

# Psychometric Properties of the General Belongingness Scale in Turkish Youth

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**Abstract** The purpose of this study was to investigate the reliability and validity of Turkish version of the General Belongingness Scale (GBS; Malone et al. in *Personality and Individual Differences*, 52(3):311–316, 2012). The adaptation process was carried out with four independent studies, examining the data from two Turkish universities. In study 1, linguistic equivalence of the scale was examined. In study 2, after ensuring the linguistic equivalence, construct, convergent and concurrent validity of the GBS were analyzed. In study 3, predictive validity of the GBS was examined in order to provide additional evidence for the construct validity of the scale. In study 4, the internal consistency and test-retest reliability of the GBS were investigated. The results of this study revealed that both two-factor structure (*Acceptance/Inclusion and Rejection/Exclusion*) and one-factor structure of the GBS were acceptable. The GBS demonstrated positive relations with social connectedness, social safeness, life satisfaction and subjective happiness while negative relations with loneliness. Results also revealed that extroversion, agreeableness, conscientiousness, openness, life satisfaction and subjective happiness were all positive predictors of the GBS. Finally, the results of the study indicated high levels of internal consistency and test retest reliability. These findings suggest that The GBS is suitable for use among Turkish youth.

Suggestions for future research and for the use of the GBS were offered.

**Keywords** Belongingness · Social connectedness · Social safeness · Subjective happiness · Life satisfaction · Big five · Scale adaptation · Turkish youth

## Introduction

The concept ‘belongingness’ can have its roots tracked back to the 1960s (Maslow 1968; Bowlby 1969). It has been defined in many different ways in social sciences and psychology. For example, Anant (1966) defined belongingness as “personal involvement (in a social system) to the extent that the individual feels himself to be an indispensable and integral part of the system” (p. 22). Freud (1930) viewed the sense of belongingness as an innate human drive in search of sexuality and security. Unlike Freud, Maslow considered belongingness to be not as basic as physiological and security needs. Maslow (1968) ranked “love and belongingness needs” in the middle of his motivational hierarchy. To feel loved and accepted by other people is essential to avoid problems such as loneliness, depression, and anxiety (Maslow 1968). Hagerty et al. (1992) defined sense of belonging as “the experience of personal involvement in a system or environment so that persons feel themselves to be an integral part of that system or environment” (p. 173). According to Baumeister and Leary (1995) defined belongingness as a fundamental human psychological need, suggesting that “human beings have a pervasive drive to form and maintain at least a minimum quantity of lasting, positive, and significant interpersonal relationships” (p. 497). There are two criteria put forth in satisfying this drive: a) a need for frequent, affectively pleasant interactions with a few people and b) those

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interactions must take place in the context of a temporally stable and enduring framework of affective concern for each other's welfare (Baumeister and Leary 1995).

We aimed to translate the General Belongingness Scale (GBS; Malone et al. 2012) into Turkish and test the translated version's linguistic validity in a Turkish context. Our study will provide a valid and reliable tool for the assessment of general sense of belongingness in Turkish language to be used to understand and integrate a great deal of existing literature with the general sense of belongingness in Turkish culture. In the present investigation, four separate studies were conducted for the adaptation of the GBS. Study 1 examined the linguistic equivalence of the GBS. Study 2 examined the construct, criterion-related validity of the GBS. Predictive validity of the GBS was examined in Study 3. Finally, reliability of the GBS was investigated in Study 4.

## Study 1. Linguistic Validity

### Introduction

Although various belongingness measures are available, most of those measures are concerned with belongingness needs met by friends, family, co-workers, sports, and school. The reason why we choose the GBS to adapt into Turkish culture is that it is a measure to assess one's general sense of belongingness across multiple levels of specificity ranging from close friends and family, to societal others, to an overarching sense of belonging that transcends interpersonal relationships.

Our first step in our adaptation study was to establish the linguistic validity of the GBS. An instrument that did not undergo a linguistic validation process may threaten the validity of research data and the safe aggregation of global data sets. Linguistic validity of the GBS was carried out in the first place in order to verify that translations of all items are interpreted in the same way across the target population and have the same content validity.

### Method

#### Participant

Both original and Turkish versions of GBS were administered to 30 English Literature Teacher students in their senior years.

#### Procedures

To ensure the linguistic equivalency of the GBS, Brislin's (1980) back translation method was performed. The necessary

written permission for the translation and the use of the original English version of the GBS was acquired from the original author of the scale by e-mail. Six translators who were fluent in both English and Turkish proceeded with the first forward translation under the supervision of the corresponding author. This translated version was back-translated by three other translators who also were fluent in the English and Turkish. A comparison between the original version and the back-translated version was performed. The final Turkish version of GBS was completed after checking for errors in spelling or format.

### Result

Language validity findings indicated that correlations for items between Turkish and English forms ranged from .91 to .98. The correlation between the scores of Turkish and English forms were .98 for acceptance and .95 for rejection, respectively. The correlation coefficients for linguistic validity are presented in Table 1.

The results obtained from the language validity study indicate that the Turkish and English forms of the scale were related and similar to each other.

## Study 2. Validity I

### Introduction

Validity studies for GBS were conducted in this study. Confirmatory factor analysis was performed to provide empirical-based evidence for determining whether the Turkish version of the GBS would yield or construct a similar structure to the original version of the GBS.

Criterion-related validity of GBS was also examined. Social connectedness, social safeness, subjective happiness, life satisfaction and loneliness were examined in order to investigate the criterion-related validity of GBS. It was expected that GBS would have positive relations

**Table 1** The correlation coefficients between Turkish and English forms of GBS

Acceptance/Inclusion		Rejection/Exclusion	
Item number	<i>r</i>	Item number	<i>r</i>
1	.98	3	.98
2	.91	4	.95
5	.97	6	.94
8	.92	7	.95
10	.98	9	.92
11	.95	12	.93
Total	.98	Total	.95

with social connectedness, social safeness, life satisfaction, and subjective happiness and negative relations with loneliness.

Since the significant associations between loneliness (e.g., Mellor et al. 2008; Malone et al. 2012), life satisfaction (e.g., Mellor et al. 2008; Malone et al. 2012), social connectedness (Malone et al. 2012), social safeness (DeWall et al. 2011; Malone et al. 2012), subjective happiness (Leung et al. 2011) and belongingness were supported by research and theoretical explanations, it has been accepted that scales measuring loneliness, social connectedness, social safeness, subjective happiness and life satisfaction can be used as criterion validity measures for general belongingness.

## Method

### Participant

This study was conducted with volunteered 333 students of two different Turkish universities. Of all the participants, 127 were enrolled in Anadolu University and 206 in Sakarya University. The participant consisted of 181 (54%) females and 152 (46%) males, with a mean age of 20.97 years ( $SD = 1.97$ ). Of the participants, 93 (28%) were freshman, 67 (20%) were sophomores, 84 (25%) were juniors, and 89 (27%) were seniors.

### Measures

**General Belongingness Scale (Malone et al. 2012)** The scale is a 12-item self-report measurement and consists of two factors; acceptance/inclusion and rejection/exclusion). Each item was rated on a seven-point Likert scale (1 = strongly disagree to 7 = strongly agree). Total scores range from 12 to 84, where higher scores indicate a stronger tendency to general belongingness. The Cronbach  $\alpha$  coefficient of the original version was .94.

**Social Connectedness Scale (Lee and Robbins 1995)** The scale has negative-worded eight items (e.g., “I feel so distant from people”) rated on a six-point scale (1: agree, 6: disagree). When reverse coded items all computed total score can range from 8 to 48, where a higher score indicates a higher sense of social connectedness. The internal consistency coefficient of the original form was .91 and test-retest reliability coefficient was .91. This scale had been adapted to Turkish by Duru (2007). The Cronbach  $\alpha$  coefficient of the Turkish form was .90 and test-retest reliability coefficient was .90. In the present study, Cronbach  $\alpha$  coefficient as found .91.

**Social Safeness and Pleasure Scale (Gilbert et al. 2009)** It comprises 11 items (e.g., “I feel content within my

relationships”) rated on a five-point Likert scale (0 = almost never, 4 = almost all the time). The total score can range from 0 to 44. Higher scores indicate greater social safeness. The Cronbach  $\alpha$  coefficient of the original form was .92. A Turkish adaptation of this scale was conducted by Akin et al. (2012). The internal consistency reliability coefficient of Turkish form was .82. In the present study, Cronbach  $\alpha$  coefficient as found .88.

**UCLA Loneliness Scale (ULS-8; Hays and DiMatteo 1987)** The scale has 8 items (e.g., “I feel isolation from others”) rated on a four-point scale (1: never, 4: always). The total score can range from 8 to 32, where a higher score indicates a higher loneliness. This scale had been adapted to Turkish by Dogan et al. (2011). Internal consistency reliability of the Turkish form, as measured by Cronbach alpha, was .72. In the present study, Cronbach  $\alpha$  coefficient as found .78.

**Satisfaction with Life Scale (Diener et al. 1985)** The scale consists of five items (e.g., “In most ways my life is close to my ideal”) and each item was presented on a seven-point Likert type scale ranging from 1 = strongly disagree to 7 = strongly agree. A sum of all scores yields a total score that ranges from 5 to 35; a higher score indicates a higher life satisfaction level. Turkish adaptation of this scale had been done by Durak et al. (2010). Internal consistency was .81 for Turkish form. In the present study, Cronbach  $\alpha$  coefficient as found .79.

**Subjective Happiness Scale (Lyubomirsky and Lepper 1999)** The scale has 4 items (e.g., “I think I am a happy person”) rated on a seven-point scale (1: Strongly disagree, 7: Strongly agree). The total score can range from 4 to 28, where a higher score indicates a higher subjective happiness. The internal consistency coefficient of the original form ranged from .79 to .94 for different samples. This scale had been adapted to Turkish by Akin and Satici (2011) and the Turkish version was used in this study. In the present study, Cronbach  $\alpha$  coefficient as found .72.

### Procedures

The confirmatory factor analysis (CFA) was performed using maximum likelihood on the 12-observed items of the GBS. CFA was also conducted on female and male data separately to test the plausibility of differing factor structures associated with gender. Comparative fit index (CFI), root mean square error of approximation (RMSEA), standardized root mean square residual (SRMR), goodness of fit index (GFI) and adjusted goodness of fit index (AGFI) were used as fit statistics. The ratio of chi-square to degrees of freedom was also examined.

Social connectedness, social safeness, subjective happiness, life satisfaction and loneliness were examined in order to investigate the criterion-related validity of GBS.

## Result

Standardized loadings, standard errors, *t* values and  $R^2$  values are shown in Table 2.

As shown in Table 2 factor loadings for accept/include subscale ranged from .48 to .76 and from .47 to .69 for reject/exclude subscale. The following criteria were used to indicate the goodness of fit: GFI, AGFI and GFI .90 and higher, RMSEA and SRMR .80 or lower, and Chi-square/df ratio three or lower (Hu and Bentler 1999; Kline 2005). The two factor solution provided an acceptable fit to the data (CFI = .93, RMSEA = .06, SRMR = .05, GFI = .94, AGFI = .92,  $\chi^2 = 119.82$ ,  $\chi^2/df = 2.26$ ).

The factor loadings of the single factor solution (after reversing items of Reject/Exclude subscale) ranged from .35 to .67. The single factor solution also provided an acceptable fit to the data (CFI = .92, RMSEA = .07, SRMR = .06, GFI = .93, AGFI = .90,  $\chi^2 = 129.36$ ,  $\chi^2/df = 3.08$ ).

Two factor solution based on the data from male and female samples also provided an acceptable fit to the data. Table 3 shows the Goodness-of-Fit Indices for confirmatory models.

Criterion-related validity of the GBS was examined in this part of the study. Correlations of the GBS with other measures assessed are shown in Table 4.

As predicted, the Accept/Include was correlated positively with social connectedness ( $r = .47$ ) and social safeness and pleasure ( $r = .44$ ) and negatively with loneliness ( $r = -.40$ ). The Reject/Exclude was correlated negatively with social

**Table 2** CFA results of two-factor GBS

Item Number	$\gamma$	$\zeta$	<i>t</i>	$R^2$
Accept/Include				
1	.62	.62	11.44	.38
2	.52	.73	9.28	.27
5	.63	.60	11.80	.40
8	.48	.76	8.66	.24
10	.74	.45	14.55	.55
11	.76	.42	15.05	.58
Reject/Exclude				
3	.60	.63	10.90	.37
4	.47	.78	8.08	.22
6	.53	.72	9.41	.28
7	.69	.53	12.81	.47
9	.62	.62	11.18	.38
12	.61	.63	11.06	.37

$\gamma$  Standardized factor loadings;  $\zeta$  Error loadings

**Table 3** Fit indexes of GBS

Structure	CFI	RMSEA	SRMR	GFI	AGFI	$\chi^2$	$\chi^2/df$
2-Factor	.93	.06	.05	.94	.92	119.82	2.26
One-Factor	.92	.07	.06	.93	.90	129.36	3.08
For Female	.91	.06	.06	.92	.88	98.25	1.85
For Male	.91	.07	.07	.90	.85	99.26	1.87

connectedness ( $r = -.49$ ) and social safeness and pleasure ( $r = -.35$ ) and positively with loneliness ( $r = .35$ ). The GBS was, as expected, correlated with the social connectedness, social safeness and loneliness ( $r = .55, .46, -.43$ , respectively).

Also, results revealed that the Accept/Include was positively correlated with measures of life satisfaction ( $r = .25$ ) and subjective happiness ( $r = .32$ ), while Reject/Exclude demonstrated negative relations with these measures ( $r = -.24, -.33$ , respectively) (all  $ps < .01$ ).

## Study 3. Validity II

### Introduction

The aim of this study was to investigate the predictive validity of the GBS to provide additional evidence for the validity of the GBS. The predictive role of Big Five, life satisfaction and subjective happiness on general belongingness was examined in this study.

Our literature review has demonstrated that only one published study has examined the relationship between the Big Five and general belongingness. The findings of this study revealed that the Big Five are important predictors of belongingness. While individuals high in extraversion and agreeableness who are experiencing positive interpersonal and social interactions appear to have high levels of belongingness, individuals high in neuroticism due to adverse feelings associated with interpersonal and social acceptance (e.g., anxiety, depression, vulnerability, etc.) notably report lower levels of belongingness. In addition, there is literature linking the Big Five to constructs associated with belongingness. For instance, in previous research the relations between belongingness, adult attachment styles, global self-esteem (self-evaluation via how

**Table 4** Zero-order correlations with study variables

Variables	Accept/Include	Reject/Exclude	GBS
Social connectedness	.47*	-.49*	.55*
Social safeness and pleasure	.44*	-.35*	.46*
Loneliness	-.40*	.35*	-.43*
Life satisfaction	.25*	-.24*	.28*
Subjective happiness	.32*	-.33*	.38*

\*  $p < .01$

one is regarded and accepted by others), and collegiate relationships were examined. Findings revealed that neuroticism correlates positively with anxious adult attachment and negatively with global self-esteem; extraversion correlates negatively with avoidant adult attachment and positively with global self-esteem (Watson et al. 2002; Donnellan et al. 2008) and extraversion, agreeableness and conscientiousness correlate positively with the number and quality of college students' relationships (Asendorpf and Wilpers 1998).

In addition, theoretical reasons suggest a relationship between belongingness and the Big Five. Individuals high in extraversion have the tendency to seek interpersonal relationships and social situations; individuals high in agreeableness are altruistic, trustworthy and cooperative; and conscientious individuals are responsible and highly dependable. All these factors have a positive impact on stable and healthy relationships which is of high importance for a sense of belonging (Baumeister and Leary 1995). On the other hand, individuals high in neuroticism have a tendency to experience a wide range of negative emotions such as anger, depression, anxiety, self-consciousness, and vulnerability which hinder their capacity to develop positive, stable relationships and thus lowering their sense of belongingness.

## Method

### Participant

The sample consists of 213 (65 % female, 35 % male;  $M_{\text{age}} = 20.97 \pm 2.04$ ) university students. Of the participants, 58 (27%) were freshman, 65 (30%) were sophomores, 47 (22%) were juniors, and 43 (20%) were seniors.

### Measures

In addition to General Belongingness Scale Turkish version, measures of Life satisfaction and Subjective Happiness were also included in this study. Adjective Based Personality Scale (ABPS; Bacanlı et al. 2009) is an instrument used for assessing the Big Five, including five subscales (extroversion, emotional stability/neuroticism, agreeableness, conscientiousness and openness to experiences). The five factor model of the ABPS was reported to explain the 52.63 % of the variance. The internal consistency coefficients of the subscales of ABPS ranged from .89 to .73 (Bacanli et al. 2009).

### Procedure

In order to establish the predictive validity of the GBS regression analyses was conducted with Big Five dimensions, life satisfaction and subjective happiness as independent variables and general belongingness as dependent variable.

**Table 5** Regression results of predictive validity

Variables	Accept/Include		Reject/Exclude		GBS	
	$\beta$	$t$	$\beta$	$t$	$\beta$	$t$
Extroversion	.45*	7.43*	-.40*	-6.38*	.50*	8.47*
Neuroticism	-.006	-.087	.14**	1.99**	-.08	-1.24
Agreeableness	.23*	3.41*	-.13	-1.86	.21*	3.09*
Conscientiousness	.34*	5.27*	-.27*	-4.05*	.36*	5.57*
Openness	.34*	5.19*	-.18*	-2.70*	.30*	4.63*
Life satisfaction	.33*	5.06*	-.33*	-5.03*	.39*	6.07*
Subjective happiness	.30*	4.60*	-.32*	-4.88*	.36*	5.69*

\*  $p < .01$

\*\*  $p < .05$

## Results

Table 5 illustrates the results of regression analysis performed to assess the predictive role of Big Five, Life Satisfaction and Subjective Happiness on General Belongingness.

Results revealed that extroversion ( $\beta = .50$ ), agreeableness ( $\beta = .21$ ), conscientiousness ( $\beta = .36$ ), openness ( $\beta = .30$ ), life satisfaction ( $\beta = .39$ ) and subjective happiness ( $\beta = .36$ ) were all positive predictors of the GBS (all  $ps < .01$ ) while neuroticism ( $\beta = -.08$ ,  $p > .05$ ) failed to make a substantial contribution. Similarly, accept/include was predicted positively by extroversion ( $\beta = .45$ ), agreeableness ( $\beta = .23$ ), conscientiousness ( $\beta = .34$ ), openness ( $\beta = .34$ ), life satisfaction ( $\beta = .33$ ) and subjective happiness ( $\beta = .30$ ) (all  $ps < .01$ ). However, reject/exclude was negatively predicted by extroversion ( $\beta = -.40$ ), neuroticism ( $\beta = -.13$ ), conscientiousness ( $\beta = -.27$ ), openness ( $\beta = -.18$ ), life satisfaction ( $\beta = -.33$ ) and subjective happiness ( $\beta = -.32$ ) while agreeableness did not make any significant contribution.

## Study 4. Reliability

### Introduction

Measurement tools are supposed to be both valid and reliable. Therefore, establishing validity would require establishing reliability. The aim of this study is to investigate the internal consistency and test-retest reliability of the GBS.

### Method

#### Participant

Test-retest reliability was performed with 61 (54 % females, 46 % males,  $M_{\text{age}} = 20.28$ ,  $SD = 1.45$ ) participants.

**Table 6** Reliability results of the GBS

Structure	Study 1 ( <i>n</i> = 30)	Study 2 ( <i>n</i> = 333)	Study 3 ( <i>n</i> = 213)	Study 4 ( <i>n</i> <sub>1</sub> = 61, <i>n</i> <sub>2</sub> = 61)	Total data ( <i>N</i> = 698)	Test-retest
Accept/ include	.86	.79	.82	.91, .85	.82	.81
Reject/ exclude	.77	.76	.76	.76, .82	.76	.79
GBS	.89	.83	.83	.89, .88	.84	.86

### Procedure

The Cronbach's alpha coefficient was calculated for the entire study and for each study separately. Test-retest reliability of the GBS over a 6-week interval was examined.

### Result

Table 6 shows test-retest and the Cronbach's alpha coefficients for the whole/entire study and for each study separately.

Six week interval test-retest reliability was found .81 for accept/include, .79 for reject/exclude and .86 for the GBS. Cronbach's alpha coefficients were calculated as .82 for accept/include, .76 for reject/exclude and .84 for the GBS. Cronbach's alpha coefficients ranged between .79 and .91 for accept/include, .76 and .82 for reject/exclude and .83 and .89 for the GBS when studies were considered separately. These findings suggest that the Turkish form of the GBS has an acceptable reliability.

### Summary and General Discussion

The current study adapted the General Belongingness Scale developed by Malone et al. (2012) into Turkish and investigated the preliminary psychometric properties of the Turkish version. The results indicated that the Turkish version of the GBS was highly correlated with the original form, suggesting that the adapted measure is linguistically equivalent to the original version. Both single and two factor models of the Turkish version yielded results consistent with the research of Malone et al. (2012). The correlations between GBS and social connectedness, social safeness, subjective happiness, life satisfaction and loneliness were examined for the criterion-related validity of the GBS. The criterion-related validity analyses results were consistent with the research of Malone et al. (2012). The predictive validity of the Big Five, life satisfaction and subjective happiness over general belongingness was analyzed. The results indicated that students with higher scores in life satisfaction and subjective happiness displayed higher levels of general belongingness. Similarly, of the Big Five dimensions, extraversion, agreeableness, conscientiousness and openness also positively predicted general belongingness. The relations between the Big Five and the

GBS were similar to those in a study by Malone et al. (2012). Finally, Cronbach's alpha and test retest results indicated acceptable levels of internal consistency and high levels of test retest reliability.

The findings of the current study must be assessed within the context of study limitations. First, although the external validity of the GBS tried to be extended through number of studies and data gathered from different universities, caution is recommended while using and interpreting the GBS since the present study was restricted to self-report methodology. Second, the current study was carried on a sample of university students therefore the psychometric properties of the GBS should be reexamined for different age groups. As a result, inspite of these limitations the findings of the current study suggested that the Turkish version of the GBS was a reliable and valid instrument. The adaptation of the Turkish version of the GBS would provide a new instrument to be used in cross-cultural studies. Finally, it can be concluded that the GBS seems to be a promising scale for assessing belongingness levels of Turkish people and for investigating the relations between belongingness and any other related psychological and social variables in Turkish culture.

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