

Different Perspectives on Emotion Regulation and its Efficiency

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Abstract

In the present article, diverse definitions, theoretical background, and contemporary research findings from the emotion regulation (ER) field are brought together alongside its open dilemmas. A clearer categorization of emotion and ER perspectives is offered: neurobiological perspective in which ER is a set of neurobiological processes that influence the emotion experience and expression; socio-constructivist perspective in which ER is influenced by socio-cultural expectations; and cognitive perspective that places ER at any situation-attention-appraisal-response sequence. Further, two contemporary models of ER are described and evaluated, followed by a presentation of the research findings regarding certain ER strategies, especially reappraisal and suppression. ER strategies are presented regarding their associations with other psycho-social characteristics. Also, efficiency of ER strategies is discussed further, proposing four criteria that should be considered simultaneously: functionality (goal orientation), adaptability (including social acceptance), automatization, and flexibility. In conclusion, some directions for the future ER research are outlined.

Keywords: emotion regulation; emotion; emotion regulation strategy; efficient emotion regulation

An increased interest in emotion regulation (ER) in psychological literature over the last two decades can be recognized through the numerous empirical studies that were designed to investigate different areas of ER, combining the knowledge of neurobiological, cognitive, developmental, social, personality, clinical, health, and cross-cultural psychology (Gross, 1998; Matsumoto, 2006). The concept of ER also fertilizes itself from the disciplines outside psychology, such as philosophy, sociology, or economics (Gross, 1998). This increasing interest in ER can also be followed through the number of scientific articles published on the subject. For example, in the PsyArticles database, under the keyword "emotion regulation", 178 articles were published in the period 1993-1997, 487 such articles

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in years 1998-2002, 1467 articles in years 2003-2007, and in the period 2008-2013, there have been an amazing 5393 articles.

ER includes different processes by which emotions may be modified. However, an interest in how emotions can and should be regulated is not new. One of the important precursors of the contemporary studies of ER is the psychoanalytic tradition with the study of anxiety and ego defense mechanisms aimed at regulating anxiety (Gross, 1999). Following this line of thought, ER is predominantly an unconscious process. The continuity of this tradition can still be traced in contemporary ER studies in its enduring concern with reducing unpleasant emotions and the (un)consciousness of regulatory processes, central to the study of psychopathology (Gross, 1999). The stress and coping strategies represent the second precursor to the research on ER. Coping includes the process of individual evaluation of situation and one's own capacities to respond to it (Folkman & Lazarus, 1985). A distinction was made between problem-focused coping, aimed at resolving the problem, and emotion-focused coping, "aimed at lessening the unpleasant emotional experience" (Gross, 1999, p. 555). Current ER research reflects the latter, that is, emotion-focused coping, although the studies focus increasingly on specific ER strategies (e.g., reappraisal, suppression, etc.). Importantly, there is a distinction made between coping and ER. However, we found that different authors understand this distinction in different ways – either coping is a broader category, including – besides emotional – also non-emotional actions taken to achieve – besides emotional – also non-emotional goals (Carver, Scheier, & Weintraub, 1989), or coping is limited to stress-eliciting situations – which is a narrower category (John & Gross, 2009).

Our discussion opens with an overview of the field of ER, including the contemporary perspectives, research, and findings in various areas of this topic. Different definitional dilemmas that appear in studies on ER are presented, and some possible answers are discussed. We then consider some of the ER strategies and continue with the discussion on ER efficiency. The insights of different findings on ER are aimed at identifying the important directions for its future investigation.

Different Perspectives on Emotion and ER

Before conceptualizing ER, it is important to understand that its definition is influenced by all the previous discussions and research done in the field of emotions that will be outlined next. Generalized, in our view, there are three main perspectives regarding emotions: a predominantly neurobiological perspective (e.g., Izard, 1991; Izard et al., 2009; LeDoux, 1989; Panksepp, 1994), a predominantly cognitive (e.g., Frijda, 1988; Lazarus, 1991), and a predominantly socio-constructivist one (e.g., Hochschild, 2008; Mesquita & Albert, 2009). Each of these perspectives is accompanied by a consequently different understanding of ER.

From the neurobiological perspective, each emotion is caused by a specific brain circuit resulting in a coordinated experience, autonomic and neuro-endocrine responses, and usually concluding unobservable expressive behaviors (Ekman, 1992; Gross & Feldman Barrett, 2011; Izard et al., 2009; LeDoux, 1989; Panksepp, 1994). Emotions are understood "as biologically prepared capabilities that evolved and endured in humans because of their value for survival" (Cole, Martin, & Dennis, 2004, p. 319).

From this definition, the neurobiological perspective understands ER as a separate set of processes that either stop the emotion from launching or prevent it from being expressed once it is triggered. The brain structures involved in this process are primarily prefrontal cortices and anterior cingulate cortex, sub-cortical structures, including the amygdalae, hypothalamus, brain stem, and central grey (Damasio, 1998). On this hierarchical axis of neural structures, mutual regulatory influences appear between higher (e.g., prefrontal cortex) and lower (e.g., amygdalae) neural structures (Thompson, Lewis, & Calkins, 2008).

In the cognitive perspective, emotions are understood as a response to a subjectively important event that is appraised by an individual (Frijda, 1988; Lazarus, 1991). An emotion is constructed from a sequence of different processes, starting with an appraisal of the situation and ending with experiential, behavioral, or physiological response (Gross & Feldman Barrett, 2011; Oatley & Jenkins, 1996; Prosen, Smrtnik Vitulić, & Poljšak-Škraban, 2013; Smrtnik Vitulić, 2009). However, whether appraisals cause emotions, precede them, or co-occur with them, remains unresolved among authors (Cole et al., 2004). In this perspective, ER can take place at any situation-attention-appraisal-response sequence, but special attention is given to (re)appraisal (Sheppes & Gross, 2011).

In the socio-constructivist perspective, the context in which emotions appear is emphasized. Emotions are socially structured and expressed through social expectations in an individual's cultural environment that differ in their worldviews, ideologies, values, and concepts of self (e.g., Hargreaves, 2000; Hochschild, 2008; Keller & Otto, 2009; Mandal, 2007; Markus & Kitayama, 1991; Matsumoto, 2006; Triandis, 1989). Socio-cultural environment contributes in important ways to ER in terms of the degree to which individuals modify situations, modify understanding of these situations, or modify emotional reactions (Ekman, 1992; Mesquita & Albert, 2009; Thompson, 2011).

However, we observe that many models of emotions and ER do not fit in a sole perspective, as emotions and ER cannot be understood only as neurobiological, cognitive, or socio-cultural processes. For example, Gross (1998) combines a neurobiological with the cognitive perspective, whereas Matsumoto (2006) combines a cognitive with a social perspective. Examples of such unitary definitions of ER can be found in different authors. Siegel (1999) defines ER as the neural, cognitive, and behavioral/action processes that sustain, amplify, or attenuate emotion arousal and the associated motivational, cognitive, and action tendencies.

Gross (1998) claims that ER involves the initiation of new, or the alteration of ongoing emotional responses through the action of regulatory processes that individuals use to influence the emotions they generate, when they do so, and how these emotions are experienced and expressed.

These definitions emphasize the contents of the processes involved in ER. However, some ER definitions emphasize more the characteristics of these processes, such as their consciousness, or goal orientation. The authors espousing this view (Eisenberg, Hofer, & Vaughan, 2009; Gross & Thompson, 2009; McRae, Ochsner, Mauss, Gabrieli, & Gross, 2008; Thompson & Meyer, 2009) define ER processes as those behaviors, skills, and strategies, whether conscious or unconscious, automatic or controlled, that serve to monitor, evaluate, modulate, inhibit, and enhance emotional experience and expression to accomplish one's goals. ER also involves the ability to reflect on the complexity and value of one's own emotions in a self-supporting manner (Cole, Michel, & Teti, 1994, as cited in Diamond & Aspinwall, 2003a).

Nevertheless, we also recognized many conceptual differences that remain open regarding the emergence of the ER. The ER strategies may occur intrapersonally – strategies for self-regulation, or interpersonally – strategies used to regulate the emotions of others (Campos, Walle, Dahl, & Main, 2011). However, some authors claim that ER as a whole is interpersonal, since the emergence of emotions is inherently relational (van Kleef, 2009).

Maybe the most zealous discussion among the researchers exists on whether the emotions and ER are one or two distinct processes. On the one hand, emotions and ER are argued to be one and the same process, as emotions are self-regulatory in their nature (e.g., Kappas, 2011). On the other hand, other authors (e.g., Gross, 1998) defend the view that emotions and ER are two different processes, and the regulation can take place either before or after the emergence of emotions.

Another dilemma regarding ER is whether the emotions are regulating – causing changes inside and outside of an individual, or whether they are regulated – referring to changes in the activated emotions such as their valence or intensity (Cole et al., 2004; Eisenberg & Spinrad, 2004; Siegel, 1999). We found different perspectives regarding this dilemma.

In addition, when reading studies from different fields of psychology, we recognized an inconsistency regarding the understanding of ER; some authors – mostly in the field of psychotherapy – use this term to address only the efficient, functional, adaptive ways of dealing with emotions, whereas for the opposite they use a term dysregulation (e.g., Schore, 2001; Siegel, 1999). On the other hand, some authors (e.g., Gross, 1999) do not make such a distinction and use the term ER regardless of its (in)efficiency. This dilemma will be discussed further in the section on ER efficiency.

The numerous views and approaches concerning ER may appear somewhat confusing. Also, a comprehensive classification of potential ER strategies remains a

challenge yet to be met. ER strategies could be classified and analyzed in terms of their characteristics. The characteristics include (1) intensity – increasing or decreasing the power of a certain emotion; (2) temporality – what is the duration of a certain ER strategy – is it momentary or long-lasting; (3) sequence – when does a certain ER strategy occur in the emotion-generation process; (4) content – is a certain ER strategy focused on the physiological, cognitive, or behavioral processes; (5) neurological processing – where in neural hierarchy does a certain ER strategy begin – is it top-down (from the prefrontal cortex to amygdalae) or bottom-up (from the limbic system to higher cortical regions); (6) volition/awareness – is a certain ER strategy conscious (also voluntary, controllable, effortful, intentional, deliberate, explicit), or unconscious (also non-voluntary, automatic, effortless, unintentional, habitual, implicit); (7) intra-/interpersonal – is a certain ER strategy a part of individual's intrapersonal or interpersonal process, used for self-regulation or for the regulation of others; (8) goal orientation – is a certain ER strategy self-oriented (aimed at managing one's own goals) or other-oriented (motivated by the perceived goals of others). Each ER strategy could be analyzed regarding each of the above characteristics, for example, more or less intensive. But, as the majority of the above characteristics actually represent a continuum rather than distinctive categories, an exclusive categorization of ER strategies cannot be achieved. A comprehensive model of ER strategies would thus have to include some other, maybe higher-order categories that would allow for an exclusive categorization of ER strategies. In our best of knowledge, two such models have been proposed: one by Gross and Thompson (2009), named process model of ER, and one by Koole (2009), which proposes target by function classification of ER strategies. Since they both receive a lot of attention in ER literature and represent a basis for several ER studies they will be outlined in greater detail in the following section.

Two Models of ER

Process model of ER is an attempt to represent the different phases of emotions and their regulation (Gross & Thompson, 2009). This model sees emotion regulatory acts as having their primary impact at five different points in the emotion generative process: situation selection, situation modification, attentional deployment, cognitive change or cognitive reappraisal, and response modulation – of experiential, behavioral, or physiological response tendencies (Gross, 1998; Gross & Feldman Barrett, 2011). The most rudimentary influences include the increase and decrease of the mentioned tendencies (Gross, 1998).

However, when analyzing this model, we noticed it does not explain clearly where the emotion itself is placed. We thought of two possible explanations to this dilemma. (1) If the emotion includes the situation-attention-appraisal-response processes (Lazarus, 1991), then all five ER points contribute to the generation of emotion and are integrated in it. However, at the end of this process, the process

may start all over again; thus it becomes antecedent to the potential new emotion. (2) If the emotion is limited solely to the response tendency (including specific behavioral, experiential, and physiological changes), certain ER points represent the regulation prior to emotion, and the fifth point, the regulation after the emotion has appeared. As Gross (1998) describes the first four emotion regulatory points as antecedent focused, and the fifth point as response focused, we think it may be concluded that he understands emotion solely as response tendency.

The described model of ER mentions several points in the emotion-generation process where different ER strategies can be used. As such, it may also apply as an ER strategies classification and it offers many possibilities for the research of these strategies. So far, however, only some of them have been studied more extensively.

On the other hand, Koole (2009) proposed a classification of ER strategies based on (1) emotion-generation systems that are being regulated and (2) psychological functions of ER. Emotion-generation systems include attention, emotion-relevant knowledge (e.g., appraisal), and body. Psychological functions of ER include satisfaction of hedonic needs, facilitation of goal achievement (understood as following one verbally reportable socially desirable norm), and optimizing global personality functioning. Even though this model represents a welcome attempt to include the vast number of ER strategies into exclusive higher-order categories the classification of empirical studies into these categories is somewhat unclear. For example, cognitive reappraisal has been classified as targeting person's knowledge and serving goal achievement (Koole, 2009). However, are one's appraisals always serving socially desirable verbally reportable goal?

Some ER Strategies and Their Associations with Psycho-Social Functioning

There are an increasing number of studies including various ER strategies. The two most studied ER strategies are reappraisal and suppression and they will be explained in greater detail, followed by research data including some other ER strategies associated to health, social interactions, and academic achievement.

The individual's evaluation of a situation is emotion-generative. If the evaluation is changed, that is, reappraised, the reappraisal may also change the emotional response (Gross, 1999; Lazarus, 1991). Reappraisal entails changing the way one thinks about the emotional situation in terms of its meaning so as to change its emotional impact (Evers, Stok, & Ridder, 2010; Gross, 1998; Karademas, Tsalikou, & Tellarou, 2010). What can be changed is either an appraisal of the situation – what it means or how important it is, or an appraisal of the capacity one has to face its demands. Following reappraisal, a decrease of emotion experience is reported verbally but it does not necessarily mean a concomitant decrease in physiological response (Gross, 1999).

Suppression entails the reduced expression or non-expression of emotions when in an emotional state, the process by which ongoing outward signs of emotion are inhibited (Evers et al., 2010; Gross, 1998; Gross & John, 2003; Gross & Thompson, 2009; Matsumoto, 2006). Suppression is efficient in lessening the outward - behavioral expression of unpleasant and pleasant emotions (Gross & John, 2003). For the pleasant emotions, their inner experience is also lessened (Gross & John, 2003), but the data on the effects of suppression on the experiential level of unpleasant emotion is ambiguous. Some studies report suppression decreases self-reported experience of some unpleasant emotions, but not others that may continue to linger and accumulate unresolved (e.g., Diamond & Fagundes, 2010; Gross & Levenson, 1997), whereas some studies even report an increase of unpleasant emotions experience (e.g., Gross & John, 2003).

Reappraisal, if understood as an ER strategy used prior to emotion occurrence, permits the modification of an entire emotional sequence, without notable physiological, cognitive, or interpersonal costs. The opposite is true for suppression that occurs late in the emotion-generative process, and primarily modifies the behavior. It consumes an individual's cognitive resources for the management of one's response tendencies, and creates a sense of discrepancy between inner experience and outer expression, alienating the individual from others and leading toward a negative feeling about the self (Gross & John, 2003).

The results of some studies including reappraisal and suppression will be presented, starting with reappraisal. The frequent use of reappraisal is significantly positively connected to well-being (Gross & John, 2003; John & Gross, 2009), to self-esteem (Gross & John, 2003), to secure attachment and social support (Gross & John, 2003), and memory for conversation contents (Richards, Butler, & Gross, 2003). In the majority of studies, the frequent use of suppression is negatively linked to well-being (Gross & John, 2003; John & Gross, 2009; Karademas et al., 2010), but in the study by Cote, Gyurak, and Levenson (2010) those individuals who could suppress their emotional reaction were the happiest with their lives and had higher income and socioeconomic status. The frequent use of suppression may also be negatively linked to social functioning (Gross & John, 2003; Martini & Busseri, 2012). The influence of suppression on memory depends on the memory task. For example, in the study by Richards and Gross (2000) where memory for emotional events was measured, the association with the suppression was negative. In the study by Richards et al. (2003), suppression decreased the memory for conversation contents, but increased the memory for emotional reactions. In the field of health studies, suppression is frequently connected to the negative outcomes. The explanation may lie in its positive association to the sympathetic nervous system activation (Diamond & Fagundas, 2010; Gross, 2002) despite a concomitant decrease in somatic activity that may cause a selective inhibition of the immune system (Maier, Watkins, & Fleshner, 1994, as cited in Gross, 1998). The strategy of suppression in the mental health research was found to lead to increased

comfort-food (i.e., chocolate, crisps) intake in the study on emotional eating by Evers et al. (2010). Suppression was also connected to depression, but only if it was accompanied by the individual's non-acceptance of emotions, which was the case for male participants (Flynn, Hollenstein, & Mackey, 2010). This study indicated that both suppression and acceptance of emotions should be taken into consideration when mental health studies are designed.

The reappraisal is generally considered as a more efficient ER strategy whereas suppression is considered as a less efficient ER strategy (Gross, 1998). However, the above mentioned data led us to the conclusion that such evaluation may be predetermined. Suppression may sometimes have positive consequences, and reappraisal can also have negative ones when it is applied too widely, leading toward defense mechanisms such as denial or rationalization (John & Gross, 2009). It is also important not to forget the possible contribution of other factors, for example, socio-cultural factors in the use of reappraisal and suppression. In his study, Matsumoto (2006) demonstrated that North Americans are using reappraisal more, whereas the Japanese are more likely to use suppression, indicating possible cultural preferences in ER strategies use.

Besides reappraisal and suppression, other ER strategies were studied in the mental health area: repression, situation avoidance, experiential avoidance, and rumination. Repression is an ER strategy pushing the unpleasant stimuli and their accompanying arousal out of consciousness (Bonnano & Singer, 1990, as cited in Gross, 1999). Situation avoidance is an ER strategy aimed at escaping the unpleasant situation (Aldao, Nolen-Hoeksema, & Schweizer, 2010), whilst the experiential avoidance can be defined as a tendency to escape private psychological experiences, such as thoughts or sensations (Boulanger, Hayes, & Pistorello, 2010). ER strategy that focuses individual's attention on one's depressive symptoms (Nolen-Hoeksema, 1991, as cited in Gross, 1999) is referred to as rumination. It is effortful, aimed at reducing depressive symptoms, although its actual effect is usually the opposite.

Two ER strategies, theorized to be protective against psychopathology, are reappraisal and acceptance of emotions, whereas ER strategies of suppression, repression, situation and experiential avoidance, and rumination are considered as risk factors for psychopathology, including anxiety, depression, eating disorders, and substance-related disorders (e.g., Aldao et al., 2010; Boulanger et al., 2010; Broberg, Hjalms, & Nevenon, 2001; Flynn et al., 2010; Salzman, 1997). In the psychotherapeutic field of research, we also found some other ER strategies to be more represented (e.g., tracking, mindfulness, holding), focusing on the present-moment (bodily) experiences (Ogden, Minton, & Pain, 2006). ER research is also present in the coronary heart disease, hypertension, and cancer studies: for example, Kravvariti, Maridaki-Kassotaki, and Kravvaritis (2010) found their connection with frequent unpleasant emotion expressiveness.

In some cases, however, ER strategies were described as emotional control in general. In these studies, ER was a powerful mediator of interpersonal relationships and socio-emotional adjustment across a lifespan (Thompson & Meyer, 2009). Efficient ER was also positively associated with good social relationship with peers (e.g., Eisenberg et al., 2009; Lopes, Salovey, Cote, & Beers, 2005), the quality of the student–teacher relationship (e.g., Chang, 2009; Grazziano, Reavis, Keane, & Calkins, 2007; Meyer & Turner, 2007), and academic achievement (e.g., Grazziano et al., 2007; Gumora & Arsenio, 2002; Ohman, 1986, as cited in Gross, 1998). In conclusion, many ER strategies have been studied, providing important and useful information. However, many ER strategies still remain less explored, offering a number of possible research directions.

Efficiency of ER

In the chapter on ER strategies it is apparent that reappraisal is generally considered a more efficient ER strategy, whereas suppression is considered to be a less efficient ER strategy (Gross, 1998). This distinction was already taken into consideration but it may also have opened a wider discussion on the efficiency of ER in general. It has encouraged us to try and find answers to the question: What is an efficient ER? Our goal is to take a closer look at the criteria defining this term and thus achieve its better understanding.

The efficiency of a certain ER strategy may be determined by its functionality (goal orientation), and adaptability (accordance to specific circumstances or context, including socio-cultural rules), (e.g., Scherer, 2011; Thompson, 2011). Functionality is defined as goal accomplishment. A common assumption is that the principal goal of ER is hedonic, leading to mood-repair by addressing the source of the unpleasant emotions, and mood-maintenance by avoiding information that might compromise a pleasant mood (Wegener, Petty, & Smith, 1995). A common misunderstanding of ER efficiency is that pleasant emotions are assumed to be regulated and unpleasant emotions are unregulated (Langlois, 2004). However, unpleasant and pleasant emotions may be in need of regulation, although some distinctions have been found in the use of ER strategies (Fredrickson, 2005). Research on ER has predominantly focused on unpleasant emotions because they impede social functioning, exploratory behavior, and cognitive processing (Fox & Calkins, 2003). The effects of pleasant emotions are the opposite – leading to the expanding body of research in this domain as well.

Continuing the discussion on functionality defined as goal orientation, an individual's goals can be multiple and sometimes contradictory. For example, certain ER strategies may help an individual accomplish immediate goals but may be inconsistent with the long-term goals (Thompson, 2011). The potential conflict between the multiple goals underlying ER is especially apparent in studies involving children at risk of affective disorders. When internalizing, these children

suppress their anxiety to avoid teasing by their peers, even though it harms them from a long-term perspective (Rubin, Coplan, Fox, & Calkins, 1995; Suveg & Zeman, 2004). On the other hand, children with an externalizing pattern may show their anger in an aggressive manner to punish someone, but that is also counter-productive for their long-term relationships. Understanding the goal orientation of efficient ER may lead to awareness of diverse ways of managing emotions that are rarely inherently optimal or maladaptive. Rather, they are more or less functional in the context of specific goals under particular circumstances.

The second criterion of ER efficiency is adaptability. ER strategies are adaptive when they are in accordance with an individual's specific circumstances and contexts, including socio-cultural rules (e.g., Scherer, 2011; Thompson, 2011). Because the socialization processes mediate cultural and gender differences in managing emotions, individuals use ER skills that are socially conditioned (Thompson & Meyer, 2009). Consequently, we can conclude that the criteria for efficient ER are to a large extent socially constructed. When discussing the criterion for social acceptability of ER we may also consider the question of what is normal. This question is especially important for the field of clinical psychology and psychiatry. Many ER characteristics may be found in descriptions of different psychological disorders or diseases; for example, situation and experiential avoidance and rumination in depression diagnostic criteria (see American Psychiatric Association, 2000).

Another criterion of ER efficiency worth considering may be automatization. The word regulation comes from the Latin *regula* or "rule" – thus to regulate means to make regular. The final goal of regulation would then be to make a certain process automatic, since such processes are more consistent and reliable. In this manner, it could be argued that the criterion of ER efficiency is its level of automatization (Bargh & Williams, 2009). Yet another criterion of efficient ER involves flexibility (Gratz & Roemer, 2004), referring to the capacity to produce context-dependent emotional responses (Westphal, Seivert, & Bonanno, 2010).

Our discussion on ER efficiency assessment may be taken further with the inclusion of individual differences perspective. Individuals vary in their sensitivity for and capability to manage various emotion arousal levels that also have distinct neural pathways (Porges, 2001, as cited in Ogden et al., 2006; Siegel, 1999). Each of us has a "window of tolerance" in which intensity of emotional arousal is optimal, enabling us to function well (Siegel, 1999). Outside of this window, emotional arousal is either too high or too low leading toward increased sensitivity, disorganized mental processing and so on, or towards numbness, disabled mental processing and so on, respectively (Ogden et al., 2006; Siegel, 1999). This model provides an important conclusion: the efficiency of ER strategies should be assessed with great consideration for the differences between individuals and the fluctuation within a person. It has been used especially in the psychotherapeutic

context where the term ER is more commonly limited to efficient ways of dealing with emotions, whereas inefficient ways are termed emotion dysregulation.

Another very important nuance in ER efficiency assessment is its developmental course. Thompson and Goodman (2010) eloquently describe the growth of ER that can be – in our view – understood also as the efficiency assessment guidelines. (1) An individual becomes increasingly responsible for managing their own emotions, and (2) with time, mentalistic strategies of ER prevail over the behavioral ones. (3) ER strategies become broader, more sophisticated, and flexible, (4) tailored to encounter specific emotions as well as emotions in general. (5) ER strategies repertoire not only incorporates social and personal goals, but also cultural norms. Still, (6) ER strategies are consistent with an individual's personality.

Similarly to Thompson and Meyer (2009), we can conclude that emotionally well-regulated people are those who are capable of flexibly altering – in a socially acceptable way – how long, how intensely, or how quickly they feel as they do in a specific situation. "Optimal ER is not a developmental task to be mastered at a certain age [...], but rather a 'moving target' that is continually sensitive to changing goals and contexts" (Diamond & Aspinwall, 2003b, p. 149).

Conclusions

Emotions and ER have become a central topic across psychological sub-disciplines. This is not surprising as ER has very important implications on a wide range of individuals' functioning such as health and interpersonal relationships. As the field of ER is such a diverse one, it is difficult to integrate its different definitions, approaches, and findings. In the present article, we attempted to bring together these aspects by including contemporary theoretical background and research data from the ER field.

Besides the previously addressed dilemmas regarding ER, we also tried to delineate the new questions that emerged when we compared and contrasted the vast, sometimes contradictory opinions of different authors and to find the possible answers to these questions. Firstly, what are the general perspectives in conceptualizing ER? We described three possible distinctive perspectives on ER deriving from defining emotions themselves. Even if similar perspectives have been mentioned previously, we added a clearer categorization and connection between emotion and ER definitions. Secondly, where does the regulation actually take place in Gross and Thompson's ER model (2009)? This question is linked to a more general discussion among the authors of the field whether emotion and ER are one or two distinctive processes. However, this question has not been addressed previously for this model. Thirdly, what are the criteria for efficient ER? This question has also been included into previous research; however, the authors did not apply the criteria (functionality, adaptability, automatization, and flexibility) we

proposed simultaneously. In order to address all these questions we offer some recommendations for future research.

As for conceptualizing ER, it would be sensible to achieve a greater consensus among the researchers when distinguishing between emotion and ER, to further clarify this area and thus facilitate greater comparability of research data. Until this is achieved we recommend for each empirical study to include a clear conceptual understanding of emotions and ER. As for ER efficiency, we delineated several criteria defining it: functionality (goal orientation), adaptability (including social acceptance), automatization, and flexibility. It may be quite a challenge to explore these criteria empirically. We suggest a few possible directions: functionality could be measured in terms of goal accomplishment. For example, a person may assess how helpful a certain ER strategy is for their immediate or long-term goal achievement. Adaptability could be assessed using the social consensus criterion of a certain cultural environment. However, specific group contexts should be acknowledged. Automatization may be determined via reaction times that measure the appearance of ER. As for flexibility, a person may describe their repertoire of ER strategies and its use across situations. It would also be interesting to study the efficiency of ER strategies during the developmental course.

We also thought of other research opportunities that remain open: other ER strategies (besides suppression and reappraisal) could be analyzed in greater detail. Research designs, aimed at specific ER characteristics within specific contexts and combining different methodological approaches, could be applied.

We hope that our reflections on these questions may lead toward a more complete view on the nature of ER and its functioning. Furthermore, we view the diversity in ER research as a possibility rather than disadvantage as it prompts us to question our assumptions and challenges us toward future research that will include advances in concept, methodology, and content.

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Različite perspektive emocionalne regulacije i njezina učinkovitost

Sažetak

U ovom je radu dan pregled definicija, teorijskih okvira i rezultata suvremenih istraživanja, ali i aktualnih izazova iz područja emocionalne regulacije (ER). Predstavljani su i osnovni pravci istraživanja ER: neurobiološki pravac, prema kojem je ER skup neurobioloških procesa koji utječu na doživljaj i izražavanje emocija; socio-konstruktivistički pravac, prema kojem socio-kulturalna očekivanja utječu na ER te kognitivni pravac, koji ER smješta u bilo koji dio slijeda situacija-pažnja-procjena-odgovor. Nadalje, opisana su i evaluirana dva suvremena modela ER te su predstavljeni rezultati istraživanja temeljeni na određenim strategijama ER, ponajprije oni vezani uz ponovnu procjenu i potiskivanje. Prikazane su strategije ER u odnosu na druge psiho-socijalne karakteristike. Također, u radu se raspravlja o učinkovitosti strategija ER i o četirima kriterijima koja bi trebalo usporediti: funkcionalnost (orijentacija usmjerena na cilj), adaptabilnost (uključujući socijalnu prihvaćenost), automatizaciju i fleksibilnost. U zaključku su navedene neke smjernice za buduća istraživanja emocionalne regulacije.

Ključne riječi: emocionalna regulacija, emocije, strategije emocionalne regulacije, učinkovitost emocionalne regulacije

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