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Evaluation of Preparedness of Final-year Students in Fields of Medicine, Nursing, and Midwifery Regarding Interprofessional Learning

Sakineh Sharifian[1], Seyedeh Batool Amini[1*], Jalil Kuhpayeh zade[1], Saeed Raeesi[1], Nafise Hheidari[1], Zahra Tajik Mirzaee[1]

[1]Medical Education Research Center, medical faculty, Iran University of Medical Sciences, Tehran, Iran.

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Abstract

Background & Objectives: Interprofessional learning (IPL) can create more collaborations among students of different healthcare disciplines. However, this depends on the tendency of students to learn from each other. Given the fact that the attitude of students is recognized as the major factor for the implementation and success of a program, this study aimed to determine the attitude of final-year students in fields of medicine, nursing, and midwifery of Iran University of Medical Sciences, Tehran, Iran toward the implementation of IPL.

Materials and Methods: This descriptive and cross-sectional research was conducted on 200 final-year students in the fields of medicine, nursing, and midwifery, who were active in clinical settings and had work experiences in clinical environments. In this research, data were collected using the valid and reliable readiness for inter-professional learning scale (RIPLS), and subjects were selected through convenience sampling.

Results: From 200 distributed scales, about 180 questionnaires (response rate=90%) were returned, 80 and 100 of which were filled by students in the fields of medicine, nursing and midwifery, respectively. According to the results, 50.6% of the respondents were female and 49.4% were male. Moreover, mean (standard deviation) total score of the evaluated students was equal to 79.8 (SD=92). Considering the obtaining of a score higher than the desired level by students (57), it could be concluded that the subjects had a positive attitude toward IPL. While the results were indicative of no significant difference between the two medicine and nursing-midwifery groups in terms of preparedness for IPL (P=0.4), there was a significant difference in the subcategory of cooperation and teamwork (P=0.001). In this regard, medical students obtained a lower score, compared to the nursing and midwifery students.

Conclusion: According to the results of the study, the subjects had a proper attitude toward IPL, which itself is the most important support for the entrance of this new educational approach in student curriculums.

[*]***Corresponding author:*** Seyedeh Batool Amini, ***Email:*** amini.b@kar.iums.ac.ir

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Introduction

Today, change in the approach of healthcare providing systems due to the alternations in the demographic pattern, the burden of diseases, increasing growth of chronic diseases, and necessity of providing multilateral and complex services have caused the need for changing the educational approach of health professions learners (1-3). However, since providing all-round services to patients requires teamwork and cooperation among various health professions, there is an international belief in the necessity of interprofessional learning (IPL) (4).

In the assembly resolution of Almaty, Kazakhstan in 1978, the world health organization (WHO) emphasized the extension of group training, especially in the context of community-based medicine, and application of problem-solving methods in medical science education, considering IPL as one of the new approaches in the education of healthcare learners. According to the definitions, IPL is a learning process, through which learners of two or several professions learn a mutual content and acquire information from and about each other so that cooperation between these individuals and the quality of care provision could be improved (5-7).

Various studies have shown that IPL during general medicine has changed the knowledge and attitude of learners toward their roles and responsibilities to other professions and has increased teamwork and cooperation between professions (8-12). In this regard, Masoumi et al. quoted Barr and presented the objectives of IPL, as follows:

1- Changing the attitudes and negative emotions of health workers about each other

2- Increasing the trust of health workers and communication between them

3- Strengthening the competencies of cooperation between individuals

4- Facing problems that are beyond the capacity of a professional

5- Increasing occupational satisfaction and decreasing stress

6- Training a flexible workforce

7- Integrating the career-oriented and comprehensive care (13)

This new educational approach has been globally applied for more than 30 years, and countries such as New Zealand, Ireland, and England have performed extensive research on the attitude of students in this regard. Nonetheless, there is inadequate knowledge on this modern educational approach in the healthcare system of Iran (12). Despite the existence of little research on the evaluation of attitude of healthcare students performed

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over the past few years (10, 14), there is growing attention toward IPL in universities of our country.

Since the attitude of learners is considered as the main factor for acceptance, implementation, and success of the IPL program, this study aimed to evaluate the attitude and preparedness of final-year medical, nursing, and midwifery students in Iran University of Medical Sciences, Tehran, Iran toward IPL.

Materials and Methods

This descriptive and cross-sectional research was conducted on 200 medical students during their internship course, as well as four-year nursing and midwifery students. These individuals were selected due to their entrance into clinical settings and dealing with students from other healthcare professions. In addition, they were active in clinical areas and had work experiences in clinical settings and former cooperation with other professions. Subjects were selected through simple and convenience sampling. In addition, data were collected using the readiness for inter-professional learning scale (RIPLS). This scale was designed by Parcel and Bling in 1999 and contains two sections, including demographic characteristics (age, gender, field, clinical work experience) and a questionaire consisting of 19 items scored based on the five-point Likert Scale (from completely agree to completely disagree) in three areas of teamwork and cooperation (nine items), professional identity (seven items), and roles and responsiblities (three items).

The total score of the scale is within the range of 19-95, and the range of scores obtained in subclasses of cooperation and teamwork, professional identity and roles and responsibilities is 9-45, 7-35, and 3-15, respectively. In Parsell and Bligh study, the reliability and validity of the questionnaire were estimated at the Cronbach's alpha of 0.9 and based on the opinions of 13 experts from various fields, respectively (8). Several researchers exploited this scale in their studies after these confirmations (15, 16). In the present study, reliability of translated questionnaire was confirmed at the Cronbach's alpha of 0.92 via test-retest on 30 students (10 medical and 20 nursing and midwifery students) with a one-week interval, followed by the distribution of the scale among 200 individuals. Data analysis was performed in SPSS version 18 using Kolmogorov-Smirnov test (to show the normal distribution of the data), Leven test (to determine the equality of variances), as

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well as Pearson's correlation coefficient, t-test and one-way analysis of variance (to compare the groups and determine the relationship between variables). In addition, P-value of 0.05 was considered statistically significant.

Results

Among the 200 distributed scales, 180 were completed and retuned (response rate=90%). In total, 80 scales were filled by the medical students, and 100 questionnaires were completed by nursing and midwifery students. In terms of demographic characteristics, 91 of the subjects (50.6%) were female and 89 participants (49.4%) were male. In addition, the mean age of the participants was 24.5 years. Furthermore, 45% and 54% of the participants were medical, nursing and midwifery students, respectively. Given a total of 19 items and a score of five for each item, the total score of the scale was 95, where scores above 57 were interpreted as a positive attitude. In addition, the mean (standard deviation) total score of evaluated students was 69.8 (9.2). Moreover, the mean (standard deviation) score of preparedness for IPL in medical and nursing and midwifery students was equal to 67.8 (9.4) and 71.3 (9.1), respectively.

According to the results, no significant difference was observed between the medical, nursing and midwifery students regarding preparedness for IPL (P=0.4). Similarly, no significant association was found between age and the preparedness score (r=0.01, n=165, P=0.8). On the other hand, preparedness score was reported at 67.1 and 72.5 for the male and female students, respectively. In this regard, there was a significant difference between the students in terms of the IPL preparedness score based on gender (df=163, t=2.73, P=0.007). Nonetheless, no significant correlation was observed between clinical work experience and score of preparedness.

According to the obtained results, a significant difference was found in the attitude of both groups of students (P=0.001). In general, nursing and midwifery students had more positive attitude toward teamwork, compared to medical students. Moreover, a significant difference was found between the research groups regarding roles and responsibilities of the participants, where medical students had more positive attitude, compared to the other subjects (P=0.01). In terms of professional identity, no significant difference was observed between the medical and nursing and midwifery students (Table 1).

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Table 1: Comparison of students' average score in three areas by academic discipline

Scale	Discipline	Mean ± SD	P value
Team work and collaboration	Medicine	34.10± 5.74	0.001
	Nursing - Midwifery	38.05 ± 7.14	
Professional identity	Medicine	25.42 ± 4.94	0.35
	Nursing - Midwifery	26.33 ± 4.85	
Roles and responsibilities	Medicine	11.30 ± 1.77	0.01
	Nursing - Midwifery	10.65 ± 2.10	

Discussion

According to the results of the present study, preparedness of students for IPL was reported at 9.2±8.69. In respect of obtaining a score above the desired level (57), it seems that there is a positive attitude toward IPL among the evaluated students. According to our findings, these groups of students have a mutual understanding of the higher level of cooperation and the need for laying the proper foundation for this type of education. While no statistically significant difference was observed between the groups, the mean total score of the nursing and midwifery students was higher, compared to medical students. In this respect, our findings are in congruence with the results obtained by Jasemi et al., and our researcher explained that these results might be due to the higher knowledge level of nursing students about professional roles, compared to medical students (17).

In a research by Vafadar et al., which was conducted on 500 postgraduate students in the field of health sciences (nursing group, medical group and other affiliated fields and paramedical), the total mean preparedness score of students for IPL was above moderate. However, no significant difference was observed between the groups regarding preparedness for IPL.

The overall score of preparedness for IPL was 83.30, 79.30, and 80.10 for nursing, medical and other groups, respectively. In addition, the total score of IPL preparedness was 80.80 for all groups. In the mentioned research, the area of cooperation and teamwork received the highest score, and nursing and midwifery students had more positive attitude toward teamwork and cooperation, compared to medical students, which is consistent with our findings and might be due to a higher level of engagement in challenges existing in interprofessional relations (18).

In this regard, our findings are also in line

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with the results obtained by Jasemi et al. and by Irajpour. In a previous research, Jasemi regarded the cause of more positive attitude of nursing students toward IPL to be the higher knowledge level of nurses about their professional roles, compared to medical students (10, 17). Furthermore, in the research by Aniz et al. in Malaysia and the study by Al-Zabir et al. in the United Arab Emirates, the preparedness of nursing students was significantly higher, compared to the medical students. This lack of consistency might be due to the area of cooperation and teamwork, which is similar to the current research (19, 20). Vey et al. recognized self-confidence, collaboration, independence, communication, coordination, responsiveness, accountability, respect, and mutual trust as the most important factors involved in the success of teamwork (21).

According to the results of the current research, there was a significant difference between gender and level of preparedness for IPL, since female students had a generally more positive attitude toward this issue compared to male students. In a previous study by Wilhelmsen, female students had a better attitude toward teamwork, compared to male students (22), which is consistent with our findings. Nonetheless, there is a lack of consistency between our results and the findings by Yildirim (17, 23) and Vafadar and Irajpour, who showed no significant difference between gender and score of preparedness for IPL (10, 18).

In the mentioned research, medical students had a more positive attitude toward performing their duties and responsibilities, which is consistent with the results obtained by Gerusi et al., who conducted a research to evaluate the mental stereotypes of nursing and midwifery students, regarding each other and perform the needs assessment of IPL between these two large professional groups. According to the results of the mentioned research, while all of the students agreed with this educational approach, mental students had a more positive attitude toward this issue, compared to nursing students, due to their mental stereotypes and belief in the excellence of physicians in professional features (12).

According to the literature, students generally enter the education environment with specific mental images about their own or other professions. These mental images are often formed by the culture governing the society (14). However, the most important issue in healthcare provision systems is the ability of physicians and

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nurses in working with each other as a team. Improvement of this attitude through holding this type of education can be recognized as one of the most important reasons for modification of the structure of inter-professional relationships between nurses, physicians, and other professionals.

In a research by Dargahi et al., the attitude of medical, nursing and pharmacy students toward IPL in Tehran University of Medical Sciences was assessed, showing that the tendency and need of these individuals in cooperative learning and skills can be a solution to clinical problems in work settings (14). Furthermore, Alizadeh et al. evaluated the attitude and preparedness of medical students for IPL, concluding that despite the positive attitude of the subjects toward IPL, they need training to improve their preparedness due to lack of comprehensive knowledge about their professional duties and responsibilities of other medical fields (24). In the end, it could be concluded that IPL has been able to prepare students for more efficient cooperation with other healthcare professions and has had a positive impact on the provision of healthcare services. Despite the presence of a wide range of structural barriers to the implementation of IPL in the majority of universities, it has been planned and developed in several medical health universities of the world (25, 26). It is hoped that effective steps be taken by the planning managers of the healthcare system of Iran considering the domestic capitals of the country and welcoming of this type of education by learners.

Research Limitations: Effective healthcare services are provided in the form of teamwork consisting of all healthcare professions. In the present study, only two professional groups were evaluated. Therefore, it is suggested that the attitude of all healthcare professions toward this issue be assessed in future studies. Moreover, the current research only evaluated the level of preparedness and attitude of students toward IPL, and results may differ in practice and implementation of IPL strategies.

Conclusion

According to the results of the present study, the participants had a positive attitude towardIPL.Due to the significant importance of application of these learning skills, especially learning within the framework of inter-professional teams in medical fields, layingtheproperfoundation by policy-makers andauthoritiesof the field for implementation of this type of learning would be a vital step toward the realization of relevant goals.

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