



# A Current Overview on Emotion Regulation: Contextual Factors

## *Duygu Düzenlemeye Güncel Bir Bakış: Bağlamsal Faktörler*

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### ABSTRACT

Emotion regulation is a transdiagnostic concept which has been frequently studied in the field of psychological health. Although these empirical studies in the relevant literature revealed important findings, it has also been currently mentioned that emotion regulation is mostly studied with certain tools having some limitations but it is not a uniform subject, and there are some contextual factors in emotion regulation which has been considered as having determinative role. In this sense, when we say emotion regulation now, we can refer several contextual factors such as relevant situation/event, emotion that is regulated, interpersonal conditions, spontaneous emergence of emotion regulation strategies, co-occurrence of various regulation methods, efficacy of the strategies and specific time frame of regulation. In this article, it is aimed to first describe emotion regulation which is frequently mentioned in national and international literature, and then, to review recent empirical research findings and to question limitations of traditional approaches toward emotion regulation by examining some salient contextual factors and finally, to present some relevant suggestions based on current approaches.

**Keywords:** Emotion regulation, contextual factors in emotion regulation, interpersonal emotion regulation, process model, assessment of emotion regulation

### ÖZ

Duygu düzenleme psikolojik sağlık alanında sıklıkla çalışılan, tanılar üstü bir kavram olarak karşımıza çıkmaktadır. İlgili alanyazındaki görgül çalışmalar bu konuyla ilgili önemli bilgiler ortaya koymakla birlikte, son yıllarda duygu düzenlemenin çoğunlukla bazı sınırlılıkları olan belirli araçlarla çalışıldığı ancak aslında duygu düzenlemenin tekdüze bir kavram olmadığı; her ne kadar bugüne kadar ihmal edilse de ortaya çıktığı bağlamın düzenleme üzerinde belirleyici bir rolü olduğu vurgulanmaya başlamıştır. Bu bağlamda, duygu düzenleme dendiğinde artık duygu ile ilişkili durum/olay, düzenlenen duygu, kişilerarası koşullar, duygu düzenleme stratejilerinin spontane şekilde ortaya çıkış biçimi, farklı düzenleme yöntemlerinin bir arada kullanılabilmesi, sergilenen stratejilerin etkinliği ve düzenlemeye özgü zaman aralığı gibi pek çok farklı bağlamsal faktörden söz edilmektedir. Bu makalede de ilk olarak ulusal ve uluslararası alanyazında sıkça söz edilen duygu düzenlemeyi tanımlamak, ardından güncel araştırma bulgularını derleyip bir dizi bağlamsal faktörü ele alarak geleneksel yaklaşımların bu noktalardaki sınırlılıklarını sorgulamak ve son olarak bu konulardaki güncel yaklaşımlardan hareketle bazı öneriler sunmak hedeflenmiştir.

**Anahtar sözcükler:** Duygu düzenleme, duygu düzenlemede bağlamsal faktörler, kişilerarası duygu düzenleme, süreç modeli, duygu düzenlemenin değerlendirilmesi

## Introduction

Emotion regulation can be defined as a multifaceted process in which one affects several factors associated with emotion. This process can occur before or after the emotional response unfolds in terms of time; on the other hand, in terms of content, individual can also modify which emotion to experience and how to experience and express it (Gross 1998b). In the relevant literature, functional regulation of emotions is generally associated with psychological well-being (Gross and John 2003); whereas, difficulties experienced in emotion regulation

are associated with numerous psychological problems such as symptoms of post-traumatic stress disorder, obsessive-compulsive disorder, depression and anxiety disorder (Moore et al. 2008, Aldao et al. 2010, Seligowski et al. 2015, Vatan 2016). In this respect, it is suggested that emotion regulation can be considered as a transdiagnostic risk factor for psychopathologies (Aldao and Nolen-Hoeksema 2010, Kring and Sloan 2010). On the other hand, although the concept of emotion regulation has been used frequently in the literature in recent years, there has been a need to review the research findings in the relevant literature, especially taking into account the highly complex nature of the

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field of psychological health. From this point of view, in this article, current theoretical explanations and empirical research findings on emotion regulation are reviewed and contextual factors contributing to the nature of this concept are discussed.

Even though there are different theoretical approaches to emotion regulation, which is the main theme of this article (Gross 1998b, Parkinson and Totterdell 1999, Garnefski et al. 2001, Gratz and Roemer 2004, Berking and Whitley 2014), it would be the best approach to start with the process model developed by Gross (1998b, 2015), which is the most cited as well as the most effective and comprehensive framework. Gross defined five regulation processes in the process model, which are discussed under two main headings, before and after the emergence of the emotional response. The first of these, antecedent-focused emotion regulation, includes four emotion regulation processes as *situation selection*, *situation modification*, *attentional deployment*, and *cognitive change*, which occur before the emotional response unfolds. The process after the emergence of the emotional response is called response-focused emotion regulation and includes *response modulation* which comprises the regulation of the physiological, experiential and behavioral elements of the emotional response. Parkinson and Totterdell (1999) classified emotion regulation strategies as *cognitive* and *behavioral strategies*. Accordingly, strategies such as trying to think of nothing, trying to think rationally about the problem are cognitive; acting as happy and exercising are included in behavioral strategies. Garnefski et al. (2001) focused on cognitive emotion regulation strategies and defined nine cognitive strategies that individuals use when they experience distress, as *self-blame*, *acceptance*, *rumination/focus on thought*, *positive refocusing*, *refocus on planning*, *positive reappraisal*, *putting into perspective*, *catastrophizing*, and *blaming others*. Some researchers, on the other hand, emphasize emotion regulation skills or difficulties experienced in emotion regulation. For example, Gratz and Roemer (2004) noted difficulties in emotion regulation such as *lack of emotional awareness*, *lack of emotional clarity*, *difficulties engaging in goal-directed behavior*, *impulse control difficulties*, *limited access to emotion regulation strategies*, and *nonacceptance of emotional responses*. Berking and Whitley (2014), on the other hand, focused on emotion regulation skills such as *awareness*, *identifying and labeling*, *understanding*, *modification*, *acceptance and tolerance*, *readiness to confrontation*, and *effective self-support*. In summary, in the related literature, emotion regulation skills, difficulties experienced in emotion regulation and various strategies used in emotion regulation are mentioned.

It has also been an object of interest how emotion regulation strategies yield results in different areas, and researchers have examined the affective, cognitive, and social effects of different strategies which are evaluated with both questionnaires in which individual differences studies and experimental studies (Gross 1998a, Richards and Gross 1999, 2000, Gross and John 2003, Richards and Gross 2006). It is worthy of note that such studies typically focus more on reappraisal which is one of the cognitive change strategies and suppression as an example of response modulation strategies especially since they represent antecedent-focused and response-focused strategies. In addition,

the fact that they can be easily manipulated in the laboratory environment may be another reason why these strategies are frequently addressed in scientific research. Although different methods can be used in experimental studies (e.g., showing participants various pictures or asking them to give a speech), usually participants are shown an emotionally valenced film at first. Manipulation can be achieved by asking participants in the control group to only watch the film, while participants in the reappraisal group also think about the film, and participants in the suppression condition to hide their emotions in a way that others cannot understand what they are feeling. The results of these studies generally point out that reappraisal reduces experience of negative emotion and using this method as an emotion regulation strategy is associated with experiencing and expressing less negative and more positive emotions, while suppression is associated with more negative emotion experience (Gross 1998a, Gross and John 2003, Hofmann et al. 2009, Szasz et al. 2011, Mohammed et al. 2021). Furthermore, suppression also negatively affects memory and interpersonal relationships, and participants using reappraisal have closer relationships are also among the findings of the research (Richards and Gross 1999, 2000, Gross and John 2003, Richards and Gross 2006). However, it also seems that some findings are more valid particularly for Western cultures; for example, suppression of emotional expression in Eastern cultures is associated with more positive results in the interpersonal context (Wei et al. 2013). Additionally, despite cultural differences (Soto et al. 2011), some associations of the emotion regulation strategies such as suppression with various psychopathologies (Moore et al. 2008, Aldao et al. 2010, Seligowski et al. 2015) or reappraisal with more positive outcomes such as psychological well-being (Gross and John 2003) has also led to the notion that emotion regulation strategies can be broadly classified as adaptive and maladaptive (Aldao et al. 2010). However, in recent years, due to the emphasis on the situational and flexible use of emotion regulation strategies, this dualistic approach has been criticized in various ways and the importance of context, which is often overlooked in the field of emotion regulation, has begun to be emphasized.

## The Role of Context in Emotion Regulation

As some of it has been discussed above, although there have been many scientific studies in the field of emotion regulation since the 2000s; it is also thought that the findings may not reflect the use of emotion regulation strategies in daily life due to the nature of the methods used in these studies. For example, in recent years, the approach of classifying strategies as adaptive-maladaptive or associating them with psychopathologies is actually considered as a result of ignoring the context (Bridges et al. 2004, Aldao 2013). Accordingly, consistent with flexibility, which is one of the most important features of functional emotion regulation (Bonanno et al. 2004, Bonanno and Burton 2013), it is emphasized that the emotion regulation strategy used or the functionality of the strategy differs from person to person and even for the same person in different contexts (different situations; different emotions such as anxiety, sadness, anger; different emotional

intensities such as low, medium, high; short or long-term goals, the existence of an individual or interpersonal situation). Therefore, it is considered that defining emotion regulation on a single axis may not be reasonable (Sheppes et al. 2011, Aldao and Nolen-Hoeksema 2012, Sheppes et al. 2014). The relationship between emotion regulation strategies and psychopathology can also be defined as a result of the persistent and inflexible use of the relevant regulation strategy in various contexts (Campbell-Sills and Barlow 2007, Kashdan and Rottenberg 2010). In other words, actual maladaptive approach is the rigid use of emotion regulation strategy without considering the features of context. Thus, it is considered that various context-related factors in emotion regulation are determinative on the use and results of the strategies. However, when the relevant literature is examined, it seems that the theoretical approaches and assessment methods used in emotion regulation can neglect the context-related factors.

Theoretical approaches provide a common language for researchers and offer a useful framework for emotion regulation. However, in addition to the fact that the application is not always parallel to this theoretical framework, there are also various contextual factors that the theoretical approaches and, relatedly, the assessment methods are sometimes limited. When the relevant literature is examined, it is remarkable that emotion regulation is generally evaluated with some self-report measures. The Emotion Regulation Questionnaire (ERQ; Gross and John 2003), which focuses especially on the use of reappraisal and suppression strategies, and the Difficulties in Emotion Regulation Scale (DERS; Gratz and Roemer 2004), which evaluates the difficulties experienced in emotion regulation, have also been adapted into Turkish (ERQ; Totan 2015, DERS; Rugancı and Gençöz 2010) and they are among the most frequently used measurement tools in the national context. On the other hand, such self-report scales, which are frequently used and provide various advantages due to their practicality, may be insufficient to fully evaluate emotions and emotion regulation, which are closely related to the context, with their approach questioning how often the listed statements and methods are used in general. Later on this paper, the prominent ones of these contextual factors will be discussed in the basis of theoretical approaches and assessment methods in the field, and relevant suggestions from current approaches will be presented for the limitations of traditional approaches.

## **Contextual Factors**

### **Situation Associated with Emotion**

Although emotions, as an important part of life, have been a subject that has been studied by researchers for many years, it is worthy of note that a single agreed definition of emotion cannot be made in the literature (Izard 1977, Werner and Gross 2010). Due to the predictable reasons for this situation, researchers have tried to determine some common threads and tried to define the basic features of emotion. The first of these features is that emotion begins with an event or situation.

This is followed by attention, evaluation and emotional responses. In other words, there is an emotion-related event or situation at the beginning of the emotion generation process (Werner and Gross 2010). Gross' process model, which was mentioned earlier, is based on the emotion generation process and positions emotion regulation strategies in line with it; therefore, in this approach, intervening the situation places at the beginning of the regulation process. This intervention can be as determining of the situation that will be exposed before the situation occurs, or it can be as changing the situation after the situation has occurred (Gross 1999, Gross and Thompson 2007). In other words, theoretically, emotion and emotion regulation are associated with an internal (a change in our body or a negative thought in our mind) or an external situation (the events we witnessed or our interpersonal interactions) related with emotion (Werner and Gross 2010, Bintaş-Zörer 2020). However, although this is the case in theory, some points can be neglected in the assessment of emotion regulation in practice. First, although emotion regulation occurs situationally, most of the measurement tools that assess emotion regulation via self-report do not include a specific situation, and the relevant situation is not clearly stated (Lee et al. 2017). Instead, use of general statements are remarkable. For example, among the most frequently used measures in the assessment of emotion regulation, the ERQ evaluates reappraisal ("I control my emotions by changing the way I think about the situation I'm in") and suppression ("I control my emotions by not expressing them"); while the DERS evaluates problems experienced in emotion regulation, such as defining and understanding the emotional responses ("I have difficulty making sense out of my feelings") and engaging in goal-directed strategies ("When I'm upset, I have difficulty getting work done") with the items that indicate habitual use and are expressed in the simple present tense. As well as these tools, which are discussed in detail here, since they are the most frequently used measurement tools in the evaluation of emotion regulation, it would not be wrong to say that this situation is similar in other self-report tools that evaluate the same concept (Cognitive Emotion Regulation Questionnaire; Garnefski et al. 2001, Tuna and Bozo 2012, Emotion Regulation Processes; Schutte et al. 2009, Aka 2011). In other words, such self-report measures assess emotion regulation as a stable construct or trait (Egloff et al. 2006). Because of the general statements that do not refer to a specific situation, it seems that self-report measures evaluate one's tendency to use these strategies and assume that individuals will use these stably over time, rather than essentially assessing the actual use of these strategies (Aldao et al. 2010). This raises the importance of considering the situation-specific nature of emotion regulation, and state assessment. Although there are tools such as the State Difficulties in Emotion Regulation Scale (Lavender et al. 2017) and the State Emotion Regulation Inventory (Katz et al. 2017), which evaluate situation-specific emotion regulation, except these very few assessment tools, most of the self-report measures that evaluate emotion regulation do not make a situation-specific assessment, which

is a fundamental factor associated with the context.

### **Emotion That Is Regulated**

Emotions, which are an important part of daily life, display a great variety due to the nature of this concept. Although generally considered as positive and negative emotions, some basic emotions are generally mentioned in the literature (Plutchik 1980, Johnson-Laird and Oatley 1989, Ekman 1992); and diversity significantly increases as complex emotions emerge as a result of the combination or evaluation of these emotions (Plutchik 1980, Oatley and Johnson-Laird 1987, Ekman 1992). Considering that each emotion has a message and a related function, this diversity becomes more decisive in everyday life. For instance, fear delivers the message of presence of a threat or danger and motivates the person to cope with it; sadness emerges when experiencing a loss and encourages setting new goals; anger arises in the case of frustration and activates the fight response (Berking and Whitley 2014). For this reason, although they can be grouped under a general title (negative emotions), the impact of these emotions and relatedly, the way they are regulated will also be different. Moreover, results are also different when the same strategies are used to regulate different emotions. These differences are even possible for different intensity of the same emotion. For example, studies show that distraction strategy is used more in high emotional intensity, while reappraisal strategy is used more in low emotional intensity (Sheppes et al. 2011, 2014); and in the case of specific emotions, suppression is used more in high intensity sadness compared to other contexts (i.e., moderate intensity anxiety, sadness, anger and high intensity anger) (Dixon-Gordon et al. 2015). In addition, there are research findings showing that the reappraisal strategy, which is considered as adaptive in dualistic classifications, may not be functional when emotional intensity is high and time is limited (Sheppes and Meiran 2007, Sheppes et al. 2009). Thus, emotion and its intensity are important contextual factors on strategy use and outcomes. However, measures carrying out evaluation specific to emotion, such as the Emotion Regulation Skills Questionnaire-Emotion-Specific (Ebert et al. 2013) that are also adapted to Turkish (Vatan 2019), are quite few, and it may not be clearly addressed the emotion that is regulated along with the situation associated with emotion in most of the measures that assess emotion regulation through self-report (Lee et al. 2017). As mentioned earlier, even though emotion regulation occurs situationally, similar to the fact that it is evaluated as a stable construct in assessment tools; although the emotion that is regulated has an important role, emotions are also usually approached in a general way, such as the positive-negative category. For example, the statements of “When I want to feel more positive emotion ...” or “When I want to feel less negative emotion ...” are used in the ERQ, and “When I’m upset ...” in the DERS. In other words, emotions are not addressed specifically. Whereas, positive and negative emotions and the intensity of these can be very diverse, and accordingly, the strategies that are used or the effects of these strategies can vary. However, most of the time, evaluation is made assuming that individuals behave in a similar way for all emotions under the headings of positive

and negative emotions and every situation that reveals these emotions. In fact, research findings show that this approach may not be appropriate, and that the flexible use of emotion regulation strategies is important for functional regulation and well-being in general (Bonanno et al. 2004, Bonanno and Burton 2013), while displaying similar rigid patterns in different contexts is associated with psychopathology (Campbell-Sills and Barlow 2007, Kashdan and Rottenberg 2010). Therefore, it is an important factor to consider the emotion that is regulated and intensity of this emotion.

Moreover, the emotions that emerge during interaction are not addressed in the self-report tools, and the interpersonal context in which the emotion arises, which will be discussed in detail in the next section, is overlooked. On the other hand, in experimental studies, by determining the emotion to be discussed, a specific emotion can be studied by revealing this emotion via using various pictures or films as mentioned earlier, as well as emotion can be emerged through a situation in which interpersonal interaction (Richards et al. 2003, Ben-Naim et al. 2013). Nevertheless, in this case, the emotion does not emerge in the natural environment in which it emerges in daily life, and is regulated by manipulation, and this may bring along the problem of ecological and external validity (Aldao 2013).

### **Interpersonal Context**

Emotions generally emerge through interactions established in an interpersonal context (De Rivera 1984, Oatley and Johnson-Laird 1987, Andersen and Guerrero 1998), thus, when it comes to emotion regulation, interpersonal conditions are also important. For example, a study on this topic indicates that emotions such as happiness, sadness, anger, fear are experienced least frequently when people are alone, and most frequently when together with a person and then with a group of people (fear was experienced equally in all three situations) (Scherer et al. 1988). Another study revealed that these emotions were highly correlated with other people’s actions. In other words, the relationship formed with others or behaviors of them can reveal such feelings (Oatley and Duncan 1992, 1994). Consistently, Gross et al. (2006) indicates that emotion regulation mostly occurs (98%) when being with others, and it is stated that emotion regulation includes both intrinsic and extrinsic processes (Thompson 1994).

When considering the theoretical explanations of emotion regulation in the literature, it seems that this concept is mostly approached as the individual’s intrinsic regulation of his/her emotions; in other words, focus is more on intrapersonal emotion regulation. Similarly, although strategies such as social support-seeking have been included in recent years (Peña-Sarrionandia et al. 2015), the process model is also focused more on intrapersonal emotion regulation. However, the regulation of emotions, which mostly occur in the interpersonal context, often includes the process of interpersonal regulation as well as intrinsic efforts, and this aspect of emotion regulation has recently been accepted as one of the most important contextual factors (Aldao 2013). That is to say, emotion regulation also has an interpersonal aspect, in which people can share their emotions

and seek support from others or provide support to them for the regulation of emotion (Rimé 2007, Zaki and Williams 2013, Hofmann 2014). Zaki and Williams (2013) defined *interpersonal emotion regulation* as “individuals’ use social interactions to regulate their own or others’ affect” (p. 804). When this interaction is related to the regulation of one’s own emotions, it is called intrinsic interpersonal regulation; whereas, it is called extrinsic interpersonal regulation, when it includes regulation of other’s emotion. Although it is stated that interpersonal emotion regulation usually occurs together with intrapersonal emotion regulation (Zaki and Williams 2013, Gross 2015), it is worthy of note that many theoretical approaches and as an extension, many assessment tools only include intrapersonal emotion regulation. For example, items of self-report measures as such the ERQ (“When I want to feel more positive emotion, I change the way I’m thinking about the situation”) and the DERS (“When I’m upset, I take time to figure out what I’m really feeling”) contain statements indicating intrapersonal regulation. Although, a similar situation is true for many of the self-report tools that assess emotion regulation, including state emotion regulation (State Difficulties in Emotion Regulation Scale; Lavender et al. 2017, State Emotion Regulation Inventory; Katz et al. 2017), it seems there are few measurement tools, such as the Interpersonal Emotion Regulation Questionnaire (Hofmann et al. 2016), have been adapted into Turkish (Gökdağ et al. 2019), and specifically evaluate this concept.

Although it is not a new concept theoretically, research in the field of interpersonal emotion regulation have gained momentum with the development of assessment tools. Hofmann et al. (2016) revealed that the frequent use of interpersonal emotion regulation; in other words, individuals’ excessive need for others to regulate their negative emotions, may be related to psychological distress (except for the enhancing positive affect dimension). Different results were obtained in Turkey and there was no relationship between interpersonal emotion regulation and psychological symptoms (except for the soothing dimension). Thus, it is considered that interpersonal emotion regulation may be perceived more positively in our country (Gökdağ et al. 2019). The results of a cross-cultural study also showed that collectivist cultures can benefit more from interpersonal emotion regulation than individualistic cultures (Liddell and Williams 2019). Therefore, studies in this field indicate that the results of interpersonal emotion regulation, similarly intrapersonal emotion regulation, may differ depending on cultural factors, and culture is an important factor to be considered. In addition to the culture, due to their co-occurring and often intertwined structures (Zaki and Williams 2013, Gross 2015), it is thought that it may be beneficial to consider intrapersonal regulation together with interpersonal regulation. The findings of the studies evaluating the habitual use of emotion regulation strategies support the interaction of intrapersonal and interpersonal emotion regulation. Accordingly, depressive symptoms of individuals whom using dysfunctional cognitive emotion regulation strategies less in the regulation of negative emotions decrease when they seek more consolation from and are soothed by others

(Ray-Yol et al. 2020); while it was found to be associated with higher depressive symptoms when individuals with low negative mood regulation expectancies regard less advice and guidance of others in the face of negative emotions (Altan-Atalay and Saritas-Atalar 2022). In recent years, assessment tools evaluating both intrapersonal and interpersonal emotion regulation have also been developed (Emotion Regulation of Others and Self; Niven et al. 2011, Difficulties in Interpersonal Emotion Regulation; Dixon-Gordon et al. 2018), taking into account the interaction revealed by these studies, in which structures related to intrapersonal and interpersonal emotion regulation are evaluated with different scales. Since emotion regulation includes both processes, although these measures provide important information; limitations such as evaluating intrapersonal and interpersonal regulation in different contexts or not including idiographic situations and the lack of specificity of emotion that is regulated may also be issues to be considered in relation to the contextual factors mentioned in the previous sections.

Moreover, the self-report tools used in the field may also cause to overlook the interpersonal context in which the emotion arises and is regulated, as a result of not clearly determining the situation. However, interpersonal context may affect the use of emotion regulation strategies. For example, findings of a research showed that suppression is used more often in the presence of other people, especially people whom the individual is not in close relationships with (English et al. 2017). Additionally, besides to being effective on the individual’s intrapersonal emotion regulation, the interpersonal context enables interpersonal emotion regulation together with intrapersonal emotion regulation. Therefore, although it is not always possible to evaluate them appropriately at the same time with existing self-report tools, it seems important to consider intrapersonal and interpersonal emotion regulation together. Interpersonal dimension of emotion regulation is tried to be included in laboratory studies, and the effect of interpersonal regulation as well as intrapersonal regulation has been investigated in some studies. Researchers are worked with participants in pairs, so one can regulate the emotion of the other in this type of research. To illustrate, a study examined the effect of participants’ negative emotions being regulated by both themselves (intrapersonal) and their partners (interpersonal) after showing emotional pictures. The results showed that the interpersonal regulation of the individual’s emotion by the romantic partner may be more effective than the intrapersonal regulation in reducing distress (Levy-Gigi and Shamay-Tsoory 2017). Even though laboratory studies provide an ideal evaluation for scientific research by means of the control of conditions; in addition to the fact the situation discussed in these studies; may not always be specific to the individual, external validity may appear as a limitation, because the context in which the emotion arises and the regulation occurs is different from the natural environment in which such situations are experienced (Aldao 2013). In conclusion, interpersonal context is an important aspect that needs to be considered and appropriately evaluated in the handling of emotions and emotion regulation. In addition, considering the fact that intrinsic and

extrinsic processes occur together, this should also be taken into account in the assessment.

## Spontaneous Use of Emotion Regulation Strategies

Emotion regulation is basically experienced situationally and momentarily (Ford et al. 2019). Consistently, in the process model of emotion regulation, which is one of the important theoretical approaches in the relevant literature, emotion regulation momentarily arises at different stages of the emergence of emotion. Accordingly, regulation may occur either before the situation emerges or in the course from the situation occurs to the emotional reaction arises or on various elements of the emotional response after the emotion has unfolded (Gross 1998b, Gross and Thompson 2007). Therefore, the strategies using for the regulation of emotions in daily life are determined momentarily and spontaneously. Except for a small number of scales that evaluate situational use, the vast majority of self-report tools used for assessment do not make situational evaluation and cannot assess situation-specific spontaneous use. At this point, it seems traditional laboratory studies have also some limitations as well as self-report tools. The fact that the spontaneous use of emotion regulation strategies is mostly not addressed in experimental studies is one of these limitations. Because in these studies, participants are often asked directly to use specific strategies which the researchers want to assess its effect; in other words, the emotion regulation strategies used are determined by manipulation. Hence, in addition to the advantages of experimental studies such as including the specific emotion and interpersonal context in the research, there are also disadvantages such as the inability of individuals to choose the strategy they will use spontaneously and therefore cannot be examined the strategy choice in different contexts (Aldao 2013). However, studies show that strategy choice is affected by contextual factors. For example, the suppression strategy is used more in the case of short-term goals, while the reappraisal strategy is used more for long-term goals (Sheppes et al. 2014).

When current laboratory studies are reviewed, it seems that there is a small number of research evaluating spontaneous use (Cambell-Sills et al. 2006, Egloff et al. 2006, Ehrling et al. 2010, Gruber et al. 2012, Quigley and Dobson 2014). For example, Egloff et al. (2006) evaluated the results of the spontaneous use of reappraisal and suppression strategies and reported that the findings were similar to the results of studies in which participants were instructed to use these strategies through experimental manipulation (Gross 1998a, Richards and Gross 2000). Quigley and Dobson (2014), on the other hand, examined the use of trait, spontaneous and instructed strategy use in participants with and without depressive symptoms. One of the remarkable results of the research, while the findings on habitual use indicate that the participants with depressive symptoms used more suppression and rumination, and less reappraisal compared to the participants without depressive symptoms; it showed that they spontaneously used suppression and rumination strategies more, and there was no difference between the two groups' use

of the reappraisal strategy. In addition, although the participants with depressive symptoms spontaneously used the reappraisal strategy less than the other strategies, it was observed that when these individuals were instructed to use reappraisal, they could use the strategy appropriately and benefit from reappraisal in reducing negative affect like the participants without depressive symptoms. Ehrling et al. (2010) also revealed similar findings on reappraisal. In other words, reported general and situational use may differ from each other, while instructed strategy use may not reflect individuals' use in daily life. Therefore, it may not be appropriate to draw conclusions based on research findings in which only habitual use is evaluated or strategy use is determined by manipulation. Thus, it is important to evaluate the spontaneous strategy choice in different contexts separately.

## Multiple Strategy Use

Emotion regulation process is affected by many factors, and as mentioned, context-related features affect the selection and results of regulation strategies. However, although emotion regulation encompasses a wide variety of processes and strategies, only very few strategies appear to be included in research. On the other hand, it is stated that emotion regulation does not represent a process as simple as applying a specific strategy, but in general, many emotion regulation strategies are used together in the regulation of a single emotion (Ford et al. 2019). For example, Aldao and Nolen-Hoeksema (2013) reported that individuals often try to regulate their emotions by using more than one strategy when no specific instruction is given. Opitz et al. (2015), on the other hand, showed that even when the participants were instructed to use a certain strategy, they might be use other strategies in addition to stated strategy. Therefore, it can be said that the general tendency is to use more than one strategy while regulating emotions. In another study, the number of strategies used was examined and it was reported that an average of seven strategies were used to regulate a single negative emotion (Heiy and Cheavens 2014). It seems the contextual factors that are effective in the choice of strategy also have a role at this point. A recent study indicates that the use of more than one strategy is more common in situations with high emotional intensity than in situations where emotional intensity is low (Szasz et al. 2018). Ford et al. (2019) entitled this phenomenon, which refers the use of more than one strategy in the regulation of an emotion, as *polyregulation*. Accordingly, strategies can be used simultaneously or sequentially in an emotion regulation process. The concomitant use of functional strategies that are compatible with the context and with each other are associated with more positive results. On the other hand, frequently used assessment tools generally evaluate a very limited number of strategies as if they were independent from each other. For example, the ERQ evaluates two strategies which are reappraisal and suppression. Although there are measures that evaluate more strategies, it is very difficult to have an idea about the use of strategies together in the regulation of an emotion, since most of the current assessment tools do not evaluate a specific situation. With the emphasis on the importance of context in recent years,

it is thought that the assessment tools developed to evaluate the situational use of emotion regulation strategies can provide more information on this topic compared to the scales that evaluate general use. For example, the State Emotion Regulation Inventory (Katz et al. 2017) assesses the situational use of four strategies: distraction, reappraisal, brooding, and acceptance.

Experimental studies, on the other hand, cannot provide clear information on this subject because they generally do not evaluate the spontaneous use of emotion regulation strategies and focus on only a limited number of strategies through manipulation. Although spontaneous use of emotion regulation strategies has been evaluated in some studies conducted in the laboratory environment, it is seen that limited number of strategies are considered in these studies (Campbell-Sills et al. 2006, Egloff et al. 2006, Ehring et al. 2010, Gruber et al. 2012, Quigley and Dobson 2014). Polyregulation research, on the other hand, are in its infancy, but with the contribution of current methods, they include many strategies in the study and support the relationship between the multiple strategy use and results of emotion regulation. Southward and Cheavens' study (2020) revealed that the use of functional strategies that are compatible with each other, both momentary and in general, affects mood positively, while the multiple use of dysfunctional strategies negatively affects mood. Such an approach is an important factor that should be included in the evaluation process, as it can more realistically capture the appearance of emotion regulation in daily life.

### **Efficacy**

Another important point regarding emotion regulation strategies is the efficacy of the strategy. The efficacy of the emotion regulation strategy is defined as the change that the use of a particular strategy causes on the target emotion (Carthy et al. 2010). The efficacy of the strategy can change, just as the preferred strategy can change according to the situation, emotion, and intensity of the emotion as stated before. Still, it seems generalizations are made regarding the results of the strategies based on the studies conducted in the field, and consequently, emotion regulation strategies can be classified as adaptive-maladaptive (Aldao et al. 2010). However, most of this information is not based on studies conducted in contexts where strategies are used spontaneously in real life and evaluating the effect of emotion regulation strategies on emotion in relevant context; it comes from studies that have various limitations in terms of generalization, that the use of strategy is manipulated in the laboratory environment, or that the general use tendency is evaluated with self-report tools, based on the assumption that people regulate their emotions in a similar way in a wide variety of situations, and the relationships between these conditions and various outcomes are examined. The self-report tools used in these studies, on the other hand, only question whether the strategies are used or the frequency of use; does not carry out a separate evaluation regarding the efficacy of these strategies (Lee et al. 2017). Yet, one of the important factors determining the outcome of the use of a particular strategy is the measurement

of efficacy. Consistently, a recent study revealed that greater use of the effective strategies, which make changes on the target emotion, positively affected the mood (Heiy and Cheavens 2014). Therefore, efficacy of the strategy is one of the important factors which should be consider for evaluating emotion regulation.

### **Time Frame**

Emotion regulation is a process emerging momentarily depending on the characteristics of the situation that has arisen. However, as mentioned earlier, besides general statements in the simple present tense do not reflect in situational and momentary nature of emotion regulation using for assessment in the self-report measures, also it is worthy of note that time frame is not specific (Lee et al. 2017). Whereas, considering the appropriate time frame is important both in terms of determining all the strategies used in the regulation process and evaluating the effects of these strategies on the relevant emotional state. On the other hand, the absence of a time limit can lead to various limitations and biases. For example, reporting bias can influence on the individual's responses, as the relevant situation is not specific and therefore spontaneous use cannot be evaluated (Aldao 2013). In experimental studies, on the other hand, it is typically possible to provide momentary emergence of emotion by various methods and thus, such biases can be prevented. However, the issue of ecological and external validity, which was discussed in the previous sections, remains a subject to be kept in mind. Therefore, the relevant time frame is also an important topic to be considered in the evaluation of emotion regulation and its results.

### **Current Approaches in the Assessment of Emotion Regulation**

Some of the contextual factors related to emotion regulation, which can be neglected both in theory and practice, are discussed above, and it is mentioned how some of them are tried to be compensated by traditional methods of studying emotion regulation. For example, since self-report tools that are widely used in the evaluation of emotion regulation make a general assessment that does not reflect the situational nature of emotion regulation, assessment tools evaluating state emotion regulation have been developed. Additionally, experimental studies appear as an alternative in which contextual factors can be included in terms of the specific situation and emotion. However, in these methods, which can be an alternative to self-report tools that evaluate general use, other problems such as not addressing idiographic situations or external validity may arise; in other words, traditional methods may not be sufficient in eliminating the limitations. Including various factors such as idiographic situations, interpersonal context, and spontaneous use of emotion regulation strategies in laboratory studies emerges as an alternative where context-related variables can be better evaluated. Nevertheless, alternative methods with high external validity that can represent better the appearance of emotion regulation in daily life are needed (Aldao 2013).

Although it is still in its infancy, it has been made a stride in the field of emotion regulation in this regard and promising results have been obtained. Current methods that can offer more functional solutions to the limitations about contextual factors will be discussed below.

The first of these is Ecological Momentary Assessment (Stone and Shiffman 1994) or Experience Sampling Method (ESM; Csikszentmihalyi and Larson 1987), which has been used in a wide variety of subjects that need momentary assessment in recent years. ESM is a method that aims to systematically evaluate participants' emotions, thoughts, behaviors or symptoms during their daily lives through self-report. In this method, participants are asked to keep repeated momentary records about certain features of the subject of interest. Nowadays, technological methods are mostly preferred for recording and records are generally taken through smartphone applications. A notification is sent to the participants' phones at certain times of the day, and they are asked to answer a series of questions about the subject that is aimed to be evaluated. Each assessment is related to the situations that have emerged since the previous notification, so it is ensured that the relevant event can be evaluated as soon as possible (Csikszentmihalyi and Larson 1987, Santangelo et al. 2013).

It seems that such methods have started to be used in recent years in order to make an assessment in accordance with the momentary and situation-specific nature of emotion regulation. Thus, it is possible to evaluate whether the participants have experienced any emotion since the last notification, the type and intensity of the emotion they have experienced, which strategies and what extent they have used to regulate this emotion, multiple use and efficacy of the strategies, very close to the relevant situation. While there are studies evaluating only a few strategies (Haines et al. 2016, Brockman et al. 2017), there are also studies evaluating many strategies with this method. For example, Brans et al. (2013) evaluated the use of 6 emotion regulation strategies (reflection, reappraisal, rumination, social sharing, expressive suppression, distraction) on positive and negative affect in daily life by measuring 10 times a day for 7 consecutive days with ESM. Heiy and Cheavens (2014) evaluated the use of 40 emotion regulation strategies (20 for positive, and 20 for negative emotions) by assessing 3 times a day (4 hours between each assessment) for 10 days. Thus, it was obtained detailed information about the most frequently used and most effective strategies for the emotions frequently experienced in daily life. Similarly, McMahon and Naragon-Gainey (2019) used ESM for evaluating 12 emotion regulation strategies (acceptance, behavioral avoidance, distraction, experiential avoidance, expressive suppression, procrastination, reappraisal, reflection, rumination, savoring, social support, substance use) in both clinical and non-clinical samples and to examine the structure of these strategies. Thus, emotion regulation strategies that were used spontaneously in clinical and non-clinical samples could be evaluated in a very short time after the relevant situation. In this sense, it is possible to say that these methods based on momentary assessment increase ecological validity by minimizing

biases. Additionally, interpersonal emotion regulation was included in these studies and intrinsic interpersonal emotion regulation was also evaluated. A limitation of this method that can be addressed is that carrying out the evaluation very soon after the relevant situation may prevent the assessment of the entire regulatory process. Because an evaluation is made on the situation and emotion experienced since the previous one with each notification. Since the emotion generation process, which forms the basis of the process model, may not be completed in this short period, and there are different strategies corresponding to each stage of this process, individual's stage may not always be suitable for evaluating all of these strategies (McMahon and Naragon-Gainey 2019). In addition, although repeated measures have advantages, such measures can prime the use of certain strategies (Aldao 2013).

Another method that enables contextual factors related to emotion regulation to be addressed is the clinical interview method. Studies on this method, which has started to be used in the evaluation of emotion regulation based on the limitations of self-report tools, are still in their infancy. One of the early examples is the Emotion Regulation Interview (ERI) by Werner et al. (2011). The ERI is a structured interview administered by a clinician. It evaluates emotion regulation in social anxiety-specific situations within the framework of Gross' process model and assesses the frequency of use of 7 emotion regulation strategies (situation selection, situation modification, attentional deployment, cognitive change, suppression, relaxing body, acceptance) and the self-efficacy of three of these strategies. In the application, an emotion induction method is applied to the participants first, and then the ERI is conducted both for this situation and for other situations in which the participants have social anxiety in the last 1 month. In addition, there is another interview form called the Semi-Structured Emotion Regulation Interview (Lee et al. 2017) in the international literature. In this form, 9 emotion regulation strategies (social support-seeking, self-medication, deliberate self-harm, acceptance, positive reappraisal, expression suppression, rumination, behavioral avoidance, cognitive avoidance) and the efficacy of these strategies were evaluated for two different emotions via interview method. In Turkey, Bintaş-Zörer and Yorulmaz (2019) adapted the ERI into Turkish and developed the Emotion Regulation Interview-Revised Form (ERI-RF) by expanding the scope of the ERI on the basis of the emotions, emotion regulation strategies and the efficacy of the strategies considering the fact that emotion regulation is important for other emotions frequently experienced in daily life besides social anxiety, and the necessity that evaluating some other strategies that are compatible with the process model and strategies that include interpersonal emotion regulation. The ERI-RF evaluates the frequency of use and efficacy of 11 emotion regulation strategies (situation selection, situation modification, attentional deployment, rumination, cognitive change, suppression, relaxing body, response modulation, social support-seeking, extrinsic regulation, acceptance) for the most frequently experienced and regulated emotions (anxiety, sadness, anger) in daily life and interpersonal relationships (Gross et al. 2006,

Heiy and Cheavens 2014). In order to include the interpersonal context in the interview form, the situations in which these emotions emerged in the interaction with the romantic partner in the last 1 month were considered, and both intrinsic and extrinsic interpersonal emotion regulation could be assessed by adding the items evaluating interpersonal emotion regulation in this study.

Based on the aforementioned, the interview method includes a 1-month time frame, as well as evaluating the interpersonal context and contextual factors such as emotion, emotional intensity, situation related with emotion, spontaneous and multiple use of strategies, and efficacy, thus, instead of assessing the tendency towards habitual use of emotion regulation strategies, it can be evaluated state regulation, and can also enable the whole process of emotion regulation to be addressed. In addition, it is stated that considering situations that occur naturally in daily life and evaluating the spontaneous use of emotion regulation strategies increase external validity (Werner et al. 2011). Nevertheless, the limitation of this method is that making a retrospective evaluation even though it comprises a short period of 1 month. It should also be considered that participants may avoid reporting some strategies during the interview (Lee et al. 2017).

In summary, momentary assessments and interview methods are approaches that can offer solutions to the limitations of traditional methods in the evaluation of contextual factors. In this respect, it is stated that these approaches can increase external validity and that current approaches and laboratory studies can complement each other (Ebner-Priemer and Trull 2009, Aldao 2013). Although they have limitations due to the nature of both of the current evaluation methods discussed here; since they include many neglected contextual factors, it is thought that these approaches can more realistically reflect the appearance of emotion regulation in daily life, so that the associations between emotion regulation and related variables can be better understood.

## Conclusion

Emotion regulation, which is considered as a transdiagnostic concept in the field of psychological health, has been examined in depth as a subject of many research, but it is also remarkable that there are neglected aspects in this field. With the emphasis on the situational use of emotion regulation in recent years, it has been observed that theoretical approaches and studies in the field have revealed important information about emotion regulation, however, they may overlook some contextual factors. The emotion regulation literature is mostly based on survey studies using self-report tools and this situation may cause various biases and limitations due to the structure of many of the self-report tools that do not reflect the momentary and situational nature of emotion regulation, but consider emotion regulation as a stable structure and evaluate the habitual use of strategies. Although laboratory studies can be a solution to many limitations of self-report tools, other limitations such as ecological and external

validity arise in these studies conducted by manipulation in an unnatural environment different from real life.

Therefore, it is worthy of note that new approaches have been used in the evaluation of emotion regulation in recent years. Some of these approaches that aim to make an assessment more appropriate to the nature of emotion regulation are ESM studies and those studies in which the clinical interview method is used. With these current approaches, important contextual factors which can be neglected by the traditional methods, such as situation related with emotion, emotion that is regulated, emotional intensity, interpersonal context, spontaneous and multiple use of emotion regulation strategies, efficacy of strategies and time frame can be addressed, so that a much more detailed evaluation can be made as well as the problem of external validity can be compensated. Although these approaches, which can offer solutions to various limitations of traditional approaches, may have their own limitations due to the nature of the methods, it is thought that these current methods can make significant contributions to the field of emotion regulation by making appropriate choices for the theoretical background and practical purposes of the research.

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