Validity and Reliability of the Nile Personality Assessment Tool Based on Enneagram for English-Speaking People

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ABSTRACT

Introduction: In a recent study, a new Turkish personality assessment tool, Nile Personality Assessment Tool (NPAT), was developed and validated based on the Enneagram principles. The aim of the present study was to validate the NPAT for English-speaking people and to test its reliability in English-speaking population.

Methods: After the translation and grammar validation of Turkish NPAT, the final tool was applied to a sample of 203 participants. The sample was drawn from 600 English-speaking community. Expert validation, convergent validity, test-retest, and internal consistency were applied. Its categorization was validated against the personality type classification made by an expert.

Results: Of the participants, 68 were females (33.5%), and 135 were males (66.5%). The mean age of the participants was 27.14±8.52 years. The Cohen's Kappa for test-retest reliability of the NPAT was calculated as 0.89 (p<0.001). Also, there was a substantial agreement between test-retest measurements of the NPAT main personality types as well as the personality wings. Taking the author's categorization as the gold-standard, the sensitivity and specificity of the NPAT in detecting the different personality types ranged from 65.0% to 100.0%. The overall performance of the NPAT was calculated as 89.9%.

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

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

INTRODUCTION

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

The number 1 is "the perfectionist" personality type who believes in the correctness of moral values. The number 2 is called "the helper" personality type who believes his/her importance. The number 3 is "the achiever" personality type who believes his/her perfectness. The number 4 is "the romantic" personality type who gives importance to own freedom. The number 5 is "the observer" personality type who believes in the power of knowledge. The number 6 is "the loyalist" personality type and the trust provided by the people is important for them. The number 7 is "the adventurer" personality type and the materiality is very important for them. The number 8 is "the challenger" personality type and the power is very important for them. The number 9 is "the peacemaker" and what truly counts is peace for them [6,7].

There is not 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 (TPI) is a successful tool in identifying Enneagram personality types of Turkish people [8] it contains many items and requires calculations to determine individual personality types. In a recent study, a new practical and easier tool for Turkish people (NPAT) was developed for measuring personality types based on the Enneagram principles and its validity and reliability were made among a Turkish speaking community [9]. The aim of the present study was to validate the Turkish version of NPAT [9] for English-speaking people and to test its reliability in English-speaking population.

Sampling and application

After the translation and grammar validation of Turkish NPAT, the final tool was applied to a sample of 203 participants. The sample was drawn from 600 English-speaking community of the Nile University of Nigeria and Nigerian Tulip International Colleges during June 2020. Each participant was personally invited to participate in test. Volunteers were invited for a face-to-face interview followed by self-reported data collection. A total of 250 people responded to invitations, of which 203 attended the interviews. The NPAT was re-administered to 62 randomly selected participants after two weeks. A study flow is shown in Figure 1.

The international ethical standards were followed in the experimental protocol. The study was performed per the Helsinki Declaration (1975, revised in 1996-2013) [10]. 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. 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 203 participants were analyzed. The mean age of the respondents was 27.14±8.52 years. Of the participants, 66.5% (n=135) were men, while 33.5% (n=68) were women. Males were significantly older than females (28.52±8.24 vs. 24.36±8.44; t=3.374, p=0.001). The sample consisted of primarily educated respondents. Distributions of primary school, high school, university, and masters/PhD graduates were 1.5% (n=3), 19.2% (n=39), 41.9% (n=85), and 37.4% (n=76), respectively. Majority of the participants, 93.1% (n=189) were Nigerians and 6.9% (n=14) from other various countries.

Descriptive findings

All participants could be categorized into one main personality type by the NPAT and the expert classification. Both the NPAT and the expert classification revealed Enneagram number 1 (the perfectionist) as the most common personality type. Personality number 8 (the challenger) appeared to be lowest in number in both classifications (Table 1).

Reliability and validity indicators

The Cohen's Kappa for test-retest reliability of the NPAT was calculated as 0.89 (p<0.001), which is considered 'substantial' by Cohen [11]. Also, there was a substantial agreement between test-retest measurements of the NPAT main personality types (McNemar-Bowker=6.000, p=0.199) as well as the personality wings (McNemar-Bowker=5.000, p=0.287). The lowest

Translation of NPAT to English → Grammar validation → Face validity (n=10) → Final instrument (27 items) → Data collection (n=203) → Re-test (n=62)

Figure 1. Study flow diagram.

agreement in the re-test was in personality number 7 (Table 2).

Taking the author's categorization as the gold-standard, the sensitivity and specificity of the NPAT in detecting the different personality types ranged from 65.0% to 100.0% (Table 3). The overall performance of the NPAT was calculated as 89.9%. All personality types could be predicted with high sensitivity and specificities. However, the number 1 personality (perfectionist) could be predicted best, while number 7 (enthusiast) and number 6 (loyalist) could be predicted with the least sensitivity and specificity.

Outcome comparisons

There were no differences in the main personality types (Chi-Square=10.160, p=0.254)

or personality wings (6.114, p=0.634) between males and females (Table 4).

Setting the mean age of 27 years as comparative value, there were significant differences in the main personality types between the younger (<28 years) and older (≥28) participants (Chi-Square=20.276, p=0.009). However, there were no significant differences between the age groups concerning personality wings (Chi-Square=5.350, p=0.720) (Table 5).

DISCUSSION

It has been well known that the Enneagram is a useful tool for improving relationships among family members, friends, and co-workers. It is interested in the background of human behavior

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

	Main personality (NPAT)		Main personality (Author)	
Enneagram#	N	%	n	%
1	50	24.6	40	19.7
2	25	12.3	24	11.8
3	14	6.9	14	6.9
4	14	6.9	16	7.9
5	25	12.3	31	15.3
6	14	6.9	15	7.4
7	16	7.9	20	9.9
8	11	5.4	10	4.9
9	34	16.7	33	16.3
Total	203	100	203	100
NPAT: Nile Personality Assessment Tool.				

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	10	-	-	-	-	-	-	-	0	10
		%	100	-	-	-	-	-	-	-	0	100
	2	n	-	7	2	-	-	-	-	-	-	9
		%	-	77.7	22.3	-	-	-	-	-	-	100
	3	n	-	-	5	2	-	-	-	-	-	7
		%	-	-	71.4	28.6	-	-	-	-	-	100
	4	n	-	-	-	6	-	-	-	-	-	6
		%	-	-	-	100	-	-	-	-	-	100
	5	n	-	-	-	-	8	-	-	-	-	8
		%	-	-	-	-	100	-	-	-	-	100
	6	n	-	-	-	-	-	5	-	-	-	5
		%	-	-	-	-	-	100	-	-	-	100
	7	n	-	-	-	-	-	1	2	1	-	4
		%	-	-	-	-	-	25	50	25	-	100
	8	n	-	-	-	-	-	-	-	6	-	6
		%	-	-	-	-	-	-	-	100	-	100
	9	n	-	-	-	-	-	-	-	-	7	7
		%	-	-	-	-	-	-	-	-	100	100
Total		n	10	7	7	8	8	6	2	7	7	62
		%	16.1	11.2	11.2	12.9	12.9	9.6	3.2	11.2	11.2	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	40	10	0	153	100	93.8	96.8
2	22	3	2	176	91.7	98.3	95
3	12	2	2	187	85.7	98.9	92.3
4	14	0	2	187	87.5	100	93.7
5	22	3	9	169	70.9	98.2	84.5
6	10	4	5	184	66.6	97.8	82.2
7	13	3	7	180	65	98.3	81.7
8	8	3	2	190	80	98.4	89.2
9	30	4	3	166	90.9	97.6	94.2
Overall					82	97.8	89.9

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	37	27.4	13	19.1	16	11.9	6	8.8
2	16	11.9	9	13.2	19	14.1	11	16.2
3	10	7.4	4	5.9	16	11.9	11	16.2
4	6	4.4	8	11.8	14	10.4	4	5.9
5	17	12.6	8	11.8	14	10.4	10	14.7
6	6	4.4	8	11.8	12	8.9	5	7.4
7	13	9.6	3	4.4	9	6.7	8	11.8
8	7	5.2	4	5.9	11	8.1	6	8.8
9	23	17	11	16.2	24	17.8	7	10.3
	135	100	68	100	128	100	68	100

NPAT: Nile Personality Assessment Tool.

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

	Main personality (NPAT)			
	Age groups			
	<28		>27	
	n	%	n	%
1	22	19.5	28	31.1
2	15	13.3	10	11.1
3	9	8	5	5.6
4	10	8.8	4	4.4
5	9	8	16	17.8
6	12	10.6	2	2.2
7	7	6.2	9	10
8	10	8.8	1	1.1
9	19	16.8	15	16.7
	113	100	90	100

NPAT: Nile Personality Assessment Tool.

and suggests the directions for individual development. Enneagram accepts that the personality types are universal and not gender specific. Moreover, it should be known that that all features of each personality type are not seen in a single person in Enneagram since they contain a wide range of parameters such as healthy, unhealthy, and normal cases. We cannot think that one of the personality types is better or worse than others [12]. 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.

Hence, Enneagram education was inserted 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].

There is not a comprehensive study 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 [8] it contains many items and requires calculations to determine individual personality types. In a recent study, a new practical and easier tool for Turkish people (NPAT) was developed for measuring personality types based on the Enneagram principles and its validity and reliability were made among a Turkish speaking community [9].

The present study results confirm that the English version of NPAT was also reliable and valid in identifying the personality types based on Enneagram in an English-speaking population. Majority of the participants (93.1%) were Nigerians and 6.9% from other various countries. The participants of the study had a higher educational level compared to the average Nigerian community.

Similar studies have reported sensitivity and specificity values ranging from 68.0-95.1% and 59.0-78.5%, respectively [16-18]. Enneagram Personality Types Inventory (Korean version) has 100% sensitivity and specificity for the number one personality type [19]. Also, TPI had a mean sensitivity value of 82.8 and specificity of 97.8 [8]. The sensitivity and specificity of the Turkish version of 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% [9]. In the present study, the sensitivity and specificity of the English version

of NPAT in detecting the different personality types ranged from 65.0% to 100.0% and its overall performance was calculated as 89.9%. All personality types could be predicted with high sensitivity and specificities. Thus, it can be stated that the sensitivity and specificity values of the English version NPAT are high compared to similar literature.

In the present study, both the English version of NPAT and the expert classification revealed Enneagram number 1 (the perfectionist) as the most common personality type. The Turkish version of the NPAT revealed Enneagram number 1 (the perfectionist) as the most common personality type [9], while the TPI [8] 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 8 (the challenger) appeared to be lowest in both classifications. 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 1 personality type (11.9%) in a Korean population [19]. Another study [20] 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 and Tastan, the most commonly encountered main personality type was the helper, (20.4%), while the challenger was the most frequently encountered personality wing (17.3%) [21].

There is a need a trusted and dependable structure for understanding differences with patients, families, and co-workers in the society. Because there is a more complex system of health care, more sophisticated patient cases, and there is an increasing demand for a well cross-discipline interaction [22]. Knowing that each patient is different, the approach based on the personality type can be an enormous advantage for today's healthcare providers. Therefore, this fact results in self-awareness of health professionals and encourages them to consider their own type preferences [22].

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 [23].

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 English speaking people with relatively higher education level. This tool should be tested in a broader spectrum of the population concerning age and educational status.

CONCLUSION

It can be stated that the English version of NPAT is a powerful tool in identifying personality types according to the Enneagram principles in English-speaking people. Health care providers, human researchers, and researchers in psychology and health sciences may apply the English version of 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.

REFERENCES

1. Daniels DN, Price VA. The essential enneagram: The definitive personality test and self-discovery guide. New York: Harper One 2000.

2. Dennis F. "So what's your type?" The Columbus Dispatch, 2002.

3. Murali D. "Stop Before You Resume." Business Line, 2003.

4. Colina, T. 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. Baron R, Wagele E. The enneagram made easy: Discover the 9 types of people. New York: Harper Collins Publishers 1994.

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

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

9. Demir A, Rakhmanov O, Tastan K, et al. Development and validation of the Nile personality assessment tool based on enneagram. J Res Med Dental Sci 2020; 8:24-32.

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

11. Cohen J. A coefficient of agreement for nominal scales. Educ Psychol Meas1960; 20:37–46.

12. Bernier N. The enneagram symbol of all and everything. Brasília: Gilgamesh 2003; 11.

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.

16. 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.

17. 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.

18. 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.

19. Hur Y, Lee KH. Analysis of medical students' enneagram personality types, stress, and developmental level. Korean J Med Educ 2011; 23:175-184.

20. 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.

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

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

23. 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.