



Original Article

The perception of undergraduate education and profession, inclination towards ethical values, and personality traits of physiotherapy and rehabilitation students: A sample of Alanya Alaaddin Keykubat University

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Abstract

Aim: The aim of this study was to examine the relationship between the perspectives of students studying physiotherapy and rehabilitation at the undergraduate level, their tendencies towards ethical values, and their personality traits.

Materials and Methods: This study was conducted with the participation of 187 students enrolled in the Department of Physiotherapy and Rehabilitation at Alanya Alaaddin Keykubat University Faculty of Health Sciences. The evaluations of the Physiotherapy students were carried out through a survey that they could complete via Google Forms, using three different measurement tools: the Questionnaire for Physical Therapy Students' Attitudes Toward Their Profession and Education (Q-PTSAPe), the Ten-Item Personality Inventory (TIPI), and the Ethical Values Orientation Scale (EVOS).

Results: A positive significant relationship was found between the emotional stability and responsibility subscales of the TIPI and the education satisfaction, career choice satisfaction, adequate clinical experience, education satisfaction subscales, and total score of the Q-PTSAPe ($p < 0.05$). It was observed that the responsibility subscale of the TIPI was positively significantly correlated with the education satisfaction subscale and total score of the Q-PTSAPe ($p < 0.05$). A positive significant relationship was found between the extraversion, emotional stability, responsibility, agreeableness, and openness to experiences subscales of the TIPI and the total score of the EVOS, as well as between the TIPI and all subscales of the EVOS ($p < 0.05$).

Conclusion: For the physiotherapy profession, where person-centered treatment is essential, it is emphasized that individuals who are emotionally stable, have a strong sense of responsibility, are extroverted, agreeable, cooperative, and particularly value love and respect, are important for all aspects of the treatment process for both physiotherapists and patients.

Keywords: Physiotherapy students, professional attitudes, ethical values, personality

INTRODUCTION

A profession is defined as a job that an individual performs to sustain their life, requiring education and work to develop their knowledge and skills [1]. The profession of physiotherapy and rehabilitation is practiced by physiotherapists. The aim of this profession is to help individuals regain their lost functional abilities, whether due to congenital reasons or other causes (accidents, injuries, sports injuries, etc.), maximize their movement capacities throughout

their lives, and maintain this maximum level. Additionally, physiotherapists take on roles such as promoting healthy aging, providing preventive healthcare services, and enhancing the quality of life for healthy individuals [2].

When an individual's interests, skills, and personality traits are taken into account during career selection, the individual tends to achieve more successful outcomes in the profession [3]. In order for the profession of physiotherapy to be practiced successfully,

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individuals must possess certain essential qualities. These qualities include good communication skills, the ability to cope with stress, a developed sense of empathy, problem-solving and organizational abilities, good time management, analytical skills, responsibility, and proactivity [4].

An individual's adaptation to a situation or action and their state of readiness is defined as attitude [5,6]. Professional attitude, on the other hand, refers to the emotional inclination that employees have towards their profession. The factors that determine a worker's professional attitude are based on their feelings and thoughts about the functions of their profession and its place in society. The professional attitude formed by the employee influences how the profession is practiced [7].

Ethics can be defined as the evaluation of an event or behavior as right or wrong. Just as there are ethical values to follow in many stages of daily life, there are also professional ethical values that must be adhered to in work life. These values include the moral principles, rules, and norms related to the profession [8]. As employees' adherence to professional ethics increases, the respect and trust that the profession receives from society also grow [9]. During the professional training process, it is of great importance for students to receive ethical education, as it plays a key role in their success in the profession and in taking the right steps after graduation [10,11].

There are several studies in the literature investigating the professional awareness of physiotherapy and rehabilitation students [1,12,13]. However, no study has been found that examines the relationship between students' attitudes towards their undergraduate education and profession, their personality traits, and their tendency toward ethical values. The aim of this study is to examine the relationship between the undergraduate education and professional perspective, ethical values orientation, and personality traits of students in the field of physiotherapy and rehabilitation.

MATERIAL AND METHOD

This study was conducted with the participation of 187 students who were enrolled in the undergraduate program of Physiotherapy and Rehabilitation at the Faculty of Health Sciences, Alanya Alaaddin Keykubat University, and volunteered to participate in the study.

Ethical Aspects of the Study

The study was approved by the Non-Interventional Ethics Committee of Alanya Alaaddin Keykubat University (Date: 13.02.2024, Decision number: 02/11). Written informed consent, prepared in accordance with the Helsinki Declaration, was obtained from the students included in the study.

Inclusion Criteria

- Being an undergraduate student enrolled in the Physiotherapy and Rehabilitation Department of the Faculty of Health Sciences at Alanya Alaaddin Keykubat University

- Agreeing to voluntarily participate in the study.

Exclusion Criteria

- Since participants need to be proficient in Turkish to understand the scales used in the study and answer the questions appropriately, students whose native language is not Turkish were excluded from the study.

Evaluation Methods

After obtaining the demographic information of the participants included in the study, their evaluations were conducted using the Physiotherapy Students' Undergraduate Education and Professional Attitudes Survey, the Ten-Item Personality Inventory, and the Ethical Values Orientation Scale. Data were collected through a survey that students could complete themselves via Google Forms.

Demographic Form

Sociodemographic information, including age, gender, class, and the way students chose the physiotherapy and rehabilitation department, was recorded for the participants in the study.

Questionnaire for Physical Therapy Students' Attitudes Toward Their Profession and Education (Q-PTSAPÉ)

This survey, which was validated and reliability-tested in Turkish by Taşvuran, Horata, and colleagues in 2022, consists of 25 questions. For each question in the survey, there is a rating system based on a 5-point Likert scale, and the highest total score achievable from the survey is 125. A high score indicates that the student has a positive attitude toward the profession and professional education. The survey has four distinct sub-sections, which are as follows: "A = Are students satisfied with their profession/department choice? B = Do students have high expectations for a good future? C = Do students have adequate clinical experience? and D = Are students satisfied with their education?" [14,15].

Ten-Item Personality Inventory (TIPI)

The Ten-Item Personality Inventory, consisting of ten items, was developed by Goslin and colleagues based on the five major personality traits (extraversion, agreeableness, responsibility, emotional stability, and openness). Each item on the scale is rated on a seven-point Likert scale ranging from "strongly disagree (1)" to "strongly agree (7)". This scale, which has been adapted into many languages, was adapted to Turkish culture by Atak in 2013 [16–18].

Ethical Values Orientation Scale (EVOS)

Developed by Kaya, the Ethical Values Orientation Scale consists of 16 items, each rated on a five-point Likert scale ranging from "strongly disagree (1)" to "strongly agree (5)". The scale is divided into three sub-dimensions: "Love-Respect" (items 1–8), "Justice-Honesty" (items 9–13), and "Cooperation" (items 14–16). The higher the score an individual receives from the scale, the more likely they are to be inclined toward ethical values [19,20].

Statistical Analysis

The effect size calculated in the reference study was found to be high ($d=1.09$) [21]. Assuming that a similar effect size could be achieved, a power analysis was conducted, and it was determined that with an effect size of $d=0.50$, and 40 students from each class (a total of 160 volunteers) participating in the study, a power of 85% at a 95% confidence level would be achieved [21]. In line with this, our study was conducted with a total of 187 participants, including 1st, 2nd, 3rd, and 4th-year students from the Physiotherapy and Rehabilitation Department of the Faculty of Health Sciences at Alanya Alaaddin Keykubat University, who volunteered to participate in the study.

Data analysis was performed using SPSS 25.0 software (IBM SPSS Statistics 25 software, Armonk, NY, IBM Corp). According to the results of the Kolmogorov-Smirnov test, the data were found to follow a normal distribution. Continuous

variables are expressed as mean \pm standard deviation, while categorical variables are expressed as frequency and percentage. The relationships between continuous variables with normal distribution were examined using Pearson correlation analysis. The significance level for all statistical analyses was set at 0.05.

RESULTS

Sociodemographic information, such as gender, class level, and reasons for choosing the profession, of the 187 physiotherapy and rehabilitation students included in the study, is detailed in Table 1. According to this, it was determined that 67.4% of the students were female and 32.6% were male. It was found that 29.4% of the students were first-year, 21.9% were second-year, 32.6% were third-year, and 16% were fourth-year students. Furthermore, 82.4% of the students had chosen the physiotherapy and rehabilitation department voluntarily, and 42.8% had chosen the profession because it aligned with their area of interest (Table 1).

Table 1. The sociodemographic information of the participants.

Age		Mean	SD
		20.60	1.86
		Number	%
Gender	Female	126	67.4
	Male	61	32.6
Class	1st class	55	29.4
	2nd class	41	21.9
	3rd class	61	32.6
	4th class	30	16.0
Did you choose the department willingly?	Yes	154	82.4
	No	33	17.6
What is the reason you chose this department?	To fall within one's area of interest	80	42.8
	Good job opportunities	54	28.9
	My AYT score is sufficient for university admission	41	21.9
	Family/environment request	36	19.3
	Physiotherapist's advice	34	18.2
	Not to be unemployed	26	13.9
	The location of the department	11	5.9
	Friend's recommendation	10	5.3
	To transfer to another institution	8	4.3
	Family profession	1	0.5

Mean: average, SD: standard deviation, AYT: field competency test

The average and standard deviation of the total scores and sub-parameters of the Q-PTSAPe, EVOS, and TIPI for the physiotherapy and rehabilitation students are provided in Table 2. According to this, the parameter with the highest total score for Q-PTSAPe was education satisfaction (25.29 \pm 5.45). This was followed by adequate clinical experience (23.50 \pm 6.38), career choice satisfaction (22.88 \pm 4.32), and future expectations

(17.86 \pm 3.60). The highest total score for EVOS was found in the love-respect subparameter (32.99 \pm 9.30). This was followed by justice (20.60 \pm 5.85) and cooperation (12.19 \pm 3.49). When looking at the TIPI scores, it was observed that the students' scores for extraversion (9.84 \pm 3.06), emotional stability (8.57 \pm 2.83), responsibility (10.58 \pm 3), agreeableness (10.66 \pm 2.71), and openness to experiences (10.17 \pm 2.99) were uniformly distributed (Table 2).

Table 2. Findings related to professional attitude, ethical values, and personality traits

		Mean	SD
Q-PTSAPe	Section A (Job selection satisfaction)	22.88	4.32
	Section B (Future expectations)	17.86	3.60
	Section C (Sufficient clinical experience)	23.50	6.38
	Section D (Educational satisfaction)	25.29	5.45
	Total	89.52	16.01
EVOS	Love and respect	32.99	9.30
	Justice	20.60	5.85
	Collaboration	12.19	3.49
	Total	65.78	18.19
TIPI	Extraversion	9.84	3.06
	Emotional stability	8.57	2.83
	Responsibility	10.58	3.00
	Soft-headedness	10.66	2.71
	Openness to experiences	10.17	2.99

Mean: average, SD: standard deviation, Q-PTSAPe: Questionnaire for Physical Therapy Students' Attitudes Toward Their Profession and Education, EVOS: Ethical Values Orientation Scale, TIPI: Ten-item Personality Scale

The relationship between the Q-PTSAPe, EVOS, and TIPI for physiotherapy and rehabilitation students is detailed in Table 3. A statistically significant negative relationship was found between the "future expectations" subscale of Q-PTSAPe and the "love-respect" subscale ($p=0.024$, $r=-0.165$) and the total score ($p=0.046$, $r=-0.146$) of EVOS (Table 3).

Table 3. The relationship between professional attitude, ethical values, and personality

		Q-PTSAPe					EVOS				
		A section	B section	C section	D section	Total	Love and respect	Justice	Collaboration	Total	
EVOS	Love and respect	r	-0.034	-0.165*	-0.099	0.001	-0.085				
		p	0.644	0.024	0.178	0.994	0.245				
	Justice	r	-0.004	-0.135	-0.086	0.021	-0.058				
		p	0.958	0.065	0.243	0.771	0.428				
Collaboration	r	0.030	-0.095	-0.050	0.023	-0.025					
	p	0.679	0.198	0.499	0.757	0.733					
Total	r	-0.013	-0.146*	-0.088	0.012	-0.067					
	p	0.862	0.046	0.233	0.875	0.361					
TIPI	Extraverted	r	-0.002	-0.016	0.061	0.074	0.045	0.408*	0.366*	0.462*	0.415*
		p	0.975	0.826	0.409	0.316	0.541	0.000	0.000	0.000	0.000
	Emotional stability	r	0.159*	0.141	0.150*	0.242*	0.217*	0.187*	0.180*	0.183*	0.188*
		p	0.030	0.054	0.040	0.001	0.003	0.010	0.014	0.012	0.010
	Responsibility	r	0.065	0.094	0.100	0.225*	0.155*	0.426*	0.382*	0.404*	0.418*
		p	0.374	0.198	0.174	0.002	0.034	0.000	0.000	0.000	0.000
	Agreeableness	r	0.034	-0.059	-0.008	0.077	0.019	0.482*	0.448*	0.493*	0.485*
		p	0.648	0.426	0.909	0.297	0.800	0.000	0.000	0.000	0.000
	Openness to experience	r	-0.073	-0.052	-0.019	0.069	-0.015	0.358*	0.314*	0.367*	0.354*
		p	0.320	0.481	0.799	0.346	0.836	0.000	0.000	0.000	0.000

Q-PTSAPe: Questionnaire for Physical Therapy Students' Attitudes Toward Their Profession and Education, EVOS: Ethical Values Orientation Scale, TIPI: Ten-Item Personality Scale, r: Pearson correlation analysis

A statistically significant positive relationship was found between the "emotional stability" subscale of TIPI and the "career choice satisfaction" ($p=0.030$, $r=0.159$), "adequate clinical experience" ($p=0.040$, $r=0.150$), "education satisfaction" ($p=0.001$, $r=0.242$) subscales, and the total score ($p=0.003$, $r=0.217$) of Q-PTSAP. A positive significant relationship was also observed between the "responsibility" subscale of TIPI and the "education satisfaction" subscale ($p=0.002$, $r=0.225$) and the total score ($p=0.034$, $r=0.155$) of Q-PTSAP (Table 3).

A positive relationship was found between the subscales of TIPI, including "extraversion" ($p=0.000$, $r=0.415$), "emotional stability" ($p=0.010$, $r=0.188$), "responsibility" ($p=0.000$, $r=0.418$), "agreeableness" ($p=0.000$, $r=0.485$), and "openness to experiences" ($p=0.000$, $r=0.354$) and the total score of EVOS. Additionally, a statistically significant positive relationship was found between TIPI and all subscales of EVOS (Table 3).

DISCUSSION

In this study, the relationships between physiotherapy and rehabilitation students' undergraduate education, professional perspectives, ethical values orientation, and personality traits were examined in detail. The findings showed that students' voluntary choice of their department had a significant impact on their professional attitude and ethical values orientation. A review of the literature indicates that individuals who choose their department voluntarily tend to show a more committed and careful approach to their profession [22]. These findings support the impact of our study on students' future goals and ethical values.

The relationships between personality traits and professional success are striking. It has been observed that individuals who are extroverted and have a high sense of responsibility are more satisfied with their profession and have positive expectations for the future. This finding aligns with studies in the literature that emphasize the importance of responsibility and discipline [22,23]. Additionally, it has been suggested that the personality traits of female students may influence their interest in the physiotherapy profession.

In the context of ethical values, it is noteworthy that students scored high in the love and respect dimensions. This supports studies that emphasize the importance of empathy and respect for others in professional success. In research by Hernando et al., which examined the ethical values of university students, the most common ethical value was respect, which includes basic respect for others' ideas and values, covering both classmates and academics [24,25]. Additionally, VanderKaay et al. [26] emphasized that ethical decision-making skills enhance clinical performance. In the study by Akyürek and Yenel [10], which examined university students' orientation to ethical values based on demographic variables, it was stated that university students place more importance on love and respect than other ethical values.

The study by Mercader et al. highlights the impact of ethical values on social commitment and social responsibility [25]. In this regard, having high levels of social commitment, social sensitivity, and social responsibility skills are key factors that enhance the ability to empathize. A high ability to empathize leads to tolerance towards individuals with differences and the development of helping skills [27,28]. Especially, the ability to empathize is an important concept in healthcare professionals and emphasizes the significance of personal characteristics of healthcare professionals in improving healthcare systems [29]. Studies have shown that students studying health sciences have higher levels of empathy compared to students in other fields [30].

The tendency of university students towards ethical values determines their level of adopting and applying ethical principles and increases the likelihood of displaying behavior in line with these principles in their professional lives [10]. The literature emphasizes that the tendency towards ethical values is crucial for fulfilling professional duties and responsibilities in individuals working in the healthcare field [20]. Aydın et al., in their study, stated that students in the health sciences field have a high tendency towards ethical values [31]. Our study shows a positive relationship between the professional future expectations and the tendency towards ethical values of physiotherapy students.

Kırca et al., in their study evaluating the tendency of nursing students towards ethical values, found that students who studied nursing with love and voluntarily had a higher tendency towards ethical values compared to those who did not enjoy studying the field [20]. However, contrary to these findings, there are studies that suggest no significant relationship between students' satisfaction with their program and their tendency toward ethical values [11]. Despite all the contradictions, studies on ethical awareness show that individuals capable of making high-level ethical decisions have better clinical performance [26]. In this regard, physiotherapists working with disadvantaged groups must respect individuals' expectations from life and treatment, as well as their interests and lifestyles, to increase treatment effectiveness. It is essential to emphasize that this requires a strong inclination towards ethical values, ethical awareness, and empathy. In our study, the high ethical scores of physiotherapy students in the love and respect sub-dimension support this perspective.

CONCLUSION

This study comprehensively evaluated the relationship between physiotherapy and rehabilitation students' undergraduate education, professional attitudes, inclination towards ethical values, and personality traits. The findings indicate that students' voluntary choice of their department positively affects their professional attitudes and inclination towards ethical values. This result is consistent with studies in the literature that show individuals who make their career choice consciously exhibit higher professional satisfaction and commitment.

In the context of personality traits, it has been observed that emotional stability, a sense of responsibility, and extraversion have a significant impact on professional success and satisfaction. This finding is supported by existing literature that emphasizes the importance of responsibility and discipline in professional life. In particular, the high scores obtained in the love and respect sub-dimensions of ethical values indicate that students understand the critical importance of empathy and respect for others in healthcare professions.

The positive relationship between ethical awareness and professional attitude suggests that students' competence in ethical decision-making processes positively influences their clinical performance. Empathy, a vital component for healthcare professionals, was found to be at a high level among physiotherapy students, indicating that these individuals are well-equipped to provide patient-centered care. This finding highlights the importance of cultivating empathy as it directly supports the students' ability to deliver effective, compassionate care in clinical settings.

In conclusion, the positive attitudes of physiotherapy students towards their profession, their personality traits, and their inclination towards ethical values are promising for their future professional success and contributions to public health. These findings once again emphasize the importance of enhancing ethical awareness and supporting personal development during the undergraduate education process. Strengthening ethical education within training programs will be a crucial step toward improving professional competence and societal sensitivity.

Conflict of Interests

The authors declare that there is no conflict of interest in the study.

Financial Disclosure

The authors declare that they have received no financial support for the study.

Ethical Approval

The study was approved by the Non-Interventional Ethics Committee of Alanya Alaaddin Keykubat University (Date: 13.02.2024, Decision number: 02/11).

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