

Preparation of Medical, Paramedical and Nursing Students of Mazandaran University of Medical Sciences for Inter-Professional Education in 2018

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ABSTRACT

Background: Interpersonal education is one of the new educational patterns that improve the quality of patient care and services by increasing collaboration. Therefore, the aim of this study was to evaluate the readiness of medical, paramedical and nursing students of Mazandaran University of Medical Sciences for interpersonal training and the identification of its related factors.

Methods: This cross-sectional descriptive study was conducted in Mazandaran University of Medical Sciences in 2018. The study population consisted of undergraduate nursing students, operation room and anesthesiologists and medical students who were finishing their internship. Also, using an unpredictable sampling method (available) based on previous studies, a total of 220 individuals were enrolled in the bachelor's theses and 130 were considered for the doctoral degree. In this research, data was collected from the standard questionnaire including 19 questions in professional preparedness assessment (RIPLS).

Results: The analysis of 350 completed questionnaires in this study showed that the mean age of the participants was 22.5 years and 44.3% of the participants were men. The average score of nursing students' readiness in medical university of Mazandaran for interpersonal learning, the average score for operation room and anesthesia students and the average for medical students, were 1.52, 1.92 and 1.00, respectively. The standard deviation of students' grades was 0.5, 0.26 and 0.49, respectively. The relationship between students' readiness for interpersonal learning with the variable of gender and age and marital status was not significant between student readiness, but there was a significant relationship between academic level and students' readiness.

Conclusion: The results of this study showed that students in all three groups had higher level of preparedness than the average level. This will enable educational planners and managers to take step the development of inter-professional education and the improvement of provision of health care and services with less constraints and considering the influencing factors.

Keywords: Inter-professional education, Preparedness, Students.

INTRODUCTION

Commonly, healthcare professionals (such as physicians, paramedics, nurses and other professions) work in spite of the importance of teamwork in health care as a set of individual careers and units. The fact is that, the members of these teams rarely get training together. Also, they come from different disciplines with different educational programs, and a few numbers of them can work as teamwork¹. Teamwork is very important for patient safety, especially when team members are well aware of their responsibilities because they make less mistakes than others². This also contributes to reducing hospitalization time, costs reduction of Hospitals and reducing death rate of patients and promote the health status of the patient and increase the quality of care and improve the behavioral disorder of nurses^{3,4}.

Inter-professional Education is considered as one of the new approaches to educating health learners⁶. Interpersonal education as defined by the World Health Organization is a method in which a group of students or learners from different health care professionals work

together in a certain period and place with the aim of creating an interaction and participation among them in the provision of health services, prevention, treatment, rehabilitation and disease improvement, and health promotion⁷.

The readiness of learners is important regardless of the use of the leader⁸. In modern educational models, the readiness of learners is so important that its importance is emphasized for the active participation and self-motivation of learners, because the emotional and motivational preparation plays a significant role in providing a facilitating atmosphere for learning⁹.

Various studies show the effectiveness of this type of education. In a review of the systematic study by Bar et al. The impact of 353 interpersonal training cases on social and health care was assessed. Findings indicate that it is useful to enter the learning and Inter-personal learning process, especially in field of health care services.

In another study, (Karlizel) health care staff participating in a focused group, argued that Interpersonal Education makes beginners become experienced people and provide the possibility that, beginners think on their own works and what they do and the experienced staff think about the whole work and what the team does¹¹.

In Iran, also the results of researches in this regard, indicate the positive attitude of the majority of research units toward the need to use this teaching approach and its consequences in improving the provision of health services

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to clients and improving the quality of the interactions of the health system staff¹².

For more than 30 years this approach has been used by the World Health Organization (WHO) with a growing international focus, especially in developed countries, and its research and related knowledge are developing and expanding. However, inter-professional education has not officially been implemented in the education of health sciences in our country¹³.

Therefore, owing to the importance of interpersonal education and learning in improving the knowledge, attitude and skills of health care professions, this study has not been paid enough attention in Iran and this study has not been done in Sari University of medical sciences.

The present study was designed for interpersonal education to assess the preparedness of medical, nursing and paramedical students of Sari UMS.

METHOD

The present study is a cross-sectional descriptive-analytic study which was conducted in 2018 with the aim of comparing students' preparedness toward interpersonal education in Mazandaran University of Medical Sciences. The research population consisted of students of surgery and anesthesia (semesters of 3,5,7), nursing students (semesters of 5,6,7,8) who completed internship and medical students that completed their internship (semesters of 11, 12, 13, 14). these groups were chosen, because they were available at the time of the study and had a common ground in conducting a clinical course.

Since the main attribute of this study, namely preparedness is a quantitative trait in a community¹⁴, Using the Mean test formula, the mean of a quantitative trait was used in an independent society to determine the sample

size, and 120 Medical students and 100 nursing students and 100 paramedical students are enrolled in the study.

Considering the probability of a 10% drop in the sample owing to incomplete response or reluctance to participate in the study, 110 persons were considered for each of nursing and pediatrician groups and 130 were considered for the medical group. In this study, Readiness Interpersonal Learning system (RIPLS) was used for collecting data.

Validity and reliability of this questionnaire was determined (0.8) by Irajpour (15) and it was used in studies by Yamani et al. (14) and Wahhabi et al¹⁶. This questionnaire consists of two questions series, the first series was demographic questions: age, Sex, educational level and current student's residence. The second part of the questionnaire consists of 19 items which are defined on a 5-point Likert scale, with the score of 1 as totally disagree, up to totally agree with the score of 5. Hence, according to the scores obtained, the lowest and the highest score of this questionnaire will be 19&95, respectively.

Questionnaires were face to face handed over by the researcher and colleagues to the students and the students were assured that their information will be remained confidential and they were not required to write their names. After collecting the data, the information will be analyzed using the SPSS19 software. The underlying characteristics including age, gender, field, and degree will be monitored using a descriptive survey.

Findings: The analysis of 350 completed questionnaires in this study showed that the age group of 20 to 25 years old had the highest frequency of 88.9%, with a minimum and maximum limit of 20 and 30 years, and the majority of respondents (90.6%) were single.155 of the respondents (44.3%) were male and the rest were female. The overall view of the students was 69.9 ± 21.85, which indicates that most students agreed with inter-professional Learning.

Table 1: Absolute and relative abundance, mean and standard deviation of students' opinions.

Question	I totally disagree n(%)	I disagree n(%)	No idea Number(%)	I agree (%)n	I totally agree Number(%)	Average	S.D
Learning with other learners of other subjects will help me become an effective member of the health team	(1/1)4	(15/4)54	(22)77	(52)182	(9/4)33	3/53	0/90
Common learning of different subjects learners from will ultimately benefit patients in solving their problems	(0/6)2	(17/4)61	(16/3)57	(57/7)202	(8)28	3/55	0/89
Common learning with other medical students will increase my ability to understand clinical problems.	0	(21/7)76	(18/9)66	(48/3)169	(11/1)39	3/48	0/95
common learning while studying improves communication after graduation	0	(12/6)4	(23/)82	(50/3)176	(13/7)48	3/65	0/86
Learning to communicate with learners of other subjects is necessary.	0	(14/6)51	(20)70	(39/7)139	(25/7)90	3/76	0/99
common learning helps me think positively about other subjects.	0	(12/3)43	(21/7)76	(49/7)174	(16/3)57	3/70	0/88
Learners need mutual trust and confidence to learn in small groups	0	(9/7)34	(23/4)82	(50)175	(16/9)59	3/74	0/85
Learning teamwork skills is essential for all health team learners	0	(10)35	(18/9)66	(50/9)178	(20/3)71	3/81	0/87
Common learning will help me to know my limitations	0	(9/1)32	(20/9)73	(59/4)208	(10/6)37	3/71	0/77
I do not want to waste my time in common learning with the students of other medical subjects	(1/1)4	(7/4)26	(22/6)79	(63/7)223	(5/1)18	3/64	0/74
common learning for undergraduate students is unnecessary	(0/9)3	(11/7)41	(13/1)46	(60/9)213	(13/4)46	3/74	0/86
My skill in solving clinical problems is enhanced only through my own conjoint learners	(4/3)15	(9/1)32	(23/1)81	(47/1)165	(16/3)57	3/62	1

common learning will help me connect better with patients and other members of health team.	0	(12/6)44	(20/3)71	(52/3)183	(14/9)52	3/69	0/87
I welcome the opportunity to work in small groups with students from other medical sciences	(1/1)4	(7/7)27	(31/7)111	(53/1)186	(6/3)22	3/55	0/77
A common learning will help to better understand the patient's problems	(3/7)13	(5/1)18	(19/7)69	(66/9)234	(4/6)16	3/63	0/80
I welcome the opportunity to lecture and attend a workshop with students from other medical sciences	(8/3)29	(12)42	(15/4)54	(47/4)166	(16/9)59	3/52	1/15
Common learning prior to graduation will help me to better work with the team.	(0/9)3	(10/9)38	(23/1)81	(57/1)200	(8)28	3/60	0/81
I'm not sure of success in my professional role	(0/9)3	(8)28	(26/6)93	(51/1)179	(13/4)47	3/68	0/83
I must acquire more knowledge and skills than other learners of other subjects.	(3/7)13	(10)35	(21/4)75	(57/4)201	(7/4)26	3/54	0/90

there was a reverse and significant correlation ($r = 0.340$), so that among the three groups the mean The scores of paramedical students were the highest and nursing students were the least.

DISCUSSION AND CONCLUSION

The results of this study, which evaluated the readiness of medical, paramedical and nursing students of Mazandaran University of Medical Sciences toward inter-professional education, showed that the students participating in the study had a high degree of willingness and willingness to participate in interpersonal education, with results A study by Yamani¹⁴, Irajpur¹⁵ and Wahhabi¹⁶ is consistent.

In this study, paramedical students (operating room and anesthesia group) were more ready for inter-professional education than nursing and medical education, while in the study conducted by Irajpur (15), nursing students were related to other fields of study Morison and colleagues also found that nursing students had a better attitude towards interpersonal education than medical students (17), which did not match the results of the study. Results This study showed that between students' readiness for inter-professional training and variables c Cognitive status of marital status, age, and gender had no significant relationship with the findings of other studies^{18,15}. Also, the results of this study showed that between students' readiness for intermediate and intermediate education There is a meaningful statistical relationship between students' education and education, which is not consistent with studies by Petri Petri¹⁸ and Irajpour¹⁵.

A higher level of student readiness for intermediate vocational training There is an appropriate space for the development of inter-professional training programs. The importance of this issue becomes more apparent when it comes to recognizing that, according to many existing literature, the differences in attitudes between medical professions and the health phase is one of the most important factors that disrupts interpersonal relationships (19-21). The results of this study, together with the results of other studies that emphasize the benefits of inter-professional learning and education, the importance of developing inter-professional training strategies is emphasized.

Among the limitations of this study, it can be noted that the study itself is self-literate, that some students may not have completed the questionnaire with sufficient precision. The results of this study indicate that interpersonal education from the perspective of students

In Tables 2 through 4, the views of the studied students were determined by gender, marital status and educational level.

Table 2: Students' view of inter-professional learning in terms of gender.

Gender	Mean	SD	Significant level
Male	1/65	0/47	0/434
Female	1/69	0/46	

This table shows that there is no significant difference between male and female students about interpersonal education ($p = 0.434$).

Table 3: Students' viewpoints on inter-professional education by educational grade.

Degree	Mean	SD	Significant level
Continuous bachelor	1/72	0/44	0/14
PhD	1/60	0/49	

Based on the above table, there was a difference between the views of undergraduate students and PhD students, and this difference was statistically significant ($p = 0.014$).

Table 4: Students' view of inter-professional education in terms of marital status.

Marital status	Mean	SD	Significant level
Single	1/68	0/46	0/74
Married	1/63	0/48	

This table also indicates that there was no significant relationship between students' viewpoints on inter-professional education and their marital status ($p = 0.574$).

Statistical analysis also showed that there was a direct correlation between the age of the samples and the average score of students in relation to interpersonal training, but there was no significant difference between them ($r = 0.009$) and ($p = 0.869$).

The average (SD) score of undergraduate students at the Faculty of Paramedical Sciences (operating room and anesthesia group) was 1.92 (0.26), and the average score of medical students was 1.60 (0.49) and the average score of nursing students was 1.52 (0.50), respectively. Spearman test showed that there is a significant difference between the three groups in terms of the mean score of readiness for inter-professional training ($p = 0.00$), and

14. Barr H, Freeth D, Hammick M, Koppel I, Reeves S. The evidence base and
15. recommendations for interprofessional education in health and social care. *Journal of Interprofessional Care*. 2006;20(1):75-8.
16. Carlisle C, Cooper H, Watkins C. "Do none of you talk to each other?": the challenges facing the implementation of interprofessional education. *Medical Teacher*. 2004;26(6):545-52.
17. Irajpour A. Inter-Professional education: A reflection on education of health disciplines. *Iranian Journal of Medical Education*. 2011;10(4):452-63.
18. Rostami Hussein, Rahmani Azad, GhahremanianAkram. Professional communication between nurses and doctors from nurses' point of view. *Journal of Research Development in Nursing and Midwifery*. 71-63: (1) 7; 1389
19. Yamani N, Jafaeidelouie R, KarimiMoonaghi H, Irajpou AR, Jarahi L. Readiness of Medical, Nursing and Radiology Students for Inter professional Education at Mashhad University of Medical Sciences. *Journal of Medical Education*.2012;9(1):25-33[In Persian].
20. Irajpou A, Alavi M. Readiness of Postgraduate student of Isfahan University of Medical Sciences for Inter professional learning. *Iranian Journal of Medical Education*.2012;11(9):1050-6.
21. Vahabi A,Vahabi A,Vahabi B, Sayyadi M, Roshani D. Study the readiness of students of Kurdistan University of Medical Sciences for Inter professional Education and related factors in 2015.Biannual Medical Education,BabolUniv Med Sci;4(2);Spring & summer,2016;40-46.
22. Morison S, Boohan M, Jenkins J, Moutray M. Facilitating undergraduate inter-professional learning in healthcare comparing classroom and clinical learning for nursing and medical students. *Learning in Health and Social Care*.2003,2(2):92-104.
23. Petri L. Attitudes of health care professions faculty toward Inter-professional education. [cited 2011 Feb 14];Available from:www.snrs.org/annualconf/2010/data/papers/361.pdf.
24. Callaly T, Fletcher A. Providing integratedmental health services: a policy and managementperspective. *Australasian Psychiatry*.2005;13(4):351-6.
25. Darlington Y, Feeney Judith A. Collaborationbetween mental health and child protectionservices: Professionals' perceptions of bestpractice. *Children and Youth Services Review*.2008;30(2):187-98.
26. Rogers T. Managing in the interprofessional environment: a theory of action perspective *Journal of Interprofessional Care*.2004;18(3):239-49

(faculty of medicine) Medical, Paramedical, and Nursing Sciences of Mazandaran University of Medical Sciences is very important and the features of Demographicin this regard are not much involved.

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REFERENCES

1. Reeves S, Zwarenstein M, Goldman J, Barr H, Freeth D, Koppel I, et al. The effectiveness of
2. interprofessional education: Key findings from a new systematic review. *Journal of*
3. *interprofessional care* 2010; 24 (3): 230-41.
4. Momeni S, Ashourion V, Abdolmaleki M, Irajpour A, Naseri K. Interprofessional education: a Step towards team work improvement in cardiopulmonary resuscitation. *Iranian Journal of Medical Education*. 2011;10(5):660-7.
5. Jasemi M, Rahmani A, Aghakhani N, Hosseini F, Eghtedar S. Nurses and Physicians' Viewpoint toward Interprofessional Collaboration. *IJN*. 2013; 26 (81) :1-10
6. Masoomi R, Yamani N. A Review on interprofessional education in health professionals' training. *Iranian Journal of Medical Education*. 2012;11(9):1231-40.
7. vafadar Z, Vanaki Z, Ebadi A. An Overview of the most Prominent Applied Models of Inter-Professional Education in Health Sciences in the World. *rme*. 2017; 8 (4) :69-80
8. Amini B, Bigdeli S, Shirazi M, Mirshahvalad S M. Validity and Reliability of the "Readiness for Interprofessional Learning Scale (RIPLS)" in Iranian Context. *payavard*. 2016; 10 (1) :51-58
9. Buring SM, Bhushan A, Broeseker A, Conway S, Duncan-Hewitt W, Hansen L, et al. Interprofessional
10. Education Supplement ,Interprofessional Education: Definition ,Student Competencies ,and Guidelines for
11. Implementation. *American Journal of Pharmaceutical Education*. 2009; 73(4): 1-8.
12. Yamani N, Jafae R, Karimi H, Erajpou A, Jarahi L. Medical, nursing and radiology students Readiness for Interprofessional Education in Mashhad University of Medical Sciences. *J Med Educ Dev*. 2015; 8 (17) :113-121
13. Hava HT, Erturgut R. Function of planning in adult education. *Procedia-Social and Behavioral Sciences*. 2010;2(2):3324-8. 25- Horsburgh M, Lamdin R, Will