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## Psychometric properties of the Turkish version of the Behavioral Emotion Regulation Questionnaire (BERQ)

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### ABSTRACT

The Behavioral Emotion Regulation Questionnaire (BERQ) is a self-report measure of the behavioral strategies individuals use to regulate emotions in response to stressful or negative events. The purpose of the present study was to report on the psychometric properties of the Turkish version. The sample was recruited through courses at a semi-private university in Turkey and through social-media announcements. A sample of 320 adults (81.9% females, 18.1% males) with a mean age of 22.03 ( $SD = 2.73$ ) completed the Turkish translation of the BERQ, the Emotion Regulation Questionnaire, the Difficulties in Emotion Regulation Questionnaire and the Brief Symptom Inventory. Exploratory factor analysis indicated that the Turkish version replicated the 5-factor structure of the original version; yet, a confirmatory factor analysis indicated that the original model showed an inadequate fit to the present data. Internal consistency coefficients of the subscales ranged between 0.72 and 0.88, and the test-retest reliability of subscales over a 3-week interval ranged from 0.51 to 0.70. As in the original version, we found that actively approaching and seeking social support were more adaptive strategies, whereas withdrawal and ignoring were less adaptive strategies. Results were mixed for the seeking distraction subscale. Additionally, withdrawal significantly predicted future depressive and anxiety symptoms. Overall, our results provide support for the Turkish version of the BERQ as a reliable and valid measure of behavioral emotion regulation strategies.

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### KEYWORDS

Behavioral emotion regulation; BERQ; coping; emotion regulation

The way individuals respond to stressful events plays a major role in the association between stress and psychological problems (e.g., Sontag, Graber, Brooks-Gunn, & Warren, 2008). Effective emotion regulation is accepted as a crucial part of successful functioning and healthy adaptation to stress (Compas, Connor-Smith, Saltzman, Thomsen, & Wadsworth, 2001). On the contrary, difficulty in regulating intense emotional reactions following stressful events is assumed to be one of the mechanisms underlying the

link between emotions and psychopathology (Mennin, Holaway, Fresco, Moore, & Heimberg, 2007).

In recent years, there has been a substantial amount of work devoted to understanding the role of emotion regulation in well-being and the association of specific emotion regulation strategies with a variety of psychological disorders (e.g., Aldao, Nolen-Hoeksema, & Schweizer, 2010; Aldao & Nolen-Hoeksema, 2010; Gross & Jazaieri, 2014; Mennin et al., 2007). As a very broad term, *emotion regulation* involves automatically or intentionally modifying or maintaining the experience and expression of negative and positive emotions, and it addresses the type of emotion experienced, its occurrence, intensity and duration, and whether or how the emotion is expressed (Gross, 1998; Gross & Thompson, 2007). Individuals use a wide array of strategies to regulate their emotions. To illustrate, making a plan to cope with a stressful event, calling a friend to share emotions, going for a walk, trying to see the problem from a new perspective or trying to suppress distressing thoughts are all examples of emotion regulation. Following stressful events, successful functioning of the emotion regulation system not only motivates and coordinates adaptive behavior, but it also prevents emotions from being overwhelming and hinders maladaptive behavior (Cicchetti, Ackerman, & Izard, 1995).

The definition of emotion regulation, as well as many specific emotion regulation strategies, involve both cognitive and behavioral regulatory attempts. For example, problem-solving, which is accepted as an adaptive strategy of emotion regulation (Aldao et al., 2010), can be both cognitive (e.g., planning a solution to a problem) or behavioral (e.g., doing something to deal with the problem). Garnefski, Kraaij, and Spinhoven (2001) posit that there are clear boundaries between how a person thinks and how he/she acts to regulate emotions. Still, the behavioral aspect of emotion regulation has not been included as a separate dimension in the current measures of emotion regulation and coping, and current diagnostic tools do not differentiate behavioral strategies from other types of emotion regulation (Garnefski et al., 2001). To illustrate, in the COPE Inventory (Carver, 2013), which is one of the most frequently used measures of coping (Kato, 2015), both cognitive (e.g., “*I refuse to believe that it has happened*”) and behavioral (e.g., “*I act as though it hasn’t even happened*”) strategies are grouped under the same dimension of “denial”. Distinguishing cognitive and behavioral components may provide us with a better understanding of the role they play in the etiology of psychological disorders. Furthermore, delineating cognitive and behavioral strategies may guide us in developing effective treatments for psychological conditions (Kraaij & Garnefski, 2019).

Based on the need to differentiate the cognitive and behavioral aspects of emotion regulation, Garnefski et al. (2001) developed the Cognitive

Emotion Regulation Questionnaire (CERQ), which specifically focuses on the cognitive aspect of emotion regulation. The CERQ is a helpful and widely used assessment tool that has been adapted into many languages (e.g., Jermann, Van der Linden, d'Acremont, & Zermatten, 2006; Zhu et al., 2008). Recently, Kraaij and Garnefski (2019) developed the Behavioral Emotion Regulation Questionnaire (BERQ) to exclusively assess the behavioral strategies individuals use to regulate their emotions after stressful or negative events. The BERQ is the first self-report scale that measures the behavioral aspect of emotion regulation. It covers 6 subscales, namely, *seeking distraction*, *withdrawal*, *actively approaching*, *seeking social support*, and *ignoring*. *Seeking distraction* can be defined as doing something unrelated to the stressful event in order to distract yourself from your emotions. *Withdrawal* refers to drawing yourself away from the stressful events and people associated with the situation. *Actively approaching* involves taking direct action in order to cope with the stressor. *Seeking social support* refers to asking for advice and support from other people and sharing your emotions. Lastly, *ignoring* is defined as denying that something has happened and behaving as if everything is fine in order to cope with the stressful situation. According to Kraaij and Garnefski (2019), *seeking distraction*, *actively approaching* and *seeking social support* are more adaptive ways of coping with stressful events, whereas *withdrawal* and *ignoring* are less adaptive strategies.

The BERQ was found to be a reliable and valid measure of behavioral emotion regulation strategies (Kraaij & Garnefski, 2019). Specifically, the scale showed good internal and test-retest reliability, and construct validity. Behavioral strategies, as measured by the BERQ, were significantly related to depressive symptoms, such that theoretically more adaptive strategies were negatively related to depression scores, while theoretically less adaptive strategies were positively related to depression symptoms (Kraaij & Garnefski, 2019). Furthermore, significant correlations were found between anxiety and all BERQ subscales, except *seeking distraction* (Kraaij & Garnefski, 2019). Although behavioral strategies were found to be related to cognitive strategies, findings suggested that they did not have too much overlap; thus, they were unique concepts (Kraaij & Garnefski, 2019).

The aim of the present study was to translate the BERQ into Turkish and to report on its psychometric properties. To the best of our knowledge, there are no assessment tools in Turkish that explore the behavioral emotion regulation strategies individuals employ when they experience stressful or negative events. Previous studies that compared coping strategies adopted by Turkish individuals to the strategies of individuals from Western cultures indicated similarities rather than major differences between groups. To illustrate, in both American and Turkish students,

active coping and seeking emotional support were associated with better adjustment to college, whereas behavioral disengagement and denial were associated with poor adjustment (Tuna, 2003). Therefore, we believe that the Turkish version of the BERQ would be a helpful tool in assessing emotion regulation strategies employed by Turkish individuals and may facilitate further research on emotion regulation in Turkish-speaking samples. Moreover, the Turkish version of the BERQ will be the first attempt to investigate the factor structure and psychometric properties of the BERQ in a non-Western sample.

The hypotheses of the present study were as follows: (1) Similar to the original BERQ, the Turkish version would demonstrate a 5-factor structure; (2) the original model would show good fit to the data collected with the Turkish version; (3) the Turkish version would have good internal consistency and test-retest reliability; (4) theoretically more adaptive strategies (i.e., *seeking distraction*, *active approaching*, and *seeking social support*) would either be negatively associated or not significantly associated with difficulties in emotion regulation, psychological symptoms and suppression, but would be positively associated with reappraisal; (5) theoretically less adaptive strategies (i.e., *withdrawal* and *ignoring*) would be positively associated with difficulties in emotion regulation, psychological symptoms, and suppression, and would either be negatively associated or not significantly associated with reappraisal; (5) behavioral emotion regulation strategies, as measured by the BERQ, would predict future depressive and anxiety symptoms.

## Method

### Participants

The sample consisted of 320 adults between 18 and 50 years of age ( $M = 22.03$ ,  $SD = 2.73$ ), including 262 (81.9%) females and 58 (18.1%) males. The majority of the sample was single ( $n = 309$ , 96.6%). As for perceived socio-economic status (SES), 49.7% ( $n = 159$ ) of the participants reported having middle SES, 40% reported having high SES and 19.4% ( $n = 62$ ) reported having low SES. Most of the participants ( $n = 273$ , 85.31%) had no history of psychiatric treatment. Of the initial sample, 145 (45.31%) respondents participated in the follow-up assessment over an approximately 3-week interval.

### Materials

#### *The behavioral emotion regulation questionnaire (BERQ)*

The BERQ (Kraaij & Garnefski, 2019) is a 20-item questionnaire that assesses the behavioral emotion regulation strategies individuals use in

order to cope with stressful or negative situations. The questionnaire consists of five subscales—*seeking distraction*, *withdrawal*, *actively approaching*, *seeking social support*, and *ignoring*—with four items each. To rate how often they engage in each behavior, participants used a 5-point Likert-type scale, ranging from 1 (almost never) to 5 (almost always). For each subscale, item scores are added to reach a total subscale score where higher scores represent increased frequency of engaging in the corresponding behavioral strategy. The BERQ demonstrated good psychometric properties. More specifically, Cronbach's alpha ( $\alpha$ ) coefficients of the subscales were 0.86, 0.93, 0.91, 0.91 and 0.89 for *seeking distraction*, *withdrawal*, *actively approaching*, *seeking social support*, and *ignoring*, respectively (Kraaij & Garnefski, 2019). Furthermore, test-retest correlations over a 2 year interval ranged between 0.47 (*seeking distraction*) and 0.75 (*seeking social support*). Regarding evidence for construct validity, theoretically more adaptive subscales had negative correlations with anxiety and depressive symptoms, whereas less adaptive subscales had positive correlations with psychological symptoms. The only exception to this pattern was the non-significant correlation observed between *seeking distraction* and anxiety (Kraaij & Garnefski, 2019).

#### ***Difficulties in emotion regulation scale (DERS)***

The DERS (Gratz & Roemer, 2004) is a widely used multidimensional self-report measure that explores clinically relevant difficulties individuals experience in emotion regulation. Participants used a 5-point Likert-type scale, ranging from 1 (almost never) to 5 (almost always), to indicate how often each of the 36 items applies to them. The scale consists of 6 subscales, each representing a dimension of emotion regulation difficulties (i.e., *awareness*, *clarity*, *non-acceptance*, *strategies*, *impulse* and *goals*). Higher scores indicate greater difficulty in regulating emotions. In previous studies, the DERS has demonstrated good internal reliability (Cronbach's  $\alpha = 0.93$  for the total scale;  $> 0.80$  for the subscales; Gratz & Roemer, 2004) and acceptable construct validity (e.g., Fowler et al., 2014). The DERS was adapted into Turkish by (Rugancı & Gençöz, 2010) and was revised by Kavcıoğlu and Gençöz (2011). The Turkish DERS demonstrated good psychometric properties (Rugancı & Gençöz, 2010).

In the current study, total DERS scores were used to establish the convergent validity of the BERQ. The Cronbach's  $\alpha$  of the global DERS was 0.94 in the present sample.

#### ***Emotion regulation questionnaire (ERQ)***

The ERQ (Gross & John, 2003) is a 10-item self-report measure that examines the tendency of individuals to use cognitive reappraisal and expressive

suppression in order to regulate their emotions. Cognitive reappraisal can be defined as cognitively making changes in the meaning of a situation in order to adjust its emotional effect (Gross & John, 2003). Expressive suppression indicates inhibiting emotional expression in order to control one's emotions (Gross & John, 2003). Previous studies have shown that reappraisal is generally an effective strategy given its negative associations with psychopathology, whereas suppression is assumed to be counterproductive and is associated with psychological disorders (Aldoa et al., 2010).

The ERQ consists of two subscales, namely *reappraisal* and *suppression*, comprising six and four items, respectively. The scale is rated on a 7-point Likert-type scale, with responses ranging from 1 (strongly disagree) to 7 (strongly agree). The Cronbach's  $\alpha$  coefficients were 0.79 for *reappraisal* and 0.73 for *suppression*, and test-retest reliability over three months was 0.69 for both subscales (Gross & John, 2003). The scale has good convergent validity (Gross & John, 2003). The ERQ was adapted into Turkish by Ulaşan Özgüle (2011). The Turkish version is rated on a 6-point Likert-type scale with responses ranging from 1 (strongly disagree) to 6 (strongly agree). Psychometric properties of the Turkish version were satisfactory (Ulaşan Özgüle, 2011).

In the present study, we utilized the ERQ in order to assess the convergent validity of the BERQ. The Cronbach's  $\alpha$  in the current sample was 0.82 for the *reappraisal* and 0.81 for the *suppression* subscale.

### **Brief symptom inventory (BSI)**

The BSI (Derogatis, 1975, 1993) is the short version of the SCL-R-90 and is a widely used self-report measure of clinically relevant psychological symptoms. The scale consists of 53 items covering 9 symptom dimensions. To indicate how often they experience each symptom, participants use a 5-point Likert-type scale with responses ranging from 0 (not at all) to 4 (extremely). The scale has good psychometric properties (Derogatis & Melisaratos, 1983; Derogatis, 1993). The BSI was adapted into Turkish by Şahin and Durak (1994), and the Turkish version of the scale consisted of five subscales, namely, *anxiety*, *depression*, *negative self-concept*, *somatization* and *hostility*. The Turkish version demonstrated good psychometric properties (Şahin, Durak-Batgün, & Uğurtaş, 2002).

We utilized the BSI to assess psychological symptoms on five dimensions in order to examine the convergent validity of the BERQ subscales. In the present sample, the Cronbach's  $\alpha$  of the total BSI was 0.97, and the Cronbach's  $\alpha$  values for the subscales were 0.89 for *anxiety*, 0.90 for *depression*, 0.89 for *negative self-concept*, 0.84 for *somatization* and 0.82 for *hostility*.

## Procedure

First, the original English version of the BERQ was translated into Turkish by three clinical psychologists with doctoral degrees who were fluently bilingual in both English and Turkish. Then, the Turkish translation was back-translated into English by another clinical psychologist with a doctoral degree. Lastly, the original form of the BERQ was compared with this back-translation by two psychology professors and necessary modifications were made to arrive at the final Turkish version.

After obtaining the approval of the university scientific research and publication ethics committee, the sample was recruited through courses at a semi-private university in Ankara, and through social media announcements. Data was collected via an online survey. Informed consent was obtained from all respondents, and participation in the study was entirely voluntary. In order to obtain the data needed to establish test-retest reliability over an approximately 3-week interval, invitations were e-mailed to the participants who had previously consented to being contacted again in the future. The Turkish version of the BERQ, along with the depression and anxiety subscales of the BSI, were re-administered to a sub-sample who volunteered to participate in the Time-2 assessment ( $N=145$ ). Participants either received extra course credits or were offered a chance to win gift cards as compensation for their participation.

## Data analysis

First, the sample was randomly divided into two halves for the purpose of cross-sample validation. A principal component analysis (PCA) with promax rotation was conducted with one half of the sample in order to explore the factor structure of the Turkish translation of the BERQ. Next, a confirmatory factor analysis was performed with the other half in order to examine the fit of the original factor structure to the data. We also tested the goodness-of-fit of two higher-order factors for adaptive strategies (i.e., *seeking distraction*, *actively approaching*, and *seeking social support*) and less-adaptive strategies (i.e., *withdrawal*, and *ignoring*) to the data. Model fit was evaluated by using the Satorra-Bentler scaled chi-square statistic ( $\chi^2$ ), with a non-significant  $\chi^2$  indicating a good fit. However, because  $\chi^2$  is sensitive to sample size, additional statistics were also examined to determine model fit (Browne & Cudeck, 1993; Schermelleh-Engel, Moosbrugger, & Müller, 2003). These included the comparative fit index (CFI; values greater than 0.90 indicate an adequate fit), the root-mean-square error of approximation (RMSEA; values less than 0.10 indicate an adequate fit) and the Tucker-Lewis index, also known as non-normed fit index (NNFI; values greater than 0.95 indicate an adequate fit). Next, Cronbach's alpha and



**Table 1.** Exploratory and confirmatory factor loadings for items on their original subscales.

| Subscale name          | Item | Principal component analysis | Confirmatory factor analysis |
|------------------------|------|------------------------------|------------------------------|
| Seeking distraction    | 1    | 0.74                         | 0.42                         |
|                        | 6    | 0.70                         | 0.57                         |
|                        | 11   | 0.67                         | 0.81                         |
|                        | 16   | 0.70                         | 0.60                         |
| Withdrawal             | 2    | 0.77                         | 0.69                         |
|                        | 7    | 0.37                         | 0.27                         |
|                        | 12   | 0.88                         | 0.80                         |
|                        | 17   | 0.89                         | 0.79                         |
| Actively approaching   | 3    | 0.81                         | 0.64                         |
|                        | 8    | 0.86                         | 0.76                         |
|                        | 13   | 0.81                         | 0.90                         |
|                        | 18   | 0.70                         | 0.85                         |
| Seeking social support | 4    | 0.84                         | 0.65                         |
|                        | 9    | 0.81                         | 0.85                         |
|                        | 14   | 0.86                         | 0.91                         |
|                        | 19   | 0.89                         | 0.77                         |
| Ignoring               | 5    | 0.81                         | 0.84                         |
|                        | 10   | 0.89                         | 0.79                         |
|                        | 15   | 0.92                         | 0.77                         |
|                        | 20   | 0.42                         | 0.46                         |

McDonald's omega coefficients were computed to assess the internal reliability of the subscales. Pearson's correlation coefficients were computed to explore the intercorrelations between the BERQ subscales and examine the relationship between the BERQ subscales, the BSI subscales, the ERQ subscales and the DERS total scores to establish convergent validity. In order to establish test-retest reliability, intraclass correlation coefficients were calculated. Lastly, two multiple regression analyses were conducted to identify whether the BERQ subscales prospectively predict anxiety and depressive symptoms as evidence for predictive validity. All analyses were conducted using SPSS 20, EQS 6.1 and JASP software.

## Results

### *Factor structure of the turkish version of the BERQ*

A PCA with pro-max rotation was conducted. The Kaiser–Meyer–Olkin value was 0.77 and Bartlett's test of sphericity was significant, suggesting that the correlation matrix was factorable. Based on the number of eigenvalues greater than 1 and an inspection of the scree plot, five factors were extracted, which explained 68.41% of the variance. Communalities ranged between 0.48 (item 7) and 0.83 (item 15). Each item had its highest loading onto its original factor, and all items had loadings above 0.40 except item 7 (i.e., "I withdraw"), which loaded onto the *withdrawal* factor with a loading of 0.37. Factor loadings can be seen in [Table 1](#).

Goodness-of-fit values for the CFAs are presented in [Table 2](#). First, a CFA with maximum likelihood estimation with robust standard errors was run in order to test how well the original 5-factor model fit the data

**Table 2.** Goodness-of-fit values for the confirmatory factor analyses.

| Model                          | Satorra-Bentler scaled $\chi^2$ (df) | CFI  | RMSEA | NNFI |
|--------------------------------|--------------------------------------|------|-------|------|
| Original five-factor model     | 322.64* (160)                        | 0.86 | 0.08  | 0.83 |
| Modified five-factor model     | 312.13* (158)                        | 0.87 | 0.08  | 0.84 |
| Second-order model             | 327.88* (160)                        | 0.86 | 0.08  | 0.83 |
| Alternative second-order model | 309.07* (160)                        | 0.87 | 0.08  | 0.84 |

Note. df: degrees of freedom; CFI: comparative fit index; RMSEA: root-mean-square error of approximation; NNFI: non-normed fit index. \* $p < .001$ .

collected with the Turkish version of the BERQ. The original model showed an inadequate fit to the data (Table 2). Modification indices were explored, and covariances were added between the error terms of items 4 and 19, and 9 and 14, because these items belonged to the same factor. The Satorra-Bentler test of  $\chi^2$  differences indicated that the modified 5-factor model showed a significantly better fit as compared to the initial model,  $\chi^2_{\text{diff}}(2) = 10.51, p < .01$ . The modified model also showed an inadequate fit to the data (Table 2). All items had significant loadings to their hypothesized factors ( $p < .001$ ) and had standardized factor loadings higher than 0.40, except item 7 (0.27 to the *withdrawal* subscale). The final model, including standardized factor coefficients, is shown in Table 1.

Next, a second-order CFA was conducted to explore whether the distinction between adaptive and less-adaptive strategies fit the data. Results of the second-order CFA suggested an inadequate fit to the data (Table 2). The paths from the more *adaptive strategies* latent factor to *seeking distraction*, *actively approaching* and *seeking social-support* factors were significant, with factor loadings of -.32, 0.19 and 0.09, respectively ( $p < .05$ ). The paths from the *less adaptive strategies* latent factor to *withdrawal* and *ignoring* factors were also significant, with factor loadings of 0.34 and 0.71, respectively ( $p < .05$ ).

Given the negative loading of the *seeking distraction* factor on-to the more *adaptive strategies* latent factor, an alternative second-order model in which *seeking distraction* factor was grouped among the less adaptive strategies was also tested. The alternative model also did not fit the data well (Table 2). The paths from the more *adaptive strategies* latent factor to *actively approaching* and *seeking social support* factors were significant, with factor loadings of 0.69 and 0.35, respectively ( $p < .05$ ). The path from the *less adaptive strategies* latent factor to *seeking distraction* and *withdrawal* subscales were also significant, with loadings of 0.58 and 0.24, respectively ( $p < .05$ ).

Means and standard deviations of the BERQ subscales are illustrated in Table 3.

### Correlations among the BERQ Subscales

Correlation coefficients among the BERQ subscales were calculated (see Table 3) and ranged between 0.04 (*seeking social support* and *seeking*

**Table 3.** Means, standard deviations, and reliability coefficients of the BERQ, along with correlations among its subscales.

| Subscales                 | 1            | 2             | 3             | 4            | 5    |
|---------------------------|--------------|---------------|---------------|--------------|------|
| 1. Seeking distraction    | 1            |               |               |              |      |
| 2. Withdrawal             | 0.08         | 1             |               |              |      |
| 3. Actively approaching   | -0.10        | <b>-0.43*</b> | 1             |              |      |
| 4. Seeking social support | 0.04         | <b>-0.19*</b> | <b>0.20*</b>  | 1            |      |
| 5. Ignoring               | <b>0.52*</b> | <b>0.25*</b>  | <b>-0.21*</b> | <b>-0.08</b> | 1    |
| <i>M</i>                  | 12.52        | 10.64         | 13.42         | 14.08        | 9.54 |
| <i>SD</i>                 | 2.79         | 3.17          | 3.23          | 3.65         | 3.47 |
| Cronbach's $\alpha$       | 0.72         | 0.75          | 0.85          | 0.88         | 0.82 |
| McDonald's omega          | 0.70         | 0.74          | 0.87          | 0.89         | 0.81 |
| ICC                       | 0.65         | 0.53          | 0.70          | 0.60         | 0.51 |

Note. ICC: Intraclass correlation coefficient. \* $p < .01$

*distraction*) and 0.52 (*seeking distraction* and *ignoring*). The mean correlation coefficient was 0.22.

### Reliability analyses

The results of the reliability analyses are summarized in Table 3. Cronbach's  $\alpha$  coefficients of the BERQ subscales ranged between 0.72 (*seeking distraction*) and 0.88 (*seeking social support*). McDonald's omega coefficients ranged between 0.70 (*seeking distraction*) to 0.89 (*seeking social support*). Regarding the test-retest reliability of subscales over an approximately 3-week interval, intraclass correlation coefficients were computed and ranged between 0.51 (*ignoring*) and 0.70 (*actively approaching*).

### Convergent and predictive validity

Pearson's correlation coefficients were computed to assess the association of the BERQ with the criterion measures. Results are presented in Table 4. Generally, the correlations between theoretically more adaptive and less-adaptive strategies and the criterion measures were in line with our expectations. As expected, *actively approaching* correlated negatively with four of the five psychological symptom dimensions and the DERS total scores, and was positively correlated with cognitive reappraisal. *Seeking social support* was not correlated with the DERS scores, nor was it correlated with psychological symptoms, except for somatization, with which it had a negative correlation. *Seeking social support* was also negatively correlated with suppression and positively correlated with reappraisal. *Seeking distraction* was not correlated with four of the five symptom dimensions and the DERS scores, but it was positively correlated with somatization in the present sample. Furthermore, *seeking distraction* correlated positively with both reappraisal and suppression. *Withdrawal* correlated positively with all symptom dimensions, the DERS total scores, and suppression. Lastly,

**Table 4.** Bivariate correlations between measures of psychological symptoms, emotion regulation, and difficulties in emotion regulation, and the BERQ Subscales.

| BERQ Subscales            | Anxiety       | Depression     | Negative self-concept | Somatization  | Hostility     | DERS           | Reappraisal   | Suppression    |
|---------------------------|---------------|----------------|-----------------------|---------------|---------------|----------------|---------------|----------------|
| 1. Seeking distraction    | 0.11          | 0.04           | 0.07                  | <b>0.12*</b>  | 0.10          | -0.10          | <b>0.25**</b> | <b>0.18**</b>  |
| 2. Withdrawal             | <b>0.40**</b> | <b>0.45**</b>  | <b>0.45**</b>         | <b>0.34**</b> | <b>0.35**</b> | <b>0.44</b>    | -0.07         | <b>0.20**</b>  |
| 3. Actively approaching   | <b>-0.13*</b> | <b>-0.20**</b> | <b>-0.14*</b>         | -0.10         | <b>-0.13*</b> | <b>-0.22**</b> | <b>0.29**</b> | 0.03           |
| 4. Seeking social support | -0.05         | -0.08          | -0.10                 | <b>-0.13*</b> | -0.04         | 0.02           | <b>0.23**</b> | <b>-0.14**</b> |
| 5. Ignoring               | <b>0.12*</b>  | 0.06           | 0.10                  | 0.06          | <b>0.15**</b> | 0.05           | <b>0.11*</b>  | <b>0.38**</b>  |

Note. DERS: Difficulties in Emotion Regulation Scale; BERQ: Behavioral Emotion Regulation Questionnaire.  
\* $p < .05$ ; \*\* $p < .01$

*ignoring* correlated positively with anxiety, hostility, reappraisal, and suppression, although its relationship with reappraisal was rather weak.

Lastly, two multiple regression analyses were performed on the Time-2 depression and anxiety scores, as measured by the BSI, in order to identify strategies that best predicted anxiety and depressive symptoms. Overall, the BERQ strategies significantly predicted anxiety ( $R^2 = 0.13$ ,  $F(5, 136) = 3.89$ ,  $p < 0.01$ ) and depressive symptoms ( $R^2 = 0.10$ ,  $F(5, 136) = 2.97$ ,  $p = 0.01$ ). Among behavioral emotion regulation strategies, *withdrawal* was the only significant predictor of anxiety ( $\beta = 0.32$ ,  $t = 3.50$ ,  $p = .001$ ) and depressive symptoms ( $\beta = 0.23$ ,  $t = 2.40$ ,  $p = .02$ ) over an approximately 3-week interval.

## Discussion

The purpose of the current study was to validate the factor structure of the Turkish version of the BERQ and to report on its psychometric properties. Therefore, we performed exploratory and confirmatory factor analyses to examine the factor structure of the Turkish translation and the fit of the original 5-factor model to the data collected with the Turkish version. Next, intercorrelations between the BERQ subscales were obtained, and internal and test-retest reliabilities were calculated. Then, we reported on the relationship of the BERQ subscales with psychological symptoms, difficulties in emotion regulation, and two frequently studied emotion regulation strategies, namely suppression and reappraisal. Lastly, we investigated which emotion regulation strategies would predict future depressive and anxiety symptoms.

The results of the PCA confirmed that the Turkish version of the BERQ replicates the five-factor structure of the original scale, with all items having their highest loadings on their hypothesized factors. The only item that had a relatively low loading onto its hypothesized factor was item 7. This finding may be related to the fact that while the remaining three items in

the *withdrawal* subscale clearly imply social withdrawal (e.g., “I avoid other people”, “I close myself off to others”), item 7 (i.e., “I withdraw”) is rather general. Based on its semantic content, item 7 was kept under the *withdrawal* subscale, and further analyses confirmed that this subscale was reliable and valid.

The results of the CFA indicated that the original five-factor structure had an overall inadequate fit to the data for the present sample. Therefore, based on the CFA results, the original five-factor model did not apply to the present sample of Turkish young adults. Furthermore, the fit of the adaptive and less-adaptive strategies’ distinction to the present data was also inadequate. In contrast to the findings indicating an unsatisfactory model fit, exploratory factor analysis suggested a 5-factor solution. All item loadings onto the hypothesized factors were significant in the CFA, and further analyses revealed good internal reliability scores and satisfactory test-retest reliabilities for the BERQ subscales. Moreover, strategies as measured by the BERQ were predictive of future symptoms of anxiety and depression. Together, these findings suggest that the Turkish BERQ could be a helpful tool to assess emotion regulation strategies among adults, yet the findings also raise the need for further research to confirm the fit of the original factor structure of the BERQ to the data collected from Turkish samples.

As expected, our results indicated that *actively approaching* and *seeking social support*, which can both be considered engagement-coping strategies, are relatively more adaptive strategies of emotion regulation. More specifically, actively approaching a problematic situation in order to deal with it was negatively associated with difficulties in emotion regulation and psychological symptoms, and was positively associated with cognitive reappraisal. This is in line with previous evidence indicating that approach coping strategies, including active problem-solving, are positively associated with psychological well-being and negatively associated with psychopathology (Aldao et al., 2010; Dukes Holland & Holahan, 2003). Furthermore, asking for social support and advice to cope with a negative or stressful situation was negatively associated with somatization, and was not associated with the other psychological symptoms or emotion regulation difficulties. In addition, *seeking social support* subscale was negatively associated with suppression and positively associated with cognitive reappraisal, confirming our hypothesis. This finding is consistent with substantial evidence showing that seeking social support is an effective way of coping with negative or stressful events by enhancing one’s resources and decreasing feelings of isolation and loneliness (Prati & Pietrantonio, 2009; Taylor et al., 2004).

An unexpected finding was that *seeking distraction*, a conceptually more adaptive strategy (Kraaij & Garnefski, 2019), negatively loaded onto the more adaptive strategies latent variable and was positively associated with

*ignoring*, which is presumed to be a less adaptive strategy of regulating emotions. Although *seeking distraction* and *ignoring* were found to have a small, yet significant, positive correlation in the original BERQ (Kraaij & Garnefski, 2019), their relationship was stronger in the present study. Moreover, we found that *seeking distraction* correlated positively with both reappraisal and suppression, and did not correlate with difficulties in emotion regulation and psychological symptoms, except for a small positive correlation with somatic symptoms. Thus, based on our findings, whether *seeking distraction* represents an adaptive or less adaptive strategy is not a straightforward issue, and it would benefit from further research. It is likely that distracting oneself by engaging in an unrelated activity following a stressful situation may lessen the intensity of difficult emotions, allow individuals to take a new perspective and decrease rumination (Liu & Thompson, 2017; Nolen-Hoeksema, 1991; Nolen-Hoeksema, Wisco, & Lyubomirsky, 2008). Yet, when distraction is used in a chronic and inflexible way or involves risk-taking behaviors, it may prevent individuals from directly dealing with the problematic situation and may even be harmful in certain cases (Nolen-Hoeksema et al., 2008). We believe that, although it is often conceptualized as a functional emotion-regulation strategy, in some cases, distraction may overlap with avoidance or ignoring and may be counterproductive. Furthermore, our findings on *seeking distraction* might reflect a cultural difference and further research exploring the adaptiveness of this strategy among Turkish individuals is highly suggested.

Our results supported the notion that *withdrawal* and *ignoring* are less adaptive strategies, which can be considered disengagement strategies because they both involve orienting away from one's emotions and/or the stressful situation. More specifically, *withdrawal* appeared to be the least adaptive emotion-regulation strategy given its positive associations with all classes of psychological symptoms and difficulties in emotion regulation. Moreover, *withdrawal* predicted future anxiety and depressive symptoms. Similarly, *ignoring* was positively associated with anxiety symptoms, hostility, and suppression, and interestingly, had a small positive correlation with cognitive reappraisal. Our findings on *withdrawal* and *ignoring* are consistent with past research, suggesting that disengagement coping strategies (e.g., denial and withdrawal) are generally maladaptive styles of dealing with stressors (Compas et al., 2001; Horwitz, Hill, & King, 2011; Sontag et al., 2008; Tuna, 2003). Overall, responding to stressful events by denying or ignoring that there is a problem and by moving away from others and the stressor may be a less adaptive strategy, especially when one has control over the situation. It is important to note that disengagement coping strategies may be helpful when the source of stress is uncontrollable, as in the case of young individuals coping with poverty or parental conflict (Compas

et al., 2001; Horwitz et al., 2011). Therefore, before categorizing strategies into adaptive and maladaptive, it is recommended that clinicians conduct a detailed evaluation of each case that examines the variability in the client's use of emotion regulation strategies, how flexibly these strategies are used, and how functional these strategies are in meeting environmental demands, and clients' short- and long-term goals (Aldao, Sheppes, & Gross, 2015; Gross & Jazaieri, 2014).

The current findings should be interpreted in light of the following limitations. To begin with, the generalizability of our results is restricted by convenience sampling. Our sample consisted predominantly of young female participants, the majority of whom were recruited from a single university. Thus, the psychometric properties of the BERQ in the general population and clinical populations remain to be tested. Furthermore, our use of self-report measures in the assessment of emotion regulation strategies and difficulties, and psychological symptoms, may be subject to reporting biases. Given that emotion regulation also includes automatic and unconscious processes, along with conscious and effortful attempts, future studies should employ multi-method assessment procedures and experimental designs to better understand how participants actually regulate emotions rather than how they report doing so. Moreover, diagnostic interviews should be included in studies that examine psychological symptoms. Lastly, the predominantly cross-sectional nature of the present findings limits conclusions regarding causality and directionality of associations between study variables. Therefore, we recommend future studies use longitudinal design to make definitive statements regarding relationships between emotion regulation strategies, emotion dysregulation and psychopathology.

In conclusion, the current study was the first attempt to adapt the BERQ into Turkish. Our findings suggest that the BERQ is a reliable and valid tool to assess behavioral emotion regulation strategies. However, there is a need for further research in order to confirm the fit of the original factor structure to the data collected through the Turkish version. Overall, actively approaching and seeking social support in response to negative or stressful events appear to be more adaptive strategies, whereas withdrawal and ignoring are less adaptive ways of dealing with problems. Clinically, interventions focusing on increasing problem-solving and social-support-seeking may be critical. Furthermore, helping clients to decrease the use of disengagement strategies, such as withdrawal and ignoring, may be a desirable treatment goal, especially when stressors are controllable.

### **Disclosure statement**

No potential conflict of interest was reported by the author(s).

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