Research Psikiyatride Güncel Yaklaşımlar-Current Approaches in Psychiatry 2023; 15(Suppl 1):283-297
doi: 10.18863/pgy.1350188

“

How to Regulate Anger? Using Expression, Problem Solving, and Distraction Strategies

Öfkeyi Nasıl Düzenleriz? İfade Etme, Problem Çözme ve Dikkat Dağıtma Stratejilerinin Kullanımı

İrem Şahin[1], Burçin Akın Sarı[1]

[1]Başkent University, Ankara

ABSTRACT

The main purpose of this study was to examine the effects of anger regulation on emotion regulation strategies applied through writing tasks. In this respect, a scenario that would trigger the anger was created. Levels of anger regulation were then evaluated by examining the effects of expression, problem-solving, and distraction strategies applied through writing tasks. The change in anger regulation was evaluated in terms of positive affect, negative affect, valence, and arousal values of emotion. In addition, the levels of effectiveness of these emotion regulation strategies were compared with each other. The sample of the study consisted of 152 female university students (for age; M =19.71, SD = 1.38). The Positive and Negative Affect Scale, Emotion and Arousal Assessment, and Emotional Valence Assessment Form were used as data collection tools. It was found that all three emotion regulation strategies had significant effects on negative affect and arousal. The most effective strategy for negative affect was distraction (M =14.44, SD = 4.83), while the least effective was expression (M =27.38, SD = 8.01). Finally, the most effective strategies for arousal were distraction and expression with problem-solving, and there was no significant difference between the effectiveness of these two strategies (M =3.40, SD = 0.80; M =3.54, SD = 1.09, respectively), while the least effective strategy was expression (M =4.11, SD = 1.07).
Keywords: Anger, emotion regulation strategies, writing task

ÖZ

Bu çalışmanın temel amacı yazı yazma aracılığıyla kullanılan duygu düzenleme stratejilerinin öfke duygusunu düzenleme üzerindeki etkisinin incelenmesidir. Bu doğrultuda öncelikle, deney aşamasında kullanılmak üzere öfke duygusunu tetikleyecek bir senaryo içeriği oluşturulmuştur. Ardından, yazı yazma aracılığıyla uygulanan ifade etme, ifade etmeyle beraber problem çözme ve dikkat dağıtma stratejilerinin pozitif duygulanım, negatif duygulanım ve duygunun şiddeti ve hoşnutluk derecesi üzerindeki etkisi incelenerek öfke duygusunun düzenlenmesi değerlendirilmiştir. Ek olarak duygu düzenleme stratejilerinin etkililiği birbiriyle karşılaştırılmıştır. Araştırmanın örneklemini üniversite öğrencisi olan 152 kadın katılımcı (yaş için $\overline{X}$ =19.71, SS =1.38) oluşturmaktadır. Araştırmada veri toplama araçları olarak Pozitif ve Negatif Duygulanım Ölçeği, Duygusal Değerlik Formu ve Duygusal Uyarılma Formu kullanılmıştır. Araştırmanın bulgularına göre her üç duygu düzenleme stratejisinin de negatif duygulanım ve duygunun şiddeti üzerinde anlamlı bir etkisinin olduğu görülmüştür. Negatif duygulanım için en etkili strateji dikkat dağıtma ($\overline{X}$ =14.44, SS = 4.83) iken en az etkili olan strateji ifade etme olarak bulunmuştur ($\overline{X}$ =27.38, SS = 8.01). Son olarak, duygunun şiddeti için en etkili stratejiler dikkat dağıtma ve ifade etmeyle beraber problem çözme iken (sırasıyla; $\overline{X}$ =3.40, SS = 0.80; $\overline{X}$ =3.54, SS = 1.09) en az etkili olan stratejinin ise ifade etme stratejisi ($\overline{X}$ =4.11, SS = 1.07) olduğu görülmüştür.
Anahtar sözcükler: Öfke, duygu düzenleme stratejileri, yazı yazma görevi

Introduction

Emotions are among the essential psychological variables that accompany and influence experiences and are influenced by them in turn (Sarp and Tosun 2011). Emotions, which are an important part of interpersonal communication in the context of human beings as social creatures, have various functions, such as mobilizing individuals against events occurring around them or preparing them to react in future situations. Emotions serve to regulate social relations in terms of reflecting people's emotional reactions to the outside and helping them make sense of the reactions of others (Van Avermaet 2001). The main reasons for choosing anger are the fact that emotion regulation strategies were studied through violence in the current study and that anger is one of the most commonly experienced emotions as a result of violence. Also, in daily life, anger is one of the main emotions from which psychological stress arises, and, when not properly regulated, it can negatively affect one's

Address for Correspondence: Burçin Akın Sarı, Başkent University Faculty of Science and Letters, Department of Psychology, Ankara, Türkiye **E-mail:** bakinsari@baskent.edu.tr
Received: 25.08.2023 | **Accepted:** 12.10.2023

well-being by provoking frequent interpersonal conflicts (Almeida 2005). The effective regulation of anger has critical importance in terms of mental health and social functioning across an individual's entire lifespan (Rook et al. 2012). Furthermore, the physiological arousal associated with anger can damage the cardiovascular system in the long term if this emotion is not regulated; for this reason, the regulation of anger is also crucial for sustaining one's physical health (Charles 2010, Kraynak et al. 2018, Barlow et al. 2019). In summary, anger-related factors are significantly associated with functional mood and physical health, and the inability to regulate anger can have a detrimental effect on one's functionality, mood, and physical health. Thus, in turn, it also negatively affects interpersonal relationships (Nicholson et al. 2003).

How anger is expressed is important and may manifest as anger externalization, anger internalization, or anger control. Externalized anger is an individual's verbal and/or behavioral expression of anger. Internalized anger is associated with suppressing the feeling of anger and hiding it from others. Anger control entails regulating and controlling the feeling of anger. It is an expected reaction that many people may get angry in many different situations. The feeling of anger has useful and mobilizing functions in life. Anger, like many other emotions, is an emotion with a high evolutionary function when experienced at an optimal level. However, excessive expression of anger or, conversely, its suppression is associated with many psychopathologies. Also, problems in the expression of anger may hinder the functionality of anger. Therefore, as stated in the basic principles of Acceptance and Commitment Therapy, it is recommended that people accept that they cannot change everything that happens to them and increase their quality of life by accepting these emotions instead of rejecting negative experiences and emotions (Harris 2006). Some individuals suppress their anger and turn it inward to direct it toward themselves. Avoidance of problems in the environment is an effective factor in the internalization of anger. Continuous suppression and internalization of anger can lead to various physical, mental (depression, psychosomatic symptoms), and emotional problems and even suicide (e.g., Stimmel et al. 2005). When anger is directed inward, it is difficult to accept the feeling, and passive reactions often occur. Passive anger reactions are manifested in behaviors such as pouting and sulking. People who keep their anger bottled up expect others to understand them automatically and the result is disappointment, sadness, or resentment (Lulofs and Cahn 2000). Anger may be expressed inwardly as well as outwardly by some individuals. Anger directed outward is manifested in verbal expressions or aggressive behaviors. Verbal expressions of anger include shouting, humiliation, belittling, and swearing, while aggressive behaviors involve physically reacting to another person. When individuals express themselves in this way, they experience problems in interpersonal relationships (Campbell 2004). The intensification of anger into aggression is made possible when memories, thoughts, and motor and physiological reactions activate each other (Berkowitz and Harmon-Jones 2004).

The ability to achieve a healthy state of anger depends on whether the anger can be controlled while expressing it. After noticing anger, an individual who can express the reason for the emergence of that emotion experiences anger in a controlled way instead of ignoring it. Individuals who healthily experience emotional discharge do not encounter problems in interpersonal relationships and can take steps toward the solution of their problems. One of the healthiest attitudes in a state of anger is to explore whether the situation causing the anger can be changed. Finding a solution if the situation can be changed or facing the problem if it cannot be changed is seen as the right attitude (Ozturk 2012).

Various activities regularly undertaken in daily life serve to regulate emotions, such as drawing (Genuth and Drake 2021), humor (Samson and Gross 2012), music (Tahlier et al. 2013), and talking (Sheppes et al. 2011). Expression strategy can be used while regulating emotions with writing tasks. In the literature, studies of expression strategy have been conducted with both drawing and writing tasks (Hemenover et al. 2008, Genuth and Drake 2021). Emotion expression is of substantial importance for the regulation of emotion. Expressing or describing emotions only briefly may not be effective in short-term emotion regulation, but it may reduce arousal and enhance the individual's mood in the long term (Smyth and Pennebaker 2001). Expressive writing is an adaptive strategy for emotion regulation when it encompasses the individual's feelings and thoughts as well as enhancing the meaning of experiences and supporting the identification of strategies for resolving experience-related distress and evaluating their success (Cameron and Jago 2008). Another strategy that can be used to regulate emotions with writing tasks is distraction or diverting attention from negative emotions and thoughts. Removing negative emotions and thoughts may improve the individual's mood (Genuth and Drake 2021). These two strategies of expression and distraction are used daily by people who struggle to express their emotions to those around them (self-expression) or seek to direct their attention elsewhere (self-distraction) (James et al. 2018). Considering the relevant findings in the literature to date, the present study was undertaken to examine the regulation of anger via the expression of emotions with a writing task while producing solutions (i.e., problem-solving) and sources of distraction.

This research examined the regulation of anger in the context of violence against women. One type of situation encountered around the world that causes negative emotions is violence in general, and violence against women may be encountered frequently in Turkish society. Also, women around the world face the threat of violence regardless of age, ethnicity, religion, and economic and social conditions (Karaca et al. 2017). In other words, violence against women is encountered as a universal social problem. Even if a woman does not experience violence herself, she can empathize by seeing or hearing about violence experienced by others, and so she is also affected when those events of violence are shared (Rothschild and Rand 2006). Violence and violent behaviors, as well as behaviors deemed to be contrary to good manners, morals, and the law, which may create perceptions of threats to the self from persons known or unknown and pain in human life, all generally trigger feelings of anger and sadness in individuals (Akan and Barıskın 2018). Decades of research have demonstrated that negative effects have further detrimental effects on health (Dougall and Baum 2001, Suinn 2001). When these emotions are left unregulated, they may cause individuals to become alienated from themselves and others (Gross and John 2003).

It is known that the expression of emotion is of substantial importance in terms of emotion regulation (Karaca et al. 2017). However, it was also stated that the expression of emotion alone may not be sufficient, and coping strategies should also be used. By adding problem-solving abilities to a writing task, the present study makes a new contribution to the literature. In this study, it was examined the anger triggered by a vignette about psychological, verbal, and physical violence against women and subsequently evaluated the regulation of that anger via a writing task. The writing task was aimed at regulating anger through expression, problem-solving, and distraction. Thus, the goal of this study was to determine the effectiveness of the expression of emotions, problem-solving, and distraction in the regulation of anger.

For these reasons, a vignette was used in this study and the research was conducted with female participants. In this study, (i) one of the three scenarios was expected to trigger anger the most; (ii) all three emotion regulation strategies would have positive effects on emotion regulation; and (iii) the most effective emotion regulation would be achieved in the group applying expression with problem-solving, while the least effect would be achieved in the group applying expression alone. It is expected that the findings of this study will make an important contribution to the literature in terms of understanding the effects of expression skills and problem-solving in the regulation of anger.

Method

Sample

The number of participants was determined by G-Power with 0.05 for the “α err prob”, 0.95 for the “power (1-β err prob), and 0.25 for the effect size. It was planned to conduct an experiment with a total of 150 participants, 50 participants in each of the 3 groups (expressing, expressing with problem-solving, and distraction groups). After data collection, 52 data in the expression group, 50 data in the expression with the problem-solving group, and 50 data in the distraction group were analyzed.

The exclusion criterion was the absence of any expression of emotion, thought, and/or problem-solving in the texts written by the participants. Additionally, participants were expected to have written a problem solution for expression with problem-solving conditions. In group two (expression with problem-solving strategy group), all participants in the experiment wrote statements containing solutions to the problem. Finally, markings made other than anger emotion in Time 1 (T1) and Time 2 (T2) measurements are exclusion criteria. The mean age of the participants was 19.71 (SD = 1.38). The sample consists of female students studying at Baskent University. All demographic information of the sample is given in Table 1.

Procedure

After obtaining Baskent University ethics committee approval (12.03.2022, E-62310886-605.99-111070), the data collection phase was started. Before the vignette to be used in the experiment was given to the participants, a pre-study was conducted to check whether the vignette triggered anger. The pre-study was conducted online via Qualtrics, and the participants voluntarily took part in the study with the informed consent form. Then the three scenarios were read by 100 female participants aged 18 and over and they rated the triggered emotion. These participants were not included in the main study. In the pre-study, the emotions triggered in the vignettes and their severity were evaluated. Scenarios were evaluated in terms of the five basic emotions triggered (anger, sadness, happiness, fear, hate) and a 5-point Likert-type scale ranging from 1 (very little severe) to 5 (too severe)

was used. The vignette that triggers the feeling of anger most intensely (traffic scenario) was used in the experiment.

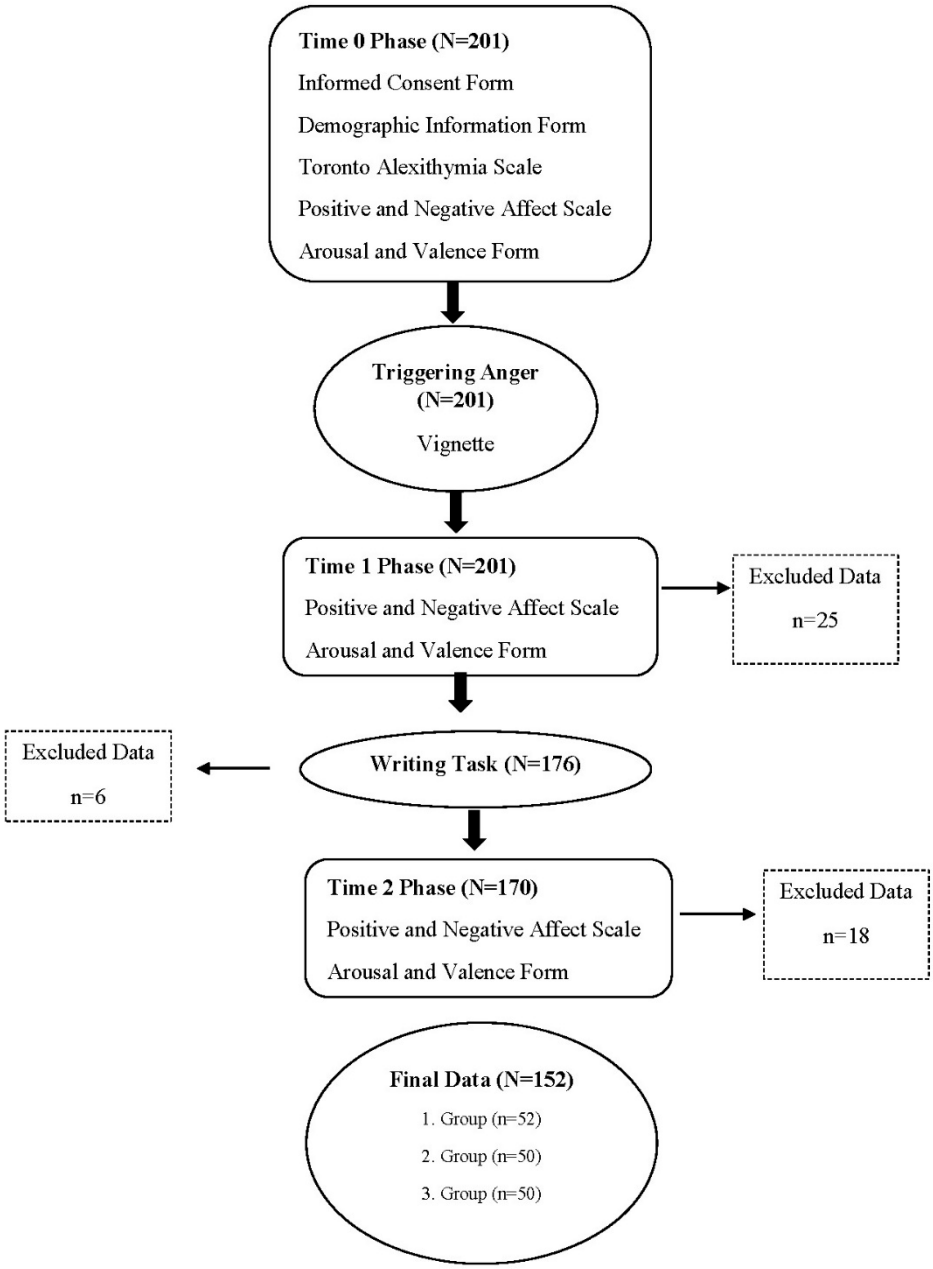

Figure 1. Experiment flow chart

*1 Group: Expression strategy, 2. Group: Expression with Problem-solving Strategy, 3. Group: Distraction Strategy

In the main study, to eliminate the confounding variable effect of the environment, it was experimented with class for all three experimental groups (expressing, expressing with problem-solving, and distraction group). Participants were randomly assigned by class to the "expressing group", "expressing with the problem-solving group" or "distraction group". The seating arrangement in the class was planned to be spaced so that participants could not see each other's scales. After the scales were distributed for the planned progress of the experiment process, the participants were able to start filling out the scales after the researcher verbalized the instruction and all participants had finished filling in the existing scales, the researcher distributed the other scales. Participants in the study were unaware of the strategy group to which they belonged. Consequently, the research is single-blind.

Table 1. Demographic information of participants		
	n	**% (Frquency)**
Department		
Psychology	81	53.3
Nutrition and dietetics	48	31.6
Audiology	23	15.1
Past Psychological Diagnosis		
Diagnosed	9	5.9
Undiagnosed	143	94.1
Current Psychological Diagnosis		
Depression	7	4.6
Anxiety	3	2.0
Obsessive-Compulsive Disorder	2	1.3
Attention deficit	2	1.3
Trichotillomania	1	0.7
Current Treatment Status		
Receiving treatment	10	6.6
Not receiving treatment	5	3.3
Gender Roles		
Strongly disagree	59	38.8
Disagree	53	34.9
Undecided	25	16.4
Agree	10	6.6
Strongly agree	5	3.3
Gender Characteristics		
Strongly disagree	111	73.0
Disagree	31	20.4
Undecided	4	2.6
Agree	5	3.3
Strongly agree	1	0.7

To determine whether participants have deficiencies in emotional expressions during writing, participants would be asked to write at least one emotional expression in expression and expression with problem-solving conditions. Voluntary female participants studying in the Psychology Department of Baskent University participated in the study in the 2021-2022 academic year. Additionally, first or second-year psychology students participated in the study. Because in the 3rd and 4th grades, with the increase in knowledge about the science of psychology, foresight can develop, so that biased answers can be given by guessing the purpose of the experiment. In addition, emotion regulation skills can be strengthened spontaneously with increased knowledge of psychology. In other words, being third or fourth grade of psychology can be a confounding variable for this reason these participants were not included in the experiment.

The participants were given the demographic information form, The Toronto Alexithymia Scale (TAS-20), Positive and Negative Affect Schedule (PANAS), and Affect Grid scales for the Time 0 (T0) measurement. After these scales were completed, the vignette, PANAS, and Affect Grid scales were distributed to the participants for T1 measurement. Anger mood was aimed to be triggered in the T1 phase of the experiment. When all participants had taken the T1 scales, the researcher verbalized the instruction. Before reading the vignette, the following instruction was given to the participants: "You will read a vignette now. Please read the vignette as if you are experiencing it yourself. After reading the vignette, imagine in your mind for a minute that you are experiencing the event." Then participants read the vignette for an average of two minutes and imagine for a minute. After reading the scenario, participants filled in the PANAS and Affect Grid scales in the T1 phase.

After the completion of the T1 scales, the T2 scales, namely the writing task, PANAS, Affect Grid, and the post-research information form were distributed to the participants. Before the participants started the writing task, the researcher verbalized the instructions to the participants. At this stage, the instruction varies according to the existing experimental groups. Participants in the expression condition were given the following instructions: “I want you to write about the event that you read and describe the most intense emotion, name it, and explain why the emotion arose. Use the writing task as a way to express your intense emotion and thoughts about the vignette." Participants in the expression with the problem-solving condition were given the following instructions: “I want you to write about the event that you read and describe the most intense emotion, name it, and explain why the emotion arose. Finally, I want you to accept your emotions and find a solution for this situation in the vignette. Can you resolve the problem? Can you do anything to change the situation? What can

you do to deal with your intense emotion?" (Sargunaraj et al., 2021). Participants in the distraction condition were given the following instructions*: "I want you to write on paper, describing the inside and outside of the room you are in where you are, what objects are there in the room, the color of these objects, their location, what and who is outside the room, what sounds do you hear, etc."* All participants were given a minimum of 5 and a maximum of 10 minutes to write. After reading the instructions to the participants, the researcher waited for 10 minutes and then informed the participants that the writing time was completed. Participants completed PANAS, Affect Grid, and the post-research information form respectively. Lastly, participants were debriefed on the study's purpose and thanked for their participation. In this study, all participants were provided written informed consent. Resources that participants can consult in case they feel any possible discomfort are stated in this form. The participants who participated in the experiment were awarded bonus points by the lecturer.

Measures

Demographic Information Form

About the variables of the study, a form containing questions about age, school, department, grade, marital status, psychological diagnosis, daily writing frequency, texting habits, social media sharing, letter writing habits, and attitude towards gender roles was created.

Positive and Negative Affect Schedule (PANAS)

PANAS (Watson et al. 1988) was used to measure the effect in this research. PANAS consists of two subscales of ten questions. The first subscale contains 10 positive words (e.g., excited, interested), and the second subscale contains 10 negative words (e.g., distressed, upset) and these words express emotions and feelings. Participants were asked to rate how much they felt each emotion in the present moment using a 5-point Likert scale with 1 being very slightly or not at all and 5 being excessively. The Turkish adaptation study of the scale was conducted by Gencoz (2000). The reliability coefficient was found as .83 for positive affect and .86 for negative affect subscale. In the current study, the internal consistency was .83 for the positive affect scale and .85 for the negative affect scale (by Time 0). Participants completed this schedule before the mood induction (T0), after the mood induction (T1), and lastly after the writing task (T2).

Emotion and Arousal Assessment and Emotional Valence Assessment Form

The original scale of forms of Emotion and Arousal Assessment and Emotional Valence Assessment is the Affect Grid (Russell et al. 1989). The scale has a single-item self-report measure that assesses valence (ranging from unpleasant to pleasant feelings) and arousal (ranging from sleepiness to high alertness). Emotion cannot be evaluated only on a two-way dimension (positive, negative). A positive emotion does not always have a negative edge however an emotion has two separate edges on the same dimension; pleasant/unpleasant and alertness/sleepiness (Feldman-Barrett and Russell 1998). As in the study of Akan and Barıskın (2018), the arousal and valence values of emotion will be evaluated with a 5-point Likert-type scale for ease of use for participants. In this study, the Affect Grid scale was used as a Likert-type scale.

In this study, the emotion and arousal assessment form was used to assess the emotions triggered by the scenarios and the severity of these emotions. In this form, the participants rated the extent to which they experienced the targeted emotions (anger, surprise, happiness, fear, sadness, aversion) on a scale of 1 (very little severity) to 5 (too much severity). In the current study, the internal consistency was .59 for arousal (by T0). The emotional Valence Assessment Form was used to assess the pleasantness or unpleasantness of the emotion triggered by the scenarios. Participants rated the degree of satisfaction they felt while reading the scenario on a scale of 1 (not pleasant) to 5 (very pleasant). In the current study, the internal consistency was .31 for valence (by T0).

The Toronto Alexithymia Scale (TAS-20)

TAS-20 was developed to assess the severity of alexithymia (Parker et al. 1993). It is a 20-item self-report rated on a 5-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree). The higher scores exhibit a higher level of alexithymia. The TAS-20 was adapted to Turkish (Gulec et al. 2009) and the internal consistency coefficient is .78. In the current study, the internal consistency coefficient of the scale was .71 (by T0). This scale was used to control the effect of the severity of alexithymia on triggering anger. If the person is an alexithymic, that is, if the participant has difficulty in recognizing and expressing emotion, the strategies used in the experiment may not have an effect. As a result, high alexithymia scores would be a confounding variable, so this factor was controlled.

Vignettes

Three different anger-triggering scenarios were created by the researcher and these scenarios were evaluated and edited by the advisor and two psychologists who are experts in the field. Vignettes contain violence towards women and include themes of traffic, work life, and dating violence. While creating the vignettes, attention was paid to including different types of anger such as psychological, physical, and verbal violence, and different anger indicators such as humiliation, bullying, provocation, assault, and aggrievement. In addition, detailed and descriptive statements were included so that the participants could easily visualize the scenario in their minds. After the pilot study, the traffic scenario that triggered anger the most was used in the experiment.

Statistical Analysis

Analyzes were performed with Statistical Package for Social Science (SPSS V. 28.0). In the pre-study, a general linear model was used to determine the scenario to be used. Data were collected from 201 participants in total and with the exclusion of 49, the data of 152 participants were included in the analysis. The quasi-experimental data set was first analyzed for normality, missing data, outliers, and reverse items. The internal consistency coefficients of the scales used in the current study were calculated. The differences between the dependent variable measurements at three different times were analyzed by analysis of variance. A mixed-design multivariate analysis of variance (MANOVA) analysis was conducted to test the hypotheses. The first independent variable is emotion regulation strategy groups and has three levels, expression, expression with problem solving, and distraction. The second independent variable is time, and it has three levels, T-0, T-1, and T-2. While the change in the anger scores of the groups according to the time is a within-subject factor, the change in the anger scores of the groups relative to each other is a between-subject factor. While the first of the dependent variables is positive-negative emotion scores, the second is the valence and arousal values of emotion.

Results

A pre-study was conducted to determine the most anger-triggering scenario. These scenarios were prepared about business life, traffic, and dating violence. In this context, data was collected from 103 participants in total via Qualtrics. The average age of the participants is 27. Five of the participants are high school graduates, 30 are graduate students and 68 are undergraduate students. The data collection does not contain any outliers or missing data. The kurtosis and skewness values of the data set are between -1.5 and +1.5. In light of the knowledge that the data must be between -1.5 and +1.5 to meet the normal distribution assumption (Tabachnic and Fidell 2014), it is concluded that this dataset meets the normal distribution assumption. Multivariate analysis of variance (MANOVA) in 3 (Scenarios: business life, traffic, dating violence) x 5 (Emotions: anger, sadness, happiness, fear, hate) was used to analyze the data. The result revealed that the assumption of Mauchly's test of sphericity was not met for emotion ($\chi 2 = 60.27$, $p < 0.00$). For this reason, Greenhouse-Geisser Correction was used to report this factor.

Table 2. Descriptive information of triggered emotions in the scenario

		Anger	**Sadness**	**Happiness**	**Fear**	**Hate**
Business Life	M	3.39	4.18*	1.08	2.26	4.13
	SD	0.13	0.09	0.05	0.12	0.10
Traffic	M	4.52*	2.92	1.03	3.37	4.19
	SD	0.08	0.14	0.02	0.13	0.12
Dating Violence	M	4.42*	3.84	1.01	2.66	3.91
	SD	0.09	0.13	0.02	3.91	0.11

Additionally, sphericity was met for the scenario ($\chi 2 = 1.83$, $p > 0.05$). The main effect of emotion (Wilks' $\lambda = 0.06$, $F [4, 99] = 13.63$, $p < 0.00$, $\eta p\ 2 = 0.12$) and scenario (Wilks' $\lambda = 0.87$, $F [2, 101] = 7.09$, $p < 0.01$, $\eta p\ 2 = 0.12$) and the interaction of emotion x scenario (Wilks' $\lambda = .37$, $F [8, 95] = 19.94$, $p < 0.00$, $\eta p\ 2 = 0.57$) were statistically significant. Follow-up ANOVAs indicated that main effect of Scenario was significant for anger ($F [2, 101] = 8.62$, $p < 0.00$, $\eta p\ 2 = 0.14$), for sadness ($F [2, 101] = 25.54$, $p < 0.00$, $\eta p\ 2 = 0.33$, for fear ($F [2, 101] = 35.70$, $p < 0.00$, $\eta p\ 2 = 0.41$) and not significant for happiness and hate. Bonferroni comparisons revealed that there were significant differences between business life and traffic scenarios with business life and dating violence scenarios and there was no significant difference between traffic and dating violence scenarios (For M and SD, Table 2). The most triggered emotion in the business life scenario was sadness. Therefore, this scenario has been eliminated. Anger is the most triggered emotion in both the scenarios involving traffic and dating violence. Since anger was triggered more in the traffic scenario than in the dating violence scenario, the traffic scenario was used in the experiment.

First, the data of the study (N=152) were evaluated in terms of suitability for parametric analysis. The mean value is provided for any missing data. The kurtosis and skewness values of the data set are between -1.5 and +1.5and it is concluded that this data meets the normal distribution assumption. Table 3 shows the descriptive information of the scales.

Table 3. Descriptive statistics for measurements

	Mean	**SD**
Alexithymia	52.09	8.42
T0		
Positive affect	28.99	7.36
Negative affect	17.75	6.82
Arousal	3.34	0.87
Valence	2.53	1.49
T1		
Positive affect	29.43	7.59
Negative affect	31.23	6.86
Arousal	4.41	0.76
Valence	1.57	0.87
T2		
Positive affect	28.80	7.85
Negative affect	21.88	8.73
Arousal	3.69	1.04
Valence	1.72	0.91

T0: Time 0; T1: Time1; T2: Time2; Positive Affect: PANAS Positive Subscale; Negative Affect: PANAS Negative Subscale; Arousal: Emotion and Arousal Assessment; Valence: Emotional Valence Assessment

Firstly, Pearson Moment Correlation analysis was used to examine the correlation between alexithymia scores and six questions about writing experiences in the demographic form. As a result of this, positive correlations were found between the questions on writing about experience and keeping a diary ($r = 0.67$, $p < 0.01$), writing about experience and writing letters ($r = 0.26$, $p < 0.01$), and keeping a diary and writing letter ($r = 0.22$, $p < 0.01$). MANOVA was conducted to examine the difference between groups in the distribution of questions that are positively correlated to each other and there were no differences between the three emotion regulation strategy groups on questions related to writing about experience, keeping a diary, and writing letters ($p > 0.05$). One-way ANOVA analysis was used to examine whether there was a difference between groups in the distribution of the scores obtained from the questions that did not have a significant relationship. There was no difference between emotion regulation strategy groups in the distribution of the scores of alexithymia ($p > 0.05$), sharing emotion and thoughts through social media ($p > 0.05$), sharing emotion and thoughts through message ($p > 0.05$), gender characteristics ($p > 0.05$) [Gender characteristics were evaluated with the following two questions: “Women and men must behave by culturally and socially determined gender roles within society.” and “While sensitivity, understanding, and emotionality are feminine characteristics, leadership, dominance, and power are masculine characteristics.”]

Likewise, Pearson Moment Correlation analysis was used to examine the correlation between dependent variables- positive affect, negative affect, arousal, and valence. As a result of this, a positive correlation was found between the questions on positive affect and valence ($r = 0.46$, $p < 0.01$), and negative correlations were found between positive affect with negative affect ($r = -0.21$, $p < 0.01$), and negative affect with valence ($r = -0.36$, $p < 0.01$). However, the arousal question was not related to the other questions. Accordingly, MANOVA was conducted to examine the difference between groups in the distribution of questions that are correlated to each other and there were no differences between the three emotion regulation strategy groups on dependent variables related to positive affect, negative affect, and valence ($p > 0.05$). One-way ANOVA analysis was used to examine whether there was a difference between groups in the distribution of the arousal scores and there was no difference between the emotion regulation strategy group ($p > 0.05$). Thus, the first hypothesis that participants' positive and negative affect and valence and arousal levels which they evaluated based on their current emotions would not differ within the three groups at T0 was supported.

Additionally, participants rated the valence and arousal of anger at T1 and T2, while at T0 they rated the valence and arousal of their momentary emotions without manipulation. In the T0 phase, participants chose one of seven options - anger, surprise, happiness, fear, sadness, disgust, and other- and rated the valence and arousal of this emotion. The distribution of the emotions selected in the T0 phase is as follows: anger ($n = 4$), surprise ($n = 3$), happiness ($n = 49$), fear ($n = 11$), sadness ($n = 29$), disgust ($n = 4$), other ($n = 52$). The other emotion

option includes the following: fatigue (n = 10), interested (n = 8), excited (n = 8), bored (n = 6), anxious (n = 10), neutral (n = 5), stress (n = 2), strong (n = 1), guilt (n = 1), shame (n = 1) were rated by the participants.

The main purpose of the study is to examine the differentiation of positive and negative affect and valence and arousal for anger (T1 and T2 valence and arousal measurements of all groups -except T0 -were performed on anger). the values of anger are valid for all T1 and T2 valence and arousal values) according to emotion regulation strategy groups and measurement time. Mixed design MANOVA was conducted in 3 (Group: expression, expression with problem-solving, distraction) x 3 (Time: T0, T1, T2) where time was treated as a within-subject factor and group was treated as a between-subject factor. There was no equality of covariance between groups in the dependent variables. In this case, Pillai's Trace was used for the MANOVA test statistic. The result revealed that the assumption of Mauchly's test of sphericity was not met for Time (positive affect [$\chi2 = 24.85$, $p < 0.00$], negative affect [$\chi2 = 7.48$, $p < 0.05$], arousal [$\chi2 = 26.23$, $p < 0.00$], and valence [$\chi2 = 85.03$, $p < 0.00$]). Therefore, Greenhouse-Geisser Correction is used to report these factors. The main effect of Time (Pillai's Trace = 0.79, F [8, 142] = 70.23, $p < 0.00$, $\eta p\ 2 = 0.79$), and Group (Pillai's Trace = 0.33, F [8, 294] = 7.35, $p < 0.00$, $\eta p\ 2 = 0.18$) and the interaction of Time x Group (Pillai's Trace = 0.41, F [16, 286] = 4.66, $p < 0.00$, $\eta p\ 2 = 0.21$) were statistically significant. Due to the comparisons of more than one dependent variable, the significance of the results was tested with Bonferroni correction.

Follow-up ANOVAs indicated that main effect of Time was significant for negative affect (F [1.91, 14.08] = 240.05, $p < 0.00$, $\eta p\ 2 = 0.61$), arousal (F [1.72, 89.63] = 83.82, $p < 0.00$, $\eta p\ 2 = 0.36$), valence (F [1.39, 80.52] = 36.12, $p < 0.00$, $\eta p\ 2 = 0.19$) and not significant for positive affect. Also, the Group main effects for negative affect (F [2, 149] = 25.57, $p < 0.00$, $\eta p\ 2 = 0.25$) and arousal (F [2, 149] = 6.79, $p < 0.00$, $\eta p\ 2 = 0.08$) were significant but not significant for positive affect and valence (For M and SD, see Table 4).

Table 4. Mean and standard deviations of positive affect, negative affect, arousal, and valence in three different groups for T0, T1, T2

Strategies		**Expression**			**Expression with problem- solving**			**Distraction**		
		T0	**T1**	**T2**	**T0**	**T1**	**T2**	**T0**	**T1**	**T2**
Positive Affect	M	29.69	31.15	30.59	28.64	29.42	28.44	28.62	27.65	27.32
	SD	8.75	7.66	8.16	6.87	7.51	7.55	6.28	7.32	7.61
Negative Affect	M	18.34*	33.65*	27.38*	18.90*	31.60*	23.60*	16.00*	28.36*	14.44*
	SD	6.98	6.45	8.01	7.74	6.89	7.30	5.29	6.28	4.83
Arousal	M	3.46*	4.63*	4.11*	3.22*	4.48*	3.54*	3.34*	4.10*	3.40*
	SD	0.91	0.62	1.07	0.88	0.70	1.09	0.82	0.86	0.80
Valence	M	2.67	1.51	1.59	2.42	1.34	1.64	2.50	1.86	1.94
	SD	1.47	0.82	0.82	1.53	0.59	0.94	1.47	1.06	0.95

*significant differences; T0: Time 0; T1: Time1; T2: Time2; Positive Affect: PANAS Positive Subscale; Negative Affect: PANAS Negative Subscale; Arousal: Emotion and Arousal Assessment; Valence: Emotional Valence Assessment

The interaction effect between Time and Group was significant for negative affect (F [3.81, 15.41] = 13.21, $p < 0.00$, $\eta p\ 2 = 0.15$) and arousal (F [3.44, 6.91] = 3.23, $p < 0.05$, $\eta p\ 2 = 0.04$) but not significant for positive affect and valence. Bonferroni testing for the source of this interaction effect revealed that there was no significant difference between T0, T1, and T2 positive affect scores in the expression, expression with problem-solving, and distraction groups. Negative affect scores for the expression and expression with problem-solving groups differed significantly between the T0, T1, and T2 phases. Negative affect scores increased significantly at T1 compared to T0 for all three groups and decreased significantly at T2 compared to T1. In addition, the lowest negative affect mean for the expression and expression with problem-solving groups was reported at T0, while for the distraction group, it was reported at T2. In the distraction group, the negative affect score differed significantly between T0-T1 and T1-T2, but not between T0-T2. The arousal score for the expression group differed significantly between the T0, T1, and T2 phases. For all three groups, arousal scores demonstrated a significant increase at T1 compared to T0 and a significant decrease at T2 compared to T1. In addition, for all three groups, the highest arousal mean was reported at T1 and the lowest at T0. In the expression with problem-solving and distraction groups, arousal scores differed significantly between T0-T1 and T1-T2, but not between T0-T2 (Figure 2 and 3).

There is a significant difference between the three emotion regulation strategy groups, expression - expression with problem-solving ($p < 0.05$), expression - distraction ($p < 0.00$), and expression with problem-solving - distraction ($p < 0.00$) at T2 for negative affect. The lowest mean value of negative affect is in the distraction group and the highest in the expression group at T2. Accordingly, distraction is the most effective strategy for

negative affect, while expression is the least effective strategy. There is a significant difference between expression-expression with problem-solving groups ($p < 0.05$) and expression and distraction groups ($p < 0.01$) at the T2 stage for arousal. The lowest mean value of arousal at T2 was in the distraction group and the highest in the expression group. However, there is no significant difference between expression with problem-solving and distraction. As a result, while expression was the least effective strategy for arousal, there was no significant difference between the effectiveness of problem-solving and distraction strategies (Table 4).

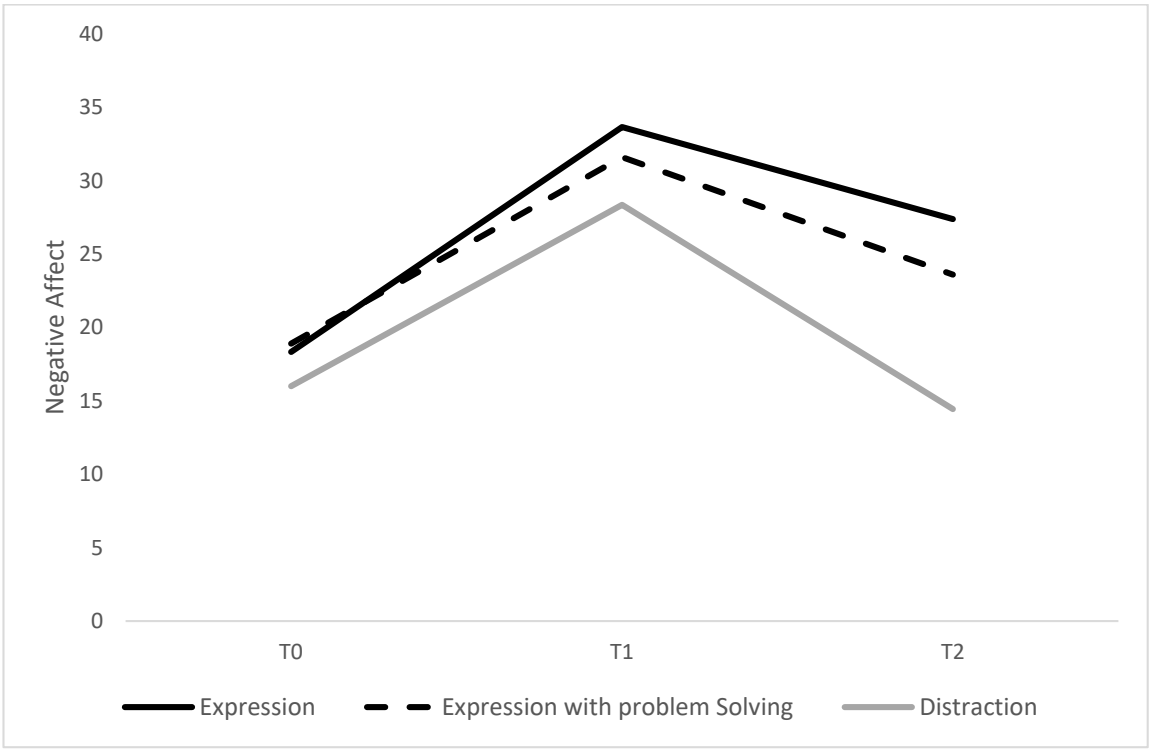

Figure 2. Time by strategy group interaction effect on negative affect

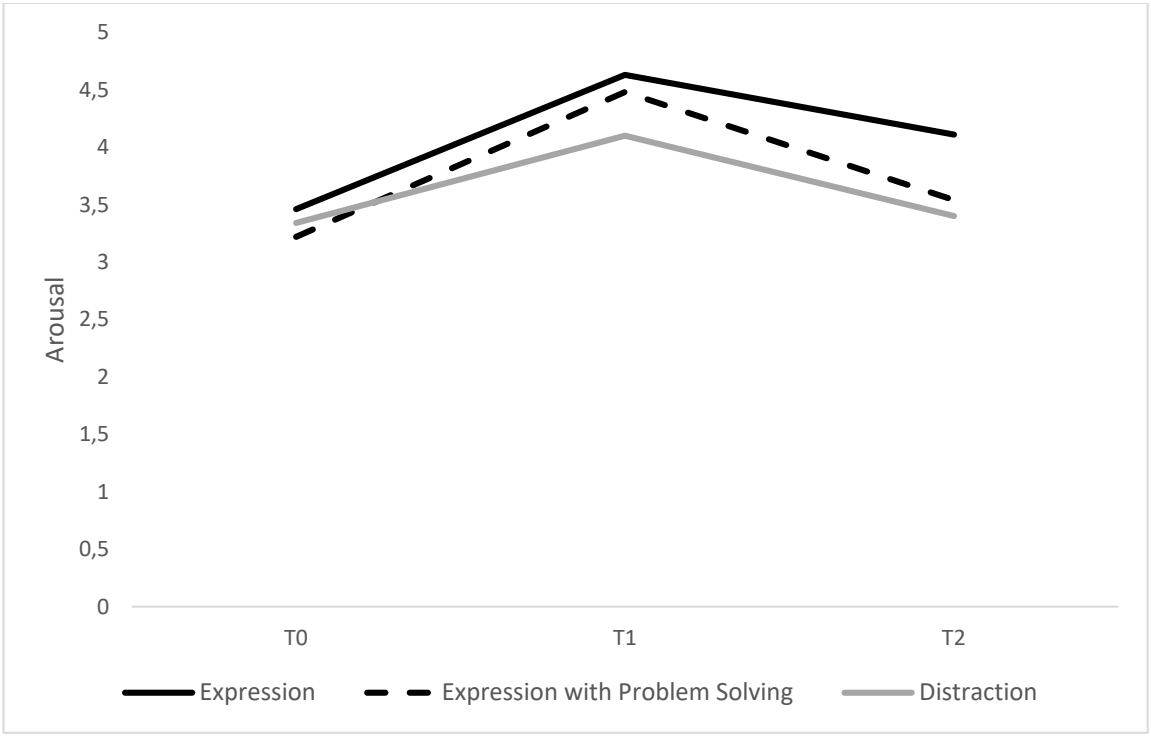

Figure 3. Time by strategy group interaction effect on arousal

Discussion

In this study, the effects of emotion regulation strategies on the regulation of anger were examined. For this purpose, first, a scenario was created to trigger the feeling of anger, and the effect of that scenario on the anger levels of the participants was evaluated. Afterward, three different groups using expression, expression with problem-solving, and distraction emotion regulation strategies were compared in terms of emotion regulation levels. In general terms, all three emotion regulation strategies had significant effects on negative affect and arousal. In addition, the most and least effective strategies for both negative affect and arousal were distraction and expression, respectively.

Anger is known to be triggered by experiences such as frustration, injustice, threats, violence, and abuse (Power and Dalgleish 2007). In the present study, a scenario involving violence against women, which was previously used in quasi-experimental studies on anger, was applied (George and Martinez 2002, Sleed et al. 2002, Martin and Dahlen 2007). Among these scenarios, the traffic context was found to trigger the most anger, and this scenario was therefore used in the experiment. Traffic is one of the contexts wherein women are most exposed to gender discrimination, and exposure to sexist expressions, prejudices, and stereotypical opinions triggers anger (Skinner et al. 2015). Also, the selected traffic scenario involves several different types of violence, including psychological, verbal, and physical violence (Krantz and Garcia-Moreno 2005). Finally, many different indicators trigger anger in the selected traffic scenario, such as bullying, conflict, provocation, defamation, aggrievement, attack, and abasement. In light of all this, it is understandable that the scenario that triggered the anger most was the one related to traffic. The anger-triggering scenario increases negative affect and decreases positive affect among the participants. In addition, it was thought that with the increase of negative affect, emotional arousal would increase and the valence value of the anger would decrease. The findings demonstrated that significant differences were found between T0 and T1 for negative affect, valence, and arousal of anger but not for positive affect. Moreover, the mean value of positive affect in the T1 phase was higher than that in T0, but the difference was not significant.

The present study examined the effectiveness of expression, problem-solving, and distraction emotion regulation strategies applied through writing tasks on positive affect, negative affect, valence, and arousal scores of anger. The interaction effect revealed that there was a significant difference in negative affect and arousal but no significant difference in positive affect or valence. It was seen that the negative affect and arousal scores obtained in the T1 phase increased significantly in all three emotion regulation groups when the scenario was presented to the participants, and these scores decreased significantly for all three groups with the application of the emotion regulation strategies. These findings agree with the results of previous studies showing the efficacy of presenting scenarios or recalling events in triggering anger and thus increasing negative affect and the arousal of emotion (Celik 2019, Genuth and Drake 2019, Rusting and Nolen-Hoeksema 2019). Moreover, emotion regulation strategies such as expression and distraction are known to reduce negative affect and arousal levels (Drake and Winner 2012, Genuth and Drake 2019). In this respect, the findings of the current study regarding the expression and distraction strategies are in line with the literature. In addition, the problem-solving strategy was found to have the same effect in the present study. In other words, the problem-solving strategy together with expression is also effective in reducing negative affect and arousal of anger.

Positive affect increases with the application of the emotion regulation strategy of distraction (Pizarro 2004, Drake and Winner 2012). Similarly, expression and distraction strategies applied after anger and sadness have increasing effects on positive affect and valence values (Genuth and Drake 2019). The findings of the present study are not consistent with the literature on positive affect and valence. In this study, a slight decrease was observed for all three groups in terms of positive affect scores at T2, but this decrease was not significant for any group. During the experiment, positive affect, negative affect, arousal, and valence were measured repeatedly at three different time points. Especially in the last stage of the measurements, T2, there may have been a decrease in feelings of curiosity, interest, and excitement due to the repetition of the same measurements for the third time. In the T2 phase, it was seen that the scores increased in all three groups for valence values, but this increase was not significant in any group. There was no manipulation in the experiment to increase the positive effect of the participants. Only strategies to regulate negative affect were applied. For these reasons, it is understandable that there was no significant difference in positive affect or valence values.

It was further hypothesized in this study that the most effective strategy in emotion regulation would be problem-solving, followed by distraction, and the least effective strategy would be expression. The interaction effect of time and group revealed that distraction was the most effective strategy for emotion regulation for negative affect. After the distraction strategy was applied, there was no significant difference between the negative affect scores at T2 and the negative affect scores at T0, or the beginning of the study. The second most

effective strategy for negative arousal was expression with problem-solving, while the least effective strategy was expression alone. The most effective strategies for arousal were distraction and expression with problem-solving and there was no significant difference between their effectiveness levels. The least effective strategy for arousal was expression. Accordingly, the fourth hypothesis of the study was partially met. Pennebaker (1997) stated that writing about distressing experiences, although painful on the day of the writing activity, produced long-term improvements in mood and well-being indicators compared to writing on different topics. Similarly, in the follow-up measurements of a study in which Sargunaraj and colleagues (2021) examined emotion regulation processes using a writing task, it was revealed that by focusing on a specific emotion and thought with the writing task, clarity in emotion and thought was achieved, thus facilitating the regulation of emotion. Based on this information, although the distraction strategy was shown to be effective in emotion regulation in the present study, its long-term effects may be less than those of expression or expression with problem-solving. In particular, the use of problem-solving strategies together with expression may be the most effective strategy for emotion regulation in the long term.

Due to some limitations, the results can only be generalized to a certain extent. One potential leading limitation is the small sample size (e.g., Castro et al. 2014, McLay et al. 2014). The results from the self-reported measurements may have been influenced by the limited sample size comprising participants with sub-threshold symptoms of mood disorder. Mood disorders are broadly characterized by a failure to adaptively regulate emotion because of heightened emotional reactivity and increased self-focus (Förster et al. 2022). Therefore, the effectiveness of the emotion regulation strategies may be observed more clearly if writing tasks are performed with a clinical sample of individuals diagnosed with mood disorders and supported by in-session and out-of-session interventions. In addition, the present sample was composed entirely of university students. It is important to replicate this study with larger clinical samples. In this study, all procedure was carried out collectively in the classroom. The fact that the procedure was not carried out one-on-one is considered a limitation of the study. This study was conducted only with female participants. However, many men may also experience anger when a woman is subjected to violence. Future studies can take the current scenario or if it is not suitable, update the scenario and see what emotions men have and how they regulate these emotions.

The use of a single standard scenario to trigger anger is another possible limitation. In this study, the scenario that was designed to trigger anger and was not specific to the sensitivity of any particular individual. Past experiences and sensitivities influence the intensity of emotions that will arise in future similar situations (Morriss 2009). Therefore, it should be asked whether they have had such experiences in the past and the influence of individuals' past experiences and sensitivities on their responses to anger-triggering stimuli should be investigated. In addition, anger scores were obtained using a 5-point Likert-type scale in terms of arousal and valence values. In future studies, measuring anger with physiological measurement tools will help improve the validity of the results, and participants' written statements during emotion regulation manipulation can be examined using qualitative analysis. Moreover, it would also be interesting to explore other emotions such as sadness, anxiety, or fear and other emotion regulation strategies such as cognitive reappraisal or suppression with writing tasks. Finally, in the current study, a control group was not included. Therefore, it was not examined whether time alone had an effect on emotion regulation without the application of any emotion regulation strategy. In future research, a control group should also be used to see if time alone has any effect, and the long-term effects of emotion regulation should be examined with follow-up measurements. As another limitation, since anger is a concept related to various personality traits, it is recommended that future studies examine personality traits in this context or consider them as control variables. Also, the post-manipulation check should be added to ensure that the participants visualize the scenario as if it had happened to them.

Conclusion

Anger is often a component of psychological disorders, such as anxiety, and the treatment of these conditions may depend on the subsidence of the anger (Suls and Bunde 2005). Techniques such as problem-solving, conflict management, social skills training, and relaxation are applied in interventions for anger reduction (Del Vecchio and O'Leary 2004). In the present study, expression, expression with problem-solving, and distraction strategies applied through writing tasks were shown to contribute to the regulation of anger. In this respect, one of the most important implications of the present findings is that future research may successfully expand on the scientific knowledge of the use of emotion regulation strategies in the regulation of anger. In addition to implications at the theoretical level, the findings of this study may serve as a substantial starting point to develop psychotherapy models and intervention techniques that use emotion regulation strategies with writing tasks. In the literature, studies are showing that anger and sadness can be regulated together with expression and

distraction strategies through tasks such as writing, drawing, and coloring (Drake and Winner 2013, Genuth and Drake 2021, Sargunaraj et al. 2021). A common finding of these studies is that distraction regulates emotions better at the moment compared to other strategies. In the present study, producing solutions to the existing problem increased the effectiveness of the expression strategy and had an effect similar to that of the distraction strategy in immediate emotion regulation. In clinical practice, implementing an additional emotion regulation strategy, such as problem-solving, alongside emotion expression may improve the outcomes of both immediate and long-term emotion regulation. In the final words, well-being is defined not only as the absence of negative emotions and/or disease but also as the presence of positive emotions and well-being/health. In this context, emotion regulation strategies should be used to increase positive emotion as well as to reduce negative affect in clinical settings.

References

Akan S, Barıskın E (2018) Conditions and scenarios eliciting emotions of disgust, anger, shame, sadness, and happiness. Türk Psikoloji Dergisi, 33:15-19.

Almeida DM (2005) Resilience and vulnerability to daily stressors assessed via diary methods. Curr Dir Psychol Sci, 14:64-68.

Barlow MA, Wrosch C, Gouin JP, Kunzmann U (2019) Is anger, but not sadness, associated with chronic inflammation and illness in older adulthood? Psychol Aging, 34:330-340.

Berkowitz L, Harmon-Jones E (2004). Toward an understanding of the determinants of anger. Emotion, 4:107-130.

Cameron LD, Jago L (2008) Emotion regulation interventions: A common-sense model approach. Br J Health Psychol, 13:215-221.

Campbell JM (2004) Statistical comparison of four effect sizes for single-subject designs. Behav Modif, 28:234-246.

Castro WP, Sánchez MJR, González CTP, Bethencourt JM, de la Fuente Portero JA, Marco RG (2014) Cognitive-behavioral treatment and anti-depressants combined with virtual reality exposure for patients with chronic agoraphobia. Int J Clin Health Psychol, 14:9-17.

Charles ST (2010) Strength and vulnerability integration: A model of emotional well-being across adulthood. Psychol Bull, 136:1068-1091.

Celik M (2019) The impact of enabling women's lifestyle and gender stereotypes on blaming the raped woman and moral outrage (Doctoral thesis). Ankara, Social Sciences University of Ankara.

Del Vecchio T, O'Leary KD (2004) Effectiveness of anger treatments for specific anger problems: A meta-analytic review. Clin Psychol Rev, 24:15-34.

Dougall AL, Baum A (2001) Stress, Health, and Illness. In Handbook of Health Psychology. (Eds A Baum, TA Revenson, JE Singer):321-337. Mahwah, NJ, Erlbaum.

Drake JE, Winner E (2013) How children use drawing to regulate their emotions. Cogn Emot, 27:512-520.

Drake JE, Winner E (2012) Confronting sadness through art-making: Distraction is more beneficial than venting. Psychol Aesthet Creat Arts, 6:255-261.

Feldman-Barrett L, Russell JA (1998) Independence and bipolarity in the structure of current affect. J Pers Soc Psychol, 74:967-984.

Förster K, Kurtz M, Konrad A, Kanske P (2022) Emotional reactivity, emotion regulation, and social emotions in affective disorders. Z Klin Psychol Psychother, 51:11-25.

Gencoz T (2000) Positive and negative affect schedule: A study of validity and reliability. Türk Psikoloji Dergisi, 15:27-28.

Genuth A, Drake JE (2021) The benefits of drawing to regulate sadness and anger: Distraction versus expression. Psychol Aesthet Creat Arts, 15:91-99.

George WH, Martínez LJ (2002) Victim blaming in rape: Effects of victim and perpetrator race, type of rape, and participant racism. Psychol Women Q, 26:110-119.

Gross JJ, John OP (2003) Individual differences in two emotion regulation processes: Implications for affect, relationships, and well-being. J Pers Soc Psychol, 85:348-362.

Gulec H, Kose S, Gulec YM, Citak S, Evren C, Borckardt J et al. (2009) Reliability and factorial validity of the Turkish version of the 20-item Toronto Alexithymia Scale (TAS-20). Klin Psikofarmakol Bulteni, 19:214-220.

Harris R (2006) Embracing your demons: An overview of acceptance and commitment therapy. Psychotherapy in Australia, 12:70-76.

Hemenover SH, Augustine AA, Shulman T, Tran TQ, Barlett CP (2008) Individual differences in negative affect repair. Emotion, 8:468-478.

James C, Drake JE, Winner E (2018) Expression versus distraction: An investigation of contrasting emotion regulation strategies when drawing, writing, talking, and thinking. Empirical Studies of the Arts, 36:162-179.

Karaca S, Barlas GU, Ongun E, Oz YC, Korkmaz G (2017) Examining the news of violence against women in newspapers. JAREN, 3:137-144.

Krantz G, Garcia-Moreno C (2005) Violence against women. J Epidemiol Community Health, 59:818-821.

Kraynak TE, Marsland AL, Gianaros PJ (2018) Neural mechanisms linking emotion with cardiovascular disease. Curr Cardiol Rep, 20:128-138.

Lulofs RS, Cahn DD (2000) Conflict: From Theory to Action, 2nd ed. Boston, USA, Allyn and Bacon.

Martin RC, Dahlen ER (2007) Anger response styles and reaction to provocation. Pers Individ Dif, 43:2083-2094.

McLay R, Ram V, Murphy J, Spira J, Wood DP, Wiederhold MD et al. (2014) Effect of virtual reality PTSD treatment on mood and neurocognitive outcomes. Cyberpsychol Behav Soc Netw, 17:439-446.

Morriss R (2009) Psychological models of mood disorders. Psychiatry, 8:82-86.

Nicholson RA, Gramling SE, Ong JC, Buenevar L (2003) Differences in anger expression between individuals with and without headache after controlling for depression and anxiety. Headache, 43:651-663.

Ozturk E (2012) Control management and causes of anger in trainers who work in primary school (Uzmanlık tezi). Elazığ, Firat University.

Parker JD, Michael Bagby R, Taylor GJ, Endler NS, Schmitz P (1993) Factorial validity of the 20-item Toronto Alexithymia Scale. Eur J Pers, 7:221-232.

Pennebaker JW (1997) Writing about emotional experiences as a therapeutic process. Psychol Sci, 8:162-166.

Pizarro J (2004) The efficacy of art and writing therapy: Increasing positive mental health outcomes and participant retention after exposure to traumatic experience. Art Ther, 21:5-12.

Power M, Dalgleish T (2007) Cognition and Emotion: From Order to Disorder, 2nd ed. London, Psychology Press.

Rook KS, Luong G, Sorkin DH, Newsom JT, Krause N (2012) Ambivalent versus problematic social ties: Implications for psychological health, functional health, and interpersonal coping. Psychol Aging, 27:912-923.

Rothschild B, Rand M (2006) Help for the Helper, Self-Care Strategies for Managing Burnout and Stress: The Psychophysiology of Compassion Fatigue and Vicarious Trauma. New York, NY, WW Norton.

Russell JA, Weiss A, Mendelsohn GA (1989) Affect grid: A single-item scale of pleasure and arousal. J Pers Soc Psychol, 57:493-502.

Rusting CL, Nolen-Hoeksema S (1998) Regulating responses to anger: Effects of rumination and distraction on angry mood. J Pers Soc Psychol, 74:790-803.

Samson AC, Gross JJ (2012) Humour as emotion regulation: The differential consequences of negative versus positive humour. Cogn Emot, 26:375-384.

Sargunaraj M, Kashyap H, Chandra PS (2021) Writing your way through feelings: Therapeutic writing for emotion regulation. J Psychosoc Rehabil Ment Health, 8:73-79.

Sarp N, Tosun A (2011) Emotion and autobiographical memory. Psikiyatride Güncel Yaklaşımlar, 3:446-445.

Sheppes G, Scheibe S, Suri G, Gross JJ (2011) Emotion-regulation choice. Psychol Sci, 22:1391-1396.

Sifneos PE (1972) Short-term Psychotherapy and Emotional Crisis. Cambridge, Harvard University Press.

Skinner AL, Stevenson MC, Camillus JC (2015) Ambivalent sexism in context: Hostile and benevolent sexism moderate bias against female drivers. Basic Appl Soc Psych, 37:56-67.

Sleed M, Durrheim K, Kriel A, Solomon V, Baxter V (2002) The effectiveness of the vignette methodology: A comparison of written and video vignettes in eliciting responses about date rape. S Afr J Psychol, 32:21-28.

Smyth JM, Pennebaker JW (2001) What Are the Health Effects of Disclosure? In Handbook of Health Psychology, (Eds A Baum, TA Revenson, JE Singer):339-348. Hillsdale, NJ, Erlbaum.

Stimmel DT, Rayburg J, Waring W, Raffeld PM (2005) The relation of internalized and trait anger to psychopathology. Counseling & Clinical Psychology Journal, 2:112-123.

Suinn RM (2001) The terrible twos - anger and anxiety: Hazardous to your health. Am Psychol, 56:27-36.

Suls J, Bunde J (2005) Anger, anxiety, and depression as risk factors for cardiovascular disease: The problems and implications of overlapping affective dispositions. Psychol Bull, 131:260-300.

Tabachnic BG, Fidell LS (2014) Using Multivariate Statistics, 6th ed. Boston, Pearson Education.

Tahlier M, Miron AM, Rauscher FH (2013) Music choice as a sadness regulation for resolved versus unresolved sad events. Psychol Music, 41:729-748.

Taylor GJ (2000) Recent developments in alexithymia theory and research. Can J Psychiatry, 45:134-142.

Van Avermaet E (2001). Social Influence in Small Groups. In Introduction to Social Psychology, 3rd ed. (Eds M Hewstone, W Stroebe):403-443. Oxford, UK, Basil Blackwell.

Watson D, Clark LA, Tellegen A (1988) Development and validation of brief measures of positive and negative affect: The PANAS scales. J Pers Soc Psychol, 54:1063-1070.

Zackheim L (2007) Alexithymia: The expanding realm of research. J Psychosom Res, 63:345-347.

Authors Contributions: The author(s) have declared that they have made a significant scientific contribution to the study and have assisted in the preparation or revision of the manuscript
Peer-review: Externally peer-reviewed.
Conflict of Interest: No conflict of interest was declared.
Financial Disclosure: No financial support was declared for this study.
Acknowledgments: This study is a part of the master's thesis titled "Regulation of Anger by Writing: Usage of Expression, Problem-solving, and Distraction Strategies," written by İrem Şahin as part of the Başkent University Clinical Psychology Master's Program under the supervision of Assitant Prof. Burçin Akın Sarı.