



# Accordance between enneagram and ten-item personality inventory with correspondence analysis and social relationship status among university students from Turkey

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## Abstract

*Purpose of the study was to determine of the effects of personality types on World Health Organisation Quality of Life-Bref (WHOQOL-Bref) Social Domain and Social relationships, in addition, to explore of accordance between Enneagram types and Ten-Item Personality Inventory (TIPI) types with Correspondence Analysis among the students who are studying at health-related schools of the university in Western Turkey. This is a descriptive study. It was realized between January and June 2015 about the university students. The questionnaire form, and Enneagram test, and TIPI were applied to the study group. The quality of life social domain scores were determined with WHOQOL-BREF. Qui Square, Mann Whitney U and Kruskal Wallis test were used for statistical analysis. The relationship between Enneagram and TIPI was evaluated with correspondence analysis. Statistical analyses were made with SPSS version 22.0. Values of  $p < 0.05$  were considered for statistical significance. The study group consisted of 307 students. Female frequency was 65.8% (n: 202). According to Correspondence Analysis; The accordance between the two personalities (respectively; Enneagram - TIPI) were observed as follows: "Type-1: Agreeableness", and "Type-1: Conscientiousness", and "Type-2: Agreeableness", and "Type-2: Conscientiousness", and "Type-8: Openness to experiences" in males, and "Type-2: Neuroticism", and "Type-3: Neuroticism", "Type-3: Agreeableness", and "Type-4: Neuroticism", and "Type-4: Agreeableness", "Type-8: The challenger-Agreeableness" in females. In females, WHOQOL Bref Social Domain Scores were lower in Type 4 and Type 8 Enneagram types than the other types (for each one,  $p < 0.05$ ). According to these results; It is recommended that the using the Enneagram together with TIPI in personality analysis of the university students in guidance services.*

**Keywords:** Enneagram, ten-item personality inventory, social relationships, university students.

## Introduction

Personality may be defined that the differences of mental and physical characteristic reflected on behaviors and thinks of a particular individual<sup>1</sup>. Two cardiologists, Friedman and Rosenman, who observed two different personality structures, defined the A-Type and B-Type personality structures in heart disease patients<sup>2</sup>. A-type personality is extremely competitive, active in business life and very sensitive to time. B-type personality is less competitive, less work-oriented and less responsive to time. Since 1960, twenty scales have been identified to determine A-Type and B-Type personality characteristics both in heart disease and in job satisfaction. Three from twenty scales are more preferring according to the others: Videotaped Structured Interview (VSI), Framingham Type-A Scale (FTAB), Jenkins Activity Survey (JAS) and Bortner Rating Scale (BRS)<sup>3</sup>.

Five-factor theory integrates different views related to personality structure under one roof. The five-factors as follows: *Extraversion, Neuroticism, Openness, Conscientiousness ve Agreeableness*<sup>4</sup>. It is seen that the five-factor dimensions are

studied in various contexts as different personality variables, and different professional groups, and different job performance, and career success, and life satisfaction, and organizational virtue, and insurance of life and interviews on the job, religious orientation, and sexual life experience<sup>5</sup>. At the beginning of the 1990s; it appears that the development of different measurement tools to measure the five-factors and the review of existing scales have been published<sup>6-10</sup>.

According to the five-factor theory, characteristic adaptations (habits, attitudes, skills, roles, relationships) in five-factors were determined as follows: Extraversion: success in social relations, to be a good speaker, participation in non-governmental organizations, being active in art and sports activities, etc. Neuroticism: to lose his self-esteem, nothing perfect for me, pessimistic, etc. Openness to Experience: Tourist trips, the request to make new things, different hobbies, to show interest in rare occupations, friendships for sharing various pleasures, etc. Conscientiousness: to be a good leader, to make long-term plans, to have organization, coordination and technical skills, etc. Agreeableness: to be forgiving, to be prone to teamwork, to use an informal language, to be compatible, etc.<sup>6</sup>.

In Greek Ennea means nine and gram means point. Enneagram divides people into nine different types of personality according to the ways in which the world perceives and evaluates and reacts, etc. It is one of the most appropriate scales used in recruitment, career research, leadership training. Enneagram is also known to be used in military areas, police departments and intelligence units. Unlike other personality scales, Enneagram not only deals with the personality traits, tendencies and preferences of the individual but also the sources of motivation underlying the behaviors of the designated personality type and the behavioral patterns that may change in case of stress or confidence<sup>11</sup>.

Enneagram has esoteric roots. The Enneagram symbol takes place in the sacred geometry of the Pythagoreans, 4000 years ago. The Enneagram symbol is found in the kabbalistic "tree of life", esoteric Judaism, especially the Neoplatonist Philo, and esoteric Christianity. The variants of this symbol are also present in the Islamic Sufi tradition. Arabian philosopher al-Ghazzali is associated with the Enneagram symbol. In the last century, we see that Enneagram was used by George Gurdjieff (1879-1949) to explain the secrets of the universe. The Enneagram was taught by *Oscar Ichazo* in South America. *Claudio Naranjo*, a Chilean psychologist, elaborated and codified Ichazo's explorations of the human personality still further. Riso and Hudson explain the Enneagram as a person-centered approach, which aims to help the process of spiritual maturation of the individual<sup>11-16</sup>.

For personality analysis with Enneagram, We see that the Riso-Hudson Enneagram Type Indicator with which has 144 items<sup>17</sup>, and *Nine Types Temperament Model*<sup>18</sup> have been developed. *The Enneagram of Personality* developed by Palmer (1988) has the ability to select one of nine types of characters<sup>19</sup>. We see that Enneagram is used in a wide range of spectrum. For example, there are also studies in which Enneagram is used to develop preventive strategies against cardiovascular disease risks<sup>20</sup>. Enneagram is also utilized in family therapy and marriage<sup>21</sup>, and work engagement in financial institutions<sup>22</sup>.

When the literature is reviewed, there are studies showing that personality types have an effect on the ability to form good social relationships and the ability to solve conflicts that arise in social relationships<sup>23-25</sup>. In addition, personality also reflects on the quality of life<sup>26</sup>.

However, there has been no study in the literature showing the accordance of TIPI and Enneagram types, according to our scanning of literature.

The study's aims were to evaluate of the effects on the WHOQOL-Bref Social Domain, and social relationships of personality types, and secondly, to explore the accordance between Enneagram types and TIPI types with *correspondence analysis*, among the 2<sup>nd</sup> grade students who are studying at health-related schools of the university in West Turkey.

## Materials and methods

**The study's type:** This study is a cross sectional.

**Area of the study and period:** Area of the study is in the city of İzmir located in the west of Turkey, it is a medical faculty, and other health-related schools of a state university. The study period is six months, from January to June 2015.

İzmir city is a contemporary, developed and at the same time a busy commercial center. The population of İzmir is 4.061.074 according to the results of the *Address-Based Population Registration System*, 2012<sup>27</sup>. There are four state universities and seven foundation universities in Izmir. The university where this study's realized is the newest state university in Izmir. This university has 13 faculties, three graduate schools, and two vocational high schools<sup>28</sup>.

**Target population:** Target population of this study consists 2<sup>nd</sup> grade students of the faculty of medicine, and other health-related schools (dentistry, health sciences, health services vocational) of a state university.

Sampling selection was not needed. It was planned to reach the target population in this study. The target population was 379 2<sup>nd</sup> grade students.

**Inclusion and Exclusion criteria:** Inclusion criteria were as follows: i. To be a 2<sup>nd</sup> grade student in Faculty of Medicine and other health-related schools, ii. Students which approval to participate in the study, iii. Turkish students.

Exclusion criteria were as follows: i. Foreign students (with cause of using a modified version of the Scales for Turkish people) (n:10), ii. Refuse to participate in this study (n:62). A total of 72 students were excluded from this study.

The study group consisted of 307 students (81.0% of the target population).

**Characteristics of the study group and normal distribution suitability:** It was thought that the selection of students in the same class (2<sup>nd</sup> grade) to the study would reduce the confounding effect of the age factor.

As nursing and midwifery students were predominant in this study group, approximately two-thirds of the study group (65.8%) was female. Relatively, medical faculty students were predominantly males. In the study group, 53.4% of medical faculty students were male and 77.8% of other school students were female ( $\chi^2=31.358$ ;  $p<0.001$ ).

According to Shapiro Wilk analysis; the distribution of Enneagram and TIPI personality types according to gender and age did not found normally distribution (for each one;  $p<0.001$ ).

**Questionnaire form:** This study was carried out under a project that investigated the factors thought to be related to mental

states of university students. A questionnaire containing multiple-choice questions was prepared in accordance with the literature<sup>29-32</sup>. It corresponds to the aims of the study, some socio-demographic (age, gender, socioeconomic level) and health-related characteristics (presence of any chronic disease and any disability) and social relations (interrelationships with mother, father, siblings and friends) were investigated. Questionnaire forms were filled out by students themselves, under the supervision of researchers, after the necessary permits and information were made in the school environment.

**Scales:** Personality types were evaluated using two separate scales. These are: i. Enneagram test, ii. TIPI.

**Enneagram test:** In this study, "The Enneagram of Personality" developed by Helen Palmer was taken into consideration<sup>19</sup>. The Enneagram of Personality measures nine individual development dimensions. This test can be applied to any age individual.

The Enneagram is a circle, a set of nine points on the circle, and a diagram showing the various relations of these points with each other. The test used has nine paragraphs that describe nine specific people. The participant reads the nine paragraphs in the Test one by one and indicates the closest he/she sees from the personalities expressed by each paragraph<sup>11</sup>.

According to Enneagram, nine people types' characteristics are as follows: i. Type-1: The reformer: Having ideals own; which desires the best, the persons those depend on the principles. ii. Type-2: The helper: Charitable person; Generous; The person who feels spiritual pleasure from solving others' problems, iii. Type-3: The achiever: Fits the situation; ambitious; image enthusiast; arrogant. iv. Type-4: The individualist: Live expressive power, Impressive, Romantic, Variable mood. v. Type-5: The investigator: innovator, predisposed to intellectual occupations, distance to other people, provocative. vi. Type-6: The loyalist: reliable, dedicated, responsible, skeptical. vii. Type-7: The enthusiast: multidirectional, distracted, person with extreme movements. viii. Type-8: The challenger: self-confidence, decisive, domineering, the tendency to face. ix. Type-9: The peacemaker: the easygoing, self-effacing type: acceptable, supporting, satisfied, compatible, reassuring, impressive<sup>17</sup>.

**TIPI:** Ten-Item Personality Inventory is a personality assessment scale, was prepared by Gosling et al.<sup>33</sup>. For TIPI, the validity and reliability study for TIPI was realized by Atak in Turkey<sup>34</sup>.

According to five-factor theory, TIPI consists of five sub-scales as follows: i. Extraversion, ii. Neuroticism, iii. Openness to experiences, iv. Conscientiousness, v. Agreeableness.

Each subscale consists of two questions: Questions 1 and 6; "Extraversion", 9 and 4; "Neuroticism", 5 and 10; "Openness to experiences", 3 and 8; "Conscientiousness", and 2 and 7; "Agreeableness" reveal personality traits.

The total score is not calculated. Scores are calculated for each subscale.

Personality traits evaluated by five subscales are as follows: i. Extraversion (extraverted, enthusiastic), ii. Neuroticism (sad, passive, disconcerting, pessimistic), iii. Openness to experiences (the request to make new things, creative) iv. Conscientiousness (dependable, self-disciplined, technical skills), v. Agreeableness (sympathetic, warm, to be compatible).

Ten types of personalities determine together with the opposite characteristics of the five personalities in TIPI.

**WHOQOL-Bref:** World Health Organization Quality of Life-BREF (WHOQOL-BREF) that included 26 questions, a scale that allows cross-cultural comparison<sup>35</sup>. The study of validity and reliability in Turkey was carried out by Eser et al.<sup>36</sup>. With the addition of a question in Turkish validity and reliability study, the scale increased to 27 questions. With this question, the number of four domains has also increased to five. The first question of the scale is perceived life's quality, and the second is related to perceived health status. The scale's domains as follows: i. Physical Health Domain: To be able to work daily, addiction to drugs and care, vitality and exhaustion, physical activity, pain and discomfort, sleep and rest, working power. ii. Psychological Health Domain: Body image and external appearance, negative emotions, memory, attention gathering. iii. Social Relations Domain: Relations with other persons, social support, sexual life. iv. Environmental Domain: Health and safety of the physical environment, access to home care services, suitable environmental conditions for hobbies, convenient transportation facilities. v. Cultural Standardized Domain: Social pressure.

In this study, WHOQOL Bref Social Relations Domain Score was applied.

**Definitions:** In this study social relations with mother, father and friends were questioned. Good (3 point), medium (2 point), and bad (1 point) answers were obtained. The social relationships scores were obtained as follows: (Scores of social relationships (with mother + with father + with friends)/3). Median (%25 - %75) values (min: 1; max: 3) were used for the social relationships scores.

The socioeconomic level was categorized as "high, middle, low". In the study, three points for high level; two points for middle level, and one point for low level were given. The median (25%, 75%) values (min: 1; max: 3) were used by socioeconomic level.

Those who have any chronic disease, physically and mentally, are accepted as "chronic disease positive".

Any disabled students, such as visual, hearing, orthopedic, any disability were accepted as "disability positive".

**Permits:** The necessary permits for this study are obtained from the administrative unit of these schools. And this study received Ethical Committee approval (Date: 11.12.2014 and Number: 262). Verbal consents were received to this study from each participant.

**Funding:** This study was produced from a Scientific Research Project that supported by Izmir Kâtip Celebi University (Project Number: 2014-GAP-TIPF-0009).

**Statistical analyses:** All statistical analyses were made with IBM SPSS Statistics 22.0 package program (IBM Corp., Armonk, New York, USA). Data are presented as count (n), percent (%), and median (25%-75% quartiles). A two-sided Fisher's exact test for rxc tables was applied to compare the differences between categorical variables. Shapiro-Wilk's test result, Histogram and q-q plot were evaluated in normality.

A two-sided Mann Whitney U test was to compare the differences between groups for continuous variables. Kruskal-Wallis analysis and Bonferroni-Dunn post hoc test were used for more than two group comparisons. Correspondence analysis was used to identify the relationship between the Enneagram types and TIPI types. p values<0.05 were accepted statistically significant.

## Results and discussion

In this study group, of the total 307 students 105 (34.2%) was male, 202 (65.8%) was female.

Frequencies were found that the distribution of the students to schools as follows: Faculty of medicine; %38.4 (n=118), Faculty of health sciences; %35.8 (n=110), Health services vocational high school and graduate school of health sciences; %11.7 (n=36), Faculty of dentistry; %14.0 (n=43).

According to the gender distribution of medical students and other health schools; Medical faculty's student frequency was higher in male than in female (60.0% and 27.2%, respectively), ( $\chi^2 = 31.358, p < 0.001$ ).

The median age of this study group was 20 (19-21) years. The frequency of 18-20 age group was 71.3% (n=219). The median age of males was 20 (20-21). The median age of females was 20 (19-20). Median age was higher in male than female (Mann Whitney U: 8068, 5;  $p < 0.001$ ). High socioeconomic level frequency was 58.0% (n=178). The frequency of those with any chronic illness was 6.8% (n=21). The frequency of those with any disability was 6.2% (n: 19).

High socioeconomic level frequency was 58.0%. The median score for socioeconomic level was 3.0 (2.0 – 3.0).

The distribution of the study group according to some characteristics was presented in Table-1.

**Table-1:** The distribution of the study group according to some characteristics.

	Some characteristics	n	%
Schools	Faculty of Medicine	118	38.4
	Others	189	61.6
Gender	Male	105	34.2
	Female	202	65.8
Age group (years)	18-20	219	71.3
	21-23	88	28.7
Relationships with mother	Good	205	66.8
	Middle	78	25.4
	Bad	24	7.8
Relationships with father	Good	161	52.4
	Middle	101	32.9
	Bad	45	14.7
Relationships with friends	Good	113	36.8
	Middle	164	53.4
	Bad	30	9.8
Socioeconomic level	High	178	58.0
	Middle	114	37.1
	Low	15	4.9
Chronicle illness	Yes	21	6.8
	No	286	93.2
Disability	Yes	19	6,2
	No	288	93.8
	Total	307	100.0

Qui square analyses; any relation was not found between school (Faculty of Medicine vs others), gender, age group (18-20 vs 21-23 years), socioeconomic level (high-middle-low), chronicle illness (yes vs no), and disability (yes vs no) with Enneagram types (for each one,  $p > 0.05$ ).

Qui square analyses; any relation was not found between school (Faculty of Medicine vs others), age group (18-20 vs 21-23 years), socioeconomic level (high-middle-low), chronicle illness (yes vs no), and disability (yes vs no) with Enneagram types (for each one,  $p > 0.05$ ). But the gender distribution of TIPI types showed a statistically significant difference ( $\chi^2 = 17.084$ ;  $p = 0.002$ ).

All participants, According to TIPI; 90 (29.3%), and according to Enneagram; 96 (31.3%) students could not placed in any personality type.

According to TIPI; Agreeableness (27.6%) and Neuroticism (17.1%) in males, Neuroticism (24.3%) and Conscientiousness (19.8%) in females were the most common types of personality.

According to Enneagram; Type-5: the investigator (15.2%), Type-2: the helper (13.3%) and Type-4: the individualist (13.3%) in males were the most common types of personality.

According to Enneagram; Type-2: the helper (13.3%), Type-4: the individualist (13.3%) and Type-9: the peacemaker (9.9%) in females were the most common types of personality.

According to TIPI; Neuroticism (22%) in medical students was the most common type.

Medical students, Type-2: the helper and Type-5: investigator were the most common Enneagram types (Respectively; 18.6%; 16.1%).

Others than medical students, Type-4: the individualist and Type-2: the helper were the most common Enneagram types (Respectively; 12.2%; 10.1%).

According to Enneagram; Type-2: the helper and Type-5: investigator were higher frequency in medical students than the other students (for each one,  $p > 0.05$ ).

Distribution of TIPI and Enneagram Personality Types by Gender were presented in Table-2.

**Table-2:** Distribution of TIPI and Enneagram Personality Types by Gender.

		Total n	Total %	Male %	Female %	Statistical analyses $X^2$ ; p
TIPI	Extraversion	27	8.8	12.4	6.9	2.050; 0.110
	Neuroticism	67	21.8	17.1	24.3	2.559; 0.152
	Openness to experiences	15	4.9	3.8	5.4	0.398; 0.528
	Conscientiousness	47	15.3	6.7	19.8	9.194; 0.002
	Agreeableness	61	19.9	27.6	15.8	6.019; 0.014
	Unclassified	90	29.3	32.4	27.7	-
Enneagram	Type 1.The reformer	18	5.8	8.6	4.5	2.121; 0.145
	Type 2.The helper	41	13.4	13.3	13.4	0.000; 0.994
	Type 3.The achiever	16	5.2	1.9	6.9	3.533; 0.060
	Type 4.The individualist	38	12.4	13.3	11.9	0.134; 0.714
	Type 5.The investigator	29	9.4	15.2	6.4	6.258; 0.012
	Type 6.The loyalist	5	1.6	2.9	1.0	1.503; 0.220
	Type 7.The enthusiast	14	4.5	5.7	4.0	0.488; 0.485
	Type 8.The challenger	23	7.5	4.8	8.9	1.716; 0.190
	Type 9.The peacemaker	27	8.9	6.7	9.9	0.901; 0.343
	Unclassified	96	31.3	27.6	33.2	-
	Total	307	100.0	100.0	100.0	

The accordance between the Enneagram and TIPI was analyzed for both genders. By Correspondence Analysis' results; in males; it was observed between "Type-1: The reformer-Agreeableness, and Type-1: The reformer-conscientiousness, and Type-2: The helper-Agreeableness, and Type-2. The helper-conscientiousness, and Type 8. The challenger-Openness to experiences" (Respectively, Enneagram – TIPI).

In females; it was observed between "Type-2: The helper-Neuroticism and Type-3: The achiever-Neuroticism and Type-3. The achiever-Agreeableness and Type-4: The individualist-Neuroticism and Type-4: The individualist-Agreeableness and Type-8: The challenger - Agreeableness (respectively, Enneagram-TIPI).

Accordance between Enneagram and TIPI for both gender was presented in Table-3.

**Table-3:** Accordance between Enneagram and TIPI for both gender.

Accordance between Enneagram and TIPI	
Males	Females
Type-1: The reformer-Agreeableness	Type-2: The helper-Neuroticism
Type-1: The reformer-Conscientiousness	Type-3: The achiever-Neuroticism
Type-2: The helper-Agreeableness	Type-3: The achiever-Agreeableness
Type-2: The helper-Conscientiousness	Type-4: The individualist-Neuroticism
Type-8: The challenger-Openness to experiences	Type-4: The individualist-Agreeableness
	Type-8: The challenger-Agreeableness

The frequencies of students who have "good" social relationships with mother, and with father, and with friends were 66.8%, 52.4%, and 36.8%, respectively. All students, total social relationships median score was 2.3 (2.0 – 2.7).

WHOQOL BREF social domain median score in the study group was 66.7 (60.0-80.0).

According to Kruskal Wallis analysis results; Any relation was not found between TIPI types with WHOQOL Bref Social Domain Scores, and TIPI types with social relationships scores, in both males and females (respectively;  $p = 0.192$  ve  $p = 0.913$  in males;  $p = 0.903$  ve  $p = 0.057$  in females).

Any relation was not found between Enneagram types with WHOQOL Bref Social Domain Scores, and Enneagram types with social relationships scores, in males (respectively;  $p = 0.572$  ve  $p = 0.305$ ).

Any relation was not found between Enneagram types with social relationships scores, in females (respectively;  $p = 0.190$ ). But a relation was found between Enneagram types with WHOQOL Bref Social Domain Scores in females ( $p = 0.027$ ).

According to Bonferroni-Dunn post hoc test; The WHOQOL Bref Social Domain Score was statistically significantly higher in types in left than types in right as follows: Type-4: The individualist – Type-1. The reformer, and Type-4. The individualist – Type-2. The helper, and Type-4. The individualist – Type-5. The investigator, and Type-4. The individualist – Type-7. The enthusiast, and Type-8. The challenger – Type-1. The reformer, and Type-8. The challenger – Type-5. The investigator and Type-8. The challenger - Type 7. The enthusiast.

Comparison of Enneagram types by WHOQOL Bref Social Domain Median Scores in females was presented in Table-4.

**Table-4:** Comparison of Enneagram types by WHOQOL Bref Social Domain Median Scores in females.

Enneagram types	WHOQOL Bref Social Domain Scores Median (25%-75%)	Kruskal Wallis Test $p^*$
Type-4: The individualist	63.3 (55.0-73.3)	0.048
Type-1: The reformer	73.3 (60.0-75.0)	
Type-4: The individualist	63.3 (55.0-73.3)	0.006
Type-2: The helper	73.3 (60.0-80.0)	
Type-4: The individualist	63.3 (55.0-73.3)	0.006
Type-5: The investigator	73.3 (73.3-76.6)	
Type-4: The individualist	63.3 (55.0-73.3)	0.004
Type-7: The enthusiast	73.3 (73.3-76.6)	
Type-8: The challenger	63.3 (55.0-73.3)	0.045
Type-1: The reformer	73.3 (60.0-75.0)	
Type-8: The challenger	63.3 (55.0-73.3)	0.034
Type-5: The investigator	73.3 (73.3-76.6)	
Type-8: The challenger	63.3 (55.0-73.3)	0.023
Type-7: The enthusiast	73.3 (73.3-76.6)	

\*Statistically significant results were shown ( $p < 0.05$ ).

**Discussion:** In young people, especially university youth, the importance of personality on the career planning cannot be denied. For this reason, we thought that the study group,



consisting of university students, should be evaluated with two different personality scales in this study.

Participants were asked about some possible factors related to personality. Socioeconomic level is at the top of these. There are studies showing the relation of socioeconomic level with personality structure<sup>37</sup>. The presence of any chronic illness or any disability is a factor that can affect quality of life and social relationships in adolescents and youths<sup>38-40</sup>. In the bivariate analyses; age, socioeconomic status, chronic disease and disability factors were not related to the personality structure (for each one  $p > 0.05$ ). These results may have been due to the fairly low frequencies of the low-level socioeconomic level group, and the students with chronic diseases, and the students with disability (respectively; 4.9%, 6.8%, and 6.2%).

When we look at the distribution of the study group to TIPI and Enneagram types, it is seen that about one-third students are not included in any personality type in both scales (29.3% in TIPI and 31.3% in Enneagram). This result is remarkable to us. Assessment of Enneagram was done by marking one of 9 options of the student. Those who cannot identify the personality type are those who do not do this. In Turkey, 93.7% (420/448 people) of the participants completed the scale correctly and the personality type could be determined in the validity and reliability study of TIPI<sup>35</sup>. In our study, those who cannot determine the personality structure according to TIPI are quite high. According to these results, we can make a comment that one-third of the students who make up the study group do not know themselves well yet and do not place themselves in any type of personality.

In our study, according to TIPI; *Agreeableness* (27.6%) and *Neuroticism* (17.1%) in males, *Neuroticism* (24.3%) and *Conscientiousness* (19.8%) in females were the most common types of personality. In a study with over 20,000 participants from twenty-six cultures, women were asked about *Neuroticism*, *Agreeableness* and *Openness*; *Openness* in males was reported at a higher frequency<sup>41</sup>. According to the meta-analysis results obtained from the studies made in the years between 1940 and 1992; Females were higher than males in *Extraversion*<sup>42</sup>. In another study, females reported higher *Extraversion*, *Agreeableness*, and *Neuroticism* scores than males<sup>43</sup>. Our study results seem to differ from the literature. One of the reasons for this may be that our study group is a selected group that does not reflect the general population.

According to Enneagram; Type-5: the investigator (15.2%) and Type-2: the helper (13.3%) and Type-4: the individualist (13.3%) were the most common types of personality in males. In females, Type-2: the helper (13.4%), Type-4: the individualist (11.9%) and Type-9: the peacemaker were the most common types of personality. In literature, we did not come across Enneagram types dominated by sex. In our study, males reflect more medical students. The females were mostly nurses and midwifery. In the study, the types of Enneagram that

stand out in males and females may be reflecting the personality types sought in health professionals in Turkish society. For this reason, both in the TIPI and the Enneagram, we looked at the distribution of personality types among students of medicine and other schools. In our study, Neuroticism from TIPI types has the highest prevalence among the medical students. In Flemish universities, a study about the medical students reported that the personality types Extraversion and Agreeableness were higher<sup>44</sup>. However, according to Enneagram; Type-2: the helper and Type-5: investigator medical students were more frequent than the other students in this study (for each one  $p < 0.05$ ). Moreover, these two were the most common types of Enneagram in medical students (18.6% and 16.1%, respectively). In a study of medical students in Korea, the most common type was reported as Type-9: Peacemaker<sup>45</sup>.

The most common Enneagram types in non-medical faculty students were Type-4: the individualist and Type-2: the helper in our study (12.2% and 10.1, respectively). In a study of nursing students in Korea, Type-9: Peacemaker was reported as the most common type of Enneagram<sup>46</sup>.

This study's researchers could not find any literature to investigate the accordance between Enneagram and TIPI. In the study, Correspondence analysis between Enneagram and TIPI personality types was analyzed for both genders. In males, Type-1: the reformer, and Type-2: the helper Enneagram types and Agreeableness and Conscientiousness TIPI types were found to be close to each other. Reformers' idealism and principles, and Conscientiousness' leadership skills, and Helpers' positive attitude towards human relations and Agreeableness' co-operation make these harmonizations are reasonable. In addition, the accordance between "Type-8: The challenger and Openness to experiences" is remarkable in males. We can say that they have a characters as challenging and opening to the outside world, for both types of personality (Type 8 and Openness).

In females; there was accordance between Type-3. The achiever from Enneagram types and Neuroticism and Agreeableness from TIPI types. We were expecting more accordance between Type-3: The achiever and Conscientiousness. However, as in Turkey, in patriarchal dominant societies, the success-oriented nature of women can be characterized by "Forgiving attitudes, belief in cooperation, inoffensive language, and reputation as a pushover" of Neuroticism and Agreeableness types. In Enneagram, Type-4: The individualist type was accordance with Neuroticism and Agreeableness. Enneagram Type-4: Individual people want to be original. Emotionalism dominates rationalism. They like loneliness. They are not open to the outside world. These features can also be found in Neuroticism and Agreeableness personalities from TIPI types. In addition, There were an accordance between "Type-2: The helper" from Enneagram and "Neuroticism" from TIPI, in females. This match is also reasonable. Finally; We have found the

accordance between Type-8: The challenger (From Enneagram) and Agreeableness (from TIPI), in females. Challengers show similar features in those who have negative characteristics for the Agreeableness personality of TIPI (aggressive people).

The "Enneagram - TIPI" accordances that we have found in this study may be reasonable conclusion, but it may not reflect the all cultures in the world, because of changes of personality's characteristics depend on differences from culture to culture. However, our findings suggest that the combination of Enneagram and TIPI may be more decisive in personality analysis.

The median score of social relations (2.3) and the median score of WHOQOL BREF Social Domain (66.7) indicate that the study group is "very good" in terms of social relations, by us. There was no relationship between social relations status and personality types in males ( $p>0.05$ ). There was no relationship between TIPI personality types and WHOQOL BREF Social Domain in females ( $p>0.05$ ). However, the relationship between the WHOQOL BREF Social Domain and the Enneagram personality types in females can be considered as evidence that personality types may be effective in social relationships ( $p<0.05$ ). In addition, this result suggests that the use of the two personality scales together increases of the power in evaluation of the social relationships.

Enneagram Type-4: The individualist and Type-8: The Challenger have lower scores of WHOQOL Bref Social Domain than the other Enneagram personality types (for each one  $p<0.05$ ). Therefore, we can say that these two types are more unsuccessful than other types in social relations.

When we look back at some of the features for Type-4: The individualist and Type-8: The Challenger, especially females, it can be understood why girls are more unsuccessful in social relationships. Namely: Type-4: The individualist says: I like being different and special. Sometimes I feel like myself, out of this world. I approach the events with an unusual and creative point of view. My mood can change suddenly; I can look like I am depressed after a while when I am happy and cheerful.

Type 8-The Challenger says: I like to be strong, to have control, and to have influence. I do not care what people think, I say it in my head and reflect my fury. I like people who are outspoken like me and know what they want. So, I think that the truths will be spoken and that nobody will act ruthlessly. My assertive attitude can frighten other people.

**Limitations and strengths:** This study was conducted at health-related schools of a university, only. Therefore, the study's results do not reflect the general population. In this study, Enneagram analysis was not performed with the test containing 144 items. Enneagram types were evaluated in a single question. Another limitation is that approximately one-third of the participants can not be identified according to Enneagram of personality types, and TIPI. In contrast, this study

contributed to the literature by demonstrating the accordance between Enneagram and TIPI types.

## Conclusion

In this study, according to TIPI; *Agreeableness* and *Neuroticism* in males, *Neuroticism* and *Conscientiousness* in females were the most common types of personality. According to Enneagram; Type-5, Type-2 and Type-4 in males; Type-2, Type-4 and Type-9 in females were the most common types of personality.

According to the results of correspondence analysis; it was revealed an accordance between two types as follows: Type-1: The reformer-Agreeableness, Type-1: The reformer-Conscientiousness, Type-2: The helper-Agreeableness, Type-2: The helper-Conscientiousness, and Type-8: The challenger-Openness to experiences (respectively, Enneagram type - TIPI type), in males.

In females, it was revealed an accordance between two types as follows: Type-2: The helper-Neuroticism, Type-3: The achiever-Neuroticism, Type-3: The achiever-Agreeableness, Type-4: The individualist-Neuroticism, Type-4: The individualist-Agreeableness, and Type-8: The challenger-Agreeableness (respectively, Enneagram type-TIPI type).

Enneagram Type 4 and Type 8 have lower on quality of life social relationship domain score than the other types in females.

According to these results; it is suggested that it would be beneficial to use Enneagram together with TIPI in personality identification in the guidance works to be done in the university students.

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