ORIGINAL ARTICLE

The Effect of Basic Human Values to Readiness for Interprofessional Learning: A Cross-sectional Survey Among Pre-graduate Health Professions Students

Temel İnsani Değerlerin Meslekler Arası Öğrenmeye Hazır Olmaya Etkisi: Mezuniyet Öncesi Sağlık Mesleği Öğrencileri Arasında Kesitsel Bir Araştırma

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Abstract

Objective: This research aimed to determine human values and readiness for interprofessional learning among pre-graduate students studying in the field of health and the relationship between them.

Method: The data were collected using a questionnaire containing the socio-demographic characteristics of the students (n=444), the human values scale (HVS) and the interprofessional learning readiness scale (RIPLS). Descriptive statistics, independent sample t-test, One-Way ANOVA test and Pearson Correlation test were used to evaluate the data.

Results: The average age of the students participating in the study is 22.52±1.19, 76.4% of them are women and 33.4% of them study in the nursing department. It was found that the students' total HVS score was 157.61±15.52 and the total RIPLS score was 75.11±10.89. It was determined that HVS scores were significantly higher in females, and those under 24 years old, while the HVS total score was significantly lower in medical school students. It was found that the RIPLS scores of the faculty of medicine students and students aged 24 and over were significantly lower. When the relationship between the students' HVS and RIPLS scores was examined, it was found that there was a moderately significant positive correlation.

Conclusion: Educators' seeing the human values and readiness levels of students can guide them in determining the goals of the education they will give and the teaching method they will use.

Keywords: Health profession students, human values, interprofessional learning, readiness

Öz

Amaç: Bu araştırma, sağlık alanında öğrenim gören lisans öğrencilerinin insani değerleri ve meslekler arası öğrenmeye hazır bulunuşluklarını ve aralarındaki ilişkiyi belirlemeyi amaçlamıştır.

Yöntem: araştırma kesitsel tipte tanımlayıcı tipte yapılmıştır. Örneklemi bir devlet üniversitesindeki son sınıf sağlık mesleği öğrencileri oluşturmuştur (n=444). Veriler, öğrencilerin sosyo-demografik özelliklerini içeren bir anket, insani değerler ölçeği (HVS) ve meslekler arası öğrenmeye hazırlık ölçeği (RIPLS) kullanılarak toplanmıştır. Verilerin değerlendirilmesinde tanımlayıcı istatistikler, independent sample t-testi, One-Way ANOVA testi ve Pearson Correlation testi kullanılmıştır.

Bulgular: Araştırmaya katılan öğrencilerin yaş ortalaması 22,52±1,19 olup, %76,4'ü kadın, %33,4'ü hemşirelik bölümünde öğrenim görmektedir. Öğrencilerin toplam HVS puanı ortalamsının 157,61±15,52 ve toplam RIPLS puanı ortalamasının 75,11±10,89 olduğu bulunmuştur. HVS puanlarının kadınlarda ve 24 yaş altındaki öğrencilerde anlamlı olarak daha yüksek olduğu, Tıp fakültesi öğrencilerinde ise HVS toplam puanının anlamlı olarak daha düşük olduğu belirlenmiştir. Tıp fakültesi öğrencileri ile 24 yaş ve üzeri öğrencilerin RIPLS puanlarının anlamlı düzeyde düşük olduğu bulunmuştur. Öğrencilerin HVS ve RIPLS puanları arasındaki ilişki incelendiğinde orta düzeyde anlamlı bir pozitif korelasyon olduğu görülmüştür.

Sonuç: Eğitimcilerin öğrencilerin insani değerlerini ve hazır bulunuşluk düzeylerini görmeleri, verecekleri eğitimin amaçlarını ve kullanacakları öğretim yöntemini belirlemede onlara rehberlik edebilir.

Anahtar Kelimeler: Sağlık mesleği öğrencileri, insani değerler, meslekler arası öğrenme, hazır bulunuşluk

Introduction

The most important aim of health services is to ensure that the patient receives quality care and treatment. Hierarchical problems among professional members and disconnections between professions constitute an important obstacle to patient safety. For this reason, raising health profession members who are ready for interprofessional work is important in terms of increasing the efficiency and quality of health services offered to the public (1). Interprofessional education enables students of two or more professions to learn with each other. It aims to ensure that each professional member recognizes and respects the roles of other team members by prioritizing teamwork, integration, and flexibility in the workforce (2,3). Some obstacles such as lack of administrative support, difficulty in bringing students together, insufficient time and financial support affect interprofessional education (4).

Although many values, knowledge and skills are common for students who will become members of the health profession, most universities consider these professional groups to be independent of each other. For this reason, health professionals are trained in independent training programs without knowing each other's duties, authorities and responsibilities (5).

Value is defined as a belief that guides the selection or evaluation of behaviors, people and events and belongs to desired ends or behavior patterns. The theory of human values has identified ten values that differ based on motivation, including self-direction, drive, hedonism, achievement, power, security, conformity, tradition, benevolence, and universalism. With this theory, human values; it is stated that it is important as guiding principles in the lives of individuals and groups in the cognitive realization of goals, with an out-of-situation and independent behavior. Values not only ensure a healthy functioning of the social order and social mechanism, but also mediate the acquisition of acceptable behaviors with inter-individual commitment and solidarity (6).

Main Points

- For the healthcare team to show interprofessional learning behavior, which is one of the indispensable requirements of the healthcare team, it is important that the healthcare team members have similar humane values such as respect for another member of the team, being peaceful and friendly.
- The human values and readiness levels for interprofessional learning of the students studying in different departments related to the field of health differed. Students with high human values are more prepared for interprofessional learning.
- It is very important to integrate skills, knowledge and values such as mutual respect, social justice, team participation into the curriculum so that undergraduate students are ready for interprofessional work.
- The results of this study can guide educators to see the human values of students and the level of readiness of students, to determine the aims of the education they will give and the teaching method they will use.

People's perceptions that they share the values of others lead to a higher sense of commitment, greater participation, and more positive attitudes towards opposition. Perceived value similarity is an important factor in shaping people's sense of connectedness with others. Feelings of commitment increase the desire to do one's share and help others (7).

All professions that make up the healthcare team need to learn the roles and responsibilities of other health professions in the team and the importance of working as a team, as well as their professional education during their student years (8). It is thought that individuals who value important concepts such as respect, friendship and honesty will be more respectful and sensitive to other professionals and will be willing to learn the professions of others.

For determine the effect of the human values of pre-graduate students who will be members of the health profession on their readiness for interprofessional learning, the following two research questions were used to guide this study.

1) What is the effect of the human values on their readiness for interprofessional learning?

2) Is there a relationship between students'

the human values and their readiness for interprofessional learning?

Material and Method

Research Design
In this descriptive and cross-sectional study, we aimed to determine the human values and readiness levels for interprofessional learning and the relationship between them in the group of pre-graduate students studying in the field of health.

Participants
The research was conducted on the students of the faculty of health sciences and faculty of medicine of a state university in November 2019. The population of the research was the final year students studying in the Faculty of Medicine (6th grade), Physical Therapy and Rehabilitation (4th grade), Nursing (4th grade) and Midwifery (4th grade) departments of a state university (n=596). The sample consisted of 444 students who were willing to participate in the research. In the Power analysis performed to determine the power of the research sample (n=444), it was determined that the sample size was sufficient for this study and provided 98% power, in the 5% effect size and 95% confidence interval (G*Power 3.0.10).

Questionnaire and Scoring
As a data collection tool in the study, descriptive form (participants' age, gender, department they studied, etc.), human values scale (HVS) and readiness for interprofessional learning scale (RIPLS) were used.

HVS

In this study, the HVS, developed by Dilmac (9), was used to determine the human values of students in Turkey. In the scale, the process of human values is measured with a total of 42 items in six dimensions as responsibility, friendship, peaceable, respect, honesty and Tolerance. There are 7 items in each sub-dimension. The scale is a five-point Likert type (1= never, 2= rarely, 3= sometimes, 4= often, 5= always), the total scores that can be obtained from the scale range from 42 to 210. A high total score indicates that individuals have more human values (9). The Cronbach's alpha value of the scale in this study was 0.84.

RIPLS

The scale was revised by McFadyen et al. (10). The Turkish adaptation of the scale was made by Onan (11). The scale, which has 3 sub-dimensions: Teamwork and collaboration, professional identity, roles, and responsibilities, consists of 19 items. Five-point ratings are used in scoring (1= strongly disagree, 2= disagree, 3= undecided, 4= agree and 5= strongly agree), the total scores that can be obtained from the scale range from 19 to 95. The cut-off point of the scale is 60 points, and it is accepted that the higher the score is, the higher the students' readiness for interprofessional learning levels will be. The Cronbach's alpha value of the scale in this study was 0.87.

Data Collection

The scales were distributed to the students outside of class hours, in the classroom environment, after the purpose of the research was explained. It was explained to the students that participation was entirely voluntary, and those who wanted to participate were asked to read and answer the questions carefully. Filling out the questionnaires took approximately 10-15 minutes.

Statistical Analysis

Research data were evaluated using the IBM Statistical Package for the Social Sciences package program (IBM SPSS v26.0). In the evaluation of the demographic data obtained, frequencies (number, percentage) were used for categorical variables and descriptive statistics [mean, standard deviation (SD)] were used for numerical variables. Independent-samples t-test and One-Way ANOVA tests were used to compare quantitative continuous data between independent groups. Relationships between scales were evaluated using Pearson Correlation Analysis. Statistical significance cut-off value was accepted as $p<0.05$.

Ethical Consideration

Legal permissions and Faculty of Medicine Clinical Research Ethics Committee of Süleyman Demirel University approval (number: 72867572.050.01.04-69337) were obtained from the relevant institution to conduct the research. The students were informed that their participation in the study was on a voluntary basis, that they could terminate their participation at any point, and that the information they provided would not be used outside the research, and their consent was obtained.

Results

It was determined that the students studying in the last year in the field of health scored above the average in the sub-dimensions of responsibility (M=26.37, SD=3.82), friendship (M=27.69, SD=4.26), peaceable (M=27.32, SD=3.55), respect (M=27.18, SD=4.21), honesty (M=22.95, SD=3.15) and tolerance (M=26.06, SD=3.32), and their human values were generally at a good level (M=157.61, SD=15.52) (Table 1).

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Table 1.
Sub-scales of the Human Values Scale (HVS) and Sub-scales of the Readiness for Interprofessional Learning Scale (RIPLS)

	Min	Max	Mean	SD
Sub-scales of the HVS				
Responsibility	11.00	35.00	26.37	3.82
Friendship	12.00	35.00	27.69	4.26
Peaceable	11.00	35.00	27.32	3.55
Respect	12.00	35.00	27.18	4.21
Honesty	14.00	35.00	22.95	3.15
Tolerance	14.00	35.00	26.06	3.32
Total score	86.00	210.00	157.61	15.52
Sub-scales of RIPLS				
Teamwork and collaboration	15.00	45.00	38.13	6.33
Professional identity	7.00	35.00	26.96	4.76
Roles and responsibilities	3.00	15.00	10.01	2.53
Total score	36.00	95.00	77.11	10.89
SD=standard deviation				

Table 2.
Comparison of HVS and RIPLS Mean Scores of Participants

Socio-demographic charasteristics	n	%	Human values scale (HVS)							Readiness for Interprofessional Learning Scale (RIPLS)			
			Total score χ ± SD	Responsibility χ ± SD	Friendship χ ± SD	Peaceable χ ± SD	Respect χ ± SD	Honesty χ ± SD	Tolerance χ ± SD	Total score χ ± SD	Teamwork collaboration χ ± SD	Professional identity χ ± SD	Roles and responsibilities χ ± SD
Age range													
23 and ↓ a	357	80.4	158.80±14.47	26.58±3.68	28.07±4.07	27.52±3.45	27.40±3.85	22.96±3.25	26.25±3.18	76.36±10.43	38.65±6.10	27.47±4.49	10.19±2.51
24 and ↑ b	87	19.6	152.72±18.54	25.51±4.23	26.17±4.66	26.54±3.88	26.28±5.36	22.91±2.71	25.28±3.76	70.01±11.32	35.87±6.78	24.87±5.25	9.26±2.50
			t=3.316 p=0.001 a>b	t=2.356 p=0.019 a>b	t=3.780 p=0.000 a>b	t=2.317 p=0.021 a>b	t=2.380 p=0.026 a>b	t=0.575 p>0.05	t=2.446 p=0.015 a>b	t=5.006 p=0.000 a>b	t=3.768 p=0.000 a>b	t=4.680 p=0.000 a >b	t=3.104 p=0.002 a>b
Gender													
Female a	339	76.4	158.79±14.76	26.59±3.67	27.84±4.17	27.67±3.43	27.32±4.14	23.03±3.23	26.33±3.17	75.63±11.29	38.27±6.50	27.30±4.83	10.04±2.54
Male b	105	23.6	153.80±17.27	25.68±4.19	27.23±4.50	26.20±3.73	26.74±4.39	22.71±2.86	25.20±3.65	73.45±9.32	37.68±5.26	25.86±4.36	9.90±2.52
			t=2.908 p=0.004 a>b	t=2.134 p=0.033 a>b	t=1.267 p>0.05	t=3.744 p=0.000 a>b	t=1.244 p>0.05	t=0.904 p>0.05	t=3.045 p=0.002 a>b	t=1.791 p>0.05	t=0.832 p>0.05	t=2.731 p=0.007 a>b	t=0.503 p>0.05
Department of education													
Nursing a	148	33.4	158.92±15.27	26.08±4.19	28.14±3.97	27.47±3.71	27.42±3.93	21.1±3.37	26.61±3.47	78.82±8.61	39.66±4.87	28.56±3.78	10.59±2.17
Medical school b	101	22.7	152.35±17.39	25.55±3.96	26.06±4.45	26.52±3.38	25.86±4.91	22.78±2.79	25.55±3.65	68.85±11.33	35.44±7.04	23.96±5.16	9.44±2.46
Midwifery c	91	20.5	159.84±14.1	27.24±3.37	28.40±4.36	27.89±3.45	27.50±4.28	22.7±3.54	26.06±2.81	72.97±11.90	36.89±7.51	27.09±4.74	8.98±2.41
Physiotherapy and rehabilitation d	104	23.4	158.91±14.06	26.84±3.30	28.02±4.02	27.41±3.49	27.86±3.51	22.99±2.78	25.76±3.11	77.79±9.30	39.66±5.20	27.56±4.33	10.63±2.78
			F=5.231 p=0.001 a,c,d>b	F=4.012 p=0.008 c>b	F=6.755 p=0.000 a,c,d>b	F=2.604 p>0.05	F=4.681 p=0.003 a,c,d>b	F=0.522 p>0.05	F=2.407 p>0.05	F=23.134 p=0.000 a,d>b,c a,c,d>b	F=13.115 p=0.000 a,d>b,c	F=22.216 p=0.000 a,c,d>b	F=12.178 p=0.000 a,d>b,c

F=One-Way ANOVA test, t=Independet Student's t-test, p<0.05 significant value, SD=standard deviation

the sub-dimensions of teamwork and collaboration (M=38.13, SD=6.33), professional identity (M=26.96, SD=4.76) and roles and responsibilities (M=10.01, SD=2.53), and their readiness for interprofessional learning status were generally at a good level (M=77.11, SD=10.89) (Table 1).

The mean age of the participants was 22.52±1.19, with 76.4% women and 33.4% nursing students. In the study, it was found that the students in the age group of 23 years and younger had significantly higher HVS total scores than the students in the age group of 24 years and above (t=3.316, p=0.001). In addition, it was determined that the responsibility (t=2.356, p=0.019), friendship (t=3.780, p=0.000), peaceable (t=2.317, p=0.021), respect (t=2.380, p=0.026) and tolerance (t=2.446, p=0.015) sub-dimension mean scores of students aged 23 and under and the HVS total scores (t=2.908, p=0.004) and responsibility (t=2.134, p=0.033), peaceable (t=3.744, p=0.000) and tolerance subscale (t=3.045, p=0.002) mean scores of females were significantly higher. Nursing, midwifery, physiotherapy and rehabilitation department students' total score averages of HVS total scores (F=5.231, p=0.001) and friendship (F=6.755, p=0.000) and respect (F=4.681, p=0.003) sub-dimensions were significantly higher than medical school students' mean scores. In addition, midwifery department students' average scores on the responsibility sub-dimension (F=4.012, p=0.008) were found to be significantly higher than those of medical school students (Table 2).

It was determined that the mean scores of the total (t=5.006, p=0.000) and all sub-dimensions of the RIPLS scale [teamwork and collaboration (t=3.768, p=0.000), professional identity (t=4.680, p=0.000), roles and responsibilities (t=3.104, p=0.002)] were statistically significantly higher in students aged 23 and younger than students aged 24 and over. It was found that the professional identity sub-dimension mean score of

Table 3.
Correlation of Human Values Scale (HVS) and Readiness for Interprofessional Learning Scale (RIPLS) (n=444)

HVS							
	Total score	**Responsibility**	**Friendship**	**Peaceable**	**Respect**	**Honesty**	**Tolerance**
RIPLS							
Total score	r=0.487 **p=0.000**	r=0.337 **p=0.000**	r=0.398 **p=0.000**	r=0.345 **p=0.000**	r=0.414 **p=0.000**	r=0.243 **p=0.000**	r=0.252 **p=0.000**
Teamwork and collaboration	r=0.491 **p=0.000**	r=0.344 **p=0.000**	r=0.412 **p=0.000**	r=0.346 p=0.000	r=0.457 **p=0.000**	r=0.208 **p=0.000**	r=0.221 p=0.000
Professional identity	r=0.411 **p=0.000**	r=0.291 **p=0.000**	r=0.338 **p=0.000**	r=0.290 **p=0.000**	r=0.329 **p=0.000**	r=0.215 p=0.000	r=0.220 **p=0.000**
Roles and responsibilities	r=0.093 p>0.05	r=0.030 p>0.05	r=0.044 p>0.05	r=0.075 p>0.05	r=0.017 p>0.05	r=0.119 p=0.012	r=0.118 p=0.013
p<0.05 significant value							

women (t=2.731, p=0.007) was significantly higher than that of men. Interprofessional readiness scale total (F=23.134, p=0.000) and all sub-dimensions mean scores (teamwork and collaboration (F=13.115, p=0.000), professional identity (F=22.216, p=0.000), roles and responsibilities (F=12.178, p=0.000) differed according to the department on which the students studied. Accordingly, RIPLS total and sub-dimension scores of nursing, physiotherapy and rehabilitation department students were compared to midwifery and medical school students' scores; it was found that the scores of the students of the midwifery department were significantly higher than the scores of the medical school students. In addition, the scores of nursing and physiotherapy and rehabilitation department students in teamwork and collaboration and roles and responsibilities sub-dimension were higher than the scores of medical school and midwifery students. It was found that the scores of medical school students in the professional identity sub-dimension were significantly lower than the students of other departments (Table 2).

It was determined that there was a moderately positive and significant relationship between students' HVS scores and RIPLS scores (r=0.487, p<0.000). Table 3 also shows the correlation results for the sub-dimensions of the scales. According to this result, as students' HVS scores increase, their readiness for interprofessional learning also increases.

Discussion

This research was carried out to determine the human values and readiness for inter-professional learning and the relationship between them.

In our study, it was determined that female students had more human values in the total score with the sub-dimensions of responsibility, peacefulness and tolerance compared to male students. In a study conducted by Dereli and Aypay (12), it was determined that female students

exhibit more human values than males. In the study of Páez Gallego et al. (13), the values of self-management, helpfulness, relevance, success and tradition were found to be higher in the female group. These results can be explained by Guilligan's (14) ethics of women. According to Guilligan (14), moral development is based on the principle of responsibility for women and the principle of justice for men. However, this idea is rejected by Kolhberg, who proposes a similar model of moral development for both sexes.

In the study, it was found that the students in the age group of 23 years and younger had significantly higher HVS total scores than the students in the age group of 24 years and above. It is reported in the literature that the meanings of values in human life can change systematically depending on age (15).

When the differences between the HVS scores of the students according to the occupational groups are evaluated, it is seen that the medical school students have lower human values than the other students. In studies conducted in Turkey, it has been determined that physicians show destructive physician behaviors such as scolding, shouting, not showing respect and courtesy to nurses, selfish and egoistic, and nurses are negatively affected (16). It is seen that stressors are relatively higher in medical faculties compared to other faculties due to the difficulty of education, the intensity of the courses and the presence of practical courses in addition to the theoretical courses. In this case, it can be said that students can enter into emotional burnout, and this may result in the loss of some values.

According to Talwalkar et al. (17), Judge et al. (18) and Al-Qahtani (19) reported that RIPLS scores do not differ according to age. Hudson et al. (20) found that although students have a higher enthusiasm for interprofessional education at the beginning of their education, they are less open to interprofessional learning over the years.

As for gender, Talwalkar et al. (17), Judge et al. (18) and Keshtkaran et al. (21) determined that students differ in terms of RIPL by gender, and female students have higher RILP scores than male students. Hojat et al. (22), in their study on health students using the Jefferson scale of Attitudes Toward Interprofessional Collaboration (Jeff SATIC), determined that female students scored higher than male students in terms of cooperation. These results are generally thought to be because women are more inclined to listen to others, trust them, and seek their views while learning. Similarly in the literature, Hojat et al. (22), Kesthkaran et al. (21) and Judge et al. (18) found that students' RILP status differs between departments, and medical school students' interprofessional readiness is lower. In addition, it is reported that medical students tend to be less enthusiastic about interprofessional education, have more negative attitudes, and be more protective of their own professional education, and nursing students are more open to interprofessional cooperation (21,23,24).

Students who received interprofessional training, both face-to-face and online, reported that this training program improved their communication with their colleagues and other members of the profession, and they were better prepared for professional life (25,26). The World Health Organization also reports that interprofessional cooperation gives good results in family health and in the management of infectious or non-communicable diseases (27).

In this study, it was determined that students with high human values also have high levels of readiness for interprofessional learning. Values such as responsibility, respect, and tolerance, which are among human values, are values that can directly affect the sub-dimensions of Teamwork and collaboration and Roles and responsibilities in RIPL. The importance that individuals attach to values such as responsibility, friendship, being peaceful, respect, honesty and tolerance affects their interpersonal relationships. For good cooperation between the professions to be possible, the members of the profession should have these human values at a high level individually. In this respect, it is expected that the readiness for professional learning of professionals with high human values will be high.

Study Limitations
The findings obtained from the study are limited to the sample of the study. Since there were differences between the student numbers of the departments in the school where the study was conducted, the number of students of the departments in the sample could not be kept equal.

Conclusion

In the study, it was determined that the human values and readiness levels for interprofessional learning of the students studying in different departments related to the field of health differed. Human values and readiness for interprofessional learning were lower in medical school students. Students with high humanitarian values also had a high readiness for interprofessional learning. This research provided students with the opportunity to increase their awareness of interprofessional learning and to evaluate their own level realistically. To successfully implement and ensure the sustainability of inter-professional education programs and activities, it is necessary to determine the wishes and readiness of the students in this regard. It is recommended to develop formal curricula for health professionals to offer integrated courses that include human values and ethics, understand each other's roles and responsibilities, improve interprofessional communication and motivate teamwork. Additionally, case events, memoirs, etc., involving altruism, compassion, respect and honesty. All students' awareness of human values can be increased by using such methods.

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