

## Summary

# Turkish Adaptation of The Flexible Regulation of Emotional Expression Scale: A Validity and Reliability Study

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Emotion regulation flexibility is one person's capability of choosing and applying a suitable strategy for regulating emotions in response to contextual requirements (Bonanno et al., 2004). Several studies in this area suggest that this ability significantly effect psychological adaptation (Bonanno et al., 2004; Burton & Bonanno, 2016).

One aspect studied within the scope of regulating emotions flexibly is the implementation of strategies adaptively when express emotions and suppress expressions of emotions (Bonanno et al., 2004; Gupta & Bonanno, 2011; Westphal et al., 2010). The notion, termed "Expressive Flexibility (Bonanno et al., 2004)", refers to a capability of showing or concealing outward emotional expressions of an individual flexibly depending on the context. Emotion theorists continue to increasingly argue that the capability of showing or suppressing emotional expressions flexibly according to the context is more crucial for psychological adjustment than merely express or suppress (Bonanno, 2001; Bonanno et al., 2004, Westphal & Bonanno, 2004). Expressive flexibility emerges as a pivotal aspect of psychological health and adjustment in both individuals without mental health problems and those confronted with negative life events (Birk & Bonanno, 2016; Gupta & Bonanno, 2011; Levy-Gigi et al., 2015; Westphal et al., 2010). Moreover, studies indicate a relationship between expressive flexibility and a decrease in psychological symptoms (Bonanno et al., 2004; Rodin et al., 2017).

Considering the current literature on emotion regulation flexibility and the relatively short history of expressive flexibility concept, research in this area is considered significant for both literature and clinical consequences. In this regard, the objective is to introduce "The Flexible Regulation of Emotional Expression (FREE) Scale (Burton & Bonanno, 2016)" to Turkish language, along with its' validity-reliability in the current study.

## Method

### Participants

A sample of 436 individuals aged 18 to 65 ( $M_{mean} = 30.51$ ,  $sd = 13.64$ ), comprising 327 women (75%) and 109 men (25%) living in various provinces of Turkey is involved in the current study.

### Measures

**The Flexible Regulation of Emotional Expression (FREE) Scale:** Burton and Bonanno (2016) developed a self-report scale consisting scenarios to assess individuals' perception of capability of regulating their emotional expressions adaptively. Participants are presented daily situation scenarios and asked to evaluate how much they can enhance or conceal their expressions of emotions using a Likert-type scale spanning between 1-6 (1: *Unable*, 6: *Very able*). The 16-item scale has two sub-dimension scores, named "Enhancement" and "Suppression", and overall "Expressive Flexibility" score.

In addition to the FREE scale, "Emotion Regulation Questionnaire (ERQ; Gross & John, 2003)", "Ego Resilience Scale (ERS; Block & Kremen, 1996)", "Coping Flexibility Scale (CFS; Kato, 2012)", "Depression Anxiety Stress Scale (DASS; Lovibond & Lovibond, 1995a, 1995b)" and "Satisfaction with Life Scale (SWLS; Diener et al., 1985)" were also applied, alongside a Demographic Information Form.

### Data Analysis

In the initial stage of validation assessments of the FREE scale, factorial structure was examined via confirmatory factor analyses (CFA) via R package program. Subsequently, Pearson correlation coefficients were computed via SPSS 24 to explore the relationship between scores of FREE scale and ERQ, CFS, ERS, SWLS

and DASS. In reliability analyses, calculations were made for both Cronbach's Alpha value and test-retest reliability.

### Procedure

Following the acquisition of approval from Hacettepe University Senate Ethics Committee with the official letter dated 19.04.2021 and numbered E-35853172-300-00001546588, the translation process of the FREE scale into Turkish was initiated. In the next step, an online link was created and sent to the participants. Participants who accessed the link were first required to confirm the informed consent form before proceeding to the page containing the scales. Participants were recruited using convenience sampling.

### Results

Two models, showing an acceptable fit with the scale's original, were tested through CFAs. In the findings of these analyses, good fit indicators were observed for the four-factor model ( $\chi^2/df = 1.52$ , CFI = .94, RMSEA = .034 [90% Confidence Interval: .024-.044], SRMR = .051) and the hierarchical model ( $\chi^2/df = 1.54$ , CFI = .93, RMSEA = .035 [90% Confidence Interval: .025-.045], SRMR = .052). In the hierarchical model, regulation type (enhancement-suppression) was used as a second-order factor. The higher-order factors included the loading of factors related with the suppressed positive-negative emotions on one, while factors comprising the enhanced positive-negative emotions were loaded on the other.

In assessing convergent validity, scores from external measures consisting of ERQ, CFS, ERS, SWLS and DASS were utilized and the associations between the FREE and aforementioned scales were examined. As anticipated, the "Enhancement" and "Suppression" subscores, alongside the overall "Expressive Flexibility" score of the FREE scale showed positive correlations with the ERQ-Cognitive Reappraisal sub-dimension evaluating the frequency of emotional expression. The FREE-Enhancement sub-dimension demonstrated a negative correlation with the ERQ-Suppression scores, while the FREE-Suppression and FREE-Expressive Flexibility scores were not correlated with the ERQ-Suppression. As predicted, the subscores of the FREE scale and the "Expressive Flexibility" scores were positively related with the total scores of CFS and ERS. The scores of "Enhancement" and "Expressive Flexibility" were positively associated with the overall score of the SWLS. It was found significant inverse relationships between FREE-Enhancement dimension and DASS-Depression scores,

as well as between the both FREE-Suppression and FREE-Expressive Flexibility scores and DASS-Depression scores. The subscores and "Expressive Flexibility" scores of the FREE scale were not associated with the DASS-Anxiety dimension.

The reliability assessments revealed that the Cronbach's Alpha coefficients fell within .66 and .70, with test-retest values for FREE-Enhancement, FREE-Suppression, and "Expressive Flexibility" scores at .58, .55, and .60, respectively.

### Discussion

In the current study, CFAs' findings showed good fit with both the four-factor and hierarchical models proposed by Burton and Bonanno (2016). However, it can be seen that factor loading was low for item 4. Thus, replication of this study in other samples and paying attention to item 4 in future studies are considered important.

Emotion regulation, resilience, and psychological health-related values were used as external measures to assess validation of convergence of FREE scale. The findings are quite congruent with existing literature. When examining the results, the subscores and the "Expressive Flexibility" scores of the FREE scale had significant positive correlations with the ERQ-Cognitive Reappraisal sub-dimension. However, The ERQ-Suppression subscore demonstrated a significant inverse association only with the FREE-Enhancement score. The absence of a significant association between the FREE-Suppression and ERQ-Suppression scores is an interesting finding, yet it aligns with the findings of the scale's initial version. The current findings support the view that frequency and capability of suppression represent distinct concepts (Aldao et al., 2015; Bonanno & Burton, 2013; Burton & Bonanno, 2016).

The correlation analyses results indicated, as expected, positive relations between the subscores of the FREE scale, alongside the overall "Expressive Flexibility" score and the ERS and CFS total scores. Furthermore, positive associations were observed between the "Enhancement" and "Expressive Flexibility" scores of the FREE scale and the SWLS overall score, whereas no significant relationship was explored between the FREE-Suppression subscore and life satisfaction. Increased expressive flexibility may positively affect life satisfaction by reducing psychological symptoms in individuals (Fergusson et al., 2015; Koivumaa-Honkanen et al., 2011) or improving their social interactions (Guzman et al., 2014).

Regarding the association between the FREE scale and psychological symptoms, the "Enhancement" scores showed significant negative correlations with the

depression scores, while the “Suppression” and “Expressive Flexibility” scores showed significant negative correlations only with the stress scores. Conversely, significant relationships were not found between all score types of FREE scale and anxiety scores. Upon reviewing the findings of studies in existing literature, it is evident that suppression and expressive flexibility scores have negative significant relationships with depression, stress (Gonzalez-Escamilla et al., 2022; Lenzo et al., 2021), and anxiety (Chen et al., 2018; Lenzo et al., 2021), while enhancement scores were generally not associated with these psychological symptoms (Burton & Bonanno, 2016; Chen et al., 2018). Studies indicate that a decrease in suppression abilities may be a risk of developing stress-related disorders (Coifman and Summers, 2019; Visted et al., 2018). For this reason, suppression abilities are expected to have stronger associations with psychological symptoms compared to enhancement capabilities (Chen et al., 2018; Gonzalez-Escamilla et al., 2022). Additionally, it can be stated that the current study has some findings that are inconsistent with the literature. On the contrary, the absence of significant correlations between “Enhancement”, “Suppression” and “Expressive Flexibility” scores of FREE scale and anxiety scores aligns with the findings of Gonzalez-Escamilla et al. (2022). Similarly, there are also studies that support negative significant relationships between Enhancement sub-dimension and depression scores (Lenzo et al., 2021; Rodin et al., 2017).

Considering all findings together, it is believed that these inconsistencies may stem from different tools used in the measurement of psychological symptoms, cultural differences or sample-specific differences (e.g. gender, age, diagnostic status). For instance, in the research by Lenzo et al. (2021), the findings showing that the “Enhancement” dimension had negative associations with depression and stress scores can be elucidated by the fact that the aforementioned study was conducted with a sample of healthcare professionals throughout the period of Covid-19 Pandemic. Given the severity of the threat encountered by healthcare workers during this period and the demanding and stressful working conditions they experienced, it's possible that shifts in participants' capacity to enhance emotional expressions, alongside changes in stress levels and symptoms of depression, could have occurred, thereby leading to the relationship between these variables becoming significant. In addition, in some studies (Chen et al., 2018; Gonzalez-Escamilla et al., 2022), the “Expressive Flexibility” score was derived from computing the interaction between “Enhancement” and “Suppression” sub-dimensions scores. This method differs from the calculation method used in the original form. Nevertheless, it can be said that all the-

se studies emphasize that suppression and enhancement abilities may have different relationships with different dimensions of psychological health.

In assessing reliability, the examination of internal consistency and test-retest correlation was conducted. The Cronbach's Alpha values for all score types were between .66 and .70, while the test-retest reliability coefficients fell within .56-.60. Considering all of these outcomes, it can be inferred that the reliability measures of the FREE scale (Turkish form) are within acceptable ranges.

Consequently, while the FREE scale (Burton & Bonanno, 2016) serves as a brief and user-friendly tool intended for assessing emotion expression regulation, there remains limited exploration of its psychometric properties. Furthermore, there is limited investigation into how the scale interacts with other relevant measures in psychology and psychopathology, alongside the subjective impacts of expression and suppression. The current study indicate that the FREE scale shows validity and reliability that are appropriate for implementation in the Turkish sample. The findings emphasize the significance of being flexible in emotions expressions may significantly contribute to enhancing individual's perceived psychological health and life satisfaction, along with the necessity of prioritizing the development and improvement flexibility in expression abilities within emotion regulation trainings and therapeutic interventions. It is also underlined that in such interventions, it may be more beneficial to emphasize the importance of adaptably utilizing various abilities and strategies based on the context rather than focusing solely on the significance of one strategy or ability. Hence, this study is considered clinically significant in terms of providing support for increasing the efficacy of interventions. At last, the findings show that individuals' subjective evaluations in regard of their expression and suppression capabilities are distinct from the frequency of employing these strategies according to the results. Since current study is the first one conducted in Turkey on flexibility of emotion expressions, these preliminary findings are viewed as a crucial contribution to the Turkish literature, suggesting that this study may pave the way for new studies on similar topics.