Psicothema 2006. Vol. 18, supl., pp. 72-78
www.psicothema.com
ISSN 0214 - 9915 CODEN PSOTEG

Emotional intelligence and emotional reactivity and recovery in laboratory context

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This research analysed the influence of Emotional Intelligence (EI) on emotional responses in laboratory context. Specifically, 1) how does EI affect previous mood states? 2) How does persons' emotional reactivity to different mood induction conditions depend on their EI? 3) How does EI help to a better mood recovery? For these purposes, 155 participants (123 women and 32 men) were measured for EI using Trait Meta-Mood Scale (TMMS) one month before the experimental session. The TMMS assesses perceived ability to (a) attend to moods (Attention), (b) discriminate clearly among moods (Clarity), and (c) regulate moods (Repair). The experiment comprised three phases. At time 1 experimenter assessed mood states of the participants before mood induction. At time 2 (mood reactivity phase), participants were randomly assigned to one of the three experimental conditions: amusement, anger, and sadness mood conditions. Subsequently participants were assessed in their mood states. At time 3 (mood recovery phase), following a rest period participants were evaluated in mood states and intrusive thoughts measures. Results indicated that EI, specifically Clarity and Repair, was related to previous mood states, emotional reactivity to mood induction conditions, and emotional recovery. Clarity and Repair play different but complementary roles in processing emotional situations generated in laboratory context. In this sense, EI could join the list of personal and interpersonal factors that contribute to the efficient processing of positive and negative emotions.

Inteligencia emocional, reactividad emocional y recuperación en el laboratorio. Esta investigación analizó la influencia de la Inteligencia Emocional (IE) en las respuestas emocionales en el contexto del laboratorio. Específicamente, se analizó: 1) ¿Cómo afecta la IE el estado de ánimo previo?; 2) ¿Cómo la reactividad emocional de una persona a diferentes condiciones de inducción de ánimo depende de su IE?; y 3) ¿Cómo ayuda la IE a una mejor recuperación del ánimo? Para ello se evaluó la IE de 155 participantes (123 mujeres y 32 hombres) mediante el Trait Meta-Mood Scale (TMMS) un mes antes de la sesión experimental. El TMMS mide la habilidad percibida para: (a) atender a las emociones (Atención); (b) discriminar claramente entre emociones (Claridad); y (c) regular las emociones (Reparación). El experimento constó de tres fases. En la primera fase el experimentador evaluó el estado de ánimo previo de los participantes antes de la inducción experimental del estado de ánimo. En la segunda fase (fase de reactividad emocional), los participantes fueron asignados aleatoriamente a una de las tres condiciones experimentales: felicidad, enfado y tristeza. Seguidamente, se evaluó el estado de ánimo de los participantes. En la tercera fase (fase de recuperación emocional), tras un período de descanso, se midió el estado de ánimo de los participantes y los pensamientos intrusivos que experimentaron. Los resultados indicaron que la IE, específicamente los subfactores Claridad y Reparación, estaba relacionada con el estado de ánimo previo, con la reactividad emocional a la inducción experimental y con la recuperación emocional. Claridad y Reparación juegan papeles diferentes pero complementarios en el procesamiento de las situaciones emocionales generadas en el contexto del laboratorio. En este sentido, la IE puede unirse a la lista de factores personales e interpersonales que contribuyen al procesamiento eficaz de las emociones positivas y negativas.

Research in psychology has demonstrated a strong relationship between Emotional Intelligence (EI) and positive and negative mood states in everyday life (e.g., Goldman, Kraemer, & Salovey, 1996; Palmer, Donaldson, & Stough, 2002; Petrides & Furham, 2003; Salovey, Mayer, Goldman, Turvey, & Palfai, 1995; Salovey, Stroud, Woolery, & Epel, 2002). However, since the first experimental studies designed to confirm this connection, there has been a great deal of debate about the underlining mechanisms responsible for this relation (Salovey et al., 2002; Schutte, Malouff, Simunek, Hollander, & McKenley, 2002). Fairly few studies have investigated the influence of EI on emotional

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response in laboratory context (Ciarrochi, Chan, & Bajgar, 2001; Petrides & Furnham, 2003; Salovey et al., 1995; Salovey et al., 2002, studies 2 and 3; Schutte et al., 2002, study 3). These researches explored the reactivity and recovery to mood induction using different emotional stimulus such as video scenes or the Velten method (e.g., Salovey et al., 1995; Schutte et al., 2002). The full version of these studies typically comprises three phases, as follows. At time 1, the experimenter assesses EI and mood states of the participants before mood induction. At time 2 (mood reactivity phase), participants are randomly assigned to the mood induction conditions (e.g., a distressing video is presented) and subsequently they are assessed in their mood states. At time 3 (mood recovery phase), following a rest period participants are evaluated in cognitive and mood states measures.

These studies have examined three important questions: 1) How does EI affect previous mood states? 2) How does persons' emotional reactivity to different mood induction conditions depend on their EI? 3) How does EI help to a better mood recovery?

EI and previous mood states (Time 1)

Salovey et al. (1995) showed that positive mood state before mood distressing induction was associated with high capacity to regulate feelings and low emotional attention, two subfactors of the Trait Meta-Mood Scale (TMMS; Salovey et al., 1995). Similarly, Schutte et al. (2002, study 3) found that higher EI was related to a more positive mood state and to greater state self-esteem before mood induction conditions. The later agrees with two correlational studies which found that higher EI was associated with more characteristically positive mood and higher self-esteem, but not with lower characteristically negative mood (Schutte et al., 2002, studies 1 and 2). Schutte et al., (2002) proposed that individuals high in EI maintain higher positive mood states because their emotion regulation capacities enable them to amplify the effect of positive environment. However, Palmer et al., (2002) found that the Clarity subscale of the TMMS correlated positively with trait positive mood and negatively with trait negative mood. In the same way, Extremera and Fernández-Berrocal (2005) asked participants to indicate how much they felt different moods in the prior seven days using a Profile of Mood States (POMS). Results showed that Clarity and Repair were correlated both with positive and negative mood dimensions such as depression, vigour, tension, and anger. These last two studies suggest that, as Schutte et al., (2002) proposed, EI raises the influence of positive situations, and also manages directly the influence of negative situations.

The first aim of our study was to check the influence of EI on Affective Balance (AB) by subtracting the negative from the positive affect score before mood induction, which has not been studied before. This AB allows us to validate whether the global emotional state of people is positive or not (Bradburn, 1969; Sheldon, Elliot, Kim, & Kasser, 2001).

EI and emotional reactivity to mood induction conditions (Time 2)

Salovey et al. (1995) expected no differences in affective response among participants immediately after a distressing stimulus. Despite this, results showed that subjects who scored high on Repair were the least distressed. In addition, Schutte et al. (2002, study 3) administered Positive and Negative Affect Schedule (PANAS) and found that individuals with higher EI showed less of a decrease in positive mood after a negative state induction and showed more of an increase in positive mood after a positive state induction. These studies support the conclusion that EI can moderate emotional reactivity to mood induction. However, studies with other mood induction conditions sometimes show no differences between people with low and high EI. For example, Ciarrochi et al., (2001) using three mood induction conditions (positive, negative, and neutral) found that mood induction had a similar effect on participants with low and high emotional regulation. However, later studies have reported different results. Specifically, Petrides and Furham (2003) investigated if high EI people would be more responsive to mood induction conditions using POMS. Results showed that the group with high EI had a better mood improvement after a cheerful video than the group with low EI, in agreement with Schutte et al. (2002, study 3). On the other hand, results after a disturbing video were unusual because the high EI group had worse mood deterioration than the low EI group. Petrides and Furham (2003) discussed this association between EI and excessive sensitivity and underline the potential weakness of the emotional reactivity of the high EI individuals, in particular, in cognitive and decision-making tasks.

The second aim of our study was to test the influence of EI on positive and negative moods but also on AB after different mood induction conditions. Specifically, to explore if EI subfactors such as Clarity and Repair would influence or moderate people's emotional reactivity when different emotions are inducted (e.g., anger, sadness or amusement).

EI and mood recovery (Time 3)

Salovey et al., (1995) found that individuals who reported being very clear about their feelings (Clarity) were less prone to ruminative thought and had a better mood recovery (positive mood). In addition, Ciarrochi et al., (2001) found that people high in emotional regulation tended to respond with more positive story generations in an effort to repair their negative moods or maintain their positive moods.

Other studies using a different procedure showed similar findings. Examining the relation between TMMS and psychological and physiological responses to repeated laboratory stressors, Salovey et al., (2002, study 2) found that skill at mood Repair was associated with perceptions of repeated stressors as less threatening. On the other hand, greater Clarity was related to greater increases in negative mood reactivity following the stressor, but lower cortisol secretion release during repeated stress. These findings suggest that individuals with high EI would have a better mood recovery after the impact of negative or stressful events.

The third objective of our study was to confirm if Clarity and Repair would influence or moderate mood recovery after the effect of negative and positive events.

Our study

In summary, our study examined the way in which EI, evaluated by TMMS subfactors (Attention, Clarity and Repair), are related to previous mood state, emotional reactivity to mood induction conditions, and afterwards mood recovery. More specifically, in keeping with the results of previous studies, we hypothesized:

1) Clarity and Repair will correlate positively with AB before mood induction.

2) Clarity and Repair will influence or moderate emotional reactivity after mood induction.
3) Clarity and Repair will reduce the frequency of intrusive thoughts about negative mood induction movies (anger and sadness).
4) Clarity and Repair will facilitate mood recovery.
5) Regarding Attention, we have not specific hypothesis, therefore the effect of this variable will be explored.

Method

Participants

All participants were university students at the University of Malaga. Total sample consisted of 155 students (123 women and 32 men). The average age of the participants was 22 years (SD= 2.66). Participants were compensated with course credit.

Procedure

Session 1

Participants were evaluated in TMMS-24 one month before session 2. They were tested in group sessions over a period of about one week.

Session 2

Time 1. Participants arrived at the laboratory and were told that the study was designed to examine people' reactions to emotional video scenes. Participants were asked to watch the video carefully and to avoid looking away from it. They were also informed that the experimenter would ask them about their reaction to the video when it concluded. After this information was given, participants completed a first Positive and Negative Affect Schedule (PANAS1).

Time 2. Subsequently, participants were randomly assigned to one of the three experimental mood induction conditions: amusement, anger, and sadness. To elicit these emotions, we used short segments of movies and short films previously evaluated by Gross and Levenson as the most effective to elicit discrete emotions (1995; see also Rottenberg, Ray, & Gross, in press). Specifically, we used *Cry Freedom* (clip length: 2'36") to elicit anger, The Champ (clip length: 2'51") to elicit sadness, and *When Harry Met Sally* (clip length: 2'35") to elicit amusement.

After participants viewed their randomly assigned video, they completed a second Positive and Negative Affect Schedule (PANAS2). Then participants were allowed to rest in a quiet room for 15 minutes without instructions for that time.

Time 3. After the 15 minutes resting period, participants returned to the lab. First, they were asked to complete a questionnaire to measure the frequency with which they had intrusive thoughts about the video scene in the fifteen-minute interim. Next, participants completed a third Positive and Negative Affect Schedule (PANAS3). Finally, the experimenter debriefed participants.

Measures

Trait Meta-Mood Scale. The Trait Meta-Mood Scale (TMMS; Salovey et al., 1995) was designed to assess how people reflect upon their moods, and it is considered a proxy for perceived EI (Salovey et al., 2002). It evaluates the extent to which people attend to and value their feelings (Attention), feel clear rather than confused about their feelings (Clarity) and use positive thinking to repair negative moods (Repair). Salovey et al., (1995) reported adequate internal consistency, as well as convergent and discriminative validity for this scale. Fernández-Berrocal, Extremera, and Ramos (2004) have developed a Spanish shorter version of the Trait Meta-Mood Scale with 24 items (eight for each subscale). This Spanish version has also shown high internal consistency (all Cronbach's alphas above .85) and test-retest reliability was satisfactory (rs ranging from .60 to .83). Besides, the scale demonstrated appropriate relations with important criterion variables (i.e., depression and rumination). The scales had adequate reliability (Cronbach's alphas Attention= .88, Clarity= .89, Repair= .85).

Positive and Negative Affect Schedule (PANAS). The Spanish translation (Sandin, Chorot, Lostao, Joiner, Santed, & Valiente, 1999) of the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988) was used. The PANAS is a self-reported adjective checklist that contains two 10-item subscales designed for the assessment of Positive Affect (PA: active, alert, attentive, determined, enthusiastic, excited, inspired, interested, proud, and strong) and Negative Affect (NA: afraid, ashamed, distressed, guilty, hostile, irritable, jittery, nervous, scared, and upset). For each of the 20 emotion-related words, participants used a 5-point scale (1= «very slightly or not at all», 5= «extremely») to rate the extent to which they felt each state as they were watching the video scene. The scales had adequate reliability (Cronbach's alphas PA= .82, NA= .86). As further described above, participants provided ratings at three different times (Time1= PANAS1, Time2= PANAS2 and Time3= PANAS3). In addition, an AB score was computed by subtracting the negative affect score from the positive affect score (Bradburn, 1969; Sheldon et al., 2001). This score served as a third, summary outcome variable.

Intrusive thoughts. We assessed the frequency of intrusive thoughts about the video scene during the inter-time period. All items were rated on a 6-point scale ranging from 0 (not at all) to 5 (very often). We used four high-loading items from the Intrusive Thought subscale of the Impact of Events Scale (IES; Horowitz, Wilner, & Alvarez, 1979; Lepore, Ragan, & Jones, 2000; Lepore, Fernández-Berrocal, Ragan, & Ramos, 2004) to assess intrusive thoughts (e.g., «Had thoughts about the video when you didn't mean to?»). The scale had adequate reliability (Cronbach's alphas intrusive thoughts= .85).

Results

Manipulations check

As shown in table 1, mood induction conditions had a powerful impact on positive and negative mood. Accordingly to previous results by Gross and Levenson (1995), participants in the amusement mood condition had the highest AB, in the sadness mood condition showed a medium AB, and in the anger mood condition had the lowest AB ($F(2,150)= 24.50$, $p<.0001$).

The effect of EI on AB before mood induction

We examined the associations between the scores on each subfactor of the TMMS and positive and negative moods before mood induction. For this purpose, AB was used as score. Higher

mood Repair was positively associated with AB, r (155)= .16, p<.05, but Attention and Clarity showed no association with AB (*p*s>.10).

The effects of EI on positive and negative mood and AB after mood induction

Three General Linear Models (GLMs) ANCOVA were conducted to examine the effects of mood induction conditions on positive mood, negative mood, and AB, using PA1, NA1, and the subfactors of the TMMS (Attention, Clarity and Repair) as covariates. The interactions between mood induction conditions with Attention, Clarity, and Repair were introduced in the final model.

A first General Linear Model (GLM) ANCOVA of the effects of mood induction conditions on positive mood showed that there was a significant effect of mood induction conditions on PA2, $F(2,150)= 5.75$, $p<.01$, $\eta^2=.07$. Post hoc analysis (Least Squares Difference, LSD) revealed that participants in the amusement mood condition ($M= 3.40$) reported more PA2 than students in the anger and sadness conditions ($M= 3.11$ and $M= 3.10$, respectively; *p*s<.01). There was no difference between the anger and sadness conditions on PA2 (*p*>.10).

There was a main effect of PA1, $F(1,150)= 121.43$, $p<.0001$, $\eta^2= .45$, showing that the participants with higher previous PA had also higher PA2. There was no main effect of NA1 (*p*>.10).

There was a main effect of Clarity, $F(1,150)= 4.19$, $p<.05$, $\eta^2= .03$, but there were no main effects of Attention nor Repair. Thus, the participants with higher scores in Clarity reported higher PA2 in all mood induction conditions (B= .10; p<.05).

The statistical interactions of Attention, Clarity and Repair with mood condition were not significant.

Table 1
Mean levels of positive affect, negative affect and affective balance in each experimental condition after mood induction (n= 155)

Variable	Mood Induction Conditions		
	Amusement (n= 47) Mean (SD)	Sadness (n= 54) Mean (SD)	Anger (n= 55) Mean (SD)
Positive affect	3.32 (.71)	3.22 (.65)	3.04 (.64)
Negative affect	1.20 (.28)	1.70 (.66)	2.31 (.96)
Affective balance	2.12 (.78)	1.52 (.95)	.73 (1.23)

Notes: SD= Standard Deviation

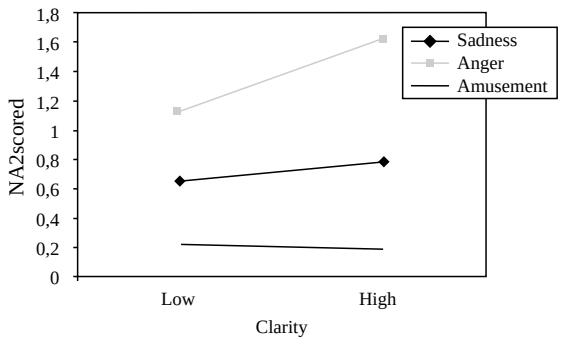

Figure 1. Relation between Clarity and Negative Affect 2 (NA2) in the mood induction conditions

A second GLM ANCOVA of the effects of mood induction conditions on negative mood showed that there was a significant effect of mood induction conditions on NA2, $F(2,150)= 49.54$, $p<.0001$, $\eta^2= .41$. Post hoc analysis (LSD) revealed that participants in the anger mood condition ($M= 2.35$) reported more NA2 than those in the sadness and amusement conditions ($M= 1.68$ and $M= 1.18$, respectively; *p*s<.001). Participants in the sadness mood condition ($M= 2.35$) reported more NA2 than those in the amusement condition (*p*<.001). There was a main effect of NA1, $F(1,150)= 53.33$, $p<.0001$, $\eta^2= .27$, showing that the participants with higher previous NA had also higher NA2. There was no main effect of PA1 (*p*>.10).

There were no main effects of the subfactors of the TMMS. The interaction of Clarity with mood condition was significant ($F(1,150)= 5.11$, $p<.05$, $\eta^2=.04$), but interactions of Attention and Repair with mood condition were not significant.

As displayed in figure 1, participants in the sadness and amusement conditions had similar scores on NA2 independently of whether their score on Clarity was low or high. However, participants in the anger condition evidenced high scores on NA2 when their Clarity was high, and low NA2 scores when their Clarity was low.

A third GLM ANCOVA of the effects of mood induction conditions on AB score showed that there was a significant effect of mood induction conditions on AB2, $F(2,150)= 23.87$, $p<.0001$, $\eta^2= .25$. Post hoc analysis (LSD) revealed that participants in the amusement mood condition ($M= 2.09$) reported more AB2 than those in the sadness and anger conditions ($M= 1.53$ and $M= 0.70$, respectively; *p*s<.01). Participants in the sadness mood condition ($M= 2.35$) reported more AB2 than those in the anger condition (*p*<.001).

There was a main effect of Repair, $F(1,150)= 4.15$, $p<.05$, $\eta^2= .03$, but there were no main effects of Attention nor Clarity. Thus, the participants with higher scores in Repair reported higher AB2 in all mood induction conditions (B= .22; p<.05).

The statistical interactions of Attention, Clarity and Repair with mood condition were not significant.

The moderating effect of EI on intrusive thoughts after mood induction

A GLM ANCOVA was conducted to examine the effects of mood induction conditions on intrusive thoughts, using PA2, NA2, and the subfactors of the TMMS (Attention, Clarity and Repair) as covariates. The interactions between mood induction conditions with Attention, Clarity and Repair were introduced in the final model.

Results revealed that there was no main effect of mood induction conditions on intrusive thoughts (*p*>.50). There was a main effect of NA2, $F(1,150)= 14.76$, $p<.0001$, $\eta^2= .09$, showing that the participants with higher previous NA2 had also higher intrusive thoughts. There was no main effect of PA2 (p>.10).

There were no main effects of Attention, Clarity, nor Repair. The interaction of Clarity with mood condition was significant ($F(1,150)= 7.47$, $p<.001$, $\eta^2= .09$), but interactions of Attention and Repair with mood condition were not significant.

As displayed in figure 2, participants in the anger and amusement conditions had the same scores on intrusive thoughts independently of whether their Clarity was low or high. However, participants in the sadness condition evidenced high scores on intrusive thoughts when their Clarity was low and low scores when their Clarity was high.

The effects of EI on positive and negative mood and AB in recovering time

Three general linear models (GLMs) ANCOVA were conducted to examine the effects of mood induction conditions on positive mood, negative mood, and AB in recovering time, using PA1, NA1, intrusive thoughts, and the subfactors of the TMMS (Attention, Clarity, and Repair) as covariates. The interactions between mood induction conditions with Attention, Clarity and Repair were introduced in the final model.

A first GLM ANCOVA of the effects of mood induction conditions on positive mood showed that there was a significant effect of mood induction conditions on PA3, $F(2,150)= 5.19$, $p<.01$, $\eta^2= .07$. Post hoc analysis (LSD) revealed that participants in the amusement mood condition ($M= 3.31$) reported more PA3 than students in the anger condition ($M= 3.00$, $p<.01$). Participants in the sadness mood condition ($M= 3.18$) reported more PA3 than those in the anger condition ($p<.05$). There was a main effect of PA1, $F(1,150)= 142.51$, $p<.0001$, $\eta^2=.49$, showing that participants with higher previous PA had also higher PA3. There was no main effect of NA1 ($p>.05$) nor intrusive thoughts ($p>.10$).

There was no main effect of Attention, Clarity, or Repair. The interaction of Clarity with mood condition was significant ($F(1,150)= 3.35$, $p<.05$, $\eta^2= .04$), but interactions of Attention and Repair with mood condition were not significant.

As displayed in figure 3, participants in the anger and amusement conditions had similar scores on PA3 independently of whether their Clarity was low or high. However, participants in the sadness condition evidence high scores on PA3 when their Clarity was high, and low scores when their Clarity was low.

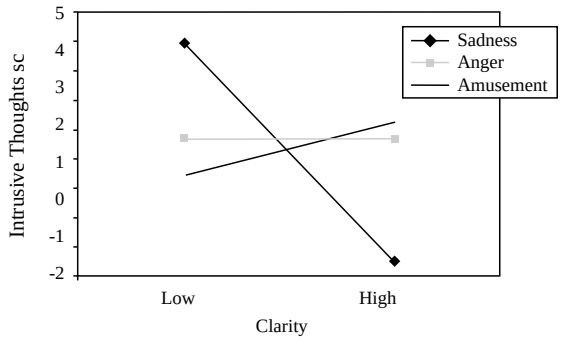

Figure 2. Relation between Clarity and Intrusive Thoughts in the mood induction conditions

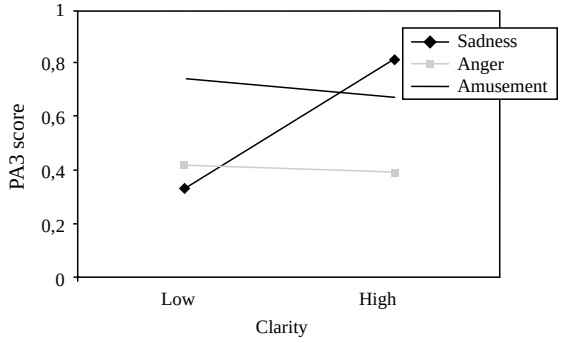

Figure 3. Relation between Clarity and Positive Affect 3 (PA3) in the mood induction conditions

A second GLM ANCOVA of the effects of mood induction conditions on negative mood showed that there was a significant effect of mood induction conditions on NA3, $F(2,150)= 17.34$, $p<.0001$, $\eta^2= .20$. Post hoc analysis (LSD) revealed that participants in the anger mood condition ($M= 2.35$) reported more NA3 than those in the sadness and amusement conditions ($M= 1.29$ and $M= 1.21$, respectively; $ps<.001$). There was no difference between sadness and amusement conditions on NA3 ($p>.10$).

There was a main effect of NA1, $F(1,150)= 148.77$, $p<.001$, $\eta^2= .51$, showing that participants with higher previous NA1 had also higher NA3. There were no main effects of PA1 nor intrusive thoughts ($p>.10$).

There was a main effect of Clarity, $F(1,150)= 5.28$, $p<.05$, $\eta^2= .03$, but there were no main effects of Attention nor Repair. Thus, the participants with higher scores on Clarity reported lower NA3 in all mood induction conditions ($B= .09$; $p<.05$).

The statistical interactions of Attention, Clarity and Repair with mood condition were not significant.

A third GLM ANCOVA of the effects of mood induction conditions on AB scores showed that there was a significant effect of mood induction conditions on AB3, $F(2,150)= 9.81$, $p<.0001$, $\eta^2= .12$. Post hoc analysis (LSD) revealed that participants in the anger mood condition ($M= 1.25$) reported lower score on AB3 than those in the sadness and amusement conditions ($M= 2.01$ and $M= 1.98$, respectively; $ps<.001$). There was no difference between sadness and amusement conditions on AB3 ($p>.10$).

There was a main effect of Repair, $F(1,150)= 4.69$, $p<.05$, $\eta^2= .03$, but there were no main effects of Attention nor Clarity. Thus, participants with higher scores in Repair reported higher AB3 in all mood induction conditions ($B= .33$; $p<.05$).

The statistical interactions of Attention, Clarity and Repair with mood condition were not significant.

Discussion

The present article examined three important questions: 1) Does EI affect previous mood states? 2) Does people's emotional reactivity to different mood induction conditions differ depending on their EI? 3) Does EI easy better mood recovery? And if so, which aspect of the TMMS does this effect predict?

The results of this experiment suggest that the subfactors of the TMMS Clarity and Repair are aspects of EI related to previous mood states, mood reactivity, and mood recovery. Subsequently, we discuss the implications of these results for the research on EI.

EI and previous mood states

Previous studies in experimental contexts indicate that higher EI is related to a more positive mood state (Salovey et al., 1995; Schutte et al., 2002), according to correlational studies conducted in natural contexts (Extremera & Berrocal, 2005; Palmer et al., 2002). Findings from our experiment agree with these previous researches. Thus, in this experiment, participants with higher scores on Repair showed better previous AB. This is an important result because participants' mood state shown when they first arrived at the laboratory does not reflect their natural emotional state, since this is an uncertainty situation, potentially demanding and stressful for the individual.

The mood (PA1 and NA1) in which subjects first walked into the laboratory had a large effect (accounting for 20 to 40% of the

total variance, see Cohen, 1988) on PA2 and NA2 after mood induction, and around 50% on the recovery phase. This phenomenon must keep researchers aware of within-subjects investigations in which individuals go through all different mood conditions.

EI and mood reactivity

In the mood reactivity phase, participants with higher scores on Clarity obtained high scores on PA2 in all mood induction conditions, which partially agrees with findings from Petrides and Furham (2003). These authors found trait EI to be linked with increased reactivity to positive mood induction. In contrast, regarding NA2, trait EI was related with increased reactivity to negative mood induction too. In our study, higher Clarity was only related to increase NA2 in anger induction, but not in sadness or amusement inductions. There might be several reasons for these findings. One possible explanation is given by Petrides and Furnham (2003), who propose that high trait EI individuals show a higher emotional reactivity which under some circumstances may imply shortcomings in their everyday life. Another additional explanation may be that individuals with high Clarity have a better and deeper understanding of the emotional stimulus (Austin, 2005).

When analysing individually PA and NA emotional reactivity, one may conclude that under some emotional circumstances, such as anger, being emotionally intelligent is not adaptive. However, it seems more important to be able to reduce global emotional impact. This is a positive final AB (positive minus negative affect). In our study, in the mood reactivity phase, participants with higher scores in Repair show also higher AB2, in agreement with findings from Salovey et al. (1995; 2002, study 2) where mood impairment (positive mood at Time 2) was predicted by Repair. Individuals who seem to be good at repairing negative moods experience lower negative emotional impact.

EI and mood recovery

In the mood reactivity phase, intrusive thoughts were elicited by NA2 and moderated by Clarity. Specifically, in the sadness condition, participants with higher scores on Clarity would be less prone to continuous negative mood and ruminative thought as in Salovey et al., (1995). These results from laboratory contexts agree with those obtain by Nolen-Hoeksema regarding depression and response style (Nolen-Hoeksema, 2000).

In the mood recovery phase, higher scores on Clarity were only associated with increased PA3 in the sadness induction condition, but not in anger and amusement induction conditions, in partial agreement with reports by Salovey et al., (1995), where mood recovery (positive mood at Time 3) was predicted by Clarity. In contrast, participants with higher score on Clarity showed also higher scores on NA3 in all mood induction conditions.

As in the mood reactivity phase, when results from PA3 and NA3 are analysed separately, one concludes that individuals high on Clarity may take a long time to recover from negative feelings. As a similar phenomenon, empathic individuals are more reactive to emotions, especially to suffering, and a lack of empathy is a feature of psychopathology (Lawrence, Shaw, Baker, Baron-Cohen, & David, 2004).

However, if we analyse final emotional balance we find that people who report better emotional recovery are those who obtained higher scores on Repair. Taking these results together, one could say that the *dangerous* profile is a person with a high score on Clarity and a low score on Repair. This *danger* is also found in other combinations, such as high score on Attention and low scores on Clarity and Repair (Gohm, 2003; Gohm & Clore, 2002; Lieschetzke and Eid, 2003). However, these two abilities usually correlate, because it is very hard to regulate misunderstood feelings (Palmer et al., 2003; Salovey et al., 2002). In our study, the effects of Attention were comprised by Clarity and Repair.

Concisely, EI seems an important personal factor to decrease negative emotional impact and also the strength and frequency of intrusive thoughts. Moreover, each one of the EI dimensions plays a different, but complementary, role. In this sense, EI would join the list of personal and interpersonal factors that contribute to the efficient processing of positive and negative emotions (Austenfeld & Stanton, 2004; Fernández-Berrocal & Extremera, 2005; Gross & John, 2002; Lepore & Smyth, 2002; Schmidt & Andrykowski, 2004; Williams, Fernández-Berrocal, Extremera, Ramos, & Joiner, 2004).

Limitations and future research

The present study has several limitations. First, a high percentage of the participants were female, so the possibility that findings may not generalise to males exists. Second, EI was measured through self-report using the TMMS. Future studies should include ability measures of EI such as the MSCEIT (Brackett & Salovey, 2006; Mayer, Salovey, Caruso, & Sitarenios, 2003). Third, mood states and cognitive processing were evaluated using self-report measures. Next research should also include psychophysiological measures of mood states (Salovey et al., 2002) and non-introspective tasks of cognitive processing such as the Emotional Stroop (Lepore et al., 2004; Ramos, Fernández-Berrocal, & Extremera, in press). Finally, this study used two negative mood induction conditions (anger and sadness) to explore the relations between EI and negative mood and found some specific differences. Future research should analyse and explain the differences found between the negative emotions anger and sadness, and extend this research to other negative emotions such as disgust and fear, and to positive emotions such as pride and surprise.

In this sense, it will be necessary to explore the generalization of these results to other cultures, since positive and negative emotions regulation is moderated by cultural factors as previous research has found (Fernández-Berrocal, Salovey, Vera, Extremera, & Ramos, 2005; Gross & John, 2003; Tsai, Chentsova-Dutton, Freire-Bebeau, & Przymus, 2002).

Concluding remarks

In summary, the results of this study indicated that people's perception of their emotional abilities, specifically Clarity and Repair, were related to previous mood states, emotional reactivity to mood induction conditions, and emotional recovery.

This study showed that Clarity and Repair play different but complementary roles in processing different emotional situations generated in laboratory context.

Author note

This research was funded in part by project Nº BSO2003-02573 from the Ministry of Education and Culture. The authors express their sincere thanks to Paulo Lopes, Peter Salovey, Steve Lepore and María Cavas for their valuable comments in earlier draft of this manuscript.

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