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Professional Preferences in the Ethnic and Economic Context of Poland and Turkey

ABSTRACT

The main objective of the study is to assess the relationship between the system of student values in the multicultural aspect in relation to professional preferences. For this purpose, Polish and Turkish students were analyzed. The groups were further separated into those studying in the faculties of science and humanities. The social learning theory of Bandura serves as the foundation for the study of occupational preferences (Strelau, 2003). The research includes John Holland's Theory of Career Choice (RIASEC) (Holland, 1970a, as cited in O'Shea & Harrington, 1972), Schwartz's theory of basic values and its structure (Schwartz, 2012). Students' values are expected to be directly related to their choice of studies based on the assumptions of Holland's Theory of Career Choice (RIASEC) (O'Shea & Harrington, 1972). Also, the research by Berring et al. (2015), Sababa and Benson (2010), and the author's interviews with the respondents are used to support the hypothesis that the Turkish students' group has greater preferences for choosing science than the Polish students' group.

KEYWORDS: occupational preferences; values; psychology of culture; Poland; Turkey.

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INTRODUCTION

Poland is one of those European nations where the economy, society, politics, and legal system have all undergone significant change. The nation has chosen to adopt both the ideals of democracy and the free market throughout this period of evolutionary progress, along with all of its implications. An individual's or a population's attitude toward work is a part of a larger process of involvement in economic and social life. The ethical perspective on labor is the outcome of various circumstances (Krzyminiewska, 2021). Work can be seen as a social and economic phenomenon that is continuously evolving under the impact of a society that is developing dynamically and that is continuously changing due to new technology. This innovative economy has grown out of a group of talented and creative people that easily combine new technologies with their own skills (Borowiecki & Dziura, 2016, p. 9, as cited in Krzyminiewska, 2021). When the Republic of Turkey was established in 1923, agriculture accounted for 43% of the country's GDP. Only after 1980 did the period of globalization and liberalization begin, which led to 80% of economic activity not related to agriculture. As a developing nation, Turkey currently adopts a liberal economic system and encourages the expansion of business, but on the other side, man faces limited resources and development chances. All of this encourages a competitive and achievement-oriented mindset, which has an impact on Turkey's younger population (Aycan & Fikret-Paşa, 2003). The most developed cities in Turkey, which is a fairly large country with 81 cities, are Istanbul, Ankara, and Izmir. The relevance of the provinces, which vary in terms of socioeconomic status, cannot be overlooked when taking education levels into consideration (Berberoğlu et al., 2017).

Theoretical foundations of research. Holland's model and its empirical verification

Holland's theory argues that every individual seeks out and is drawn to environments that suit their personality types. For instance, a person with the enterprising personality type will look for a profession in the entrepreneurial sector (O'Shea & Harrington, 1972). Six Holland's occupational types are listed: (R) Realistic: qualified, technical, and some service professions; (I) Investigative: scientists and some technical professions; (A) Artistic: professions in the sphere of music, literature; (S) Social: education and professions related to social care; (E) Enterprising: managerial positions and commercial services; (C) Conventional: includes office and white-collar jobs. His argument is that the degree to which a person resembles the six suggested personality types is represented by all six characteristics of professional personality. In one of the studies (Costa, McCrae, & Holland, 1994; as cited in Gottfredson et al., 1993), a relationship was found between six scales (RIASEC) describing professional personality (Holland, 1985b; as cited in Gottfredson et al., 1993) and three NEO scales (neuroticism, extraversion, and openness to experience) (McCrae & Costa, 1983; as cited in Gottfredson et al., 1993). According to a study of 349 individuals, extraversion positively correlated with the (S) social and (E) enterprising types, while the (I) investigative and (A) artistic types positively related with openness to experience (Gottfredson et al., 1993).

The Theory of Value of S. H. Schwartz

Schwartz (2012) identified ten different values: Self-Direction, Stimulation, Hedonism, Achievement, Power, Security, Conformity, Tradition, Benevolence, and Universalism. Some values represent several motivational objectives because they have multiple meanings. Anisha Juneja and Monika Rikhi (2017) provide research with the goal of evaluating the contribution of the work values with relation to profession preferences and work values

at different phases of people's careers. 120 adults, divided into three groups according to the different stages of their professional careers, participated in the study. The working group (test participants who had been working in the field for less than ten years and were randomly selected) favored enterprising and artistic occupations, the PG group (respondents who worked for no more than two years after graduation) selected conventional and realistic professions, and the UG group (respondents who had just started their studies) preferred artistic and investigative professions. The study demonstrates that young adults choose their careers based on how they feel about the values they internalize. The research conducted by Bruce and Ahim (2017) on the relationship between motivation and professional preferences among Ghanaian and foreign students showed that regardless of the program implemented by the students, the differences in the influence of external values were minimal and the external values had a greater impact on student career preferences than internal values (Bruce & Qartey, 2017). The focus of the research by Berring et al. (2015) is on how 200 young adults in eastern society choose their academic fields of study in relation to their personal values. The results clearly show that students in business/technical subjects place a higher value on extrinsic values and anticipate a greater probability of achieving them in the future (Berring et al., 2015). American research conducted by Sababa and Benson (2010) showed, among other things, that students' career choice and aspirations are greatly influenced by their personal and people-oriented values. The largest percentage of students stated that the desire to maximize one's potentials led them to choose their field of expertise.

Characteristics of the choice of profession and professional career of the Polish and Turkish student

In Poland, two groups of students were identified based on research for the "Balance of Human Capital" project among uni-

versity students (Górniak, 2011): students of the humanities and social sciences and technical students. In the research carried out in terms of the degree of satisfaction with the choice of the field of study, the result showed the advantage of satisfied students with the choice of the field of study. Referring to the data compiled by the Balance of Human Capital in 2010 based on the data of the Central Statistical Office of Poland, in 2009/2010 students chose pedagogy, management and philology, followed by IT and economics. They most often choose the fields of social sciences, economy, and law. The humanities and arts are in second place, followed by education, science, technology, industry, and construction. In Turkey, the medical faculty is the one that students are most interested in, followed by the legal faculty and computer engineering, according to 2018 information with regard to level of interest in a particular faculty. Economy ranked 22 in top 30 in 2018, because students were not interested in economy in 2019, thus, it was not listed in top 30 (Faculty of Higher Education, https://www.yok.gov.tr/Sayfalar/Haberler/2019/yok-atlas-2019-tercih-donemi.aspx). In 2017, Bahar Berberoğlu and her colleagues conducted a fascinating field study to demonstrate Turkey's socioeconomic trends. According to the findings about management styles, Turkish students gave the transformative management style the highest rating, followed by the participatory management style, the paternalistic management style, and the bureaucratic style, which was the least frequently selected style.

METHOD

Sample
509 students took part in the study at four universities: Istanbul Kultur Universitesi, Ayvansaray Universitesi, Istanbul Gedik Universitesi, and Marmara Universitesi. 165 students (121 female

and 44 male) were interviewed at the psychology departments of the four universities, while 99 participants (54 female and 44 male) were interviewed at the physics department of Marmara University. Four universities in Poland participated in the study, too. Data was gathered at the psychology departments of the John Paul II Catholic University of Lublin (KUL) (18 female and 17 male students) and Kazimierz Wielki University (UKW) (16 male students) in Bydgoszcz. The research at KUL was conducted in 2019 just before the class started. An investigator who was extensively trained in the study protocol did the interviewing. At Maria Curie-Skłodowska University (UMCS), data from the psychology department (89 students: 75 female and 14 male) was gathered in March 2019. Additionally, at UMCS, data was gathered in February 2019 at the Faculty of Physics (20 students, 7 women and 13 men). In April 2019, a further 69 students (36 women, 33 men) were evaluated at the University of Warsaw's Faculty of Physics. All ethical standards relating to research in psychology were complied with.

Instruments

1. Portrait Values Questionnaire by Shalom Schwartz with 40 items

Polish adaptation
The questionnaire contains 40 items in total across the following scales: Stimulation, Hedonism, Power, Adaptation, Tradition, Benevolence, Self-Direction, Achievements, Security, Universality. On a 6-point scale, the subject rates the scales in accordance with their individual personality traits (Cieciuch & Schwartz, 2018).

Reliability of the PVQ
Through multiple analyzes of many PVQ studies, the PVQ-R2 version was developed. The adopted cut-off point was 0.6–0.7.

The entire questionnaire's reliability was found to be satisfactory (Cieciuch, 2013).

Relevance of the PVQ
Factor validity was VERIFIED by confirmatory factor analysis (Schwartz et al., 2012).

Turkish PVQ adaptation
The Schwartz theory of value served as the foundation for the PVQ's Turkish adaptation (Schwartz, 1992, 1996, as cited in Demirutku & Sümer, 2010). The Turkish version of the PVQ adaptation involved 381 subjects (186 female, 194 male, 1 person did not answer). The mean age was 21.4 years.

Reliability for Values
The values of the coefficients of internal consistency, reliability and test–retest correlation for the Portrait Questionnaire of Values is considered satisfactory.

2. Youth Questionnaire of Professional Interests – MŁOKOZZ

This questionnaire consists of 60 items concerning various interests and professions. Rating is done on a 5-point Likert scale. The psychometric properties of the scale are satisfactory (Paszkowska-Rogacz, 2011). The methods tested all the variables included in the program.

RESULTS

Values and professional preferences of Polish and Turkish students
First, six models were incorporated in the study. The first model includes subject preferences as a dependent variable. This model

explained 19% of the dependent variable's variance ($R^2 = 0.187$). Linear regression analysis showed that relationship between self-management and subject preferences was significant and negative in Turkish subjects ($\beta = -0.37$, $p < .001$) (see Table 1).

Table 1. Evaluation of the parameters of the model explaining the subject preferences on the basis of values.

	B	SE	t	p	95 % CI		η_p^2
					LL	UL	
Intercept	40.06	2.50	16.04	<.001	35.15	44.97	0.35
Nationality	−6.90	4.30	−1.60	.109	−15.36	1.55	0.01
Adaptation	−0.17	0.79	−0.21	.834	−1.72	1.39	0.00
Tradition	−3.38	0.68	−4.96	<.001	−4.72	−2.04	0.05
Benevolence	4.05	0.92	4.42	<.001	2.25	5.86	0.04
Universalism	0.75	1.01	0.74	.461	−1.24	2.73	0.00
Self-Direction	−4.40	0.90	−4.89	<.001	−6.16	−2.63	0.05
Stimulation	−0.54	0.69	−0.77	.439	−1.89	0.82	0.00
Hedonism	0.42	0.73	0.58	.565	−1.02	1.86	0.00
Achievement	0.21	0.67	0.32	.751	−1.10	1.53	0.00
Power	−1.64	0.59	−2.79	.006	−2.79	−0.48	0.02
Security	0.47	0.88	0.53	.598	−1.27	2.20	0.00
Nationality * Adaptation	0.31	1.11	0.28	.778	−1.86	2.48	0.00
Nationality * Tradition	1.54	1.00	1.54	.125	−0.43	3.50	0.01
Nationality * Benevolence	−1.70	1.21	−1.40	.161	−4.07	0.68	0.00
Nationality * Universalism	0.07	1.31	0.05	.958	−2.51	2.65	0.00
Nationality * Self-Direction	3.95	1.25	3.15	.002	1.49	6.41	0.02
Nationality * Stimulation	−1.88	1.02	−1.84	.067	−3.90	0.13	0.01
Nationality * Hedonism	−0.12	0.95	−0.13	.898	−1.99	1.75	0.00
Nationality * Achievement	−0.66	1.00	−0.66	.510	−2.63	1.31	0.00
Nationality * Power	1.40	0.88	1.59	.113	−0.33	3.14	0.01
Nationality * Security	−0.35	1./22	−0.29	.772	−2.74	2.04	0.00

The second model includes a dependent variable for innovative preferences. This model explained 23% of the dependent variable's variance ($R^2 = 0.225$). In Polish students, the relationship between power and innovative preferences was positively correlated ($\beta = 0.17$, $p = .020$; linear regression analysis split into Polish and Turkish students (see Table 2).

Table 2. Evaluation of the parameters of the model explaining the innovation preferences on the basis of values.

					95 % CI		
	B	SE	t	p	LL	UL	η^2
1	2	3	4	5	6	7	8
Intercept	44.67	2.17	20.60	<.001	40.41	48.93	0.47
Nationality	–7.59	3.73	–2.03	.043	–14.93	–0.25	0.01
Adaptation	–0.79	0.69	–1.15	.252	–2.13	0.56	0.00
Tradition	0.43	0.59	0.73	.467	–0.73	1.59	0.00
Benevolence	2.71	0.80	3.40	.001	1.14	4.27	0.02
Universalism	–2.37	0.88	–2.70	.007	–4.10	–0.65	0.02
Self-Direction	–4.13	0.78	–5.29	<.001	–5.66	–2.59	0.06
Stimulation	–0.47	0.60	–0.79	.433	–1.65	0.71	0.00
Hedonism	1.57	0.64	2.47	.014	0.32	2.81	0.01
Achievement	0.92	0.58	1.59	.113	–0.22	2.07	0.01
Power	–0.90	0.51	–1.77	.078	–1.90	0.10	0.01
Security	–0.96	0.77	–1.25	.212	–2.46	0.55	0.00
Nationality * Adaptation	0.93	0.96	0.97	.333	–0.96	2.81	0.00
Nationality * Tradition	0.39	0.87	0.44	.658	–1.32	2.09	0.00
Nationality * Benevolence	–1.17	1.05	–1.11	.266	–3.23	0.89	0.00
Nationality * Universalism	0.57	1.14	0.50	.616	–1.67	2.81	0.00
Nationality * Self-Direction	0.27	1.09	0.25	.803	–1.86	2.41	0.00
Nationality * Stimulation	–0.09	0.89	–0.11	.916	–1.84	1.65	0.00
Nationality * Hedonism	–0.35	0.83	–0.42	.672	–1.98	1.27	0.00

1	2	3	4	5	6	7	8
Nationality * Achievement	–1.99	0.87	–2.29	.022	–3.70	–0.28	0.01
Nationality * Power	2.21	0.77	2.88	.004	0.70	3.72	0.02
Nationality * Security	1.99	1.06	1.89	.059	–0.08	4.07	0.01

A dependent variable regarding artistic preferences was incorporated in another model, which explained 13% of the variance ($R^2 = 0.132$). Turkish students have higher levels of artistic preferences than Polish ones. Nationality and achievement interactions as well as nationality and hedonism interactions both turned out to be significant. Linear regression analysis showed that the relationship between hedonism and artistic preferences was negative in Turks ($\beta = -0.25$, $p = .001$). Among Poles ($\beta = -0.30$, $p < .001$), the relationship between achievements and artistic preferences was negative (see Table 3).

Table 3. Evaluation of the parameters of the model explaining artistic preferences on the basis of values.

					95 % CI		
	B	SE	t	p	LL	UL	η_p^2
1	2	3	4	5	6	7	8
Intercept	29.31	2.64	11.11	<.001	24.13	34.50	0.21
Nationality	13.00	4.54	2.86	.004	4.07	21.92	0.02
Adaptation	0.53	0.83	0.64	.522	–1.11	2.17	0.00
Tradition	0.91	0.72	1.26	.208	–0.51	2.32	0.00
Benevolence	1.20	0.97	1.24	.217	–0.71	3.10	0.00
Universalism	–0.75	1.07	–0.70	.483	–2.85	1.35	0.00
Self-Direction	–0.56	0.95	–0.59	.558	–2.42	1.31	0.00
Stimulation	–1.60	0.73	–2.19	.029	–3.03	–0.16	0.01
Hedonism	–2.51	0.77	–3.25	.001	–4.02	–0.99	0.02

1	2	3	4	5	6	7	8
Achievement	–0.01	0.71	–0.02	.986	–1.40	1.38	0.00
Power	0.63	0.62	1.02	.308	–0.59	1.85	0.00
Security	1.11	0.93	1.19	.236	–0.73	2.94	0.00
Nationality * Adaptation	0.40	1.17	0.34	.735	–1.90	2.69	0.00
Nationality * Tradition	–1.75	1.06	–1.66	.099	–3.82	0.33	0.01
Nationality * Benevolence	–1.41	1.28	–1.10	.271	–3.92	1.10	0.00
Nationality * Universalism	–1.11	1.39	–0.80	.423	–3.84	1.61	0.00
Nationality * Self-Direction	1.61	1.32	1.22	.225	–0.99	4.21	0.00
Nationality * Stimulation	–0.64	1.08	–0.59	.555	–2.76	1.49	0.00
Nationality * Hedonism	3.03	1.01	3.02	.003	1.06	5.01	0.02
Nationality * Achievement	–2.98	1.06	–2.82	.005	–5.06	–0.90	0.02
Nationality * Power	0.01	0.93	0.02	.988	–1.82	1.85	0.00
Nationality * Security	–1.92	1.28	–1.49	.136	–4.44	0.61	0.01

The following model took social preferences into account and explained 25% of the dependent variable's variance ($R^2=0.252$). The analysis showed a significant main effect for universalism that the relationship between power and social preferences was negative in Poles ($\beta=-0.20$, $p=.010$) (see Table 4).

Table 4. Evaluation of the parameters of the model explaining social preferences on the basis of values.

					95 % CI		
	B	SE	t	p	LL	UL	η_p^2
1	2	3	4	5	6	7	8
Intercept	42.82	2.42	17.70	<.001	38.07	47.58	0.40
Nationality	4.86	4.17	1.17	.245	–3.34	13.05	0.00
Adaptation	–0.38	0.77	–0.50	.617	–1.89	1.12	0.00
Tradition	–0.13	0.66	–0.20	.842	–1.43	1.17	0.00
Benevolence	–1.61	0.89	–1.81	.071	–3.35	0.14	0.01

1	2	3	4	5	6	7	8
Universalism	−2.44	0.98	−2.49	.013	−4.37	−0.52	0.01
Self-Direction	0.61	0.87	0.70	.483	−1.10	2.33	0.00
Stimulation	−0.11	0.67	−0.16	.872	−1.42	1.21	0.00
Hedonism	0.05	0.71	0.07	.941	−1.34	1.44	0.00
Achievement	0.79	0.65	1.21	.226	−0.49	2.06	0.00
Power	0.33	0.57	0.58	.561	−0.79	1.45	0.00
Security	−0.14	0.86	−0.17	.868	−1.82	1.54	0.00
Nationality * Adaptation	0.75	1.07	0.70	.484	−1.35	2.86	0.00
Nationality * Tradition	0.10	0.97	0.11	.916	−1.80	2.01	0.00
Nationality * Benevolence	−1.75	1.17	−1.49	.136	−4.05	0.55	0.01
Nationality * Universalism	−0.16	1.27	−0.12	.902	−2.66	2.34	0.00
Nationality * Self-Direction	1.14	1.21	0.94	.346	−1.24	3.53	0.00
Nationality * Stimulation	−0.56	0.99	−0.56	.573	−2.51	1.39	0.00
Nationality * Hedonism	1.25	0.92	1.36	.176	−0.56	3.06	0.00
Nationality * Achievement	−0.63	0.97	−0.65	.519	−2.53	1.28	0.00
Nationality * Power	−2.18	0.86	−2.54	.011	−3.86	−0.49	0.01
Nationality * Security	−0.59	1.18	−0.50	.615	−2.91	1.72	0.00

Another model included managerial preferences as a dependent variable, explaining 34% of the dependent variable variance ($R^2 = 0.338$). The analysis showed two significant main effects: for nationality and power, and two interactions: nationality and benevolence, and nationality and power. The level of managerial preferences among Turkish students was higher than among Polish students. Linear regression analysis showed that the relationship between benevolence and managerial preferences was negative in Polish students ($\beta = -0.14$, $p = .044$). Significant and negative relationships between power and managerial preferences were found in both groups, with Polish students ($\beta = -0.59$, $p = .001$) having a stronger relationship than Turkish students ($\beta = -0.46$, $p = .001$) (see Table 5).

Table 5. Evaluation of the parameters of the model explaining managerial preferences on the basis of values.

	B	SE	t	p	LL	UL	η_p^2
					95 % CI		
Intercept	43.14	2.33	18.52	<.001	38.56	47.72	0.42
Nationality	11.50	4.01	2.87	.004	3.62	19.39	0.02
Adaptation	–0.23	0.74	–0.31	.760	–1.67	1.22	0.00
Tradition	0.99	0.64	1.56	.121	–0.26	2.24	0.01
Benevolence	1.19	0.86	1.39	.166	–0.50	2.87	0.00
Universalism	–1.35	0.94	–1.43	.152	–3.21	0.50	0.00
Self-Direction	–0.21	0.84	–0.25	.804	–1.86	1.44	0.00
Stimulation	–1.02	0.64	–1.59	.112	–2.29	0.24	0.01
Hedonism	–0.25	0.68	–0.37	.713	–1.59	1.09	0.00
Achievement	0.21	0.63	0.33	.741	–1.02	1.43	0.00
Power	–3.32	0.55	–6.07	<.001	–4.40	–2.25	0.07
Security	–0.16	0.82	–0.20	.842	–1.78	1.45	0.00
Nationality * Adaptation	0.88	1.03	0.85	.395	–1.15	2.90	0.00
Nationality * Tradition	–1.07	0.93	–1.15	.251	–2.90	0.76	0.00
Nationality * Benevolence	–2.75	1.13	–2.44	.015	–4.96	–0.53	0.01
Nationality * Universalism	0.52	1.23	0.42	.673	–1.89	2.93	0.00
Nationality * Self-Direction	0.56	1.17	0.48	.634	–1.74	2.85	0.00
Nationality * Stimulation	–0.24	0.96	–0.25	.800	–2.12	1.64	0.00
Nationality * Hedonism	0.88	0.89	0.99	.321	–0.86	2.63	0.00
Nationality * Achievement	–0.34	0.93	–0.36	.718	–2.17	1.50	0.00
Nationality * Power	–2.41	0.83	–2.92	.004	–4.03	–0.78	0.02
Nationality * Security	0.92	1.13	0.81	.418	–1.31	3.15	0.00

Methodological preferences were included as a dependent variable in the latest model. This model explained 16% of the dependent variable's variance ($R^2 = 0.159$). The analysis found that only safety was significantly correlated with preference level.

The interaction between nationality and hedonism proved to be significant. Hedonism and methodological preferences have a favorable association in Poles ($\beta = 0.20$, $p = .009$) (see Table 6).

Table 6. Evaluation of the parameters of the model explaining methodological preferences on the basis of values.

	B	SE	t	p	95 % CI LL	UL	η_p^2
Intercept	43.42	1.96	22.16	<0.001	39.57	47.27	0.51
Nationality	1.91	3.38	0.56	0.573	–4.73	8.54	0.00
Adaptation	–1.02	0.62	–1.65	0.100	–2.24	0.20	0.01
Tradition	–0.14	0.54	–0.26	0.795	–1.19	0.91	0.00
Benevolence	1.37	0.72	1.91	0.057	–0.04	2.79	0.01
Universalism	–0.17	0.79	–0.21	0.832	–1.73	1.39	0.00
Self-Direction	–1.22	0.71	–1.73	0.084	–2.61	0.16	0.01
Stimulation	0.86	0.54	1.60	0.111	–0.20	1.93	0.01
Hedonism	–0.35	0.57	–0.60	0.548	–1.47	0.78	0.00
Achievement	–0.06	0.53	–0.12	0.906	–1.10	0.97	0.00
Power	0.02	0.46	0.05	0.959	–0.88	0.93	0.00
Security	–2.86	0.69	–4.13	<0.001	–4.22	–1.50	0.04
Nationality * Adaptation	0.16	0.87	0.18	0.854	–1.54	1.86	0.00
Nationality * Tradition	0.36	0.78	0.46	0.648	–1.18	1.90	0.00
Nationality * Benevolence	–1.71	0.95	–1.80	0.073	–3.57	0.16	0.01
Nationality * Universalism	0.69	1.03	0.67	0.505	–1.34	2.71	0.00
Nationality * Self-Direction	0.95	0.98	0.97	0.334	–0.98	2.88	0.00
Nationality * Stimulation	–1.34	0.80	–1.66	0.097	–2.92	0.24	0.01
Nationality * Hedonism	1.57	0.75	2.10	0.036	0.10	3.04	0.01
Nationality * Achievement	–0.38	0.79	–0.48	0.629	–1.92	1.16	0.00
Nationality * Power	–0.48	0.69	–0.69	0.494	–1.84	0.89	0.00
Nationality * Security	–0.02	0.95	–0.02	0.984	–1.89	1.85	0.00

In the next step, it was checked whether there were differences in the values professed by students, depending on the field of study. For this purpose, the analysis was performed with the Student's *t*-test for independent samples. The results of the analysis undertaken revealed significant differences between the groups in terms of benevolence, universalism, hedonism, and power (see Table 7).

Table 7. Comparison of physics and psychology students in terms of their values.

Values	Physics (n = 188)		Psychology (n = 305)		t	p	95% CI		d
	M	SD	M	SD			LL	UL	
Tradition	3.23	1.10	3.33	.97	–0.95	.341	–0.28	0.10	0.09
Benevolence	2.43	0.92	2.21	.84	2.61	.009	0.05	0.38	0.25
Universalism	2.32	1.00	2.12	.87	2.29	.022	0.03	0.38	0.22
Social	2.21	0.84	2.13	.85	1.00	.319	–0.08	0.23	0.09
Stimulation	2.80	1.10	2.72	1.02	0.77	.441	–0.12	0.27	0.07
Hedonism	2.90	1.25	2.64	1.15	2.33	.020	0.04	0.48	0.22
Achievement	2.76	1.10	2.66	.96	1.00	.316	–0.09	0.29	0.10
Power	3.68	1.24	3.45	1.17	2.04	.042	0.01	0.44	0.19
Security	2.62	1.02	2.45	.85	1.86	.064	–0.01	0.34	0.18

Polish and Turkish students were compared against one another in terms of recognized values using the Student's *t*-test as well. The analysis showed that Polish students demonstrated a higher level of acceptance for conformity, tradition, universalism, self-direction, stimulation, hedonism as well as power and security compared to Turkish students. Both groups did not differ in terms of the level of evaluation of benevolence and achievement. The results of the analyzes are presented in Table 8.

Table 8. Comparison of Polish and Turkish students in terms
of recognized values.

Values	Poles (n = 229)		Turks (n = 264)				95% CI		
	M	SD	M	SD	t	p	LL	UL	d
Conformity	3.02	1.01	2.60	0.93	4.74	<.001	0.24	0.59	0.43
Tradition	3.60	1.00	3.03	0.96	6.47	<.001	0.40	0.75	0.58
Benevolence	2.37	0.92	2.23	0.84	1.77	.078	–0.02	0.30	0.16
Universalism	2.50	0.90	1.94	0.86	7.06	<.001	0.41	0.72	0.64
Self-Direction	2.38	0.86	1.97	0.80	5.43	<.001	0.26	0.55	0.49
Stimulation	3.03	1.08	2.51	0.96	5.71	<.001	0.35	0.71	0.52
Hedonism	3.37	1.16	2.20	0.93	12.29	<.001	0.98	1.36	1.13
Achievement	2.71	0.96	2.70	1.06	0.11	.914	–0.17	0.19	0.01
Power	4.00	1.07	3.14	1.16	8.51	<.001	0.66	1.06	0.77
Security	2.93	0.85	2.15	0.82	10.31	<.001	0.63	0.93	0.93

A comparative analysis of the level of professional preferences among the surveyed students showed that Turkish students display a higher level of subject, artistic, social, and managerial preferences compared to Polish students as presented in Table 9.

Table 9. Comparison of Polish and Turkish students in terms
of professional preferences.

Professional Preferences	Polish (n = 229)		Turkish (n = 264)				95% CI		
	M	SD	M	SD	t	p	LL	UL	d
1	2	3	4	5	6	7	8	9	10
Subject	25.37	8.76	27.21	9.55	–2.22	0.027	–3.47	–0.21	0.20
Innovative	38.20	8.11	37.07	8.28	1.53	0.127	–0.32	2.59	0.14
Artistic	26.56	9.49	28.40	9.33	–2.16	0.031	–3.50	–0.17	0.20

1	2	3	4	5	6	7	8	9	10
Social	31.67	10.11	37.02	7.79	−6.50	<0.001	−6.96	−3.73	0.60
Managerial	28.57	10.36	31.80	8.51	−3.75	<0.001	−4.93	−1.54	0.34
Methodical	34.62	6.98	35.81	7.22	−1.86	0.063	−2.46	0.06	0.17

Both groups did not differ in terms of the level of innovative and methodological preferences. The strength of the differences was low to moderate.

DISCUSSION

The hypothesis that the values recognized by students are directly related to their choice of studies has been partially confirmed. The basis for the evaluation of this hypothesis are the results of the analyzes presented in Tables 1–6 and the auxiliary data presented in Tables 7 and 8. By summarizing the verification analysis of Tables 1–6, we can indicate that for all types of occupational preferences, which were considered in our analyzes as dependent variables, both main and interaction effects between the variables (15 main effects and 5 interaction effects) were revealed. As the results summarized in Table 7, we can certainly indicate that the field of study of the respondents did not statistically significantly differentiate any of the values involved in our research. We found a similar lack of statistically significant differences as a result of the analysis of the relationship between the values and the nationality of the surveyed students (Table 8). Inspired by the literature on the subject (O'Shea & Harrington, 1972), this hypothesis was formulated on the basis of the assumptions of the concept of Holland's professional interests, which includes six personality types. According to this theory, each person chooses a professional environment, activating their own needs related to their personal-

ity type. For example, the correlation between power and social preferences was negative in the Polish group.

The hypothesis that Turkish students' group has greater preferences for choosing science than the Polish students' group has also been confirmed. The level of statistical significance of the difference between both groups of students is very high and ranges from $p < .027$ (for artistic preferences), through $p < .031$ (for artistic preferences to managerial and social preferences, up to $p < .001$ (for social and social preferences). This hypothesis was created on the basis of the results of research conducted by Berring et al. (2015). In this study, the results confirmed that there are differences in value orientation among students depending on whether the student is from the faculty of humanities and arts or from the faculty of business and technology. Research by Sababa and Benson (2010) showed a relationship between the influence of the value of self-expression in the choice of occupation and preferences of administration students, and a significant difference between personal values and other values that affect a given career aspiration. The largest percentage of students stated that the selected field of specialization was created out of the desire to maximize their own potential (Sababa & Benson, 2010). Additionally, this hypothesis reflects their own observations during the conversation on the situation of choosing a profession among Polish and Turkish school graduates.

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