

Readiness for Interprofessional Learning of Undergraduate Midwifery Students in Turkey: A Cross-Sectional Study

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Cite this article as: Uslu-Şahan F, Er-Korucu A. Readiness for interprofessional learning of undergraduate midwifery students in Turkey: A cross-sectional study. *Arch Health Sci Res.* 2022; 9(1): 55-60.

ABSTRACT

Objective: The present study examined the readiness of midwifery students for interprofessional learning and the relationship of it with the years of their study.

Materials and Methods: A cross-sectional analytical study was done with 250 undergraduate midwifery students. Using a convenience sample of students, attitudes toward interprofessional learning was measured using 1 standardized instrument: Readiness for Interprofessional Learning Scale. The data were analyzed using one-way analysis of variance and post hoc least significant difference's (LSD) test.

Results: The total mean scores of readiness for interprofessional learning were 69.99 ± 15.43 . The results demonstrated a remarkable variation between the years of their study in terms of readiness for interprofessional learning ($P = .029$), teamwork and collaboration ($P = .006$), and roles and responsibilities ($P = .018$), and this difference was due to third-grade students.

Conclusions: Midwifery students' level of readiness for interprofessional learning was high and reached the highest value in the third year of their study. The outcomes of the study recommend that the baseline attitudes of students should be taken into consideration by midwifery educators while designing interprofessional education curricula. Interprofessional learning could be integrated into the curriculum of midwifery professional programs which may trigger the students' ambition to be competent in their profession while comprehending other professions' roles.

Keywords: Interprofessional education, learning, midwifery, students


Introduction

Providing quality midwifery services, especially in primary health care, has an increasing importance, for the improvement and development of mother-child health.^{1,2} The midwives' ability to demonstrate effective communication skills in an interprofessional team and to work in cooperation with the apprehension of the roles and responsibilities of other team members may positively affect patient safety and mother-child health outcomes.^{3,4} To support this goal through midwifery education, there is a growing need for an interprofessional training form as an innovative strategy.^{1,5,6}

The World Health Organization² emphasized the importance of interprofessional learning and cooperation in midwifery undergraduate education to provision the best care for women and their families and for effective and efficient teamwork. The Royal College of Obstetricians and Gynaecologists (RCOG)⁷ has emphasized the removal of professional barriers between obstetricians and midwives and the need for improved communication and teamwork. Similarly, the Nursing and Midwifery Council (NMC)⁸ stressed the importance of collaborative competencies and to produce a learning environment that encourages interprofessional learning opportunities, collaboration, and effective communications within an interprofessional team. In these reports, interprofessional learning is underlined as a priority for midwives' training and maternity care.

Interprofessional learning's most commonly cited definition, stated by Centre for the Advancement of Interprofessional Education, is "occurs when 2 or more professions learn with, from and about each other to improve collaboration and the quality of care."⁹ Interprofessional learning

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Received: September 21, 2021

Accepted: November 15, 2021

Available Online Date: January 1, 2022

is adopted as a strategy to handle many challenges such as improving communication and teamwork between different professions, allocation of limited resources within the health system, poor clinical outcomes, and low job satisfaction.¹⁰ It provides insights from a range of various health perspectives leading to enhanced consultation and discussion among different health professionals.^{10,11} In addition, interprofessional learning fosters an environment where students can nurture a critical apprehension of the roles and significance of other health professions, thus enhancing awareness regarding the whole patient management life-cycle can be obtained more efficiently with collaborative teamwork and establishing clinical links.^{10,12-14}

Interprofessional learning and working have become the main priorities in healthcare.^{5,15-17} This learning approach has been included in the undergraduate education curriculum of health professionals globally for many years; countries such as Australia,^{10,18} England,^{6,19} Canada²⁰ and America^{4,15} are conducting extensive study on this subject. Although there is a growing interest in this innovative education approach in Turkey, it has not yet been included in the undergraduate curriculum. To the best of our knowledge, no study has been found in the literature that examines the level of midwifery students' preparation for interprofessional learning and its relationship with the years of their study. There are a limited number of studies in which the readiness level of students in different professions for interprofessional learning is evaluated and a part of the sample consists of midwifery students.^{12,21-23} The level of readiness of students is considered as one of the primary factors affecting the acceptance, implementation, and success of interprofessional education programs.^{13,15,20,24}

It is critical for educators to understand attitudes of the students toward interprofessional learning while designing the curriculum to account for differences in midwifery students' values and beliefs. The aim of the present study is to determine the readiness for interprofessional learning as well as their relationship among the year of study of midwifery students in Turkey.

The research questions that guided this study are as follows:

- What is the self-reported level of readiness of students for interprofessional learning?
- Are there differences among midwifery students in perceptions of readiness during the years of their study?

Materials and Methods

Design

A cross-sectional analytical study using a convenience sample of first-, second-, third-, and fourth-year undergraduate midwifery students.

Participants

The participants in the study were undergraduate midwifery students from one of the state universities in Ankara, Turkey, in the beginning of the 2019-2020 academic year spring semester, between February 15 and March 15, 2020. Midwifery students complete a program of at least 4 years, resulting in a bachelor's degree.²⁵ Students were determined by convenience sampling. The sample constituted 250 volunteer midwifery students with the distribution of 70 first year, 64 second year, 64 third year, and 52 fourth-year students. Midwifery students were selected among the volunteers who were either in their first, second, third, or fourth years. There were 458 eligible students; however, 172 of them were not volunteering to take part in the study and 36 students returned blank surveys. Therefore, the study was sampled with the remaining 250 students having 54.6% response rate. Post hoc power analysis for sample size determination is carried out by using the G*Power 3.1.1 program²⁶ with Cohen's method of small effect size

(0.3). The results demonstrate that the current sample size of the study has a power above 0.90 with a *P* value of .05.

Instruments

A form, including the demographic characteristics, such as age, gender, year of study, status of satisfaction with the department, were utilized in collecting the data of the study. In order to evaluate the students readiness for inter professional learning and the attitudes of them toward interprofessional teams, "The Readiness for Interprofessional Learning Scale (RIPLS)" formed by Parsell and Bligh was utilized.²⁷ The validity and reliability study of the scale was carried out by Onan et al.²⁸ This scale consisted of 19 items distributed in 3 subscales, namely, "teamwork and collaboration" (items 1-9), "professional identity" (items 10-16), and "roles and responsibility" (items 17-19). Moreover, 5-point Likertscale was used in the scale.^{27,28} Readiness for interprofessional learning was proportional with the score of the scale, having the lowest value of 19 and highest value of 95. In the study carried out by Onan et al.²⁸ the cronbach's alpha was 0.87, whereas in our study it was determined to be 0.93.

Procedure

Students were invited to take a part in the study on a voluntary basis after the classes. They were informed that participation was voluntary and also anonymous. It took approximately 8-10 minutes to complete questionnaires, and the consent was implied by its completion and submission.

Statistical Analysis

Analysis of the data was performed using Statistical Package for the Social Sciences software (IBM SPSS Corp., Armonk, NY, USA). The Kolmogorov-Smirnov test is used to verify the appropriateness of the data for normal distribution. Descriptive statistic (standard deviation and mean) were utilized to report the demographic characteristics and the Readiness For Interprofessional Learning Scale (RIPLS) data. Post hoc LSD's test and one-way analysis of variance were performed to investigate the differences among the year of their study on the total scores of RIPLS. Statistical significance was reported as significant when *P* < .05.

Ethical Considerations

The study was approved by the Ethics Committee of Ankara University (Date: February 11, 2020, Decision No: 04/62). The students were verbally ensured that participation and non-participation would not affect their education, and the study is totally voluntary. Moreover, written informed consents, where the aim of the study and the confidentiality conditions was explained, were also obtained from the students. The participants were free to leave at any stage of the study.

Results

Demographic characteristics of the participants, totally 250 students, are presented in Table 1. The average age of the students was 20.43 ± 11.68. The majority of students surveyed were predominantly female (98%) and were enrolled in the first year (28%). The majority of students did not have experience in interprofessional training (82.4%) and did not have experience in interprofessional course (88.8%).

Total RIPLS scores of the students ranged from 19 to 91 with the mean score of 69.99 ± 15.43 with the distribution among subscales of 35.02 ± 9.65 for teamwork and collaboration, 25.67 ± 5.73 for professional identity, and 9.31 ± 1.75 for roles and responsibility (Table 2).

The most strongly supported ideas by participants were "for small-group learning to work, students need to respect and trust each other (4.18 ± 1.21)" and "team-working skills are vital for all health care

Table 1. Demographic Characteristics of the Participants (n=250)

Characteristics	n	(%)
Age (M ± SD) = 20.43 ± 11.68		
Gender		
Female	245	98
Male	5	2
Year of study		
First year	70	28
Second year	64	25.6
third year	64	25.6
fourth year	52	20.8
Satisfaction with the department		
Satisfied	221	88.4
Not satisfied	29	11.6
Previous experience in interprofessional training		
Yes	44	17.6
No	206	82.4
Previous experience in interprofessional course		
Yes	28	11.2
No	222	88.8

Table 2. The Mean Score of RIPLS and Its Subscales

RIPLS and Subscales	Mean ± SD	Min-Max
RIPLS	69.99 ± 15.43	19-91
RIPLS subscales		
Teamwork and collaboration	35.02 ± 9.65	9-45
Professional identity	25.67 ± 5.73	7-35
Roles and responsibilities	9.31 ± 1.75	3-13

RIPLS, readiness for interprofessional learning scale.

students to learn (4.13 ± 1.17).” On the other hand, the participants did not agree to the opinion that “I am not sure about my professional role among healthcare workers’, in order to better predict interprofessional collaboration (2.28 ± 1.16)” and that “clinical problem solving can only

be learnt effectively with students from my own discipline (3.04 ± 1.27).” The entire results RIPLS distribution can be seen in Table 3.

The results of RIPLS regarding the years of study demonstrates that the highest mean score was recorded at the third year (74.34 ± 13.91) students, while the lowest score was encountered in the second year (66.14 ± 16.1) students. Analysis results of analysis of variance demonstrated remarkable variation between the years of the study with respect to RIPLS (F=3.053, P=.029), teamwork and collaboration (F=4.219, P=.006), and roles and responsibility (F=3.44, P=.018). On the otherhand, regarding the professional identity subscale of RIPLS (F=1.846, P=.139), no significant differences were determined between the years of study. The RIPLS values regarding the years of study are presented in Table 4.

Discussion

Developing interprofessional teams, integrated with the education programs of health professionals, will increase the possibility of collaborative implementation in the future.^{4,6,11} Determining the readiness level of students for interprofessional learning will contribute to the success of this integration.^{11,13} To the best of our knowledge, this study is the first in literature that has investigated the attitudes of toward interprofessional learning across the various years of study in midwifery students.

There is a continuing debate regarding the timing of interprofessional initiation and a need of further study in this area which is addressed in this study. In the present study, it was identified that students’ level of readiness for interprofessional learning was high and reached the highest value in the third year of their study. Moreover, it would appear that students value the teamwork, communication, trust, and respect concepts which are the key elements of interprofessional learning and collaboration. The third year midwifery students took practical courses on the protection and care of mother–baby health in the risky and normal pregnancy period, birth and postpartum periods, as well as theoretical knowledge in midwifery education.^{25, 29} The fact that third year midwifery students cooperated more with the team during clinical practice compared to other years

Table 3. Item Mean Scores (Standard Deviation) RIPLS (n=250)

Item Mean (SD)	Mean ± SD
1. Learning with other students will make me a more effective member of a health care team	3.78 ± 1.18
2. Patients would ultimately benefit if health care students worked together to solve patient problems	4.06 ± 1.20
3. Shared learning with other health care students will increase my ability to understand clinical problems	3.86 ± 1.21
4. Learning between health care students before qualification would improve working relationships after qualification	3.97 ± 1.24
5. Communication skills should be learned with other health care students	3.59 ± 1.32
6. Shared learning will help me think positively about other health care professionals	3.69 ± 1.22
7. For small-group learning to work, students need to respect and trust each other	4.18 ± 1.21
8. Team-working skills are vital for all health care students to learn	4.13 ± 1.17
9. Shared learning will help me to understand my own Professional limitations	3.75 ± 1.17
10. I think learning with other healthcare students is a waste of time	3.89 ± 1.21
11. ‘I think learning from other healthcare students’ experiences help my professional improvement	3.79 ± 1.19
12. Clinical problem solving can only be learnt effectively with students from my own discipline	3.04 ± 1.27
13. Shared learning with other health care professionals will help me to communicate better with patients and other professionals	3.78 ± 1.16
14. I would welcome the opportunity to work on small-group projects with other health care students	3.63 ± 1.2
15. Shared learning will help me clarify the nature of patients’ or clients’ problems	3.72 ± 1.17
16. Shared learning with other healthcare students will help me to become an effective team worker’, in order to better emphasize ‘a better team worker	3.82 ± 1.2
17. The function of other healthcare workers is mainly to provide support for doctors’, since our study was conducted with a variety of healthcare students and not just nurses, therapists, or doctors	3.52 ± 1.29
18. I am not sure about my professional role among healthcare workers’, in order to better predict interprofessional collaboration	2.28 ± 1.16
19. I have to acquire much more knowledge and skill than other students	3.52 ± 1.29

SD, standard deviation.

Table 4. Comparison of the Mean of RIPLS and Its Subscales Among the Subjects According to Years of Study

RIPLS and Subscales	Year of Study				F	P	LSD Test ^c
	First Year, Mean ± SD	Second Year, Mean ± SD	Third Year, Mean ± SD	Fourth Year, Mean ± SD			
RIPLS	70.89 ± 14.25	66.14 ± 16.1	74.34 ± 13.91	68.19 ± 16.71	3.053	0.029	2-3 3-4
RIPLS Subscales							
Teamwork and collaboration	33.6 ± 9.13	32.59 ± 10.31	37.5 ± 8.58	34.15 ± 10.19	4.219	0.006	2-3
Professional identity	26.34 ± 5.73	24.28 ± 5.38	27.3 ± 5.37	24.46 ± 6.07	1.846	0.139	-
Roles and responsibilities	8.94 ± 1.62	9.26 ± 2.06	9.55 ± 1.63	9.58 ± 1.6	3.44	0.018	1-3 1-4

RIPLS, readiness for interprofessional learning scale.

SD, standard deviation; F, ANOVA; LSD'S test, least significant difference test.

of study may have revealed this result. As a result of this study, it is crucial to implement interprofessional learning at the beginning of the third year of the curriculum, as midwifery students are more perceptive to team-based work in the middle of their professional degree.

While uniprofessional education continues to be the dominant model in the education of health professionals, interprofessional learning practices are becoming more common.¹¹ In this study, the readiness status of students for interprofessional learning was reported as 69.99 ± 15.43 . Having the score above the desired level,²⁸ it can be concluded that there exists a positive attitude toward interprofessional learning between the evaluated midwifery students. In addition, students' scores on teamwork and cooperation, professional identity and roles and responsibilities subscales are above average. Mèche et al²¹ who applied RIPLS to students from different professions, including midwifery students, reported results similar to our study in the scale total scores and subscales scores of midwifery students. In the literature, in studies carried out with students in different professions, it is stated that students' attitudes toward interprofessional learning are high.^{12,15,24} The readiness of the students will determine the success of the implementation of interprofessional education (IPE) in their programs, which will ultimately lead to the interprofessional practice in their future career. According to the results of the study, it can be said that they have a positive attitude toward laying the appropriate foundation for this type of education.

Increasing cooperation among health professionals contributes to a better understanding of each other's roles and to providing health services with a holistic approach by ensuring the optimal participation of entire team members in the care of the individual.^{6,16,19,23} In the present study, students generally stated that they believed that cooperative learning made them more effective team members, would have beneficial results for the patient, and improved their communication skills. The RIPLS statements 2, 7, and 8 are designed to assess "teamwork and collaboration."²⁸ Results from the study indicate that midwifery students agreed to the opinions included as the statements in the RIPLS (Table 3). However, the results obtained from some RIPLS statements show that students are not completely ready for interprofessional education. The RIPLS statements 10 and 12 are introduced to identify "professional identity" and include negative statements.²⁸ Results from these statements demonstrate midwifery students agreed to the opinions in the RIPLS (Table 3). These findings demonstrate that while midwifery students are open to the concept of interprofessional learning, a factor into its perceived relevance might be whom the collaborative learning is done with.

Although numerous factors impact the successful implementation of interprofessional education (IPE), baseline student attitudes are among the most important factors influencing positive outcomes.³⁰ In studies conducted with health professional students, it was stated

that attitudes toward interprofessional learning reached its maximum value in the first year and decreased over time.^{18,20} However, Keshtkaran et al²⁴ emphasized that increase in the years of their study might enhance responsibility, exposure, and the impact on readiness to perform responsibilities and roles. Similarly, this present study found that students had the highest level of readiness for interprofessional learning in the third year of their study. Therefore, the result of the current study may guide midwifery educators in designing a curriculum such that interprofessional learning could be integrated into students' third year which might be more beneficial for program acceptance, implementation, and success.

Effective collaborative teamwork is critical to achieving the best results by providing a patient-centered approach in complex and rapidly changing environments.^{16,23,31} In our study, regarding the "teamwork and cooperation" subscales, the mean score of the third year is 4.91 points higher than the second year average score. The high score obtained from this subscale reflects that students' value to interprofessional learning and respect for other health professional students are higher in their third year compared to other years.¹⁷ Similar results were reported in the studies performed with healthcare students, and they were stated that the students' RIPLS teamwork and collaboration score average was the highest in the third year.²⁴ Current study findings may indicate that the significance and acceptance of collaborative teamwork increase as the education level of students and their presence in clinics increase.

One of the most important obstacles to cooperation is that the professional roles and responsibilities of the professionals in the team are not completely comprehended.^{14,16} Interprofessional education directly aims to reduce this obstacle in academic field and health services.^{11,13,14,16} In our study, regarding the "roles and responsibilities" subscales, the mean score of the third and fourth years was higher than the first year. It is thought that this is due to the fact that students are not yet aware of their roles and responsibilities as well as other health professionals in their first year of study. Keshtkaran et al²⁴ stated that the average RIPLS score of the third year health professional students was higher than the first year. Maharajan et al¹³ underlined the significance of the need for health professionals to understand their professional role within the team and stated that if this situation does not develop, they cannot cooperate with other health professionals as a team. Also, MacDonalds et al³¹ defined that having knowledge about the professional role of health professionals in the team is an important factor in improving both interprofessional practices and health service results. Midwifery students are less in clinics in the first year of their education.²⁵ Increasing clinical practices initiated in the second semester may have caused students to develop a stronger healthcare professional identity until their third year. This may have contributed to the increase in students' roles and responsibilities scores.

One of the surprising results of this study was the relation between the “professional identity” and the year of study such that there was no statistically remarkable difference between them. Similar to present study, Keshtkaran et al²⁴ determined that the students’ year of study did not affect the professional identity. This can be explained with the education model of the faculty, where our study was conducted. In this model, the midwifery and nursing education is provided through a single vocational education model²⁵ resulting in an isolation from other health professional students. Orchard³² stated that when a group of students has an extensive contact with each other, they form stable alliances with each other and even the language specific to the profession can also develop in the spoken language, emphasizing that this situation negatively affects the development of professional identity. This result of the current study may reveal that professional identity development is negatively affected by the increase of midwifery students spending more time together to accelerate the development of a more robust group identity.

Limitations of the Study

There are a few limitations to this study. The first of these is the convenience sampling method used. While this method facilitates the sampling of students, it may lead to a decrease in the sample representation of students. Another limitation is that the results of the study are based on students’ self-report which may differ from actual interprofessional learning attitudes in the clinical healthcare setting. Finally, this study is limited to students studying at the midwifery department of a university in a cross-sectional time frame, and the study results can be generalized to these students.

Conclusion

Interprofessional learning benefits students much more effectively with the correct timing. Educators should take into account that starting interprofessional learning programs prematurely, without being aware of the professional roles and responsibilities of students, or late in student groups where a strong group identity is formed among students may negatively affect the effectiveness of the program. This study provides evidence that students’ readiness for interprofessional learning is influenced by the year of their study. In the study, it was determined that third-grade midwifery students have a high level of preparation for interprofessional learning. In addition, it was determined that the students value the concepts such as teamwork, communication, trust, and respect, which are the basic elements of interprofessional learning and cooperation. It is thought that preparing an interprofessional education program according to the level of preparedness and needs of midwifery students for interprofessional learning will contribute to increasing the effectiveness of the program and improving the attitude toward interprofessional learning. Interprofessional learning should be incorporated in the curriculum of midwifery programs, which may foster students to become competent healthcare providers and understand the importance of teamwork and collaboration. The findings of the study may be useful for the midwifery educators in identifying the students’ readiness and perception toward interprofessional learning, facilitating teamwork learning in the clinical setting, and developing effective interventions to increase the interprofessional learning. Outcomes of this study provide important knowledge for the midwifery discipline as it prepares for greater collaborative approaches to health care.

Ethics Committee Approval: Ethics committee approval was received for this study from the ethics committee of Ankara University (Date: February 11, 2020, Decision No: 04/62).

Informed Consent: Written informed consent was obtained from students who participated in this study.

Peer-review: Externally peer-reviewed.

Author Contributions: Concept – F.U.Ş.; Design – F.U.Ş.; Supervision – F.U.Ş., A.E.K.; Resources – F.U.Ş., A.E.K.; Materials – F.U.Ş., A.E.K.; Data Collection and/or Processing – F.U.Ş., A.E.K.; Analysis and/or Interpretation – F.U.Ş., A.E.K.; Literature Search – F.U.Ş., A.E.K.; Writing Manuscript – F.U.Ş., A.E.K.; Critical Review – F.U.Ş., A.E.K.

Conflict of Interest: The authors have no conflict of interest to declare.

Financial Disclosure: The authors declared that this study has received no financial support.

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