






Context-related Impact of Positive and Negative Affect on Emotion Regulation: A Mobile-Conducted EMA Study

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Abstract

During emerging adulthood, emotion regulation is especially important as it has been associated with better interpersonal relationships, psychosocial adjustment and well-being. The aim of this study was to analyse the influence of contextual variables on the selection of specific emotional regulation strategies in a sample of emerging adults aged 18-29. As part of our ecological momentary assessment study (EMA), we asked our participants ($N = 31$) over 7 days, 6 times a day (35 observations in total), how they were feeling in terms of Positive (PA) and Negative Affect (NA), with whom they were and the frequency with which they were implementing the following emotion regulation strategies: rumination, positive reappraisal, problem solution, distraction, acceptance, emotional suppression and social sharing. Conforming with our hypothesis, problem solving was found to be positively associated with being with colleagues when experiencing PA, as well as emotional suppression. Non-expectedly, we found that rumination and distraction were negatively associated with being alone when experiencing PA. Acceptance resulted to be negatively associated with being alone when experiencing NA. Positive reappraisal was found to be negatively associated with being alone when experiencing PA and NA. There were no significant effects on social sharing. This study contributes to the understanding of emotional processes in different contexts in a sample of emerging adults based on the EMA methodology, which allows the measurement of micro-processes by breaking down global concepts, such as emotion regulation.

Keywords: emotion regulation, emerging adulthood, positive and negative affect, ecological momentary assessment - EMA.

Resumen

Impacto contextual del afecto positivo y negativo en regulación emocional: Estudio EMA a través de dispositivo móvil. Durante la etapa de la adultez emergente, la regulación de las emociones es especialmente importante, ya que se ha asociado a mejores relaciones interpersonales, mejor ajuste psicosocial y bienestar. El objetivo de este estudio fue analizar la influencia de variables socio-contextuales en la selección de estrategias de regulación emocional en una muestra de adultos emergentes entre 18 y 29 años. En el presente estudio de evaluación ecológica momentánea (EMA), se preguntó a los participantes ($N = 31$) a lo largo de 7 días, 6 veces al día (35 observaciones en total), cómo se sentían en términos de Afecto Positivo (AP) y Negativo (AN), con quién estaban y la frecuencia con la que ponían en práctica diferentes estrategias de regulación emocional: rumiación, reevaluación positiva, solución de problemas, distracción, aceptación, supresión emocional y apoyo social. Conforme a las hipótesis planteadas, la solución de problemas resultó estar asociada positivamente con estar con compañeros cuando se experimenta AP, al igual que la supresión emocional. Contrario a lo esperado, encontramos que la rumiación y la distracción estaban asociadas negativamente con estar solo cuando se experimenta AP. La aceptación resultó estar relacionada negativamente con estar solo cuando se experimentaba AN. La reevaluación positiva estuvo asociada negativamente con estar solo cuando se experimentaba tanto AP como AN. Por último, no hubo efectos significativos en apoyo social. Este estudio contribuye a la comprensión de los procesos emocionales en diferentes contextos en adultos emergentes basándose en la metodología EMA, que permite medir microprocesos desglosando conceptos globales, como la regulación de las emociones.

Palabras clave: regulación emocional, adultez emergente, afectos positivos y negativos, evaluación ecológica momentánea - EMA

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Emerging adulthood is described as a developmental period that comprises the age range from the late teens to mid-late twenties (Arnett, 2007). It is highly heterogeneous and the least structured, specifically it is characterized by *identity exploration*, *instability*, *self-focused age*, *feeling-in-between* and a high range of *possibilities* (Arnett, 2007). Emotion regulation is especially important in this age range, and it has been associated with better interpersonal relationships (Lopes et al., 2011), with higher relationship satisfaction in couples (Mónaco et al., 2022) and predicts psychosocial adjustments (Brewer et al., 2016). Emerging adults that were not attending college are usually called “The Forgotten Half”, as studies with them are uncommon (Arnett, 2016).

Emotions have different functions, such as favouring adaptation to situational demands, facilitate decision-making or promote learning (Gross, 1999). Based on Gross’ model of emotion regulation (2001), emotions can be regulated at five stages: (1) *selection of situation*, (2) *modification of the situation*, (3) *deployment of attention*, (4) *change of cognitions* and (5) *modulation of experiential, behavioural or physiological responses*. *Problem solution* would be part of modification of the situation. *Positive reappraisal* corresponds to the change of cognitions of an emotional event to change its emotional balance (Shiota & Levenson, 2012). *Distraction* is a deployment of attention strategy, as it involves paying less attention to the emotional salient event (Thiruchselvam et al., 2011). *Rumination* would be the strategy contrary to distraction that consists of thinking repeatedly about the emotional stimulus that leads to the amplification of the emotional response (Ray et al., 2008). *Social sharing* and *emotional suppression* are emotion regulation strategies corresponding to the modulation of experiential, behavioural or physiological responses. *Social sharing* can elicit the modulation of the emotional response, as the social sharing partner can provide advice or comfort (Lane et al., 2013). *Emotional Suppression* implies the modulation of the behavioural response with the inhibition of the emotional expressive behaviour (Gross & Levenson, 1993). *Acceptance* that involves adopting a decentred non-evaluative perspective (Goldin et al., 2019) could be also considered a way of modulating the emotional response.

So far, emotion regulation has been studied mostly either in experimental settings or by using retrospective questionnaires. However, these methods have some disadvantages, as they lack ecological validity. In experimental conditions participants might be instructed to use a particular strategy to determine its effects, revealing little about the spontaneous decision to use one strategy or another (Brans et al., 2013). In the case of retrospective questionnaires, results might be distorted due to memory biases (Bridges-Curry et al. 2024). The novel method of Ecological Momentary Assessment tries to correct these disadvantages by measuring participants repeatedly in their natural environments. Ecological Momentary Assessment (EMA) is a broad umbrella term that refers to different ways of collecting real-word data (Newman & Stone, 2019). The main characteristics of this way of collecting data are the following ones: (1) data is collected while participants are experiencing their daily lives, therefore it is “ecological”, (2) questions usually refer to current feelings, thoughts or behaviour to avoid memory biases, therefore it is also called “momentary” and (3) assessment is based on repeated measurements to provide a picture of how participants’ feelings, thoughts or behaviours are fluctuating on a day-to-day basis (Strakosch et al., 2024). The assessment must be completed at selected times, e.g., each time a particular event occurs or at random intervals (Newman & Stone, 2019).

Considering the purpose of emotion regulation, it can be used for hedonic purposes, such as increase positive affect and diminish

negative emotions, and it can also be used for contra hedonic purposes to adapt to the situational demands (Brans et al., 2013; Bridges-Curry et al. 2024; Strakosch et al., 2024; Wilms et al., 2020), such as for example when someone must show condolences and not show happiness, even if he/she might be feeling happy because of another reason. This example shows us that the social context plays an important role in the selection of emotion regulation strategies, as daily emotions occur often in the presence of other persons. Furthermore, the degree of closeness to the other person also influences the emotion regulation strategy, being with close others favouring social sharing and not being with close others favouring emotional suppression (Paul et al., 2023). Distraction and rumination are also considered to rely on intrapersonal processes that happen more frequently when being alone (Paul et al., 2023). It must be noted that reappraisal can also happen in interaction, that would be called co-reappraisal (Christensen et al., 2020; Horn & Maercker, 2016; Tosalí & Harma, 2020). Apart from the social context, the experienced affect can influence the pattern of thoughts, which could also influence the selection of emotion regulation strategies. Lay et al. (2019) made a distinction between negative and positive solitude experiences, being negative solitude experiences characterized by negative affect and effortful thought, while positive solitude experiences are characterized by calm affect and pleasant thoughts.

Having reviewed the relevance factors that could influence the selection of specific emotion regulation strategies, the aim of this EMA study is to predict the use of the emotion regulation strategies conceptualized by Gross (2021), according to the valence of affect that the person might be experiencing and the social context. Based on the study of Paul et al. (2023), we would expect reappraisal, distraction and rumination to be more frequent when being alone, as they are intra-personal processes. In the case of reappraisal, it would also be frequent with close others (co-reappraisal) (H1). As part of the second hypothesis, we would await social sharing to be more frequent when being with close others, as it relies on interpersonal processes (H2). Finally, emotional suppression would be more frequent when being with not close others (H3). Based on the distinction between intrapersonal and interpersonal process, we could also hypothesize that problem solution as it can be favoured by the advice of others, is an interpersonal process and is more frequent in the presence of others. Acceptance as it relies on intrapersonal processes, such as non-evaluation and curiosity, would be more frequent when being alone (H4).

Method

Participants

Participants were recruited through social media and e-mail. Those who were interested completed a small survey to collect their contact information and were later informed by e-mail about the next steps to participate in the study. Initially, 93 participated, but applying inclusion and exclusion criteria, the final sample consisted of 31 participants. Inclusion and exclusion criteria can be read from Figure 2.

Participants had a mean age of 24 years ($M = 24.06$; $SD = 0.46$, range = 18-29). Regarding gender, 54.8% of the participants were women and 45.2% participants were men. In relation to work, 37% of the participants were working and from the participants that were working, 50% were working and studying at the same time and 50% were just working, so that emerging adults not attending college and belonging to “The Forgotten Half” as explained before, were also included in this study.

Figure 1. Flowchart of participants

Inclusion criteria	Exclusion criteria	Excluded	Reason for exclusion	Final Sample
Enrollment	n=93	n=48	Did not meet inclusion criteria or did not complete baseline questionnaire	n=31
Allocation	n=49	n=8	Declined to participate	
Analysis	n=41	n=9	Did not complete at least 66,6% (2/3) of the EMA surveys. One participant was eliminated due to a random response pattern while displaying the graphics	

(Adapted from De la Barrera et al., 2024)

Figure 2. Inclusion and exclusion criteria

Inclusion criteria	Exclusion criteria
Be an emerging adult (18 - 29 years)	Did not complete baseline questionnaire
Residing in Spain	Withdrew their consent during the study
Use a smartphone with an Android operating system	Did not complete 2/3 of the EMA survey
Sign the informed consent	Displayed a random response pattern

Variables and Instruments

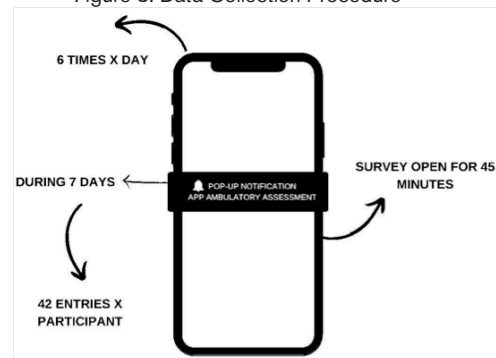
Negative and positive affect were measured on a 5-point Likert scale with items modified from the Positive and Negative Affect Schedule (PANAS) (Thompson, 2007; Spanish version: Lopez-Gomez et al., 2015), so to assess the intensity of the affect at the present moment. The PANAS was considered too extensive to be completed daily as part of the EMA, so that according to informal judgment of experts only some of the items were selected, as has been done in other EMA studies (Blanke et al., 2022; Husen et al., 2016; Singh & Björling, 2019). Four items were selected for negative affect (*nervous, irritable, scared and concerned*) and other four for positive affect (*interested, enthusiastic, proud and active*). Both scales showed good within-subject reliability considering the Interclass Correlation Coefficients (ICC) and McDonald's Omega for negative affect (ICC = .76, $\alpha = .76$, $\omega = .76$), positive affect (ICC = .85, $\alpha = .85$, $\omega = .85$).

Emotion Regulation Strategies mentioned in the Introduction were assessed on a 5-point Likert scale with 21 items, 3 items for each strategy (Rumination, Positive Reappraisal, Distraction, Emotional Suppression, Problem Solution, Social Sharing, Acceptance), asking the extent to which they used those strategies to regulate their affect since the last beep ranging from 1 (*Almost nothing*) to 5 (*A lot*) (Bucich & MacCann, 2019; Cabello et al., 2012; Domínguez-Sánchez et al., 2011; Garnefski et al., 2001; Gross & John, 2003). We calculated within-subject reliability for each strategy, indicating very good consistency for Rumination (ICC = .86, $\alpha = .86$, $\omega = .86$), Positive Reappraisal (ICC = .81, $\alpha = .81$, $\omega = .82$), Distraction (ICC = .83, $\alpha = .83$, $\omega = .83$), Emotional Suppression (ICC = .86, $\alpha = .86$, $\omega = .86$), Problem Solution (ICC = .86, $\alpha = .86$, $\omega = .86$), Social Sharing (ICC = .76, $\alpha = .76$, $\omega = .83$), Acceptance (ICC = .86, $\alpha = .86$, $\omega = .86$).

Procedure

The EMA assessment was conducted with the mobile app "App Ambulatory Assessment" for Android (Figure 3). Participants were asked the same battery of questions 6 times per day for 7 days, with notifications appearing randomly within the following intervals: 10:00-10:30; 13:00-13:30; 16:00-16:30; 18:00-18:30; 20:00-20:30 and 21:30-22:00. They were informed by a pop-up notification that it was time to answer the survey and the survey remained open for 45 minutes. Based on 6 beeps x 7 days there should be 42 entries for each participant, as it is visually displayed in Figure 3. In our study, not all 31 participants completed all 42 entries, resulting in a total of N = 1302 data points. However, a rather small percentage (8.6%) of the data (n = 111) was missing and therefore conceptualized as missing data.

Figure 3. Data Collection Procedure



Participants were also asked who else was present in the moment when they were answering the survey. Possible answers that were presented referring to the persons they were spending time with were the following ones: *alone, with my partner or similar, with friends, with family or with colleagues*. It should be noted that answers to this question were not mutually exclusive, so participants could choose more than one answer in a multi-answer format.

Statistical Analysis

Statistical analyses were conducted using IBM SPSS Statistics. First, we assessed within-subject reliability using Intraclass Correlation Coefficient (ICC), Cronbach's alpha, and McDonald's omega to ensure the consistency of the measures over time. Second, to ensure the robustness of our analyses, we conducted pattern analysis of missing data, which revealed that 8.6% of data were missing at random (MAR), meaning the likelihood of a data point being missing is related to the observed data rather than the unobserved data itself. This reduces the likelihood of bias due to missing data. Consequently, we decided not to include the missing data in subsequent analyses. Lastly, we employed multilevel modeling to account for the nested structure of the data, with repeated measures (time points) nested within participants. Specifically, we estimated 14 causal models to predict each emotion regulation strategy from positive affect (PA) and negative affect (NA) over time. Additionally, we conducted 70 moderation models to examine how the relationship between affect and emotion regulation strategies was moderated by the type of social interaction. Each model included fixed effects for time and affect variables, random intercepts to account for between-subject variability, and an autoregressive structure to account for within-subject correlations over time.

Table 1. Results from multilevel models of the within-subject effects of Daily Positive and Negative Affect on Daily Emotional Regulation Strategies

X	Y	X→Y	W	X(W)→Y	W(X)→Y	X*W→Y
1. PA	Rumination	-.06	Alone	-.12*	-.36**	.14**
			Partner	-.04	.16	-.08
			Friends	-.06	-.20	.03
			Family	-.05	.27	-.09
			Colleagues	-.06	.27	-.07
2. NA	Rumination	.35**	Alone	.32**	-.08	.04
			Partner	.32**	-.23	.14
			Friends	.35**	-.08	.03
			Family	.37**	.23	-.13
			Colleagues	.36**	.36	-.19
3. PA	Positive Reappraisal	.33**	Alone	.29**	-.29**	.08
			Partner	.34**	.16	-.06
			Friends	.32**	-.19	.06
			Family	.33**	.10	-.05
			Colleagues	.33*	.03	-.00
4. NA	Positive Reappraisal	.01	Alone	0	-.22*	.04
			Partner	.03	.16	-.07
			Friends	.03	.32	-.05
			Family	.02	.07	-.06
			Colleagues	.00	.03	.07
5. PA	Distraction	-.07	Alone	-.12*	-.30*	.09
			Partner	-.04	.21	-.10
			Friends	-.07	-.40	.10
			Family	-.06	.09	-.01
			Colleagues	-.06	.53	-.13
6. NA	Distraction	.27**	Alone	.29**	.06	-.06
			Partner	.26**	-.13	.01
			Friends	.26**	-.16	.09
			Family	.28**	.29	-.15
			Colleagues	.26**	.13	.03

Note. PA = Positive affect, NA = negative affect. * $p < 0.05$, ** $p < 0.01$

Results

We estimated multilevel models that specified a within-subject process of Daily Positive and Negative Affect to predict the use of Daily Emotion Regulation Strategies considering the moderation effect of the interpersonal context (Table 1).

The first multilevel model estimated the effect of *Positive Affect* (PA) on the use of *Rumination*, which was non-significant. When including the moderating variable of *Being Alone* in this model, the negative effect of PA on *Rumination* was found to be significant. Moreover, *Being Alone* also showed to be negatively significant. The interaction between PA and *Being Alone* was positive, which means that their negative effect on *Rumination* is stronger when one of them increases. Thus, participants who experienced PA when *Being Alone*, used less rumination strategies. The second multilevel model evaluated the impact of *Negative Affect* (NA) on the use of *Rumination*, which proved to be significant. Therefore, participants who experienced NA used more rumination strategies independently of the moderating variables of the social context. In other words, PA reduces rumination, especially when being alone, while NA increases rumination regardless of social context.

Following with *Positive Reappraisal*, the third multilevel model estimated the impact of PA on *Positive Reappraisal*, which proved to be significant with a positive relation. Accordingly, participants who experienced PA used *Positive Reappraisal* more frequently. Moreo-

Table 1 (continuation). Results from multilevel models of the within-subject effects of Daily Positive and Negative Affect on Daily Emotional Regulation Strategies

X	Y	X→Y	W	X(W)→Y	W(X)→Y	X*W→Y
1. PA	Social Sharing	.26**	Alone	.24**	-.15	.04
			Partner	.27**	.27	-.06
			Friends	.27**	.23	-.07
			Family	.26**	-.23	.05
			Colleagues	.26**	-.26	.11
2. NA	Social Sharing	.13	Alone	.06	-.39**	.16*
			Partner	.15*	.23	-.02
			Friends	.14*	.25	-.01
			Family	.14*	.04	-.09
			Colleagues	.16*	.50	-.31*
3. PA	Emotional Suppression	-.14**	Alone	-.21**	-.50**	.16**
			Partner	-.12**	.06	-.06
			Friends	-.13**	-.22	.03
			Family	-.13**	.26	-.07
			Colleagues	-.13**	.95**	-.22*
4. NA	Emotional Suppression	.28**	Alone	.35**	.21	-.16*
			Partner	.27**	-.12	.00
			Friends	.26**	-.30	.11
			Family	.29**	.18	-.08
			Colleagues	.24**	-.06	.23*
5. PA	Problem Solution	.18**	Alone	.08	-.63**	.23**
			Partner	.20**	.21	-.09
			Friends	.19**	-.07	-.02
			Family	.19**	.15	-.08
			Colleagues	.19**	.74*	-.12
6. NA	Problem Solution	.34**	Alone	.38**	.07	-.09
			Partner	.30**	-.27	.19
			Friends	.34**	-.03	.05
			Family	.36**	.11	-.11
			Colleagues	.32**	.27	.07
7. PA	Acceptance	.32**	Alone	.30**	-.12	.04
			Partner	.31**	.13	-.01
			Friends	.32**	-.10	.01
			Family	.32**	.07	-.03
			Colleagues	.31**	-.40	.17
8. NA	Acceptance	-.11	Alone	-.16	-.29*	.11
			Partner	-.10	.24	-.03
			Friends	-.09	.31	-.12
			Family	-.10	.07	-.05
			Colleagues	-.11	.08	-.03

Note. PA = Positive affect, NA = negative affect. * $p < 0.05$, ** $p < 0.01$

ver, when including the variable *Being Alone* in the model, the variable *Being Alone* was found to have a negative significant impact on the use of *Positive Reappraisal*. Therefore, participants who experienced PA used *Positive Reappraisal* less frequently when being alone. The fourth model estimating the impact of NA on *Positive Reappraisal* showed that NA is non-significant. However, the variable *Being Alone* was found to be significant in this fourth model. This means that PA increases *Positive Reappraisal*, but being alone decreases its use, regardless of the experienced affect.

In the case of *Distraction*, the fifth model showed the impact of PA on *Distraction*, which was non-significant. However, when the variable *Being Alone* was included in the model, PA proved to be significant in predicting *Distraction* with a negative effect. Moreover, the variable *Being Alone* was significant in this model in predicting *Distraction* with a negative association. Therefore, participants used less *Distraction* when *Being Alone* and experiencing

PA. The sixth model showed that NA was significant in predicting the use of *Distraction* independently of the social context with a positive association. Consequently, participants used *Distraction* more frequently when experiencing NA. So that, PA leads to less *Distraction* when alone, while NA increases *Distraction* regardless of the social context.

Continuing with *Emotional Suppression*, the seventh model estimated the impact of PA on *Emotional Suppression*, which proved to be significant with a negative association. Thus, participants used less strategies related to *Emotional Suppression*, when experiencing PA. When the variable *Being Alone* was included in the model, it showed to be significant with a negative effect. The interaction between PA and *Being Alone* was positive and significant, so that both variables had an additive effect. Therefore, participants used less strategies related to *Emotional Suppression*, when experiencing PA and *Being Alone*. When the variable *Being with Colleagues* was included in the model with PA, it had a positive significant effect on *Emotional Suppression*, which meant that *Being with Colleagues* increases the probability of using *Emotional Suppression*. The interaction between PA and *Being with Colleagues* was negative and significant, so that when one of the variable increases, the other had a weaker effect on *Emotional Suppression*. In other words, the negative effect of PA on *Emotional Suppression* was weakened by the positive effect of *Being with Colleagues*. The eighth model estimating the prediction of NA on *Emotional Suppression* demonstrated that NA was associated positively with *Emotional Suppression* in a significant way. When including the variable *Being Alone*, the interaction between *Being Alone* and NA was negative and significant, so that the positive effect of NA on *Emotional Suppression* was reduced by the fact of *Being Alone* and vice versa. In the case of the variable *Being with Colleagues*, the interaction between NA and *Being with Colleagues* was positive and significant, so that *Being with Colleagues* strengthened the positive effect of NA on *Emotional Suppression*. To put it differently, PA reduces *Emotional Suppression*, especially when alone, while NA increases *Emotional Suppression*, with the effects of both moderated by social context, as explained.

In the case of *Social Sharing*, the ninth model estimating the impact of PA on *Social Sharing* demonstrated that PA is significant with a positive effect independently of the social context. Thus, participants made more use of *Social Sharing* when experiencing PA. The eighth model estimating the impact of NA on the use of *Social Sharing*, showed that NA was non-significant. When the variable *Being Alone* was included in this model, it proved to be negatively associated with *Social Sharing* in a significant way. Consequently, participants made less use of *Social Sharing* when *Being Alone*. The interaction between NA and *Being Alone* was positive and significant. In the case of the variable *Being with Colleagues*, the variable *Being with Colleagues* was non-significant. However, the interaction between NA and *Being with Colleagues* was negative and significant. So, to sum up, PA increases *Social Sharing* regardless of social context, while NA has no effect.

Following with *Problem Solution*, the eleventh model showed that PA had a positive impact on its use. Thus, participants used more frequently strategies related to *Problem Solution*, when experiencing PA. Furthermore, when including the variable *Being Alone* in this model, it proved to be significant with a negative effect on *Problem Solution*. The interaction between PA and *Being Alone* was positive and significant, so when one of them increases, the strength of the other variable increases. In the case of *Being Alone*, when participants were alone and experienced PA, they made less use of *Problem Solution*. Furthermore, the variable *Being with Colleagues* was also significant with a positive association, when included in this model. Thus, partic-

ipants used more frequently *Problem Solution* when experiencing PA and *Being with Colleagues*. The twelfth model estimating the impact of NA on *Problem Solution* showed that NA had a positive impact on this strategy. Therefore, participants used problem solution strategies when experiencing NA and independently of the moderating variables of the social context. In other words, PA and NA both increase the use of *Problem Solution*. PA's effect is strengthened when being with colleagues and weakened when alone, while NA's effect remains significant regardless of social context.

Finally, *Acceptance*, the thirteenth model estimating the impact of PA on *Acceptance* showed that PA is significant with a positive association independently of the social context. Thus, participants used *Acceptance* more frequently when experiencing PA. On the contrary, the fourteenth model estimating NA on *Acceptance* showed that NA is non-significant. When the variable *Being Alone* was included in this model, this variable was proved to be significant on *Acceptance* with a negative association. Therefore, participants used less *Acceptance* when being alone and experiencing NA. So that, PA increases *Acceptance* independently of social context. Moreover, being alone decreases *Acceptance*, especially when experiencing NA.

Discussion

The aim of this study was to examine the influence of contextual variables on emotion regulation processes in a sample of emerging adults, expanding previous research that has been demonstrated that the presence or absence of other persons can influence the selection of emotion regulation strategies (Paul et al., 2023). EMA methodology makes it possible to analyze the impact of the social context on a daily setting, not restricted to the laboratory guidelines, which helped us gain a high ecological validity.

According to our first hypothesis, reappraisal, distraction and rumination were more frequent when being alone, as they are intra-personal processes. In the case of reappraisal, it was also specified that it can also be frequent with close others, a process called co-reappraisal. This hypothesis was disconfirmed by our results. Being alone strengthened the negative impact that positive affect had on rumination, so that rumination was used less when being alone and experiencing positive affect. The unexpected results could be explained considering that Lay et al. (2018) identified a distinct pattern between negative and positive solitude experiences, so that participants that were possible experiencing a positive solitude experience did not ruminate. Following with the emotional regulation strategy of distraction, it was found that the absence of other persons remained only significant when participants were experiencing positive affect, and in this case, it had a negative effect on distraction, decreasing its use. Accordingly, we could state that being alone did not favored the use of rumination and distraction as expected, then participants did not experience the need to use either of these strategies, when experiencing positive solitude experiences (Lay et al., 2018). In the case of positive reappraisal, the fact that participants were alone had a negative moderating effect both when they were experiencing positive and negative affect. It seems that being alone interfered with viewing events under a more positive light. It could be the case that when participants were alone, they were not involved in a possible situation with other persons that could be reappraised in a positive way. Moreover, when participants were experiencing positive emotions, as was the case with rumination and distraction, they might not have felt the need of using positive reappraisal. Co-reappraisal was also not found as part of our results, as being with partner, friends, family or

colleagues did not have a significant impact on this strategy. So far, co-reappraisal has been studied in dyads (Christensen et al., 2020; Horn & Maercker, 2016; Tosyali & Harma, 2020), so that there are some variables that mediate the extent to which co-reappraisal takes place in a dyad, such as perceived partner's responsiveness (Tosyali & Harma, 2020), that were not assessed in our study and that could explain why our results did not remain significant.

Contrary to the strategies mentioned above, social sharing was considered to be an interpersonal process. Therefore, we hypothesized social sharing to be more frequent when being with close others. This hypothesis was also disconfirmed, as being with partner, friends, family or colleagues did not have a significant impact on this strategy. So that, future studies should include variables related to the quality of the relationships to disentangle these results. As part of our third hypothesis, we expected emotional suppression to be more frequent when being with not close others, which was confirmed. Positive affect had a negative direct effect on suppression, decreasing its use. However, this effect was weakened by the fact that participants were with colleagues, that were considered not as close. In agreement with the study of Wilms et al. (2020), we could interpret that participants had the instrumental goal of adapting to the situational demands at work and therefore experienced the need to down-regulate their positive feelings. Finally, according to the fourth hypothesis, we expected problem solution to be more frequent in the presence of others, as it can be favored by the advice of others. Positive affect had a positive effect on problem solution. Moreover, this effect was strengthened by the presence of colleagues, having a positive moderating effect on the use of problem solution. A possible explanation could be that as in the case of emotional suppression, the degree of closeness to the person plays a role on the emotional regulation strategy, in this case problem solution. Close friends and one's partner are usually similar to oneself, as it has been demonstrated that humans tend to look for persons who are similar in values, attitudes and behaviors (Bahns et al., 2017). Therefore, being exposed to the advice of non-close others could enable the exposition to different points of view on a specific matter and the quality of solutions improves with divergent perspectives on a topic (Graesser, 2018). Moreover, it could be that problem solution is related to problems that individuals encountered at work, so that the opinion of colleagues that are also working on the same topic could be more valuable, as an expert opinion. In the case of acceptance, we thought of it as an intrapersonal strategy, so that it would be more frequent when being alone. We found that the fact that participants were alone had a negative moderating effect on the use of acceptance, when they were experiencing NA, so that, being alone could have interfered with the process of accepting one situation that elicits negative emotions. It has been shown that social support fosters the acceptance of negative situations, such as the acceptance of a disease (Kostova et al., 2014) or a disability (Jiao et al., 2012), which could give us a hint to interpret that this process could also work the other way round.

Some of the limitations of this study are the small sample of participants and the rather small presence (8.6%) of missing data. Both factors could impact the reliability and accuracy of the study's conclusions by limiting the generalizability and statistical power of the results and/or affecting the robustness of the findings. To design future studies, it would be necessary to reflect on how to increase adherence on EMA-type studies. Moreover, possible interfering variables related to the quality of the interpersonal relationships were not examined, as a supportive couple, family member or friend can elicit very different emotions and guide the selection of emotion regulation strategies in a different way than these same persons acting in non-supportive ways.

Emphasizing the strengths, this study contributes to the understanding of emotion regulation processes in different contexts in a sample of emerging adults, including the forgotten half, that as explained is a way of naming all emerging adults that do not attend university, and therefore are more difficult to recruit. This EMA methodology can lead to a big chance on how psychology is researched, as it allows researchers to measure microprocesses that can allow to disentangle global concepts, such as emotion regulation.

Conflict of interests

The authors declare no conflict of interest.

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