant teacher to act as a coordinator of sufficient information and knowledge on the curriculum, academic issues, personal, medical and consulting service. (7). Seyedmajidi, Jahanian, Moradi, and Bijani (2013) showed that students lacked sufficient knowledge and information on how to request from their advisors for help and guidance (8). Delaram (2013) showed that from the ten items of satisfaction, only “providing access to an advisor” was significant after implementing Advisors’ Project in Faculty of Nursing (p=0.01). It seems that the performance of advisors’ project could not provide a satisfactory position for students. Adequate supervision of university students is crucial, proper implementation of the program can support faculty advisors to strengthen their
position and help them to improve their supervision skills (9).

Sum et al. (2012) in their research concluded that the students weren’t much aware of the consultant’s duties and role and were dissatisfied with their consultant teacher (10).

Asadollahi, Shakurnia, and Elhampour, Hossein (2011) showed that faculty members asserted that they are interested in students’ counseling, but have moderate knowledge about the advisory task. Mean total score of the present statues of students’ counseling in the university was 3.38±0.56 and that of the ideal situation was 4.05±0.38 (p<0.001) (7).

Brear and Dorrian (2010) suggested that suggest that in every 25 students as many as three will have questionable suitability for counselling, evidenced primarily by problems associated with self-awareness and interpersonal issues, areas of functioning that are rarely systematically or objectively assessed. Such students are likely to be identified via skills-based classes and, of concern, at least half of these students “slip through the gate” and go on to graduate. Discussion addresses implications for educators (11).

Bektaş (2008) concluded that: key elements for working effectively with international students are presented and a long-term orientation model that might be applicable for Turkish university counselling centers is proposed (12). Owen and Güneri (2013) showed that during the fourth period (1982-1995), the first undergraduate program in counseling was established, followed by six other universities admitting students to undergraduate programs in guidance and counseling. During the fifth period (1996-present), many significant developments took place. For example, the chairs and co-chairs of counseling departments held meetings regarding the reconstruction of counseling programs. They aimed to standardize counselor education programs at the undergraduate and graduate level (13).

Another study showed that: The paper considers the Turkish education and higher education systems, followed by a brief history of counseling and current counselor education in Turkey and, finally, discusses accreditation and credentialing processes in the country. Attention to these matters and, in particular, standardization and restructuring of undergraduate and graduate counseling programs is considered increasingly important for the development of counseling in Turkey (14). As perceived, therefore, this study aimed to compare the Performance of Counselors with the Students’ Expectations at Mazandaran University of Medical Sciences in 2015.

2. METHODOLOGY

In this cross-sectional study, the cases included all of the students (5461) at Mazandaran University of Medical Sciences studying at their second semester of the academic year 2013-2014. Stratified based on the college. In this study stratified random sampling was applied. To determine the sample size, using Cochran’s formula and taking into account the 95% confidence level and 5% error was estimated as 359 (15). The study samples have been out of the students from Sari Medicine, Dentistry, Pharmacy, Sari Nursing Midwifery School(SNS), Amol Nursing School (ANS), Behshahr Nursing School (BNS) and Ramsar Pardis Autonomous Campus (RPAC). Two questionnaires prepared by us which were used to assess students’ views on the current situation regarding the performance of counselors. These questionnaires were prepared according to the Code of Health Ministry of Health of Iran on the faculty member advisor and the study of other relevant papers (9-11, 16). To analyze the data, binomial non-parametric and Wilcoxon and Kruskal-Wallis tests have been employed and all analyses have been done by SPSS-18.

3. RESULTS

Out of 338 students answering the questionnaire: 245 were women (72.5%), 88 men (26%) and 5 (1.5) unspecified gender. Out of 338 students answering the questionnaire: 152 (45%) were in 2nd-4th semesters, 145 (42.9%) in 5th-7th semesters, 17(5%) in 8th-10th semesters, 1 (0.3%) over 10 and 23 (6.8%) unspecified semesters. Among 338 students answering the questionnaire: 92(27.2) were from Medical School, 33 (9.8%) from Pharmacy School, 29 (8.6%),29 from RamsarMed School, 13 (3.8%) from Dentistry School, 33 (9.8%) from Health School, 71 (21%) from Sari Allied Medical Sciences, 17 (5%) from Amol, Allied Medical Sciences,36 (10.7) from Sari Nursing-Midwifery and 17 (4.1%) from Amol Nursing School has participated in the present research. Among 338 students answering the questionnaire:4 subjects (1.2%) got GPA below 12, 77 (22.8%) got from 12-15.5, 73 (21.6) from 15.5-17, 26(7.7%) above 17, and 158 (46.7%) didn’t specify their GPA. Since with Kolmogorov, it has been found that the study data aren’t normal, to evaluate the consultant professors’ performance’s current and optimum status, binomial non-parametric, Wilcoxon and Kruskal-Wallis tests have been applied.

Evaluating Optimum and Current Status of Consultant Professors’ Performance

To evaluate the consultant professors’ performance’s optimum status, two binomial tests have been used (Table 2). So that score 3 or less was given a rating of 0 and score higher than 3 was given a rating of 1. Then the ones with rating 1 (adequate) and 0 (inadequate) have been examined. In the educational area with significance level 0.0001, a meaningful difference has been spotted in the consultant professors’ performance so that 22 % (n=74) viewed it inadequate (less or equal 3) and 78% (n=264) as adequate (more than 3). In the job prospects area with significance level 0.0001, a critical difference has been discovered in the consultant professors’ performance so that 20% (n=69) took it as inadequate and 80% (n=269) as adequate. In the non-educational issues area with significance level 0.0001, a meaningful difference has been seen in the consultant professors’ performance so that 27% (n=91) considered it inadequate and 73% (n=247) adequate. Overall, at significance level 0.0001, a meaningful difference has been discovered in the optimum status of the consultant professors’ performance so that 55% (n=51) viewed it as inadequate and 45%(n=48) as adequate.

Comparing the optimum status of the consultant professors’ performance in various universities has been done by Kruskal-Wallis test, revealing no meaningful difference between them at significance level 0.053; the maximum mean rating has been in Health School (202.85) and the minimum mean rating in Amol Nursing School (124.61).

To analyze the current status of the consultant professors’ performance, two binomial tests have been applied. Thus, score 3 and less has been given a rating of 0 and score over 3, a rating of 1. After that, the ratio of the individuals with rating 0 (adequate) and 0 (inadequate) has been examined. In the
educational area with significance level 0.0001, a meaningful difference has been seen in the consultant professors’ performance so that 64% (n=218) considered it inadequate (less or equal 3) and 36% (n=120) as adequate (more than 3). In the job prospects area with significance level 0.001, no critical difference has been gained in the current status of the consultant professors’ performance so that 53% (n=179) viewed it as inadequate and 47% (n=159) as adequate. In the non-educational area with significance level 0.0001, a meaningful difference has been spotted in the consultant professors’ performance so that 68% (n=230) took it inadequate and 32% (n=108) adequate. To sum up, with significance level 0.0001, a meaningful difference has been found in the current status of the consultant professors’ performance so that 63% (n=214) considered it as inadequate and 37% (n=120) as adequate. Comparing the current status of the consultant professors’ performance in different Schools have been carried out using Kruskal-Wallis test, indicating a meaningful difference at significance level 0.0001 between them; the maximum mean rating has been related to Ramsar Pardis Autonomous Campus (256.76) and the minimum mean rating to Dentistry School (95.27).

**Comparing current and optimum status of consultant professors’ performance**

To compare the current and optimum status of the consultant professors’ performance, Wilcoxon test has been used (Table 3). In the comparison of the educational issues area of the consultant professors’ performance’s current and optimum status, the results have depicted a meaningful difference between the two conditions at significance level 0.0001 so that the mean rating of the optimum status (164.25) is more than that of the current status (106.65). Comparing the job prospects in the current and optimum status has clarified a meaningful difference between the current and optimum status at significance level 0.0001. So that the mean rating of the optimum status (156.76) has been more than that of the current status (94.47). In non-educational area, there is a meaningful difference between the current and optimum status at significance level 0.0001. So that the mean rating of the optimum status (164.22) is more than that of the current status (100.40). Overall, there is a significant difference between the current and optimum status of the consultant teachers at significance level 0.0001, so that the mean rating of the optimum status (178.43) has been more than that of the current status (90.69). In order to compare the current and the optimum status of the consultant teachers by the separation of the Schools, Wilcoxon test has been employed in each School. In the medical School at significance level 0.0001, a meaningful difference has been spotted between the current and optimum status. So that the mean rating of the optimum status (8,63) is more than that of the current condition (7,50). In the Pharmacy School at significance level 0.0001, a meaningful difference has been discovered between the current and optimum status at significance level 0.0001, so that the mean rating of the optimum condition (8,16) is higher than that of the current condition (7,43). In Pardis Campus, a meaningful difference has been found between the current and optimum status at significance level 0.0001, so that the mean rating of the optimum condition (12,09) is higher than that of the current condition (11,92). In Dentistry School, a meaningful difference has been seen in the current and optimum status at significance level 0.0001, so that the mean rating of the optimum status (7,50) is more than that of the current status (6,47). In non-educational area, there is a meaningful difference between the current and optimum status at significance level 0.0001, so that the mean rating of the optimum status (7,26) is more than that of the current condition (12,16). In Amol Allied Medical Sciences, a meaningful difference has been seen in the current and optimum status at significance level 0.0001, so that the mean rating of the optimum status (200.00) is more than that of the current condition (100.00).

**Table 1. The current situation and students’ expectations of consultants’ professors at the affiliated schools of Mazandaran University of Medical Sciences, 2015**

| Status | Areas | Sig. level | Inadequate Frequency (%) | Adequate Frequency (%) |
|--------|-------|------------|--------------------------|------------------------|
| Current Status | Educational | 0.0001 | 218 (64) | 120 (36) |
| | Job prospects | 0.301 | 179 (53) | 159 (47) |
| | Non-educational | 0.0001 | 230 (68) | 108 (32) |
| | Overall | 0.0001 | 214 (63) | 124 (37) |
| Optimum Status | Educational | 0.0001 | 74 (22) | 264 (78) |
| | Job prospects | 0.0001 | 69 (20) | 269 (80) |
| | Non educational | 0.0001 | 27 (91) | 247 (73) |
| | Overall | 0.0001 | 51 (15) | 287 (85) |

**Table 2. Current and optimum status of consultant professors’ performance at the affiliated Schoolsof Mazandaran University of Medical Science**

| Schools | Sig.level | Optimum status mean rating | Current status mean rating |
|---------|----------|-----------------------------|---------------------------|
| Medicine | 0.0001 | 48.00 | 26.75 |
| Pharmacy | 0.0001 | 18.16 | 8.63 |
| Pardis | 0.879 | 12.09 | 11.92 |
| Dentistry | 0.002 | 7.50 | 1.00 |
| Health | 0.0001 | 18.04 | 5.75 |
| Sari Allied Medical Sciences | 0.0001 | 39.02 | 11.09 |
| Amol Allied Medical Sciences | 0.008 | 9.19 | 5.50 |
| Sari School of Nursing Midwifery | 0.0001 | 19.50 | 14.36 |
| Amol Nursing School | 0.278 | 7.63 | 6.00 |
| Total | 0.0001 | 178.43 | 90.69 |

**Table 3. Comparing the current situation with the expectations of students from consulting professors in the affiliated schools of Mazandaran University of Medical Sciences**
that of the current status (1.00). In Health School, a meaningful difference has been gained between the current and optimum status at significance level 0.0001, so that the mean rating of the optimum status (39.02) is higher than that of the current status (11.09). In Amol Allied Medical Sciences, a meaningful difference has been observed between the current and optimum status at significance level 0.008, so that the mean rating of the optimum status (9,19) is more than that of the current status (5,50). In Sari Nursing-Midwifery School, a meaningful difference has been seen between the current and optimum condition at significance level 0.0001, so that the mean rating of the optimum condition (19,50) is higher than that of the current condition (14,36). In Amol Nursing School, no meaningful difference has been found between the current and optimum status at significance level 0.278. So that the mean rating of the optimum status (7.63) is more than that of the current status 6 (Table 3).

4. DISCUSSION

The study’s results showed that 22% of the students of this university have viewed the consultant professors’ performance inadequate in educational issues area and 78% have taken it as adequate. In job prospects area, 20% have seen it as inadequate and 80% as adequate. In non-educational issues area, 27% have taken it as inadequate and 73% as adequate and overall, 15% (n=51) have considered it inadequate and 85% (n=287) as adequate. The present research extracted results are compatible with those of Jafarpour et al. (2012) and Mehranfar. Jafarpour et al. (2012) showed that the female and male teachers had positive attitude toward providing consultation for the students (17) and also the research by Mehranfar stated that half of the students considered the presence of a consultant teacher as an essential matter (18). Fazli (2004) in his study stated paying attention to students consulting necessary and assumed that consultation can help enhance interactions in family, acquire social skills and promote positive self-concept and job finding in job satisfaction (19). Haji Aghajani et al. (2003) also considered consultant professors’ consultation and guidance in the field of education effective (20). Compared with the optimum status of the consultant professors’ performance in various Schools, the present research extracted results disclosed no meaningful difference between them; the maximum mean rating belongs to Health School.

This study results showed a meaningful difference in the current status of the consultant professors’ performance so that 63% (n=214) viewed it inadequate and 37% (n=124) as adequate. This study showed that students haven’t been satisfied with the consultant professors’ performance and the guidance by the consultant teachers couldn’t achieve a favorable and acceptable position in solving the students’ problems and the students. This finding is consistent with Hazavehei from Hamedan University of Medical Science (21) and Adhami from Kerman Medical Science University on the students being discontented with the offered consultation and guidance (6,22)(22). In addition, concerning the study results gained by Jahanian from Babol Medical Science University, the students’ satisfaction with the consultant teachers was reported as 20.28% and the results of another study at the Tabriz University Medical Science showed that 90% of the students and teachers believe that the present system of the consultant teachers isn’t helpful in the students’ academic achievement, which isn’t compatible (23, 24). A research at the Medical Science University in Shahrekord reported that implementing the consultant teachers project didn’t manage to provide a promising status for the students (9). In a study termed as “Consultant Teachers from Medical Science Students’ Perspective “about the role of the consultant teachers reported that the students were slightly aware of the consultant professors’ duties and role and weren’t contented with their consultant professors’ performance (23). A study by the Medical Science University in Lorestan reported that the highest cause for referring to the consultant teacher was the educational problems, the results reflected an insufficient satisfaction level with the consultant teachers (24-26). The national analysis on the role of the consultant teachers in the undergraduate and graduate studies educational programs has reported that about half of the psychological schools’ students were discontented with the consultant teachers and stated lack of knowledge of the consultant professors’ duties as the most important reason (15). The findings of another research also expressed that the students weren’t contented with the consultant professors’ presented consultation and guidance (27). The results of a research in the Medical Science University of Isfahan also suggested that merely a third of the students were satisfied with their consultant teachers and only 35% of them were contented with their consultant professors’ information adequacy on the School educational and disciplinary rules (13). To explain these results, it can be claimed that the process of consultant teachers, despite the emphasis on the educational system and the related codes suffer from not being implemented and it has neither been whole heartedly welcomed by the students nor by the consultant teachers and the students are not aware of the consultant professors’ educational and non-educational duties and on the other hand, the teachers aren’t informed about their duties of consultation and this makes achieving the goal, that is, to support and guide the students difficult. Moreover, compared with the current status of the consultant professors’ performance in various schools of the Medical Science University of Mazandaran, a meaningful difference exists between them; generally, the students of RPAC were more satisfied with their consultant professors’ performance than those in other majors that may be attributed to the consultant professors’ capability and efficiency and or the mentioned students being sufficiently informed about what area and how to seek help from their consultant teachers.

To sum up, there is a significant difference between the current and optimum condition of the consultant professors’ performance so that the mean rating of the optimum status is higher than that of the current status. In addition, in the present research, the current and optimum condition of the consultant professors’ performance has been compared in each School by the separation of the Schools. In the Medical School, Sari Pharmacy School, Dentistry, Health, SAMS, and SSNM. It has been determined that a meaningful difference exists between the current and optimum status and in RPAC, and ANS, no significant difference exists between the current and optimum status. Though no similar study comparing the students’ satisfaction in the current and optimum status is available in Iran, the one by Assadollahi et al. (7), consultant professors’ comments of Ahvaz University of Medical Science
have been analyzed about the current and optimum status of the educational and academic consultation and guidance, the results of this research suggested a significant difference between the current and optimum status and the professors’ knowledge of their duties has been average. Also this study extracted results showed that the knowledge and performance of the advisors in Medical, Pharmacy and Dentistry Schools hasn’t been acceptable (7). In other studies conducted in the Medical Science Universities, it has been reported that the students were dissatisfied with the existing conditions of educational and non-educational issues related consultation and guidance and the position of a consultant in the university as the authentic source of problem solving for the students isn’t acceptable (24-29). The results extracted from other studies also signal the insufficient knowledge of the teachers and the students toward educational consultation and their impaired familiarity with the consultants (20). The study results pursuing the goal to analyze the knowledge, attitude and performance of the consultants in Hamedan Medical Science University demonstrated that the consultants’ knowledge and performance in Medical, Pharmacy, Dentistry, Nursing and Allied Medical Sciences’ Schools. Regarding the criticality and necessity of consultation and guidance, it is imperative to focus on consultation as an academic issue requiring training and this responsibility should be assigned to those equipped with the essential academic qualifications. The effect rendered by increased consultation capability of the consultants trained through workshops and or receiving educational material can boost the Medical Science University of Mazandaran students’ satisfaction.

5. CONCLUSION

It seems that there is a critical difference between the ideal situation and the status quo of Mazandaran University of Medical Science affiliated consultants’ performance; therefore, to improve the consultants’ performance, it is recommended to properly supervise the presentation process of the consultant teacher, to support the consultant, and to hold training workshops.

REFERENCES

1. Masic I. Quality Assessment of Medical Education - why Bologna? Mater Sociomed. 2007; 19(2): 122-4.
2. Masic I. Quality Assessment of Medical Education at Faculty of Medicine of Sarajevo University - Comparison of Assessment Between Students in Bologna Process and Old System of Studying. Acta Inform Med. 2013; 21(2): 76–82. doi: 10.5455/aim.2013.21.76-82.
3. Masic I, Begic E. The Actual (Un)Usefulness of the Bologna System in Medical Education. Med Arch. 2016; 70(2): 158-63. doi:10.5455/medarch.2016.70.158-163.
4. Shams B, Farshidfar M, Hassan Zadeh A. Effect of counseling on the achievement of university students with DROPOUT. Iran J Med Edu. 2000; 1(1): 36-41.
5. Pasha Sharifi H, Hosssaini SM. The Principles of Counseling and Supervision (Persian). Tehran: Roshd Publications, 1989.
6. Harrison E. (Re) visiting academic advising. Nurse educator. 2009; 34(2): 64-8.
7. Asadollahi P, Shakurnia A, Elhampour H. The Attitudes of Faculty Members of Ahwaz Jondishapur University of Medical Sciences toward Student Advising and Counseling. Strides Dev Med Educ. 2011; 8(5): 58-66 (Persian).
8. Seyedmajidi M, Jahanian I, Moradi N, Bijani A. Students’viewpoints about Academic Guidance and Consultation at Babol University of Medical Sciences. Medical Education and Development. 2013; 8(26): 2-19 (Persian).
9. Delaram M. Students’ satisfaction about the performance of academic advisors before and after implementation of the Advisors Project in Shahrekord University of Medical Sciences. The Journal of Medical Education and Development. 2013; 8(3): 33-43 (Persian).
10. Sum S, Tayebi M, Ghahramani M, Moslemi D, Pourhashem M. Role of university advisors in the viewpoint of medical sciences’ students. Iranian Quarterly of Education Strategies. 2012; 5(1): 23-9 (Persian).
11. Brear PD, Dorrian J. Does professional suitability matter? A national survey of Australian counselling educators in undergraduate and post-graduate training programs. International Journal for the Advancement of Counselling. 2010; 32(6): 1-13.
12. Bektas DY. Counselling international students in Turkish universities: Current status and recommendations. International Journal for the advancement of Counselling. 2008; 30(4): 268-78 (Persian).
13. Owen FK, Güneri OY. Counseling in Turkey. Counseling Around the World. 2013: 293-302.
14. Korkut F. Counselor education, program accreditation and counselor credentialing in Turkey. International Journal for the Advancement of Counselling. 2007; 29(1): 11-20.
15. Cohen L, Manion L, Morrison K. Research methods in education. London: Routledge, 2013.
16. Ministry of Health and Medical Education. 25th Meeting of Planning High Commission in Medical Sciences (Text in Persian). Tehran: Ministry of Health and Medical Education, 2003.
17. Jafarpor P, Mohsenimoghadam F, Aghamohammadnasiri P, Sayyadi A. Viewpoints of academic advisors of Rafsanjan university of Medical Sciences regarding counseling and their duties as advisor. Community Health Journal. 2012; 6(3): 25-30 (Persian).
18. Mehranfar S. Cultural problems, social, economic and nonindigenous students and provide appropriate solutions for their university(text in Persian), 2007.
19. Fazli A. Impact on counselling students’ progress. Res Plan High Educ. 2004; 31: 61-90 (Persian).
20. Haji Aghajani S, Ghorbani RJ, al. MSe. Performance and tasks
of supervisors from the perspective of students at the university of Semnan. J Babol Univ Med Sci, Special issue of medical education articles. 2003; 2: 7-12 (Persian).
21. Hazavehei SMM. Comparison of the Effectiveness of two Academic Advisors’ educational Methods on the Level of Students’ satisfaction in Hamadan University of Medical Sciences. J Shahrekord Univ Med Sci. 2003; 5(2): 16-26 (Persian).
22. Haghdoost AA, Esmaeili A. Educational achievement in medical students entered university between 1995 and 2003, Kerman University of Medical Sciences. Strides Dev Med Educ. 2009; 5(2): 80-7 (Persian).
23. Shaseddin A. Student assessment of faculty quality consultation Iran J Med Educ. 2005; 14: 2-8.
24. Peiravi H, Parvizy A, Soroor A, Haghani H. Supportive Counseling for the Students with Low Academic Achievement: An interventional study. Iranian Journal of Medical Education. 2011; 11(2): 75-83.
25. Masic I, Ramic-Catak A, Kudumovic M, Pasic E. Distance learning in the medical education in B&H: E-health and Education. E-health and education. Proceedings, Zagreb, 2002: 17.
26. Masic I. Medical informatics education in Bosnia and Herzegovina. IMIA Yearbook. 2004: 192-6.
27 Masic I. Quality assessment of medical education at faculty of medicine of Sarajevo University. Med Arh. 2012; 66(3 suppl 1): 6-10.
28. Masic I, Novo A. History of medical informatics education in Bosnia and Herzegovina. Acta Inform Med. 2007; 15(1): 49-61.
29. Galedar N, Birjandi M. survey of satisfaction Rate Student of Advising student Supervisors Master Lorestan University of Medical Sciences. Quarterly research Journal of Lorestan University of Medical Science. 2010; 4(11): 53-61 (Persian).