Journal of Research in Medical and Dental Science
2020, Volume 8, Issue 4, Page No: 24-32

Available Online at: www.jrmds.in
eISSN No. 2347-2367: pISSN No. 2347-2545

Development and Validation of the Nile Personality Assessment Tool Based on Enneagram

Abdullah Demir[1], Ochilbek Rakhmanov[2], Kenan Tastan[3], Senol Dane[4], Zekeriya Akturk[5]*

[1]Faculty of Law, Nile University of Nigeria, Abuja, Nigeria

[2]Department of Computer Science, Faculty of Natural and Applied Sciences, Nile University of Nigeria, Abuja, Nigeria

[3]Department of Family Medicine, Faculty of Medicine, Atatürk University, Erzurum, Turkey

[4]Department of Physiology, Faculty of Basic Medical Sciences, College of Health Sciences, Nile University of Nigeria, Abuja, Nigeria

[5]Ailem Academic Counseling, Izmir, Turkey

ABSTRACT

Introduction: The Enneagram is an old process for human personality typing, principally understood, and taught as a typology of nine interconnected personality types. The aim of this study was to develop a Turkish assessment tool based on the Enneagram principles.

Methods: An instrument based on expert opinion and the Delphic method was developed. The final questionnaire consisting of 27 questions, was applied to a sample of 199 Turkish-speaking participants. Expert validation, convergent validity, test-retest, and internal consistency were applied. Its categorization was validated against the personality type classification made by an expert and another Turkish inventory, the Taştan Personality Inventory.

Results: Of the participants, 70 were females (35.2%), and 129 were males (64.8%). The mean age of the participants was 34.26 ± 12.33 years. Cronbach's alpha value for the total items was 0.756. The sensitivity and specificity of the results of the present study in detecting the different personality types ranged from 71.4% to 100.0%. Its overall performance was calculated as 90.8%.

Conclusion: It can be concluded that the Nile Personality Assessment Tool (Nile Enneagram Personality Test) is a useful tool in identifying personality types according to the Enneagram principles in Turkish-speaking people.

Key words: Personality types, Personality assessment tool, Enneagram, Validation study

HOW TO CITE THIS ARTICLE: Abdullah Demir, Ochilbek Rakhmanov, Kenan Tastan, Senol Dane, Zekeriya Akturk, Development and Validation of the Nile Personality Assessment Tool Based on Enneagram, J Res Med Dent Sci, 2020, 8 (4):24-32.

Corresponding author: Zekeriya Akturk

e-mail✉: zekeriya.akturk@gmail.com

Received: 01/06/2020

Accepted: 29/06/2020

INTRODUCTION

Enneagram is a personality identification and analysis process. It is an old education and personality examination method based in which there are 9 different personality types [1]. Each personality type has a different name according to its characteristics and is called by numbers from 1 to 9 [2-5].

The exact origin of Enneagram is not precisely known. However, it is well known that the Enneagram has been used by Muslim Sufi brotherhoods in the Middle East [6]. It is accepted that the Enneagram has components from mystical Judaism, Christianity, Islam, Taoism, Buddhism, and ancient Greek Philosophy as well as ancient age traditions. Gurdjieff, et al. a Russian scholar, introduced Enneagram to Europe in the 1920s [7]. His teachings were transported primarily by oral conversations [8]. He was an Orthodox Ottoman citizen and son of a Greek mother and an Armenian father. Gurdjieff, who dedicated his life to know and understand

human truth, has performed many investigations in Central Asia, Bukhara, and Tashkent [5]. In his book, meeting with remarkable men, Gurdjieff stated that he lived in central Asia for 20-25 years and met with Sufi elders. Gurdjieff explains that he learned the Enneagram method from the order of Saourmoni, a secret sect in ancient Babylon. Later, Gurdjieff came to Istanbul with his students and built an institute called the harmonic development of spirit.

Ichazo, et al. a Bolivian psychologist, categorized the Enneagram according to different personality types. He has explained the characteristics of the 9-person type system [9,10]. Then, Naranjo, et al. applied Enneagram to psychology [11].

Enneagram types

The Enneagram has 9 main different types numbered from 1 to 9 [1] and each is named according to predominant characteristics of that personality type [9]. The Enneagram is demonstrated with a circle figure as a symbol that has the nine different points connected with lines. The circle represents wholeness, while the lines signify the energy movement within the whole of the Enneagram framework (Figure 1) [12].

1. The perfectionist (reformer): Their aim in life is to catch perfection in everything. They make a lot of effort to obey laid down rules and makeup to others. This type works like a bee and enjoys working. They are usually found doing the hardest work with pleasure and in the most perfect way.

2. The helper: The most basic feature of type 2 is to help others and to expect them to show appreciation. The need for gratitude and the desire to help is quite important for this type. They always look for somebody to help.

3. The achiever: The most basic characteristics of this type is to be phenomenally successful in life. They want to be number 1 in every field and to be such is important to them. This type mostly works extremely hard for achievement.

4. The individualist: The aim of type four is to be an original person in life and to do original works. They hate mediocrity and being ordinary. Original artists usually come out of this type.

5. The researcher (investigator): This type always aims to continue his life with knowledge. They are usually very curious, and they can be seen as always trying to learn more and more because they feel more powerful as they learn. Thinkers, philosophers, scientists are usually from this type.

6. The loyalist: This type always aims to have full security in all areas of life. They always reach their life decisions to avoid risks and dangers. Therefore, they concentrate on hazards, errors, and imperfections to recognize and avoid them easily.

7. The enthusiast: The aim of type 7 in life is always to experience new things and to be happy in this way. They are impatient, hyperactive, knowledgeable in every field.

8. The challenger: The type 8s usually have strong leadership features. Being independent and exhibiting good leadership abilities are their main characteristics. Great leaders usually emerge from this type.

9. The peacemaker: They are peacekeepers and mediators who work well with everyone to prevent any chaos or disharmony in their lives.

The Enneagram is accepted as a useful tool for improving relationships among family members, friends, and co-workers. It clarifies the reasons behind our behaviors and displays the directions for individual development. Enneagram insists on the issue that the personality types are universal and not gender specific. Moreover, in Enneagram it should be noticed that that we cannot observe all personality type features in

Figure 1: The enneagram circle with nine points and lines [12].

a single person since they contain a wide range of parameters such as healthy, unhealthy, and normal cases. We cannot disclaim that of the personality types is better or worse than others. Consequently, each personality type should be classified in itself [8].

Identifying one's personality type has many advantages for that person and for the community which is on contact with that person. By means of Enneagram the person will be aware of his/her strengths and weaknesses which will enable a better dialogue and communication within the society.

In addition, it is important that Enneagram education is included into the syllabus of Stanford MBA and applied in the court plea training at the Harvard Law School. Furthermore, the Enneagram is taught at the many universities in the USA, mainly at the departments of education, psychology, arts, business, and medicine. Likewise, many companies are now using the Enneagram rules in personnel recruitment, sales, and marketing policies [13].

Health professionals apply specific standardized psychometric tests of adult personality and psychopathology, as part of the therapeutic assessment procedure. In addition, personality type is accepted as an independent predictor of quality of life in old age [14]. Similarly, there are evidences of the correlative relationships between personality, posture, and pain [15]. On the other hand, we cannot find a comprehensive literature on personality traits of healthy individuals although there are extensive researches on the personality types about psychiatric illnesses. Although Taştan Personality Type Inventory is a successful tool in identifying Enneagram personality types of Turkish people [16] it contains many items and requires calculations to determine individual personality types. Consequently, the main target of the present study is to develop a new practical and easier tool for measuring personality types based on the Enneagram principles and test its validity and reliability among a Turkish speaking community.

METHODS

Study design and setting

We conducted an instrument-development validation study. The research was carried out during January-June 2020 on the Turkish-speaking community of Nile University of Nigeria.

Item generation

A panel of seven experts was established to prepare a pool of questions. The collected questions were revised by the authors, including items from a literature search. A Delphi round was then done to grade the items, followed by a team meeting with the authors to finalize the study instrument (Figure 2). Grading of the items was done by asking the respondents to select two clusters of items from a final set of 27questions arranged in 9 clusters. The first cluster perceived by the respondent as being the most-describing of his/her personality was recorded as selection 1 (main personality), while the preferred cluster adjacent to the selection 1 was marked as selection 2 (personality wing) (Appendix 1). Its Turkish version is available as external link from: http://aile.net/img/dosya/8nilenegramtr.pdf

Instrument validation

Content validity was assured with the contribution of an expert panel, the authors, and a literature search. The experts were asked to propose questions measuring each of the nine personality dimensions. As a result, a pool of 75 items was established. Then, a Delphi round was conducted asking the experts to grade each item's suitability by scoring them on a scale from 1 to 5 (1: the item does not measure the given personality type, 5: the item excellently measures the given personality type). In the next stage, a team meeting of the expert panel and the authors was arranged to refine the instrument items. Questions with a low level of consensus were eliminated. It was decided to select the three best phrases describing each Enneagram personality dimension. Thus, the final list consisted of 27 items. The developed instrument was called the Nile Personality Assessment Tool (NPAT) (Appendix 1). The Turkish version of the NPAT is available as external link from: http://aile.net/img/dosya/8nilenegramtr.pdf

Face validity and item refinement were made by interviews with a sample of 10 participants. As a result, some minor modifications in wording were made. The number of items, instrument instruction, and the response methods were found acceptable. Participants could complete the instrument in 2–20 (median 3) minutes without needing any assistance.

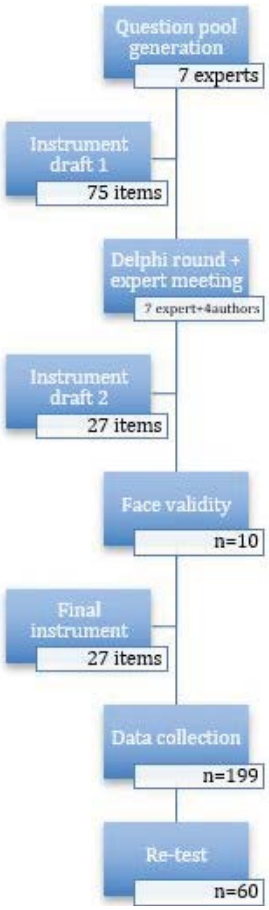


Figure 2: Study flow diagram.

Concurrent validity was evaluated by applying simultaneously the Taştan Personality Inventory (TPI) [16]. Piloting of the tool was done in a convenient sample of Turkish-speaking university students at the Nigeria Nile University. Criterion validity was determined by in-depth interviews of one expert (Author AD). At the end of a 15-25 minutes interview, the author classified each participant into one of the nine traditional Enneagram personality types.

Sampling and application

The final tool was applied together with the TPI to a sample of 199 participants. The sample was drawn from 650 Turkish-speaking community of the Nile University of Nigeria during April-June 2020. E-mail invitations were sent to all people working at the university during the study time. Respondents were invited for a face-to-face interview followed by self-reported data collection. A total of 256 people responded to the e-mail invitations, of which 199 attended the interviews. The NPAT was re-administered to 60 randomly selected participants after two weeks. A study flow is shown in Figure 2.

The international ethical standards were followed in the experimental protocol. The study was performed per the Helsinki Declaration (1975, revised in 1996-2013) [17]. The study's aims and objectives were explicitly explained to the participants before the commencement of the study. All participants voluntarily gave written informed consent to participate in the study. A paper-and-pencil based method of filling questionnaires was utilized.

Analysis

The extended McNemar's test was used to check for consistency or agreement of values within cases. The internal reliability of the general items was calculated using Cronbach's alpha. Besides, a split-half test was performed to detect any incongruence. Also, test-retest reliability and agreements between the different measurements were assessed with the Cohen's Kappa and McNemar-Bowker's tests.

Data from socio-demographic variables were presented as n (%) or mean ± standard deviation (SD). Comparisons between independent groups were performed with the independent samples

t-test and the Chi-Square test. All analyses were conducted using the SPSS v20.0 software (SPSS Inc., Chicago, IL, USA).

RESULTS

Participants

The results of 199 participants were analyzed. The mean age of the respondents was 34.26 ± 12.33 years. Of the participants, 64.8% (n=129) were men, while 35.2% (n=70) were women. Males were significantly older than females (35.77 ± 12.92 vs. 31.47 ± 10.70; t=2.374, p=0.019). The sample consisted of primarily educated respondents. Distributions of high school, university, and masters/PhD graduates were 20.6% (n=41), 46.7% (n=93), and 32.7% (n=65), respectively.

Descriptive findings

All participants could be categorized into one main personality type by the NPAT and the expert classification. However, the TPI failed to classify 20.0% of the participants (n=20). Both the NPAT and the expert classification revealed Enneagram number 1 (the perfectionist) as the most common personality type, while the TPI classified number 2 (the helper) as the most common type (Table 1). Personalities number 3 (the achiever), 6 (the loyal), and 8 (the challenger) were relatively less common in all three classifications.

Reliability and validity indicators

The Cronbach's Alpha value for the TPI was calculated as 0.756. Furthermore, the Cohen's Kappa for test-retest reliability of the NPAT was calculated as 0.764 (p<0.001), which is considered 'substantial' by Cohen [18]. Also, there was a substantial agreement between test-retest measurements of the NPAT main personality types (McNemar-Bowker=12.000, p=0.364) as well as the personality wings (McNemar-Bowker=14.333, p=0.351). The lowest agreement in the re-test was in personality number 2 (Table 2).

On the other hand, the agreement between the NPAT and TPI main personality categories were low (Kappa=0.107) though significant (p<0.001). However, the classifications made by the two tools were significantly different from each other (McNemar-Bowker=66.678, p<0.001).

Taking the author's categorization as the gold-standard, the sensitivity and specificity of the NPAT in detecting the different personality types ranged from 71.4% to 100.0% (Table 3). The overall performance of the NPAT was calculated as 90.8%. All personality types could be predicted with high sensitivity and specificities. However, the number 1 personality (perfectionist) could be predicted best, while number 3 (achiever) could be predicted with the least sensitivity and specificity.

Outcome comparisons

There were no differences in the main personality types (Chi-Square=14.398, p=0.072) or personality wings (12.444, p=0.132) between males and females (Table 4). There were significant differences in the main personality types between the younger (<35 years) and older (≥35) participants (Chi-Square=19.463, p=0.013). However, there were no significant differences between the age groups concerning personality wings (Chi-Square=10.676, p=0.221) (Table 5).

Table 1: Classifications of the main personality types of the participants.

	Main personality (NPAT)		Main personality (Author)		Main personality (TPI)	
Enneagram #	N	%	N	%	N	%
1	43	21.6	46	23.1	21	11.7
2	24	12.1	21	10.6	48	26.8
3	6	3	7	3.5	11	6.1
4	17	8.5	15	7.5	19	10.6
5	31	15.6	30	15.1	24	13.4
6	15	7.5	15	7.5	8	4.5
7	18	9	18	9	22	12.3
8	11	5.5	15	7.5	8	4.5
9	34	17.1	32	16.1	18	10.1
Total	199	100	199	100	179	100

NPAT: Nile Personality Assessment Tool. TPI: Taştan Personality Inventory.

Table 2: Distributions of the test-retest responses.

			Main personality (NPAT post-test)									
			1	2	3	4	5	6	7	8	9	Total
Main personality (NPAT pre-test)	1	n	9	-	-	-	-	1	1	-	0	11
		%	81.8	-	-	-	-	9.1	9.1	-	0	100
	2	n	-	3	-	2	-	1	1	-	1	8
		%	-	37.5	-	25	-	12.5	12.5	-	12.5	100
	3	n	-	-	2	-	-	-	1	-	-	3
		%	-	-	66.7	-	-	-	33.3	-	-	100
	4	n	-	-	-	3	-	-	-	-	-	3
		%	-	-	-	100	-	-	-	-	-	100
	5	n	-	-	-	-	8	1	-	-	-	9
		%	-	-	-	-	88.9	11.1	-	-	-	100
	6	n	-	-	-	-		3	-	-	-	3
		%	-	-	-	-		100	-	-	-	100
	7	n	-	-	-	-	1	-	1	-	-	2
		%	-	-	-	-	50	-	50	-	-	100
	8	n	-	-	-	-	-	-	-	8	-	8
		%	-	-	-	-	-	-	-	100	-	100
	9	n	1	-	-	1	-	-	-	-	11	13
		%	7.7	-	-	7.7	-	-	-	-	84.6	100
Total		n	10	3	2	6	9	6	4	8	12	60
		%	16.7	5	3.3	10	15	10	6.7	13.3	20	100

NPAT: Nile Personality Assessment Tool.

Table 3: Sensitivity and specificity of the NPAT for detecting different personality types.

Personality Type	Author (+) NPAT (+)	Author (-) NPAT (+)	Author (+) NPAT (-)	Author (-) NPAT (-)	Sensitivity (%)	Specificity (%)	Sen+Spec 2
1	41	2	5	151	89.1	98.7	93.9
2	19	5	2	173	90.5	97.2	93.8
3	5	1	2	191	71.4	99.5	85.5
4	13	4	2	180	86.7	97.8	92.2
5	26	5	4	164	86.7	97	91.9
6	11	4	2	182	84.6	97.8	91.2
7	14	4	4	177	77.8	97.8	87.8
8	11	0	3	185	78.6	100	89.3
9	28	6	4	161	87.5	96.4	92
Overall					83.6	98.5	90.8

NPAT: Nile Personality Assessment Tool.

Table 4: Comparison of the main personality types and wings between males and females.

	Main personality (NPAT)				Personality wing (NPAT)			
	Sex				Sex			
	Male		Female		Male		Female	
	n	%	n	%	n	%	N	%
1	32	24.8	11	15.7	16	12.5	8	11.4
2	15	11.6	9	12.9	25	19.5	7	10
3	6	4.7	0	0	11	8.6	7	10
4	12	9.3	5	7.1	14	10.9	11	15.7
5	13	10.1	18	25.7	13	10.2	7	10
6	10	7.8	5	7.1	10	7.8	13	18.6
7	12	9.3	6	8.6	18	14.1	3	4.3
8	9	7	2	2.9	8	6.3	5	7.1
9	20	15.5	14	20	13	10.2	9	12.9
	129	100	70	100	128	100	70	100

NPAT: Nile Personality Assessment Tool.

Table 5: Comparison of the main personality types and wings between the age groups.

	Main personality (NPAT)				Personality wing (NPAT)			
	Age groups				Age groups			
	<35		>34		<35		>34	
	n	%	n	%	n	%	n	%
1	17	16.5	26	27.1	10	9.7	14	14.7
2	12	11.7	12	12.5	12	11.7	20	21.1
3	2	1.9	4	4.2	7	6.8	11	11.6
4	10	9.7	7	7.3	16	15.5	9	9.5
5	20	19.4	11	11.5	10	9.7	10	10.5
6	10	9.7	5	5.2	14	13.6	9	9.5
7	15	14.6	3	3.1	12	11.7	9	9.5
8	6	5.8	5	5.2	10	9.7	3	3.2
9	11	10.7	23	24	12	11.7	10	10.5
	103	100	96	100	103	100	95	100

NPAT: Nile Personality Assessment Tool.

DISCUSSION

The present study results confirm that the NPAT was reliable and valid in identifying the personality types based on Enneagram in a Turkish-speaking population. The participants of the study had a higher educational level compared to the average Turkish community. In the present study, percentages of high school, university, and masters/PhD graduates were 20.6%, 46.7%, and 32.7%, respectively.

Similar studies have reported sensitivity and specificity values ranging from 68.0-95.1% and 59.0-78.5%, respectively [18-20]. Enneagram Personality Types Inventory (Korean version) has 100% sensitivity and specificity for the number one personality type [21]. Also, TPI had a mean sensitivity value of 82.8 and specificity of 97.8. The sensitivity and specificity of the NPAT in detecting the different personality types ranged from 71.4% to 100.0%. The overall performance of the NPAT was calculated as 90.8%. All personality types could be predicted with high sensitivity and specificities. Thus, the sensitivity and specificity values of NPAT are high compared to similar literature.

On the other hand, the agreement between the NPAT and TPI main personality categories were low though significant. However, the classifications made by the two tools were significantly different from each other. This difference can be attributed to two basic differences between them. First, the TPI has many questions. Because most participants do not like to respond to many questions, it may result in unreliable results. Secondly, NPAT is extremely easy and practical, and the participants can find their own main Enneagram character and its wing directly, whereas TPI requires some calculations.

Despite its long history, the literature is scarce regarding the scientific studies of Enneagram. Based on the traditional Enneagram, Yilmaz et al. proposed the Nine Types Temperament Model as a candidate for being a comprehensive and integrating model that can explain the reasons of human behavior and can be used in clinical studies as well as in practice in the fields of psychiatry, psychology, and education [22]. The authors developed a theoretical model to explain the temperaments with the interpretation of the Enneagram System. The study of Yilmaz et al. is similar to ours in its aims and academic context. However, although they introduced a reliable and valid scale with high psychometric indices [23], it is extremely long (91-items), time-consuming, and utilized a 3-point Likert scale, which can be considered as some drawbacks. Also, we do not agree with these authors in using the term temperament instead of personality.

In the present study, both the NPAT and the expert classification revealed Enneagram number 1 (the perfectionist) as the most common personality type, while the TPI [16] classified number 2 (the helper) as the most common type in Turkish population. This difference may be related to the fact that Enneagram numbers 1 and 2 are wings of each other. Also, personalities number 3 (the achiever), 6 (the loyal), and 8 (the challenger) were relatively less common in the present study. Hur and Lee have found that the number nine-personality type is the most frequent personality type (13.4%); the second

most frequently seen personality type was the number one personality type (11.9%) in a Korean population [21]. Another study [6] found Enneagram type 9 to be 32.9% among Korean college students, which makes us postulate that personality distributions are similar in different populations, however, with variability in their dominance. It has been well known that Enneagram 1 and 2 and 1 and 9 personality types are the wings of each other. In a large-sample study of Akturk, et al. the most encountered main personality type was the helper, (20.4%), while the challenger was the most frequently encountered personality wing (17.3%) [24].

We need a straightforward and dependable structure for understanding differences with patients, families, and co-workers in the society. Because currently there is a more complex system of health care, more sophisticated patient cases, and there is an increasing demand for a more effective cross-discipline interaction [25]. Knowing that each patient is different, the approach based on the personality type can be an enormous advantage for today's healthcare providers. Furthermore, the doctor's personality type preferences are often quite different from those of the patients. Therefore, this fact results in self-awareness of health professionals and encourages them to consider their own type preferences [25]. These arguments are also current in university education area and studies. Thus, it has been suggested that the differences in empathy levels in terms of Enneagram personality types can be applied to medical education to maintain and improve medical students' empathy [26,27].

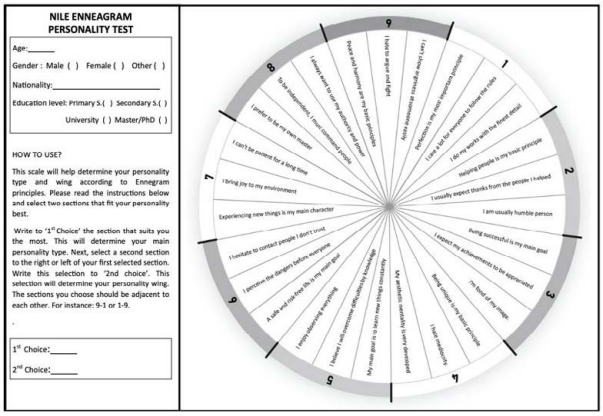
STUDY LIMITATIONS

One limitation of this study is the demographic features of the study participants. Participants of the study had relatively high educational levels. Thus, this tool can be advised for Turkish speaking people with relatively higher education. The inventory should be tested in a broader spectrum of the population concerning age and educational status.

CONCLUSION

It can be stated that the Nile Personality Assessment Tool (NPAT) is a powerful tool in identifying personality types according to the Enneagram principles in Turkish-speaking people. Health care providers, human researchers, and researchers in psychology and health sciences may utilize the NPAT. Additionally, knowing his/her personality type may enhance the persons' confidence in dealing with daily life conditions through a deeper understanding and acceptance of themselves.

APPENDIX



The Turkish version of the NPAT is available as external link from: http://aile.net/img/dosya/8nilenegramtr.pdf

REFERENCES

1. Daniels DN, Price VA. The essential enneagram: The definitive personality test and self-discovery guide. New York: Harper One 2000.
2. https://www.dispatch.com/
3. Murali D. Stop before you resume. Business Line 2003; 1.
4. Tracy C. Nine ways of looking at work. J Quality Participation 1998; 21:56-60.
5. Palmer H. The enneagram: Understanding yourself and the others in your life. New York: Harper Collins 1988.
6. Lee JS, Yoon JA, J DK. Effectiveness of enneagram group counseling for self-identification and depression in nursing college students. J Korean Acad Nurs 2013; 43:649–657.
7. Ginsburg SB. Gurdjieff unveiled: An overview and introduction to gurdjieff's teaching. London: Lighthouse Workbooks 2005; 138.
8. Bernier N. The enneagram symbol of all and everything. Brasília, Gilgamesh 2003; 11.
9. Russ H, Don R. The widsom of the enneagram: The complete guide to psychological and spiritual growth for the nince personality types, New York, Bantam Books 2000.
10. Oscar I. Interviews with oscar ichazo. Arica Institute Press 1982.
11. Naranjo, Claudio. (1990). Enneagram-Type Structures: Self-Analysis for the Seeker. Nevada City, NV: Gateways.
12. https://search.proquest.com/openview/89b4f37116ed1664717a45fd8c4edf41/1?pq-origsite=gscholar&cbl=60372

13. Tastan K. Combating stress according to personality types. Elazig: Grafikkent Dijital Baski Merkezi 2012.

14. http://www.tuik.gov.tr/PreHaberBultenleri.do?id=16055

15. Guimond S, Massrieh W. Intricate correlation between body posture, personality trait and incidence of body pain: A cross-referential study report. PLoS One. 2012; 7: e37450.

16. Tastan K. Development and validation of a personality type inventory based on enneagram. Konuralp Tıp Dergisi 2019; 11:112-120.

17. https://www.wma.net/policies-post/wma-declaration-of-helsinki-ethical-principles-for-medical-research-involving-human-subjects/

18. Cohen J. A coefficient of agreement for nominal scales. Educ Psychol Meas. 1960; 20:37–46.

19. Politi PL, Piccinelli M, Wilkinson G. Reliability, validity and factor structure of the 12-item general health questionnaire among young males in Italy. Acta Psychiatr Scand 1994; 90:432–437.

20. Irastorza LJ, Rojano P, Gonzalez-Salvador T, et al. Psychometric properties of the Spanish version of the diagnostic interview for depressive personality. Eur Psychiatry 2012; 27:582–590.

21. Hickling FW, Martin J, Walcott G, et al. The creation and validation of the Jamaica personality disorder inventory. West Indian Med J 2013; 62:389–396.

22. Hur Y, Lee KH. Analysis of medical students' enneagram personality types, stress, and developmental level. Korean J Med Educ. 2011;23(3):175–84.

23. Yilmaz ED, Gencer AG, Unal O, Aydemir O. From Enneagram to Nine Types Temperament Model: A proposal. Egit ve Bilim 2014; 39:393–415.

24. Yilmaz ED, Gencer AG, Aydemir O, et al. Validity and reliability of nine types temperament scale. Egit ve Bilim 2014; 39:115–137.

25. Aktürk Z, Taştan K. Frequency of personality types based on enneagram in a Turkish sample: A web-based cross-sectionalstudy. Ortadogu Tıp Derg 2020; 12:211-218.

26. Allen J, Brock SA, Ford S. Health care communication using personality type: Patients are different. Heal Expect 2002; 5:182-183.

27. Roh H, Park KH, Ko HJ, et al. Understanding medical students' empathy based on Enneagram personality types. Korean J Med Educ 2019; 31:73-82.