The Validity and Reliability of the Turkish Version of the Berkeley Expressivity Scale

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Abstract

This study investigated the validity and reliability of the Turkish version of the Berkeley Expressivity Questionnaire (BEQ; Gross & John, 1995). The sample of study consists of 425 university students. Results of language equivalency showed that the correlations between Turkish and English forms ranged from .62 to .83. Results of exploratory factor analysis showed that the 16 items loaded on three factors (positive expressivity, negative expressivity, and impulse strength). The total variance explained was 58% and factor loadings ranged from .53 to .90. Fit index values of the model were RMSEA=.048, NFI=.96, CFI=.98, IFI=.98, RFI=.95, GFI=.95, AGFI=.92, and SRMR=.048. Internal consistency reliability coefficients varied between .74 and .88 and test-retest reliability coefficients varied between .66 and .85. These results demonstrate that this scale is a valid and reliable instrument.

Keywords: Emotional expressivity; validity; reliability; confirmatory factor analysis.

1. Introduction

What we say is mostly either lies or bullshit. But the voice is there, the gesture, the posture, the facial expression (Perls, 1969, p. 54).

Emotion is defined adaptive reactions to internal or external stimuli that include a variety of different components such as physiological responses, non-verbal expressions, cognitive appraisals, and action tendencies (Ekman, 1982; Frijda, 1986). Emotions play important roles in our lives. Firstly, emotions have the potential to serve us today as a delicate and sophisticated internal guidance system. Emotions primarily alert us when natural human need is not being met. For example, when we feel lonely, our need for connection with other people is unmet. Secondly, our emotions are valuable sources of information; therefore they help us make decisions. Lastly emotions help us set our boundaries which are necessary to protect our physical and mental health (Goleman, 1995).

According to the emotional intelligence theory (Mayer & Salovey, 1997), ability to express emotions accurately is an important component of emotional intelligence (Riggio & Riggio, 2002). Kring, Smith and Neale (1994) defined emotional expressivity as “the degree to which an individual actively expresses emotional experience through verbal or nonverbal behaviors” (p. 934). Gross and John (1997) handled emotional expressivity as behavioral changes (e.g., postural, facial) that accompany emotion, such as smiling, frowning, crying, or storming.
out of the room. On the other hand, Stalikas and Fitzpatrick (1996) defined emotional expressivity using simply and briefly statement as “the outward directed feelings that clients have in sessions” (p.262).

Emotional expression is linked to both physical and psychological well-being. It was assumed that emotional expression is beneficial and plays an important role of in the maintenance of psychological and physical well-being, whereas bottled up emotion is detrimental to individual’s well-being (Lavee & Adital, 2004). This view is supported by researches showing emotional expressiveness to be inversely related to autonomic arousal (Isen, 1987), and in turn, autonomic arousal is linked with lowered immune functioning and psychomatic illness (Pennebaker, 1989). Similarly, studies have shown suppression of emotional expression to be associated with psychopathology and physical illness, including cardiovascular disease (Friedman & Booth-Kewley, 1987), cancer (Fox & Temoshok, 1988), arthritis (Udelman & Udelman, 1981), depression (Sloan, Strauss, & Wisner, 2001), schizophrenia (Earnst & Kring, 1999), and borderline personality disorder (Herpertz et al., 2001).

Among theorists and practitioners in the field of psychotherapy, it is a common belief that people’s mental health is related to how they express their emotions (Sloan & Marx, 2004). Particularly, psychotherapists with a psychodynamic or humanistic orientation emphasize the role of emotional expressivity for maintaining psychological and physical well-being, and thus aim at improving their clients’ access to and expression of feelings (Leising, Müller, & Hahn, 2007; Whelton, 2004) via techniques fostering emotional experience and expression and establishment of a safe and supportive therapeutic relationship (Leising et al., 2007). Because emotional expression leads clients to change (immediate, intermediate, or long term) affords relief of symptoms (i.e., emotional disturbance, feelings of unpleasantness), effects problem resolution, and facilitates the outcomes of therapy (Iwakabe, 2000).

According to Fredericson (1998), positive emotions help to build an individual’s cognitive and social resources. In this context, Fredericson (1998) stated, positive emotions tend to expand the scope of one’s attention, foster creative flexible thinking, promote general readiness or engage in a variety of different activities which provide individuals to enhance their social, intellectual, and physical skills, and strengthen social bonds. Thus Harker and Keltner (2001) stated there was a connection between ability to express emotions and specific personality characteristics including extraversion, dominance, and affiliation (Friedman, 1979; Friedman, Riggio, & Segall, 1980). Affiliation reflects a nurturing, affiliative, and cooperative interpersonal style and represents to the tendency to feel warmth, sympathy, and low hostility others. Competence, on the other hand, reflects good cognitive skills such as organization, the ability to maintain focused attention, and achievement striving. Considering benefits of positive emotions, it is reasonable that correlations between expression of positive emotions and affiliation and competence. On the other hand both observational and self-report studies have documented that neuroticism is positively related to the experience of negative emotions (Wilson & Gullone, 1999) and to the expression of negative emotions (Larsen & Ketelaar, 1991; Watson & Clark, 1992). It is also negatively related to the experience and expression of positive emotions (Kardum, 1999; Lavee & Adital, 2004).

Studies also suggest that emotional expressiveness also plays an important role in interpersonal interaction (Geist & Gilbert, 1996; Gottman & Levenson, 1992; King, 1993; Long & Andrews, 1990; Sullins, 1991). Within interpersonal relationships, the tendency to be emotionally expressive may impinge on the extent of both spouses’ satisfaction and dissatisfaction with the relationship. Empirical evidence suggests that the communication of emotions enhances the awareness of one’s own emotional state as well as that of one’s spouse, thereby forming the basis for intimacy and satisfaction with the relationship (Gottman, Katz, & Hooven, 1997; King, 1993). Moreover, the modulation and control of facial expressions of emotion facilitate impression management in social situations (Snyder, 1987), and expressive people are seen as more attractive and are more well liked than unexpressive people (Friedman, Riggio, & Casella, 1988; Larrance & Zuckerman, 1981).

Gross and John (1997) have proposed a heuristic model of the emotional expressivity and according to this model, emotion occurs when internal and external input is processed in similar way that an emotion program is triggered. Once activated, the emotion program produces response tendencies (including physiological changes, subjective feelings, and behavioral impulses) that prepare an individual to respond adaptively to environmental challenges or opportunities. In this model of emotion, emotions do not force people to behave in any particular way, they only suggest that people do. For this reason, emotions are not always revealed: Emotional response tendencies
may or may not be expressed as visible behavior. In this model, emotion-expressive behavior rises from emotion-response tendencies. According to model, individual differences in emotional expressivity are determined by two factors: a) individual differences in emotion-response tendencies, and b) modulation of emotional-response tendencies which indicates whether individuals express emotional-response tendencies behaviorally and if they choose to express emotional-response tendencies as a behavior, how they do express?(Gross & John, 1997) Gross and John (1995) proposed a model and developed a scale to assess two determinants of individual differences in expressivity.

Emotional expressiveness is generally used research in two ways. First, it is often used to denote skill in sending messages nonverbally and facially. The “expressive” person is the individual who is high in emotional encoding ability; that is, he or she can accurately nonverbally communicate what he or she is feeling. Secondly it is also often used to imply general expressive style (Friedman, Prince, Riggio, & DiMatteo, 1980). It has been theorized that emotional expressiveness, in general, and emotional encoding ability, in particular, may represent a central component of individual personality because the communication of emotions plays such a crucial role in face-to-face interaction and in the development of interpersonal relationships (Friedman, 1979), and because emotional expressiveness as a personal style is relatively consistent across situations (Allport & Vernon, 1933), and across the course of development (Kagan, Reznick, Snidman, Gibbons, & Johnson, 1988).

Given the critical role of emotional expression in adaptive functioning, it is important to measure this construct as a valid and reliable way. Thus the aim of this research is to adapt Berkeley Expressivity Questionnaire (BEQ; Gross & John, 1995) to Turkish and to examine its psychometric properties.

As explained, emotional expressivity plays crucial role in physical (Fernandez-Ballesteros et. al., 1998) and psychological (Buck, Goldman, Easton, & Smith, 1998) well-being, social relationships (Levine & Feldman, 1997), and personality (Abe & Izard, 1999). Emotional expressivity is explained various approaches. One of the most approaches is proposed by Gross and John (1995). The most advantage of their approach is emphasized the individual differences in emotional expressivity. I will expect that the heuristic model of emotional expressivity which undertakes emotion-expressive behavior as a function of the person, the situation, and his/her interaction expands scope of researchers. Additionally this study earned a scale which measures emotional expressivity in relation to positive and negative expressivity and impulse strength.

1.1. The Berkeley Expressivity Questionnaire (Gross & John, 1995)

The BEQ was developed based on a trait conceptualization of emotional expression that includes “the behavioral (e.g. facial, vocal, postural) changes associated with the experience of emotion such as smiling, laughing, frowning, storming out of a room, or crying” and “emphasizes observable behavioral reactions” (Gross & John, 1995, s. 555). This is a self-report questionnaire with 16 items rated on a 7-point scale (1—strongly disagree, 7—strongly agree). Factor analysis has indicated the presence of both an overall expressivity factor and three distinct subscales, Positive Expressivity, Negative Expressivity, and Impulse Strength. The amount of total variance explained by three factors was 33%. Factor loadings ranged from .44 to .80 for positive expressivity, .37 to .68 for negative expressivity, and .53 to .69 for impulse strength. Facets for general expressivity are all positively correlated. Impulse strength correlated 0.52 with Negative Expressivity and 0.50 with Positive Expressivity, and Negative Expressivity is correlated 0.51 with positive expressivity (Gross & John, 1995). The Positive Expressivity subscale is derived from responses to statements such as, “When I’m happy, my feelings show.” The Negative Expressivity subscale is calculated based on responses to statements such as, “Whenever I feel negative emotions, people can easily see exactly what I’m feeling.” The third subscale, Impulse Strength, provides a general measure of experience of emotion and includes items such as, “I have strong emotions.” Additionally, the BEQ shows convergent validity with peer ratings of general expressivity and the subscales differentially predict positive and negative emotion-expressive behavior in the laboratory (Gross & John, 1997). Convergent validity of BEQ was established by high correlations with other expressivity scales. The BEQ is the most strongly correlated with the Emotional Expressivity Scale (Kring et al., 1994; r = .88; Gross & John, 1997). The two-week interval test-retest reliability coefficient was found as .86
2. Method

2.1. Participants

Validity and reliability studies of BEQ were executed on two sample groups. The first group was 77 English teachers (49 female, 28 male) and mean age of them was 33.4 (sd=2.6). Language equivalency study of the scale was executed on this group. The second group was 425 university students from different programs of Education Faculty of Sakarya and Gazi Universities in Turkey. These programs were psychological counseling and guidance (n=85), science education (n=66), pre-school education (n=43), computer and instruction technology education (n=51), primary school education (n=77), social sciences education (n=56), and Turkish language education (n=47). Of the participants, 197 were male and 228 were female and the mean age of the participants was 19.8 (sd=2.1). In this study, construct validity, concurrent validity, and internal consistency reliability coefficients were calculated according to data obtained from the second group. The third group was consisted of 111 university students. The average of third group was 18.7 (sd=1.8). The test-retest reliability of the BEQ was determined by administering the test two times with an interval of 3 weeks on these students.

2.2. Measures

2.2.1. Berkeley Emotional Expressivity Questionnaire (BEQ; Gross & John, 1995).

The BEQ is a 16-item self-report questionnaire and consists of three sub-scales: positive expressivity, negative expressivity, and impulse strength. Each item was rated on a 7-point likert scale (1=strongly disagree to 7=strongly agree). High scores showed a high level of emotional expressivity. Factor loadings ranged from .44 to .80 for positive expressivity, .37 to .68 for negative expressivity, and .53 to .69 for impulse strength. Coefficients of internal consistency (Cronbach’s Alpha) for each subscale .86 for the total BEQ, and .70, .70, and .80 for the three subscales respectively. The two-week interval test-retest reliability coefficient was calculated as .86.

2.2.2. Emotions Management Skills Scale (EMSS; Çeçen, 2006).

The EMSS is a 28-item self-report measurement and consists of six sub-scales; expression of emotions as a verbal, recognizing and accepting emotions, expression of emotions as spontaneously, control of negative body response, coping, and management of anger. Each item was rated on a 5-point Likert scale (1= not appropriate for me at all not appropriate for me at all to 5= very appropriate for me). High scores represented a high level of emotional management. Factor loadings ranged from .41 to .78 and item-total correlations ranged from .36 to .65. The Cronbach’s Alpha internal consistency coefficients of EMMS were obtained .83 for overall scale and orderly, for six subscales .79, .60, 67, .65, .64, .62. and split-half correlation coefficient was .81. Test-re-test reliability coefficient was .81 for three weeks.

2.3. Procedure

Translation and cross-cultural adaptation of the BEQ into Turkish were based on the recommendations of Hambleton and Kanjee (1995). As the first step 3 specialists who were a native Turkish speaker fluent in English translated English version into Turkish. Discrepancies in initial translations were addressed with the assistance of a fourth independent translator. The Turkish version of the BEQ was then translated back into English by 2 English-speaking language specialists who were blinded to the original scale and the objective of the study. The differences between translated versions were evaluated and a satisfactory compliance with the original scale was achieved by consensus of the translators. The completed Turkish version was evaluated for cultural appropriateness by 5 academicians from department of English Language and Literature. Controversial items were determined and
necessary modifications in relation to grammar, semantic, phrase were done. The updated version was reevaluated by the original group of expert reviewers, to finalize the Turkish version used in this study. After that a study of language equivalence was executed and then the validity and reliability analyses of the scale were examined. In this study confirmatory factor analysis (CFA) was executed to confirm the original scale’s structure in Turkish culture. Also concurrent validity, re-test and internal consistency reliabilities, and item analysis of the BEQ were examined. Data were analyzed using LISREL 8.54 and SPSS 13.0 package programs.

3. Results

3.1. Language equivalence

Language equivalence study demonstrated that correlations between Turkish and English forms of BEQ were high (.83 for entire scale, .62 for positive expressivity, .81 for negative expressivity, and .75 for impulse strength).

3.2. Construct Validity

Confirmatory factor analysis demonstrated that the model was well fit. Also, Chi-Square value ($\chi^2=193.04$, $N=425$, $p=0.00$) which calculated for the adaptation of the model was significant. The goodness of fit index values of the model were RMSEA=.048, NFI=.96, CFI=.98, IFI=.98, RFI=.95, GFI=.95, AGFI=.92, and SRMR=.048. Factor loads of items belonging Turkish version of BEQ are presented in Figure 1.

![Figure 1. Factor loadings for the BEQ](image)

3.3. Concurrent Validity

For concurrent validity, the relationships between EMSS and the BEQ which was translated into Turkish in this study were calculated. As expected, EMSS total scores were positively associated with positive expressivity ($r=.31$), negative expressivity ($r=.47$), and impulse strength ($r=.36$) subscales of BEQ. Also EMSS total scores were found positively related to BEQ total scores ($r=.41$).
3.4. Reliability

For reliability studies of the Turkish version of the BEQ Cronbach’s Alpha internal consistency coefficient were used. The Cronbach’s Alpha internal consistency coefficient for the entire scale was .88, for the positive expressivity subscale was .74, for the negative expressivity subscale was .82, and for the impulse strength subscale was .87. Pearson correlation coefficients were used to determine the temporal stability of the BEQ. Results indicated that the test-retest reliability coefficient was .81 for the entire scale, .85 for the positive expressivity subscale, .66 for the negative expressivity subscale, and .67 for the impulse strength subscale.

4. Discussion

The purpose of this research is to adapt the BEQ to Turkish and to examine its psychometric properties. Results of language equivalency showed that the correlations between Turkish and English forms were high. These results confirm that Turkish and English forms of the BEQ might be regarded equivalent. In this study, factor structure of the Turkish version of BEQ was examined via confirmatory factor analyses. The confirmatory factor analysis showed that the factorial model of BEQ that consists of 3 factors were at an acceptable degree of goodness of fit for Turkish sample (Hu & Bentler, 1999). The internal consistency and re-test reliability coefficients of the factors of BEQ showed acceptable reliability. According to these findings BEQ can be termed as a valid and reliable instrument that could be used in fields of education and psychology. However, because participants were university students, examination of the factor structure of BEQ for targeting other populations should be made. Also, further studies that will use BEQ are important for its measurement force.

References


