The Validity and Reliability Study of the Turkish Version of Quick Big Five Personality Test

Umit Morsunbul[1]

[1]Assist. Prof. Dr., Aksaray University, Faculty of
Education, Department of Educational Sciences,
Psychological Services in Education, Aksaray - Turkey

ABSTRACT

The validity and reliability study of the Turkish version of Quick Big Five Personality Test

Objective: Personality is one of the most investigated topics in areas which examine human behaviors. Various approaches have been proposed to examine personality. But the Big-Five Personality Theory, which suggests personality traits can be assessed under the five-factor, has begun to come to the fore. These factors are extraversion, agreeableness, emotional stability, conscientiousness and openness to experience. The aim of this study is to adapt the Quick Big Five Personality Test (QBFPT), which measures personality dimensions to Turkish.

Method: The participants of this study consisted of 793 (63.9% females) students and their age are between 14-22 (mean age=17.76, SD=2.37). The participants consisted of two age groups. Adolescent group study consisted of 478 (60.7% females) high school students and their age are between 14-17 (mean age=16.03, SD=0.85). Emerging adult group study consisted of 315 (68.9% females) university students and their age are between 18-22 (mean age=20.39, SD=1.25). The QBFPT, the Self-Concept Clarity Scale, the Children's Depression Inventory, the Screen for Child Anxiety Disorders Scale and the Satisfaction with Life Scale were used to collect data.

Results: Confirmatory factor analysis showed factor structure of the QBFPT was confirmed. Also, item analysis indicated items in the test works well to measure personality traits. The internal consistency and test-retest stability revealed Turkish version of the QBFPT is reliable.

Conclusion: The results of this study showed The Quick Big Five Personality Test is reliable and valid measurement to determine personality traits.

Key words: Personality, personality traits, reliability, validity

ÖZET

Hızlı Büyük Beşli Kişilik Testi Türkçe versiyonu geçerlilik ve güvenirlik çalışması

Amaç: Kişilik, insan davranışlarını inceleyen alanlar içerisinde en fazla incelenen konulardan biridir. Kişiliği incelemek için çeşitli yaklaşımlar ortaya konulmuştur. Ancak son yıllarda kişilik özelliklerinin beş faktör altında değerlendirilebileceğini ileri süren beş faktör kuramı ön plana çıkmaya başlamıştır. Bu kişilik faktörleri dışadönüklük, uyumluluk, duygusal denge, sorumluluk ve deneyime açıklıktır. Bu çalışmanın amacı Hızlı Büyük Beşli Kişilik Testi'ni (HBBKT) Türkçe'ye uyarlamaktır.

Yöntem: Bu çalışmanın katılımcılarını yaşları 14-22 arasında olan (yaş ortalaması:17.76, SS=2.37) 793 (%63.9 kadın) kişi oluşturmaktadır. Katılımcılar iki yaş grubundan oluşmaktadır. Ergen grubu yaşları 14-17 arasında olan (yaş ortalaması:16.03, SS=0.85) 478 (%60.7 kadın) lise öğrencisinden oluşmaktadır. Beliren yetişkin grubu, yaşları 18-22 arasında olan (yaş ortalaması=20.39, SS=1.25) 315 (%68.9 kadın) üniversite öğrencisinden oluşmaktadır. Veri toplamak amacıyla Hızlı Büyük Beşli Kişilik Testi, Benlik Kavramı Belirginliği Ölçeği, Çocukların Depresyon Envanteri, Çocukluk Çağı Anksiyete Tarama Ölçeği ve son olarak da Yaşam Doyumu Ölçeği kullanılmıştır.

Bulgular: Doğrulayıcı faktör analizi sonuçları HBBKT'nin mevcut faktör yapısının doğrulandığını göstermiştir. Ayrıca madde analizi sonuçları da testte yer alan maddelerin kişilik özelliklerini ölçmek için iyi çalıştığını göstermiştir. Bu çalışmada bulunan güvenirlik katsayıları testin Türkçe versiyonunun güvenilir olduğunu göstermiştir.

Sonuç: Bu çalışmanın bulguları HBBKT'nin kişilik özelliklerini belirlemek için geçerli ve güvenilir bir ölçme aracı olduğunu göstermiştir.

Anahtar kelimeler: Kişilik, kişilik özellikleri, güvenirlik, geçerlik

Address reprint requests to / Yazışma adresi:
Assist. Prof. Dr. Umit Morsunbul
Aksaray University, Faculty of Education,
Department of Educational Sciences,
Psychological Services in Education,
Aksaray - Turkey

Phone / Telefon: +90-382-288-2241

E-mail address / Elektronik posta adresi:
morsunbulumit@gmail.com

INTRODUCTION

Personality is one of the most investigated topics in areas, which examine human behaviors. The main reason of this is that personality is one of the most important variables that predicts quality of interpersonal relationships, adaptation against difficult life conditions, professional achievements, social participation, happiness and health (1).

Several approaches (psychoanalytic, behavioral, traits) have been proposed to examine personality. But the Big-Five Personality Theory, which suggests personality traits can be assessed under the five-factor, has begun to come to the fore (1,2). Many researchers (3-8) agree about focus of personality can be grouped under five dimensions. They are extraversion, agreeableness, emotional stability, conscientiousness, and openness to experience. Extraversion includes traits such as social skills, entrepreneurship and talkativeness. Extraverts are active, sympathetic, and dominant. Agreeableness includes traits such as compatibility, sympathy, respectfullness, and friendliness. Agreeable people tend to maintain a positive and mutual relationship with others. Emotional stability shows traits such as openness to criticism, calmness and relaxation. People high in emotional stability effectively deal with negative emotions and situations. Conscientiousness includes traits such as self-discipline, tidiness and achievement. People in high conscientiousness tend to become planned, organized and self-disciplined. Openness to experience which another of the five factors includes traits such as creativity, curiosity, and openness to new ideas. People high in openness to experience are imaginative and sensitive (1,2,8-10). Studies (1,11-13) examined relations between depression, anxiety, aggression, loneliness, and self-esteem indicated that five personality factors negatively related to psychological problems, and positively related to psychological variables.

Several measurements have been developed in order to measure five personality dimensions. Since measurements that used to determine personality traits have too much items Vermulst and Gerris (14) developed the Quick Big Five Personality Test (QBFPT) by selecting 30 of 100 adjectives related to personality traits that Goldberg (9) proposed. This measurement has been frequently used in studies (11-16) due to short time conduct and reliability.

In this context, the aim of this study was to adapt the QBFPT to Turkish. Thus (a) the factor structure of the Turkish version QBFPT examined, (b) reliability analysis conducted and finally (c) convergent validity analyzed.

METHOD

Research Group

Research group consisted of 793 (63.9% females) students aged between 14 and 22 (mean age=17.76, SD=2.37) from Aksaray University and high schools in Aksaray. Participants were chosen form Aksaray due to practical reasons. Research group consisted of two age groups. Adolescent group consisted of 478 (60.7% females) high school students aged between 14 and 17 (mean age=16.03, SD=0.85). Emerging adult group consisted of 315 (68.9% females) university students aged between18 and 22 (mean age=20.39, SD=1.25).

Measures

Personal Data Form: Personal data form was used to obtain data on demographical features of the participants such as age and gender.

Quick Big Five Personality Test (QBFPT): In order to measure personality factors of the QBFPT that was developed by Verlmuts and Geris (14) by choosing 30 of 100 adjectives proposed by Goldberg (9) related to personality factors were used. Each factor is measured by 6 items. Items can be respondent on a 6 point scale, ranging from "applies to me very well" (6 points) to "does not apply to me at all" (1 point). 12 items are reverse coded. Each subscale scores ranges between 6 and 42. Confirmatory factor analysis (CFA) was used to test factor structure. Results of CFA supported 5 factor structures. The Root Mean Square

Error of Approximation RMSEA=0.05, Comparative Fit Index-CFI=0.96). The Cronbach alfas were 0.81 for extraversion, 0.80 for agreeableness, 0.86 for conscientiousness, 0.78 for emotional stability and finally 0.73 for openness to experience.

Adaptation study of the QBFPT was initiated after receiving approval from the authors (Ad Vermults). At first step the test was translated in adaptation study. Test The scale is translated into Turkish by 4 individuals from social sciences field and back translated into English by 4 different individuals. Items with consensus are kept and when there is no consensus, agreement of at least three individuals are taken into account.

In order to analyze convergent validity, the relations between personality factors and self concept clarity, depression, anxiety and life satisfaction were examined. These variables were used to analyze convergent validity since these variables are associated with personality factors and they have been frequently used in studies related to personality factors.

Self Concept Clarity Scale (SCCS): In order to measure self-concept clarity, Self Concept Clarity Scale (SCCS) developed by Campbell and et al. (17) and adapted into Turkish by Gungor (18) was used. Items can be respondent on a 5 point scale, ranging from 5 points to 1 point. Cronbach alfa value in this study group was 0.78.

The Children's Depression Inventory (CDI): In order to measure depression, CDI developed by Kovacs (19) and adapted into Turkish by Oy (20) was used. Items can be respondent on a 2 point scale, ranging from 0 points to 2 point. Cronbach alfa value in this study group was 0.91.

Generalized Anxiety Disorder (GAD): To assess this construct GAD subscale of the Screen for Child Anxiety Related Emotional Disorders developed by Birmaher et al. (21) and adapted into Turkish by Cakmakci (22) was administered. Items can be respondent on a 2 point scale, ranging from 0 points to 2 point. Cronbach alfa value in this study group was 0.83.

Both depression and anxiety scales have been used for children, adolescents and emerging adults in many studies (11,23).

Satisfaction with Life Scale (SLS): In order to measure life satisfaction, SLC developed by Diener et al. (24) and adapted into Turkish by Koker (25) was used. Items can be respondent on a 7 point scale, ranging from 1 points to 7 point. Cronbach alfa value in this study group was 0.84.

Procedure

Before the study, the necessary permits and approvals were obtained. Data were collected by group application. Data were collected from the participants during courses with permission of the instructor. Consent was obtained from the participants and participation was voluntary. Aims of the study were explained to the participants and scales were given to volunteers. When necessary, additional information was also given. Administration of the instruments took 25-30 minutes.

Statistical Analysis

SPSS and LISREL softwares were used in statistical analysis of the data. Frequency and percent analysis were used to analyze demographical variables of the participants. In order to determine factor structure of the scale confirmatory factor analysis (CFA) were used. Pearson correlation analysis was used to determine convergent validity.

RESULTS

Confirmatory Factor Analysis

CFA was used to test factor structure of test. CFA aims to investigate the fit of a factorial model, consisting of observable factors (latent variables), with real data (26,27). Correlation matrix obtained from 30 items was used in CFA application. (x^2/sd) ratio calculated by CFA was 3.76 and this value indicated that the suggested

factor model was consistent with the data. Goodness of Fit Index (GFI), was 0.91, and CFI was 0.92, Normed Fit Index (NFI) was 0.91, Not-Normed Fit Index (NNFI) was 0.91; and RMSEA was 0.08, suggesting that CFA results indicated five factor solution was acceptable and yielded valid results.

As seen in Table 1, observed data had a good fit with five factor model and path coefficients were between 0.41 and 0.84. All values were higher than 0.30, and values equal to or higher than 0.30 are acceptable (27).

Correlation coefficients showing the association between dimensions of the scale were shown in Table 2. When Table 2 was investigated, extraversion was negatively related to conscientiousness but positively related to other personality factors. Agreeableness was positively related to all personality factors, except for emotional stability. Conscientiousness was positively related to agreeableness, openness to experience, but negatively related to extraversion. Emotional stability was only significantly related to extraversion. Finally, openness to experience was positively related to all personality factors, except for emotional stability.

Item Analysis

To determine item discrimination values item-total correlations were examined. Results of item analysis were shown in Table 3. According to results of item

Table 1: Confirmatory factor analysis of the Quick Big Five Personality Test

Items	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Agreeableness					
Pleasant	0.63	-	-	-	-
Helpful	0.62	-	-	-	-
Kind	0.58	-	-	-	-
Cooperative	0.45	-	-	-	-
Agreeable	0.59	-	-	-	-
Sympathetic	0.68	-	-	-	-
Extraversion					
Reserved *	-	0.41	-	-	-
Quiet*	-	0.68	-	-	-
Introverted*	-	0.73	-	-	-
Talkative	-	0.48	-	-	-
Bashful*	-	0.79	-	-	-
Withdrawn*	-	0.86	-	-	-
Conscientiousness					
Sloppy*	-	-	0.72	-	-
Careful	-	-	0.41	-	-
Organized	-	-	0.84	-	-
Prompt	-	-	0.40	-	-
Neat	-	-	0.90	-	-
Systematic	-	-	0.65	-	-
Emotional stability					
Irritable*	-	-	-	0.42	-
High-strung*	-	-	-	0.50	-
Touchy*	-	-	-	0.55	-
Anxious*	-	-	-	0.78	-
Fearful*	-	-	-	0.51	-
Nervous*	-	-	-	0.83	-
Openness to experience					-
Imaginative	-	-	-	-	0.47
Inquisitive	-	-	-	-	0.44
Sophisticated	-	-	-	-	0.52
Innovative	-	-	-	-	0.70
Artistic	-	-	-	-	0.51
Creative	-	-	-	-	0.73

*Reverse coded items

Table 2: Associations between personality factors

	Mean	SD	2	3	4	5
1. Extraversion	4.11	1.33	0.15**	-0.07*	0.42**	0.27**
2. Agreeableness	5.53	0.89	-	0.31**	0.06	0.50**
3. Conscientiousness	4.49	1.29	-	-	0.00	0.19**
4. Emotional stability	4.05	1.13	-	-	-	0.01
5. Openness to experience	5.00	0.98	-	-	-	-

*p<0.05, **p<0.01

Table 3: Results of Item analysis of the Quick Big Five Personality Test (QBFPT) and reliability analysis

	Items	Cronbach Alpha when the item is excluded	Adjusted Item-Total Correlation	Cronbach Alfa	Test-Retest
Agreeableness	Pleasant	0.67	0.54		
	Helpful	0.68	0.51		
	Kind	0.70	0.44	0.73	0.82
	Cooperative	0.71	0.43		
	Agreeable	0.68	0.51		
	Sympathetic	0.67	0.55		
Extraversion	Reserved*	0.79	0.31		
	Quiet*	0.76	0.67		
	Introverted*	0.76	0.67	0.81	0.87
	Talkative	0.80	0.46		
	Bashful *	0.77	0.64		
	Withdrawn*	0.75	0.71		
Conscientiousness	Sloppy *	0.78	0.60		
	Careful	0.80	0.37		
	Organized	0.75	0.72		
	Prompt	0.78	0.41	0.81	0.86
	Neat	0.77	0.74		
	Systematic	0.78	0.61		
Emotional stability	Irritable *	0.71	0.31		
	High-strung *	0.66	0.53		
	Touchy*	0.69	0.45	0.72	0.80
	Anxious*	0.64	0.60		
	Fearful*	0.71	0.34		
	Nervous*	0.63	0.52		
Openness to experience	Imaginative	0.68	0.42		
	Inquisitive	0.71	0.31		
	Sophisticated	0.69	0.40		
	Innovative	0.64	0.54	0.71	0.81
	Artistic	0.69	0.42		
	Creative	0.62	0.53		

*Reverse coded items

analysis corrected item-total correlation changed between 0.31 and 0.74. Investigation of Cronbach's Alfa values when any of items deleted showed that these values were between 0.62 and 0.80.

Convergent Validity

Convergent validity was investigated by examining the association between personality factors and related variables. As can be seen in Table 4 personality factors were positively related to self-concept clarity and life satisfaction but negatively related to depression and anxiety.

Reliability

In order to assess the reliability of the scale, the internal consistency was assessed by Cronbach alpha and the correlation analyses related to test-retest stability were performed. As shown in Table 3 the

Table 4: Correlations between personality factors and related variables

	Self-Concept Clarity	Depression	Anxiety	Life Satisfaction
Extraversion	0.22	-0.26	-0.31	0.12
Agreeableness	0.22	-0.32	-0.15	0.24
Conscientiousness	0.28	-0.27	-0.15	0.20
Emotional stability	0.35	-0.41	-0.56	0.16
Openness to experience	0.13	-0.12*	-0.16	0.19

*p<0.01, for all other values p<0.001

Cronbach alpha reliability coefficient of the scale supported reliability of QBFPT.

The QBFPT was administered to 80 participants with interval of two weeks in order to determine test-retest reliability. Participants consisted of 40 high school students (60% female) and 40 university students (55% female). The test-retest values shown in Table 3 indicated the QBFPT is reliable tool in order to measure personality factors.

DISCUSSION

In the present study the QBFPT developed by Verlmuts and Geris (14) was adapted into Turkish by conducting validity and reliability analysis. The factor structure of QBFPT was examined by CFA. Results of CFA verified factor structure of QBFPT. Findings revealed that factor structure of original test (14) was extracted also in this study. Items under each factor in original test were located under same factors in Turkish version. Further, results of item analysis indicated items in the test work very well.

Internal consistency and test-retest scores were examined for reliability. It was seen that findings related to reliability were similar to values in original study (14) and other studies (11,15,16). The reliability coefficients in this study showed Turkish version of QBFPT is reliable.

Results of convergent validity indicated personality factors were negatively related to anxiety and depression but positively related to self-concept clarity and life satisfaction. These results suggested personality factors are important for negative and positive psychosocial functioning.

This study has some limitations. The first limitation was that the research group consisted of only students group. In the future studies, it may be more useful to work with the groups who are not students. Another limitation was about of cross-sectional design of this study. Using longitudinal design in the future studies may reveal more valid results. Although the study has some limitations the results of this study indicated that the QBFPT is in short time and reliably applicable instrument by specialists in order to determine personality factors in both adolescents and emerging adults.

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