

Reliability and Validity Indicators of Berkeley Expressivity Questionnaire In The Context of Culture and Gender



Şebnem TUNAY AKAN¹, Elif BARIŞKIN²

SUMMARY

Purpose: The Berkeley Expressivity Questionnaire (BEQ), developed by Gross and John (1995), is used to measure emotion expression. The purpose of the present study was to investigate reliability and validity indicators of the BEQ in our culture.

Method: The study population composed of 213 (115 women) subjects with an average of age 35 and living within the borders of Izmir. The validity indicators of the questionnaire were investigated through explanatory and confirmatory factor analyses, gender differences between the scores and correlational analyses on Difficulties in Emotion Regulation Scale (DERS). Anyway, the reliability indicators of the questionnaire were explored by internal consistency coefficient and test re-test reliability.

Results: Confirmatory and explanatory factor analyses revealed a three-factor model explaining 48% of the total variance. These factors were named as emotional expressivity, impulse strength and masking. The results showed a positive correlation between the DERS and the total BEQ scores, which were congruent with theoretical expectations. It was found that the women had higher scores in the BEQ, emotional expressivity and impulse strength subscales while the men had higher scores than women in the masking subscale, meaning the women might be more emotionally expressive and the intensity of their emotional experience were higher than men. In addition, the Cronbach's alpha value was 0.81 and test re-test values were 0.78 for the total BEQ.

Conclusion: Based on these results, we concluded that the Turkish version of the BEQ has sufficiently high reliability and validity to justify its use as a tool in emotion expression studies.

Keywords: Expressed emotion, Gender, Culture, Reliability, Validity

Emotional expression is defined as a behavioral change (e.g. facial, vocal, postural) that emerges in the course of experiencing of our emotions. Emotional expression makes it possible that we can arrange our behavior. So we can avoid unnecessary conflict and study in agreement with them, and express our anger through verbal behaviors instead of action (Gross and John 1995). Expression of emotions has shown to benefit physical health especially in people diagnosed with cancer and elderly (Shaw et al 2003, Sloan et al 2004, Stanton et al 2000).

On the other hand, emotion suppression can play a central role in psychopathology. For example Kring and Neale (1996) showed more diminished positive and negative emotional expressions to emotional stimuli in schizophrenic patients than controls. D'Avanzato et al (2013) showed that participants diagnosed with major depression had more frequently attempt to inhibit expressive behaviours contrary to remitted depression. Similarly, it is shown that there is a discrepancy between emotion expression and emotion experience in obsessive compulsive disorder (OCD). Participants diagnosed

Received: 11.12.2014 - Accepted: 06.07.2015

¹PhD, University of Ege, Faculty of Medicine/Socat Laboratory, Department of Psychiatry, Izmir, ²Prof., University of Hacettepe, Faculty of Medicine, Department of Psychiatry, Ankara, Turkey.

e-mail: sebnemtunay@yahoo.com

with OCD experience higher levels of anger and have difficulty in expressing that emotion. They generally internalize their anger (Rachman 1993, Whiteside and Abramowitz 2004).

Thus, the importance on emotion expression and the concept of expressivity have been accerrelated. It has been emphasized that culture and group norms should be taken into consideration as critical factors (Gross and John 1995, Lü and Wang 2012). Especially, it has been observed that both positive and negative emotions have been expressed less to sustain relational harmony in collectivistic cultures (Matsumoto 2006, Yuan et al 2014). Hence, it has been accepted that inhibition of emotion expression is functional and mature behavior. However in some cultures expressing your emotions openly is considered socially unmature (Butler et al 2007, Trommsdorff and Rothbaum 2008).

It has also been suggested that emotion expression is gender specific (Deng and Zheng 2003, 2004). which may result from neurobiological differences in emotional systems or the effects of socio-cultural stereotypes (Kring and Gordon 1998). Many studies concluded that women had more emotional expressive than men (Gross and John 1995, 2003, Haga et al. 2009, Davis et al. 2012). In fact, gender differences have been observed in impulse strength, which is conceptualized as the strength of emotional impulses. Davis et al (2012) showed that women were more responsive to emotional stimuli than men. Kring et al (1994) observed that women experienced more intensely and frequently positive and negative emotions. Brody (1999) stated that higher levels of anger in men as compared to women could be the result of different style of responses between men and women.

The research regarding emotion expression is increasing and will lead to a better understanding of its role in social interactions, physical and psychological health and will provide theoretical and practical benefits. So, based on the process model of emotion regulation, Berkeley Expressivity Questionnaire (BEQ) was developed by Gross and John (1995). To understand individual differences in emotion expression (i.e. behavior), researchers focused on two parts of emotion-generative process, which includes the activation of emotion response tendencies and their subsequent modulation. The scale includes both positive and negative emotions such as sadness, fear, anger and happiness. According to factor analyses, the scale composed of one general facet and three different but related facets i.e. Positive Expressivity, Negative Expressivity and Impulse Strength. Positive and Negative Expressivity relates to the degree to which both positive and negative emotional response tendencies are expressed behaviorally. Impulse strength represents physical and behavioral changes that accompany emotional responses that are difficult to cease or hide. The three facets also consistently replicated in different studies (Gross and John 1997, 1998). Furthermore, the

construct validity has been supported with the findings that women are more expressive than men in total and subscale scores of the BEQ.

The studies conducted by Gross and John (1995) provided evidence for the convergent validity of the BEQ. They observed that the subscales of emotion expression showed substantial negative relations with a measure of emotional control, because high expressivity participants in contrary to low expressivity participants were more inclined to inhibit their emotions. Furthermore, they founded that participants and their well-acquainted peers who seen an individual in a wide range of emotion eliciting circumstances completed the BEQ. The results suggest that self-report emotional expressivity of the participants reflect different times and circumstances acceptably.

With respect to discriminant validity, participants first completed the BEQ. Secondly their expressive behavior (facial behavior and upper-body movement) was measured by videotaping them during emotional movies (comedy or drama). The results show that Negative Expressivity Subscale predicted only for the drama/sadness film and Positive Expressivity Subscale predicted only for the comedy film (Gross and John 1997, Gross et al. 2000). The BEQ measures showed differential relations with Positive-Negative Affect Scale (Watson et al. 1988). Considering the association between emotion expression and Five Factor Personality Questionnaire, it was found that while Positive Expressivity was positively correlated with Extraversion and Agreeableness, Negative Expressivity and Impulse Strength were positively correlated with Neuroticism (Gross and John 1995). Following recent studies on the BEQ, the objective of this study is to examine validity and reliability criteria's of the Berkeley Expressivity Questionnaire in our culture.

METHOD

Participants

The study population consisted of 213 people (115 female, 54%; 98 male, 46%) who were reached by way of psychology students and snowball sampling method with an age ranging from 18 to 50. While the mean age of participants was 35 (SD=10.45), the mean education level of them was 12 (SD=3.14) years.

Measures

Berkeley Expressivity Questionnaire

The BEQ is 16-item scale developed by Gross and John (1995) to measure an individual's emotional expressivity. Subjects will indicate if agreement or disagreement using 7

point likert scale on which 1= strongly disagree, 4=neutral, 7=strongly agree. Three items were reversed scored. Higher scores indicate greater expressivity.

The reliability of the scale was examined with two different methods. Internal consistency for the total scale ranged from 0.82 to 0.86. Internal consistencies for the sub-scales ranged from 0.68 to 0.74 for Negative Expressivity, 0.65 to 0.71 for Positive Expressivity and 0.73 to 0.80 for Impulse Strength. It was reported that the test-retest reliabilities of which interval was 2 to 3 months were 0.86 for total scale, 0.71 for Positive Expressivity, 0.78 for Negative Expressivity and 0.82 for Impulse Strength (Gross and John 1997).

Difficulties in Emotion Regulation Scale

Gratz and Roemer (2004) developed the Difficulties in Emotion Regulation Scale (DERS). The scale was composed of 36-items, rated on a 5-point likert type scale, with higher scores indicating a difficulty of emotion regulation. The scale includes six subscales i.e. awareness, clarity, non-acceptance, strategies, impulse and goals. The scale has acceptable reliability and validity in our culture (Rugancı and Gençöz, 2010).

Process

The Turkish form of the BEQ had some extensive translation steps, which was proposed by Savaşır (1994). The scale in the source language, was translated by three independent Turkish translators. Two translators were clinical psychologist and one was an English teacher. After initial translations, ambiguities and discrepancies of words, sentences and meanings were discussed and resolved by researchers. Subsequently, the Turkish form of the BEQ was sent to three different clinical psychologists to validate the psycho-linguistically. After validation, 30 participants were asked to rate the clarity of the items by using a 5-point (0 to 4) Likert type scale. Items that caused difficulties in understanding were changed. The final Turkish form of the BEQ and DERS were administered with informed consent. The average time to conduct the test was around 15-20 minutes. For the test-retest reliability analyses of the Turkish form of the BEQ, the time interval ranged from 4-5 weeks. One hundred forty nine participants had completed measures.

To assess validity of Turkish form of the BEQ, confirmatory and exploratory factor analyses were performed, Cronbach's Alpha reliability coefficient was calculated, t test comparisons were conducted for sex differences. Pearson Moment Correlation Coefficient were used not only for examining associations between scores of the DERS and the BEQ but also for test-retest reliability of the scale.

RESULTS

Validity Results

Factor Analysis

The validity of the BEQ were at first assessed with factor analysis. Principal Component Analysis was applied to the correlation matrix obtained from the BEQ items and three factor that its eigenvalue higher than 1 is obtained. This factor explains 48 % of the scale. The BEQ's factor construct is presented at Table 1.

According to factor analyses, it was determined that factor 1 was comprised of 8 items (1, 3, 5, 6, 10, 12, 13,16), factor 2 was comprised of 6 items (2, 4, 7, 11, 14, 15) and the third factor was composed of two items (8, 9). The loadings of items on the first factor ranged from 0.50 to 0.72. Similarly, the loadings of items on the second factor with exclusion of the forth item, ranged from 0.54 to 0.72. It was observed that the forth item loaded similarly and weakly on all three factors. Though, this item loaded on the second factor with low weight, considering both semantic content of the item and the alpha consistency of this factor remained the same when the item was excluded. Lastly, the loadings of items on the factor 3 ranged from 0.67 to 0.79. Exploratory factor analysis revealed that the Turkish version of the BEQ has three components, with the same factor structure as the original form. The items of factor structure were different between the scales.

In this study, Factor 1 was labeled Emotional Expressiveness, because it was composed of items reflecting individuals whose emotions could be understand externally. Factor 2, Impulse Intensity, refers to the experience of strong emotions that were difficult for the individual to suppress. The factor 3, Masking, was defined by items involving perceived discrepancies between the inner experience and the outer expression of emotion or attempts at masking the expression of one's inner feelings.

We re-evaluated the three factor structure of the scale through confirmatory factor analyses with Lisrel 8 (Jöreskog and Sörborn, 1993). There are different fit indexes in literature. In this study, we used Comparative Fit Index (CFI), Standardized Root Mean Square Residual (SRMR), Root Mean Square Error of Approximation (RMSEA) and Non-Normed Fit Index/ Tucker-Lewis Index (NNFI). It is asserted that values 0.06 or less for RMSEA, 0.08 or less for CFI and 0.90 or greater for NNFI are indicative of acceptable model fit (Hu and Benter, 1999). The results showed that the factor model was not consistent with the data and suggested modification indices because of the factor loadings of the forth item to three facets similarly (with loadings of 0.46 and 0.50 on factors 4 and 6, respectively). The modification indices showed that the forth item was related with the items on the second factor. After the revised

Table 1. Rotated Factor Loadings of the Berkeley Expressivity Questionnaire Items, Mean and Standard Deviation of Items, Item-Total Coefficient Correlation Score.

Item and Item Number	Rotated Factor Loadings					
Factor 1: Emotional Expression	1	2	3	M	SD	r
Whenever I feel positive emotions, people can easily see exactly what I am feeling (1)	0.68	0.01	0.14	3,98	1,28	0.42
People often do not know what I am feeling (3)*	0.6	0.01	0.09	3,11	1,37	0.5
It is difficult for me to hide my fear (5)	0.5	0.24	0.25	3	1,41	0.43
When I'm happy, my feelings show (6)	0.52	0.4	0.03	4,52	0,85	0.51
I am an emotionally expressive person (10)	0.72	0.22	0.33	3,54	1,35	0.59
Whenever I feel negative emotions, people can easily see exactly	0,7	0.03	0.15	3,55	1,28	0.62
What I am feeling (13)						
What I'm feeling is written all over my face (16)	0.61	0.48	0.17	3,7	1,27	0.7
Factor 2: Impulse Strength						
I am sometimes unable to hide my feelings, even though I would like to (12)	0.41	0.51	0.06	3,74	1,25	0.55
I sometimes cry during sad movies (2)	0.02	0.67	0.06	3,37	1,48	0.4
I laugh out loud when someone tells me a joke that I think is funny (4)	0.27	0.31	0.08	4	1,22	0.31
My body reacts very strongly to emotional situations (7)	0,31	0.63	0.03	3,71	1,31	0.55
I have strong emotions (11)	0.08	0.54	0.27	4,07	1,09	0.32
There have been times when I have not been able to stop crying even	0.01	0.72	0.23	3,22	1,58	0.41
though I tried to stop (14)	0.25	0.65	0.17	3,74	1,29	0.48
Factor 3: Masking						
I've learned it is better to suppress my anger than to show it (8)*	0.07	0.01	0.79	2,71	1,36	0.7
No matter how nervous or upset I am, I tend to keep a calm exterior (9)*	0.19	0.03	0.67	2,5	1,29	0.53
Eigenvalue	3,64	2,24	2,2			
Percents of Variance	23	14	11			
Coefficient of Alpha	0.92	0.85	0.82			

*Reversed items

model, the fit statistics were improved (RMSEA=0.051, CFI= 0.91, NNFI = 0.90 and SRMR=0.078) and suggestive of good fit to the data, χ^2 (114, N = 213) = 394.91 $p < .001$.

Gender Differences

Gender differences were found in the overall scale score. Men had significantly lower scores than women ($t(204)=5.492$, $p < .05$). Furthermore, men had significantly lower scores than women for Emotional Expressiveness and Impulse Strength subscales (respectively, $t(200)=4.039$, $p < .01$; $t(198)=5.241$, $p < .01$). However, men had significantly higher scores than women for Masking subscale ($t(201)=3.528$, $p < .01$).

The Association between Berkeley Expressivity Questionnaire and Difficulties in Emotion Regulation Scale

In order to examine the association between BEQ and DERS, correlations were investigated. A correlation was found between total scores of BEQ and DERS ($r=0.20$, $p < .05$) (Table 2). The total score of BEQ was correlated with Goals, Strategy and Impulsivity subscales of DERS ($r=0.22$, $p < .05$; $r=0.28$, $p < .05$; $r=0.18$, $p < .05$, respectively) (Table 2).

When factors of the BEQ were examined, the factor of Emotional Expressiveness displayed positive correlation with Goals and Strategy subscales of DERS ($r=0.20$, $p < .05$; $r=0.22$, $p < .05$, respectively). While exhibiting positive correlations with Goals and Strategy subscales, the factor of Impulse Strength exhibited negative correlation with Awareness subscale ($r=0.20$, $p < .05$; $r=0.14$, $p < .05$; $r=-0.23$, $p < .05$, respectively). In addition, the factor of Masking was positively correlated with Impulsivity and Strategy subscales ($r=0.23$, $p < .05$; $r=0.15$, $p < .05$, respectively).

Table 2. The Association between Berkeley Expressivity Questionnaire (BEQ) and Difficulties in Emotion Regulation Scale (DERS)

Factors of the BEQ	Subscales of the DERS					
	Goals	Clarity	Impulse	Nonacceptance	Strategy	Awareness
Emotional Expressivity	.20*	.01	.14	.12	.22*	-.06
Impulse Strength	.15*	.07	.09	.05	.14*	-.23*
Masking	.13	.09	.23*	.12	.15*	.13

Reliability Results

In order to examine the internal consistency of the BEQ and its factors, Cronbach alpha coefficients and item total coefficient correlations were computed. The results given in Table 1 indicated that the item total correlation coefficient ranged between 0.31 to 0.71 and that the BEQ was found to have a Cronbach alpha coefficient of 0.81.

Test-retest reliability of the BEQ, was found as 0.78 $p < 0.05$. Furthermore, the test-retest reliability coefficients were found 0.79 $p < 0.05$ for Emotional Expressiveness subscale, 0.81 $p < 0.05$ for Impulse Strength subscale and 0.82 $p < 0.05$ for Masking subscale.

DISCUSSION

Given recent attention to the associations between emotion expression and physical/ psychological health, an increasing need for comprehensive measures that adequately assess emotion expression is needed. The purpose of this study was to examine psychometric properties of Turkish Berkeley Expressivity Scale.

In terms of validity studies, the factor structure of the scale was first evaluated. Explanatory factor analyses revealed that the scale has three-factor construct and that these factors explain 48% of the total variance. The three-factor construct of the scale was also supported with confirmatory factor analyses. The results indicated that the Turkish version of the scale revealed a similar factor structure as the original scale (Gross and John 1995). Although factor analyses suggested three proposed dimensions, there were items that had different patterns when compared to the original factor structure. Therefore, two factors were called differently from the original scale. On the other hand, the items of Factor one were virtually identical to original scale, except for one item (I laugh out loud when someone tells me a joke that I think is funny) which we grouped as Impulse Strength, consistent with the original scale. Thus the factors emerged from this study were labeled as followed “Emotion Expression”, “Impulse Strength” and “Masking”. The factors on the original version were labeled as “Positive Emotion Expression”, “Negative Emotion Expression” and “Impulse Strength”.

In the Turkish version of the BEQ, it was noted that most of the items representing positive and negative emotion expression in the original scale loaded were now loaded onto the same factor. For instance, in the original version the item “When I’m happy, my feelings show” loaded onto the factor of positive emotion expression and the item “It is difficult for me to hide my fear” loaded under the negative emotion expression factor, whereas these items loaded under the same factor in the present study. This result was not consistent with studies declaring that negative and positive emotion expression should conceptualized as different constructs (King and Emmons 1990, Gross and John 1995, Gross et al 2000). On the other hand, Barchard (2001) stated that some of the items comprising of the BEQ, were not related to positive or negative emotion, but related to only emotional experience.

In the present study has masking factor, which was not present in the original version. This factor consisted of two items: “I’ve learned it is better to suppress my anger than to show it” and “No matter how nervous or upset I am, I tend to keep a calm exterior”. Conversely, this factor was consistent with the notion proposed by Gross and John (1998) who emphasized both the multifaceted nature and hierarchical model of emotional expressivity. According to hierarchical model, individual differences in expressivity can be divided into three components: expressive confidence, masking, and core emotional expressivity. Expressive confidence seems to predict outgoing, approach-oriented behavior. Masking seems to predict attempts to regulate the public expression of strongly experienced negative affect. Core emotional expressivity is crucially related to the behavioral expression of emotion in everyday life, which captures Positive Expressivity, Negative Expressivity, and Impulse Intensity.

The inconsistency between factor construction of the Turkish and original version might have been resulted from cultural differences. Hence, Mesquita and Walker (2002) proposed that emotion expression could be related to different constructs in different cultures. Given that the Masking factor corresponded to hierarchical model of emotional expressivity theoretically and statistically, it could be considered that this result was evidence for construct validity of this measure. Furthermore, these results verified the assumption of Gross and John (1995). They stated that emotional expressivity

could not be conceptualized in one-dimensional terms ranging from inexpressive to expressive.

It is important to understand the development of the Masking factor in our collectivistic culture (Göregenli 1995, İmamoğlu 1998, Kağıtçıbaşı 1998). Mesquita and Walker (2002) asserted that certain types of expressions and behaviors tend to reflect differences across cultures, and they also stated that negative emotions may have been masked because of the fact that the expression of emotions make explicit the boundaries between the self and others in collectivistic cultures. In this context it seemed to be necessary to understand the meaning of hiding emotions in our culture. Similarly, item 4 (I laugh out loud when someone tells me a joke that I think is funny) had the lowest item total coefficient correlation score in the scale, which may have been due to our collectivistic culture. Mesquita and Walker (2002) stated that the expression of happiness was rare in cultures that place an emphasis on harmony in relationships. Happiness expressions were seen as potentially disruptive since they painfully contrast with the emotional state of others. Thus, in a collectivistic culture it could be functional to hide emotions for preserving harmony in relationships.

All participants in this study had an university education or higher, which may played a role in the structure of emotion expression. Lü and Wnag (2012) showed that emotional expressivity was in depended of education level. However, emotional expressivity was related to display rules, which are culturally informed guides about facial expressions and other emotional displays (Lü and Wnag (2012)). Erkman (1972) also stated that the main factor which influenced how and when emotions are elicited, was culture determined. Likely Gross and John (1998, 2003) suggested that the variables regarding emotion expression were group differences and gender. Thus, these variables could be conceptualized as a mechanism that explains emotion expression management.

Validity indicators of the Turkish version of the BEQ also were examined with differences between gender. The total BEQ scores of women were significantly higher than the total BEQ scores of men. Women had significantly higher scores than men in impulse strength and emotional expressivity subscales. But men had significantly higher scores than women in masking subscale. These results were consistent with studies indicating that women were more expressive than men (Claesson et al 2007, Gross and John 1995, 1998). Based on these date we could concluded that the construct validity of the Turkish version of the BEQ and its subscales were supported differently.

Also the relationship between BEQ and DERS was examined in terms of construct validity. The obtained results indicated that the total scores of the measures were positively correlated, suggesting a difficulty of emotion regulation when emotions

were expressed with behaviorally. This result seemed to be in line with the previous study suggesting that excessive expression of emotions were associated with unfavorable mental health (Rime and Zech 2001). Otherwise, it was stated that when both positive and negative emotions were expressed properly, emotions were regulated effectively (Butler and Gross 2004, Kennedy-Moore and Watson 2001). This result might have been due to the fact of our collectivistic culture. Kağıtçıbaşı (1998) stated that expression and speaking out emotions in our culture is not supported. Hence, Kuyumcu and Güven (2012) found that the emotional awareness rather than expression of emotions was much more effective in psychological well-being for Turkish university students contrary to English university students.

On the other hand, the total score of BEQ had a low positive correlation with the total score of DERS. This result could be stemmed from proposed relation between emotion expression and individual's psychological health. Growing evidence in empirical research indicated that the expression of emotions might have helped the regulation of emotions through understanding of one's emotional reactions regarding experienced psychological distress (Kennedy-Moore and Watson 2001, Lepore et al 2000). Kuzucu (2011) observed that expression of emotions in Turkish university students were related with maintenance of sharing need. Dönmez (2007) confirmed that individuals with high emotionally expressive were happier, had more social relationships and better life satisfaction level than individuals with less emotionally expressive. Consequently, the low positive correlation between the total scores of DERS and BEQ, indicating that there is further need to understand the relationship between emotion expression and psychological health in our culture.

The BEQ were significantly correlated with the Goals, Strategies and Impulse subscales of DERS. These subscales are measured different domains of emotion regulation namely, lack of strategy building, lack of control on impulsive behaviors and inability to behave in accordance with goals under negative emotions. The results indicated that when expressivity of emotion was increased, the difficulties in these domains might have increased accordingly. Similarly, Emotional Expression and Impulse Strength factors of the BEQ were significantly correlated with the Goal and Strategies subscales of DERS. This result suggested that when expressivity of emotion and the severity of emotional experience were increased, the individual might had difficulty at behaving in accordance with the goals and selecting appropriate strategies for regulating their emotions effectively. On the other hand, the factor of Impulse Strength was correlated negatively with the awareness subscale of DERS, suggesting that when the severity of the emotions increased the awareness of emotions might decrease. The Masking factor of BEQ correlated with the Impulse subscale of DERS. This indicated that suppression

of negative emotions is related with difficulty to control impulsive behaviors. Also the Masking factor and Strategy subscale were correlated significantly, which suggest that when an individual suppressed negative emotions, they also have difficulty to use effective emotion regulation strategies. This result is supported by studies that showed that the suppression of emotions were related with non-functional emotion regulation strategies (Hayes et al. 2006, Salters-Pedneault et al. 2004). Briefly, given that the correlations between BEQ and DERS scores were consistent with relevant literature, one could conclude that this is support the construct validity of the Turkish version of the BEQ.

In regard to reliability, internal consistency and test re-test reliability of the BEQ and its factors were examined. The Turkish version of the BEQ was found to have statistically acceptable level internal consistency and test re-test reliability, which was similar to the original version of the scale.

As a result, when the reliability and validity studies were evaluated together, it was seen that the validity and reliability scores of the BEQ were at acceptable levels in our culture. Furthermore this study showed that culture and gender might have had an important role in emotion expression. The interest in the studies of emotional expressivity will lead to a proliferation of knowledge regarding validity of the scale. Thus the validity studies will facilitate the development of a general framework for understanding the diverse effects of emotional expressivity on social interactions, psychological well-being, and physical health.

REFERENCES

- Barchard KA (2001) Positive Expressivity Scale and Negative Expressivity Scale. Initial Psychometrics Characteristics. Poster presented at the convention of the Western Psychological Association, Hawaii.
- Benet-Martinez V, John OP (1998) Los cinco grades across cultures and ethnic groups: Multitrait-multimethod Analyses of the big five in Spanish and English. *J Pers Soc Psychol* 75:729-50.
- Butler EA, Gross JJ (2004) Hiding feelings in social contexts: Out of sight is not out of mind. *The Regulation of Emotion*, P Philippot, RS Feldman (Ed), Mahwah, New Jersey: Erlbaum. p. 101-26.
- Butler EA, Lee TL, Gross JJ (2007) Emotion regulation and culture: Are social consequences of emotion suppression culture specific? *Emotion* 7:30-48.
- Brody LR (1999) Gender, emotion, and the family. Cambridge, MA: Harvard University Press. p.448.
- Claesson K, Birgegard A, Sohlberg S (2007) Shame: Mechanisms of activation and consequences for social perception, self image and general negative emotion. *J Pers* 75:597-65.
- D'Avanzato C, Joorman J, Siemer M et al (2013) Emotion regulation in depression and anxiety: examining diagnostic specificity and stability of strategy use. *Cognitive Ther Res* 37:968-80.
- Davis E, Greenberger E, Charles S et al (2012) Emotion experience and regulation in China and the U.S: How do culture and gender shape emotion responding? *Int J Psychol* 47:230-9.
- Deng LF, Zheng RC (2003) Research on the relationship between emotional direction expression and mental health in college students. *Psychology Developmental Education* 19:69-73.
- Deng LF, Zheng RC (2004) Affect variables and mental health in college students. *Chinese Mental Health of Journal* 18:58-60.
- Dönmez MM (2007) Meslek lisesi öğrencilerinin atılganlık düzeylerine göre yaşam doyumu ve duyguları ifade etme eğilimlerinin karşılaştırılması. Unpublished post graduate dissertation. Ankara: Ankara University Department of Education Institute.
- Ekman P (1972) Universals and cultural differences in facial expressions of emotion. *Nebraska Symposium on Motivation*, 1971. J Cole (Ed), Lincoln, NE: University of Nebraska Press. p. 207-83.
- Gratz KL, Roemer L (2004) Multidimensional assessment of emotion regulation and dysregulation: Development, factor structure and initial validation of the difficulties in Emotion Regulation Scale. *Journal of Psychopathology and Behavioral Assessment* 36:41-54.
- Göregenli M (1995) Kültürümüz açısından bireycilik-toplulukçuluk eğilimleri: Bir başlangıç çalışması. *Türk Psikoloji Dergisi* 10:1-14.
- Gross JJ, John OP (1995) Facets of emotional expressivity: Three self-report factors and their correlates. *Pers Indiv Differ* 19:555-68.
- Gross JJ, John OP (1997) Revealing feelings: Facets of emotional expressivity multi-modal evidence for a hierarchical model. *J Pers Soc Psychol* 74:190-1.
- Gross JJ, John OP, Richards JM (2000) The dissociation of emotion expression from emotion experience. A personality perspective. *Pers Soc Psychol Bull* 26:712-26.
- Gross JJ, John OP (1998) Mapping the domain of expressivity: Multi-method evidence for a hierarchical model. *J Pers Soc Psychol* 74:170-91.
- Gross JJ, John OP (2003) Individual differences in two emotion regulation processes: Implications for affect, relationships, and well-being. *J Pers Soc Psychol* 85:348-62.
- Haga S, Kraft P, Corby E (2009) Emotion Regulation: Antecedents and Well-Being Outcomes of Cognitive Reappraisal and Expressive Suppression in Cross-Cultural Samples. *Journal of Happiness Study* 10:271-91.
- Hayes SC, Louma JB, Bond FW et al (2006) Acceptance and commitment therapy: model processes and outcomes. *Behav Res and Ther* 44:1-25.
- Hu L, Bentler PM (1999) Cut of criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling* 6:1-55.
- İmamoğlu O (1998) Individualism and collectivism in a model and scale of balanced differentiation and integration. *J Psychol* 132: 95-105.
- Jöreskog K, Sörbom D (1993) LISREL 8: Structural Equation Modeling with the SIMPLIS Command Language. Chicago, IL: Scientific Software International Inc.
- Kağıtçıbaşı Ç (1998) Kültürel psikoloji: Kültür bağlamında insan ve aile. İstanbul: Evrim Press.
- Kennedy-Moore E, Watson JC (2001) How and when does emotional expression help? *Rev Gen Psychol* 5:187-212.
- King LA, Emmons RA (1990) Conflict over emotional expression: Psychological and Physical correlates. *J Pers Soc Psychol* 58:864-77.
- Kring AM, Neale JM (1996) Do schizophrenic patients show a disjunction among expressive, experiential, and psychophysiological components of emotion? *J Abnorm Psychol* 105:249-57.
- Kring AM, Smith DA, Neale JM (1994) Individual differences in dispositional expressiveness: Development and validation of the Emotional Expressivity Scale. *J Pers Soc Psychol* 66:934-49.
- Kring AM, Gordon AH (1998) Sex differences in emotion: Expression, experience and physiology. *J Pers Soc Psychol* 74:686-703.
- Kuzucu Y (2011) Duyguları İfade Etme Ölçeği'nin uyarlanması: geçerlik ve güvenilirlik çalışmaları. *Kastamonu Eğitim Dergisi* 19:779-92.
- Kuyumcu B, Güven M (2012) Türk ve İngiliz üniversite öğrencilerinin duygularını farketmeleri ve ifade etmeleri ile psikolojik iyi oluşları arasındaki ilişki. *GEFAD-GUJGEF* 32: 589-607
- Lepore SJ, Ragan JD, Jones S (2000) Talking facilitates cognitive-emotional processes of adaptation to an acute stressor. *J Pers Soc Psychol* 78:499-508.
- Lü W, Wang Z (2012) Emotional expressivity, emotion regulation and mood in college students: Across-ethnic study. *J Pers Soc Psychol* 40:319-30.
- Matsumoto D (2006) Are cultural differences in emotion regulation mediated by personality traits? *Journal of Cross-Cultural Psychology* 37:421-37.

- Mesquita B, Walker R (2002) Cultural differences in emotions: a context for interpreting emotional experiences. *Behav Res and Ther* 41:777-93.
- Rachman S (1993) Obsessions, responsibility and guilt. *Behav Res Ther* 31:149-54.
- Rime B, Zech E (2001) The social sharing of emotion. *Boletin de Psicologia* 40:97-108.
- Rugancı N, Gençöz T (2010) Psychometric properties of a Turkish version of the Difficulties in Emotion Regulation Scale. *J Clin Psychol* 66:442-55.
- Salter-Pedneault K, Tull MT, Roemer L (2004) The role of avoidance of emotional material in anxiety disorders. *Applied and Preventive Psychology* 11:95-114.
- Savaşır I (1994) Ölçek uyarlamasındaki bazı sorunlar ve çözüm yolları. *Türk Psikoloji Dergisi* 33:27-32.
- Shaw WS, Patterson TL, Semple SJ et al (2003) Emotional expressiveness, hostility, and blood pressure in a longitudinal cohort of Alzheimer caregivers. *J Psychosom Res* 54:293-302.
- Sloan DM, Marx BP (2004) Taking pen to hand: Evaluating theories underlying the written emotional disclosure paradigm. *Clinical Psychology: Science and Practice* 11:121-37.
- Stanton AL, Danoff-Burg S, Cameron CL et al (2000) Emotionally expressive coping predicts psychological and physical adjustment to breast cancer. *J Consult Clin Psychol* 68:875-82.
- Tull MT, Jakupcak M, Roemer L (2010) Emotion suppression: a preliminary experimental investigation of its immediate effects and role in subsequent reactivity to novel stimuli. *Cognitive Ther Res* 34:114-25.
- Trommsdorff G, Rothbaum F (2008) Development of emotion regulation in cultural context. *Regulating Emotions*, 2. Edition, M Vandekerckhove, C Von Scheve, S Ismer, S Jung, S Kronast (Ed) New York, Blackwell Publishing, p.85-111.
- Watson D, Clark LA, Tellegen A (1988) Development and validation of brief measures of positive and negative affect: the PANAS scales. *J Pers Soc Psychol* 54:1063-70.
- Whiteside SP, Abramowitz JS (2004) Obsessive-compulsive symptoms and the expression of anger. *Cognitive Ther Res* 28:259-68.
- Yuan J, Liu Y, Ding N et al (2014) The Regulation of Induced Depression during a Frustrating Situation: Benefits of Expressive Suppression in Chinese Individuals. *PLoS ONE* 9,5:e97420.