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The Effect of Emotional Intelligence on the Relationship between Negative Mood and Risk
Taking

An honors thesis presented to the
Department of Psychology,
University at Albany, State University of New York
in partial fulfillment of the requirements
for graduation with Honors in Psychology
and
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Abstract

Emotional intelligence is conceptualized as encompassing perception, utilization, and management of emotion. Research suggests that the managing one's own emotions subscale (MOE) may be particularly relevant to risky behaviors such as substance use and gambling. The present study examined the effects of emotional intelligence and mood manipulation on risk taking. Participants were randomly assigned to a positive, negative, or neutral mood condition. Baseline measures of mood state were obtained by the Positive and Negative Affect Schedule (PANAS), followed by self-report questionnaires. Participants were then presented with a brief film clip for the mood manipulation. Immediately thereafter, a second PANAS was completed, followed by the Iowa Gambling Task (IGT) to simulate risk taking, and a third PANAS. A mixed model repeated measures analysis indicated that the mood induction was effective. Moderation analyses revealed that under high levels of negative affect change, MOE moderates the relationship between change in negative affect and advantageous selections on the IGT. The results indicate that MOE may play a prominent role in reducing risk taking when in a negative mood. This study has implications for addiction, as individuals with higher emotional intelligence may engage in less risk taking when in a negative mood, whereas individuals with lower emotional intelligence may be prone to risky behaviors.

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The Effect of Emotional Intelligence on the Relationship between Negative Mood and Risk Taking

Emotional difficulties are often at the root of addictive behaviors; gambling disorders are no exception to this. Current models of excessive gambling suggest that emotion dysregulation may play a role in the development and maintenance of problem gambling (Williams, Grisham, Erskine, & Cassedy, 2012). Several psychological disorders in which emotions are poorly modulated (e.g., depression, anxiety disorders, and borderline and antisocial personality disorders) are often found in individuals with co-occurring gambling disorders. It is therefore possible that in such instances, gambling serves a self-medication purpose. For example, individuals who suffer from anxiety disorders may use gambling in an attempt to decrease arousal via narrowed attention and dissociation, whereas those who suffer from dysphoria may seek the exciting aspects of gambling in an attempt to enhance arousal and overcome dysphoria (Blaszczynski, Wilson, & McConaghy, 1986).

The notion of gambling as emotion management has also been supported in other literature. Emotional vulnerability, often experienced as low self-esteem and feelings of inadequacy and inferiority, has been associated with negative childhood experiences (McCormick, Taber, Kruedelbach, & Russo, 1987; McCormick, Taber, & Kruedelbach, 1989). Later in life, individuals may seek mood alteration and use gambling as a means of emotional escape (Anderson & Brown, 1984; Jacobs 1986). When gambling is used as a coping strategy for interpersonal difficulties and negative emotional states, the behavior tends to escalate, which in turn may exacerbate the emotional and interpersonal costs associated with gambling. When this happens, non-problem gamblers learn from the consequences of their behavior and typically

change their gambling habit or stop gambling altogether. In contrast, problem gamblers disregard the adverse consequences and maintain their destructive behavior (Ricketts & Macaskill, 2004).

Some preliminary evidence in the literature suggests that individuals who engage in addictive behaviors for the purpose of emotion regulation may have lower levels of emotional intelligence (e.g., Brackett, Mayer, & Warner, 2004). The concept of emotional intelligence is a relatively newer behavioral construct that was introduced in the psychological literature by Salovey and Mayer (1989) and later rose to prominence in the popular literature through Daniel Goleman's book, "Emotional Intelligence" (1995). Salovey and Mayer (1989) defined emotional intelligence as "the ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions" (p.189). This initial conceptualization of emotional intelligence was divided into three factors: the appraisal and expression of emotion, the regulation of emotion, and the utilization of emotion.

The appraisal and expression of emotion is primarily manifested through the self and through interactions with others (Salovey & Mayer, 1989). Individuals who are able to appraise and express emotions accurately can quickly perceive and respond to their own and others' emotions, whereas those who lack this ability may be impaired in their social functioning. In a gambling situation, such persons may not be able to learn from others' emotional reactions and may have greater difficulty controlling their gambling (Kaur, Schutte & Thorsteinsson, 2006).

The regulation of emotion refers to how individuals manage their own emotions, for the purpose of setting and meeting particular goals that may also result in improved mood (Salovey & Mayer, 1989). Individuals who can regulate their emotions will often be able to alter them, as appropriate to a situation, or avoid situations that cause them to experience negative emotions. In

contrast, people who are not able to regulate their emotions may not avoid such situations or may not be able to attain meaningful goals.

Finally, the utilization of emotions entails their use to solve problems (Salovey & Mayer, 1989). For example, some mood states (e.g., anxiety) may motivate individuals to persevere through challenges to reach a goal (e.g., studying for an exam to obtain a good grade). Thus, individuals with emotional intelligence can harness emotions, positive as well as negative ones, to achieve their goals (Salovey & Mayer, 1989).

As indicated above, more recently, the construct of emotional intelligence has also been researched in relation to addictive behaviors, particularly in the area of substance abuse. For example, Brackett, Mayer, and Warner (2004) reported that males with lower emotional intelligence had more involvement with illegal drugs, consumed alcohol excessively, and engaged in deviant behavior. Riley & Schutte (2003) also observed a correlation between lower emotional intelligence and more alcohol- and drug-related problems in adults. The researchers found that poorer coping predicted drug-related, but not alcohol-related, problems. However, coping did not function as a mediator; there was a direct correlation between emotional intelligence and substance use problems. Furthermore, Brackett and Mayer's (2003) research revealed a negative relationship between alcohol consumption and emotional intelligence, which was later supported by the findings of Austin et al.'s (2005) study.

Trinidad et al. (2004) showed that the intention to smoke cigarettes was increased in adolescents who were less apt to manage their emotions. High emotional intelligence served as a protective factor for smoking and was associated with stronger self-efficacy to refuse cigarette offers and greater perceptions of the negative consequences of smoking. A study conducted by Limonero, Tomás-Sábado, and Fernández-Castro (2006) examined the ability to regulate and

control mood in relation to tobacco and marijuana use. The researchers found that university students who scored low on mood regulation not only smoked greater amounts of tobacco and marijuana, but also had begun smoking these substances at an earlier age compared to students who scored high on mood regulation.

Deficits in emotion regulation were also seen in pathological gamblers. For example, Blaszczynski and Nower (2002) identified emotionally vulnerable gamblers, who use gambling as a means of emotional escape or of regulating affective states. Williams et al. (2012) similarly reported that gamblers had difficulty in effectively utilizing emotion regulation strategies. However, only very few studies have explicitly examined the relationship between emotional intelligence and gambling behavior. A research team (Parker, Summerfeldt, Taylor, Kloosterman, & Keefer, 2013) studied two large community-based samples of adolescents and found that emotional intelligence was a moderate-to-strong predictor of gambling, internet use, and video-game playing. A study by Parker, Taylor, Eastabrook, Schell, and Wood (2008) also found that low emotional intelligence was correlated with increased gambling, gaming, and internet use in adolescents. The researchers speculated that adolescents with considerable involvement in these behaviors may fail to develop appropriate interpersonal skills, which expresses itself in lower emotional intelligence. Finally, in one recent study, lower emotional intelligence was associated with more problem gambling and lower self-efficacy to control gambling in adult men and women (Kaur, Schutte, & Thorsteinsson, 2006).

In conclusion, the prevailing evidence has found some relationship between emotional intelligence and a variety of risky behaviors that involve addictive substances (alcohol, drugs, nicotine) or behaviors (internet use, gambling). However, all research in this area has been correlational in nature. Therefore, research is needed to examine the relationship within an

experimental paradigm and measure behavior rather than relying on self-report. This was the purpose of the present study.

As addictive behaviors, by definition, pose a risk to the individual and entail impulsive or risky decisions without considering the consequences, the present study was designed to shed light on the relationship between emotional intelligence and risky decision making. It was hypothesized that emotional intelligence would be inversely related to risk taking such that individuals with higher emotional intelligence would engage in risk-taking behavior to a lesser degree. It was further hypothesized that the presence of a negative mood would increase risky decision making, but that this relationship would be moderated by emotional intelligence, such that higher emotional intelligence will lead to less risky decision making when participants are in a negative mood state.

Method

Participants

Eighty-one undergraduate students (49 women, 32 men) were recruited from introductory psychology classes at a northeastern University and participated in the study for research credits. The participants' mean age was 19.2 years (range 17-33); the majority identified themselves as Caucasian (56.8%), followed by African American (14.8%), Asian (14.8%), Hispanic (4.9%), and "Other" (8.6).

Current mood states. Participants completed the Positive and Negative Affect Schedule (PANAS: Watson, Clark, & Tellegen, 1988). The PANAS includes two 10 item scales; one scale measures positive affect (e.g., interested, excited), and the other measures negative affect (e.g., distressed, irritable). Participants rate, for a specified time frame ("at the present moment"), the extent to which they have felt a certain mood on a scale of 1 (*very slightly or not at all*) to 5

(*extremely*). The PANAS has high internal consistency for this time frame for both positive affect ($\alpha=.89$) and negative affect ($\alpha=.85$). Participants were asked to complete the PANAS three times throughout the study: upon arrival, after the mood induction, and after performing the risk task. For the present sample, Cronbach's alpha was .85, .90, and .91 for positive affect at each time of assessment, and .82, .86, and .79 for negative affect at each time of assessment.

Emotional intelligence. The Assessing Emotions Scale, a 33-item questionnaire (Schutte, Malouff, & Bhullar, 2009), was used to assess emotional intelligence. The scale is based on Mayer and Salovey's (1989) initial model of emotional intelligence, and asks participants to rate items on a five-point scale. The items reflect perception of emotion, managing one's own emotions, managing others' emotions, and utilization of emotion. Higher scores on the Assessing Emotions Scale are correlated with less alexithymia, greater attention to feelings, greater clarity of feelings, increased mood repair, and less impulsivity (Schutte et al., 1998). The scale has been shown to have high internal consistency ($\alpha=.90$) and high test-retest reliability ($r=.78$) (Schutte, Malouff, & Bhullar, 2009). In the present sample, the Cronbach's alpha was .81 for the managing one's own emotions scale.

Core Alcohol and Drug Survey 7th edition (CORE Institute, 2004). Selected questions of the CORE Alcohol and Drug Survey were used to measure quantity and frequency of alcohol, tobacco, and marijuana use, as well as frequency of gambling for money during the past 30 days and the past year. Participants used a 9-point Likert scale to indicate the number of days they had engaged in these behaviors during the past month and the number of occurrences of use during the past year. For past month use, ratings ranged from 1 (0 days) to 9 (all 30 days). For past year use, ratings ranged from 1 (Didn't use) to 9 (Every day). For the purposes of the present study, past year gambling was used in the analyses due to the infrequency of gambling among the

current sample. A composite score for substance use was created for the analyses by averaging the scores for past month tobacco, alcohol, and marijuana use.

Mood Induction

Based on a meta-analysis of studies using mood induction (Westermann, Spies, Stahl, & Hesse, 1996), instructing participants to “get involved” in a situation presented in either a short movie clip or an elaborate story is the most effective means to induce a positive or negative mood, with mean effect sizes for elated mood states of $r_m=0.73$ and for depressed mood states of $r_m=0.74$. For the present study, film clips were selected based on Hewig et al. (2005), who identified specific film scenes that effectively induce a positive, negative, or neutral mood. Participants were randomly assigned to the mood conditions. For the positive mood, they watched an amusing scene from *When Harry Met Sally*, during which Harry and Sally are discussing sexual matters in a restaurant. To induce a negative mood, participants were shown a clip from *An Officer and a Gentleman*, when the two main characters enter their friend’s hotel room only to find him dead. For the neutral mood condition, a scene from *All the President’s Men* was presented, which involves a casual discussion between two men in a courtroom.

Risk Taking Task

Following the mood induction, participants were asked to perform a computerized task to simulate risk-taking.

Iowa Gambling Task (Bechara, Damasio, Damasio, & Anderson, 1994). The Iowa Gambling Task (IGT) is a computerized decision-making task intended to simulate real-life risk taking. Participants select cards from four virtual decks (A, B, C, D) presented on a computer screen. They are told that for each chosen card they will win some play money, but sometimes they will also lose money; the goal is to win as much money as possible. Unbeknown to

participants, decks A and B result in larger wins but also larger penalties; they are disadvantageous because they lead to an overall net loss. Decks C and D offer more modest rewards but smaller penalties; they are advantageous, leading to an overall net gain.

Procedure

The study was approved by the university's institutional review board. Participants were recruited from introductory psychology classes and received partial research credit. In the laboratory, participants provided informed consent and were randomly assigned to a positive, negative, or neutral mood condition. They first completed the PANAS, to obtain a baseline measure of their mood, followed by a series of self-report questionnaires, including the Assessing Emotions Scale and the CORE-R. Participants were then shown a brief film clip to induce a positive, negative, or neutral mood, depending on their assigned condition. Immediately thereafter, they completed the PANAS again to determine whether the mood induction had been effective. They then completed a risk taking task, the IGT, to assess risky decision making. After completing this task, they took the PANAS for a third time to assess their mood. At the end of the experiment, participants were debriefed.

Results

Preliminary Analyses

A missing values analysis (SPSS Version 19) was conducted to determine the amount of missing data from the questionnaires of the 81 participants. No variable had more than 5% of missing data, with the exception of one question on the SSEIT missing 6%. Little's (1988) MCAR analysis ascertained that all values were missing completely at random. Therefore, a mean substitution approach was used to replace missing values. Four participants were excluded from the analyses due to the computer not saving their performance on the IGT.

Descriptive statistics were used to determine whether skewness (± 1.00) and kurtosis (± 3.00) values fell within accepted margins. Negative affect, gambling, and substance use scores were positively skewed. Therefore, a log transformation was applied to the negative affect scores and gambling, and a square-root transformation was applied to the composite substance use score to rectify this. The baseline-corrected negative affect scores were normally distributed, and therefore were not transformed in the regression analyses.

Mood Induction

Two 3 (time) x 3 (condition: positive, negative, neutral) mixed design ANOVAs were conducted for positive and negative affect, to determine whether the mood induction was effective.

Positive affect. Assessment periods across the positive affect (PA) subscale in the PANAS served as the within-subjects factor and condition (positive, negative, neutral) served as the between-subjects factor. The Box's M test was significant ($p = .020$), indicating that the assumption of homogeneity of dispersion was not met, therefore the Pillai's Trace was used as it is robust to this violation. Mauchly's test revealed that the assumption of sphericity was met ($p = .992$). Analysis of time by condition revealed a significant interaction effect, Pillai's $\Lambda = .126$, $p = .045$, $\eta^2 = .063$, indicating that positive mood states changed throughout the experiment based on the condition (Table 1). Neither the main effect of time ($p = .095$) nor the main effect of condition was significant ($p = .214$). Analyses of the simple interaction effects revealed that PA decreased only within the sad condition, Pillai's $\Lambda = .156$, $F(2, 73) = 6.77$, $p = .002$, $\eta^2 = .156$. Change in PA was not significant in the other two conditions (Neutral: $p = .599$, Happy: $p = .604$). One-way ANOVAs with Bonferroni-correct alpha levels ($p = .0167$) revealed that PA did not differ across the conditions (Figure 1). Therefore, PA was not used in further analyses.

Negative affect. Assessment periods across the negative affect (NA) subscale in the PANAS was used as the within-subjects factor and condition was used as the between subjects factor. The Box's M test revealed that the homogeneity of dispersion was violated, $\chi^2(12) = 36.85, p < .001$. Therefore, the Pillai's Trace statistic was used to adjust for this violation. Mauchly's test indicated that the assumption of sphericity was also violated, $\chi^2(2) = 14.53, p = .001$; thus, a Greenhouse-Geisser correction was used ($\epsilon = .847$). The interaction of condition by period was significant, Pillai's $\Lambda = .357, F(4, 148) = 8.034, p < .001, \eta^2 = .178$ (Table 1); the main effect of time and condition were not significant (time: $p = .055$, condition: $p = .244$). The analysis of the simple interaction effects revealed that NA differed within the negative mood (Pillai's $\Lambda = .332, F(2, 73) = 18.12, p < .001, \eta^2 = .33$) and the positive mood conditions (Pillai's $\Lambda = .102, F(2, 73) = 4.133, p = .020, \eta^2 = .10$). One-way ANOVAs with Bonferroni-corrected alpha levels ($p = .0167$) revealed that NA differed across the conditions only following the mood induction (see Figure 2; $F(2, 74) = 7.56, p = .001$). Sidak post-hoc tests revealed that participants in the negative mood condition endorsed a higher level of negative affect ($M=17.41, SD=6.94$) than participants in the positive mood condition ($M=12.08, SD=3.10$).

Correlational Analyses of Mood and Emotional Intelligence

A correlational analysis was conducted to examine the relationship between NA at the second assessment period (after the mood induction) and emotional intelligence (using scores for total, perception of emotion, managing one's own emotions, managing others' emotions, and utilization of emotion). Negative affect was found to have a statistically significant inverse relationship only with one subscale, managing one's own emotions, $r(77) = -.241, p = .035$ (Table 2). Therefore, only the managing one's own emotions subscale was used in the following moderation analyses.

A second correlational analysis was performed to determine whether changes in positive and negative mood, performance on the IGT, and emotional intelligence and its subscales were correlated with the composite substance use variable and the gambling variable. Substance use was created as a composite variable by averaging participants' self-reported tobacco, alcohol, and marijuana use over the past month from the CORE-R. None of the correlations was significant ($p > .05$).

Moderation Analyses

A multiple regression model was tested to determine whether the association between negative affect and performance on the IGT was dependent on one facet of emotional intelligence, titled managing one's own emotions. Separate multiple regression analyses were conducted within each condition (Table 3). Results indicated that negative affect and managing one's own emotions did not significantly predict selections from advantageous decks within any of the mood conditions ($p > .05$). However, the interaction between change in negative affect and managing one's own emotions was significant within the negative mood ($b = .143$, $SE_b = .058$, $\beta = 2.498$, $p = .022$) and the neutral mood conditions ($b = .208$, $SE_b = .095$, $\beta = 3.316$, $p = .041$). This suggests that, in the negative and neutral mood conditions, the effect of negative affect on selecting from advantageous decks was dependent upon the degree to which individuals are capable of managing their own emotions (Figure 3). Simple slopes for the association between negative affect and selections from advantageous decks were tested for low (-1 SD below the mean) and high (+1 SD above the mean) levels of managing one's own emotions. Within the negative mood condition, an analysis of the simple slopes revealed a significant effect of negative affect on risk taking only with high levels of managing one's own emotions ($b = 1.296$, $SE_b = .589$, $\beta = .701$, $p = .038$). The simple slopes analysis did not achieve statistical significance

within the neutral mood condition ($p=.189$). These results indicate that when induced into a negative mood, individuals with a high ability to manage their emotions performed better and made fewer risky decisions on the IGT.

Discussion

The results of the present study suggest that the relationship between emotional intelligence and risk taking may be specific to negative emotional states and a subtype of emotional intelligence, i.e., a person's ability to manage his or her own emotions. This study indicates that the ability to manage one's own emotions may be protective against risky decision making when one experiences a significant rise in negative mood. Participants with greater ability to manage their emotions may be more likely to temper their negative feelings and avoid riskier decisions. These findings support the literature indicating an inverse relationship between emotion regulation and risk taking (Blaszczynski and Nower, 2002; Trinidad et al., 2004; Williams et al., 2012).

There are various explanations as to why this particular component of emotional intelligence may impact decision making. Gross and John (2002) have discussed the malleability of emotions, such that individuals can easily modify their emotional experiences and expressions. The researchers posit that it is this flexibility that allows people to modify their responses to better correspond with their goals in a particular situation. Specifically pertaining to the functionality of negative emotions, Parrot (2002) suggests that it is the appraisal of these emotions that motivates certain behaviors, based on the meaning of the situation. He describes an anxious man, for example, who has observed a threat to his goals. Because he will now be more careful when analyzing the consequences of the situation, he will be reluctant to take risks. In light of these and other theories, the role of emotion management in decision making is complex

and can entail a variety of processes. Further investigation into its function is thus needed and would benefit from exploring the different ways people manage and regulate certain emotions in a given circumstance.

Manipulation Effects on Mood

The study confirmed that the presentation of the selected film clips was an effective mood manipulator, particularly for inducing a negative mood. Negative affect differed across conditions only after the mood induction, and showed the most significant increase within the negative mood condition. Change in positive affect did not achieve statistical significance after adjusting for multiple comparisons; however, with greater statistical power, it is likely this would be significant. It would be interesting to see if future studies obtain similar results using alternative mood induction procedures (i.e., Velten, music, imagination) and with different populations.

Relationship between Mood and Emotional Intelligence

Emotional intelligence and its subscales were examined in relation to negative affect. A correlational analysis revealed that only the managing one's own emotions subscale was inversely related to negative affect following the mood induction. This is consistent with Salovey, Mayer, Goldman, Turvey, and Palfai's (1995) findings that mood repair, which also entails regulating unpleasant moods and attempting to preserve pleasant ones, is inversely associated with negative feelings. Individuals who are more apt in managing their emotions tend to report lower levels of negative affect following an unpleasant experience.

Contrary to expectations, overall emotional intelligence was not significantly related to substance use or gambling. This could be due to a number of reasons. For one, the participants in this study were relatively young college students, who in their majority were undergraduates. As

such, they may have lacked resources and access to activities involving substance use and gambling. Given that previous studies have found significant associations between lower emotional intelligence and these so-called addictive behaviors in college populations (Austin et al., 2005; Brackett, Mayer, & Warner, 2003), it would be important to replicate the present study with more senior students and other adults who live away from campus in the community and have free access to activities involving drinking, smoking, and gambling.

Limitations

One limitation of this study was its small sample size. Lack of power limited the statistical significance of certain analyses, including the correlational analyses of the relationships between emotional intelligence and risky behaviors (substance use, gambling). Another limitation was that the sample was comprised of relatively young college students. While these students may engage in certain risky behaviors and have access to alcohol, and possibly other drugs, the lack of financial resources may curtail these behaviors and may make it highly unlikely that they engage in much gambling. As such, this study's findings regarding gambling behaviors may not be as relevant as they might be in community and clinical samples.

Another limitation of this study was that most of the findings were based on self-report questionnaires, with the exception of the IGT as a behavioral measure. Although the experimenters emphasized confidentiality and anonymity, some participants may have distorted their answers to questions about substance use and gambling in a socially desirable way, or their answers may have been influenced by other uncontrolled and unknown factors.

Despite these limitations, this study contributed to the literature by identifying a component of emotional intelligence that is particularly relevant to risky decision making, especially when one is in a negative emotional state. While many studies have looked at overall

emotional intelligence and its subscales in relation to risk taking, there seems to be a dearth of research examining these associations when participants experience different moods. By using mood induction, studies may elucidate the relationship between different moods and behaviors in light of people's ability to manage their moods effectively. This study also explored the relationship between emotional intelligence and risky behaviors using an experimental paradigm, in contrast to the plethora of correlational research on this topic. Furthermore, risky decision making was observed through a behavioral measure, whereas it is typically measured via self-report.

Future Directions

This study's findings have implications for future research on the role of emotion management in decision making. As previously mentioned, the function of emotion regulation is complicated and remains unclear. More work is needed to clarify how managing one's emotions impacts behavior under different affective circumstances. Such studies may also be valuable in that they may shed light on addictive behaviors and their treatment. For example, individuals who are better able to regulate their emotions may be less likely to engage in risky behaviors when in a negative mood, while those who lack this ability may be prone to risk taking in an attempt to repair an undesirable mood state, even if such repair attempts lead to undesirable long-term consequences. As such, helping people to learn better means of coping with unpleasant emotions may be useful in treatment settings. Raising self-awareness and teaching effective coping skills may protect against addictive behaviors, particularly in conditions of emotional distress.

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Table 1.

Means and Standard Deviations of Mood by Condition.

Mood over Time	Condition		
	Sad	Neutral	Happy
PA1	27.00 (8.36)	27.21 (5.51)	27.69 (7.04)
PA2	22.37 (7.88)	25.92 (7.90)	28.73 (9.48)
PA3	25.40 (9.10)	26.13 (8.19)	28.92 (9.28)
NA1	14.37 (5.30)	13.00 (3.54)	15.27 (8.02)
NA2	17.41 (6.94)	13.33 (5.06)	12.08 (3.10)
NA3	13.37 (5.06)	13.38 (4.18)	12.96 (3.33)

Note. PA = positive affect, NA = negative affect. Standard deviations appear in parentheses below the mean.

Table 2. *Correlations between Negative Affect and Emotional Intelligence*

	Total Emotional Intelligence	Perception of Emotion	Managing One's Own Emotions	Managing Others' Emotions	Utilization of Emotion
NA2	-.141	-.051	-.241*	-.069	-.111

Note. * $p < .05$

Table 3.

Summary of Multiple Regression Analysis for the Moderation Analyses of Change in Negative Affect and Performance on IGT within Each Condition.

	Neutral				Sad				Happy			
	<i>df</i>	ΔR^2	ΔF	β	<i>df</i>	ΔR^2	ΔF	β	<i>df</i>	ΔR^2	ΔF	β
Model 1	2, 21	.022	.24		2, 24	.067	.87		2,23	.118	1.535	
Δ NA				-.156				.056				-.344
MOE				-.055				-.245				-.002
Model 2	1, 20	.188	4.76 *		1, 23	.194	6.06 *		2, 22	.002	.06	
Δ NA				-3.451 *				-2.420 *				-.063
MOE				-.079				-.390				-.018
NA X MOE				3.316 *				2.498 *				-.291

*Note: * $p < .05$*

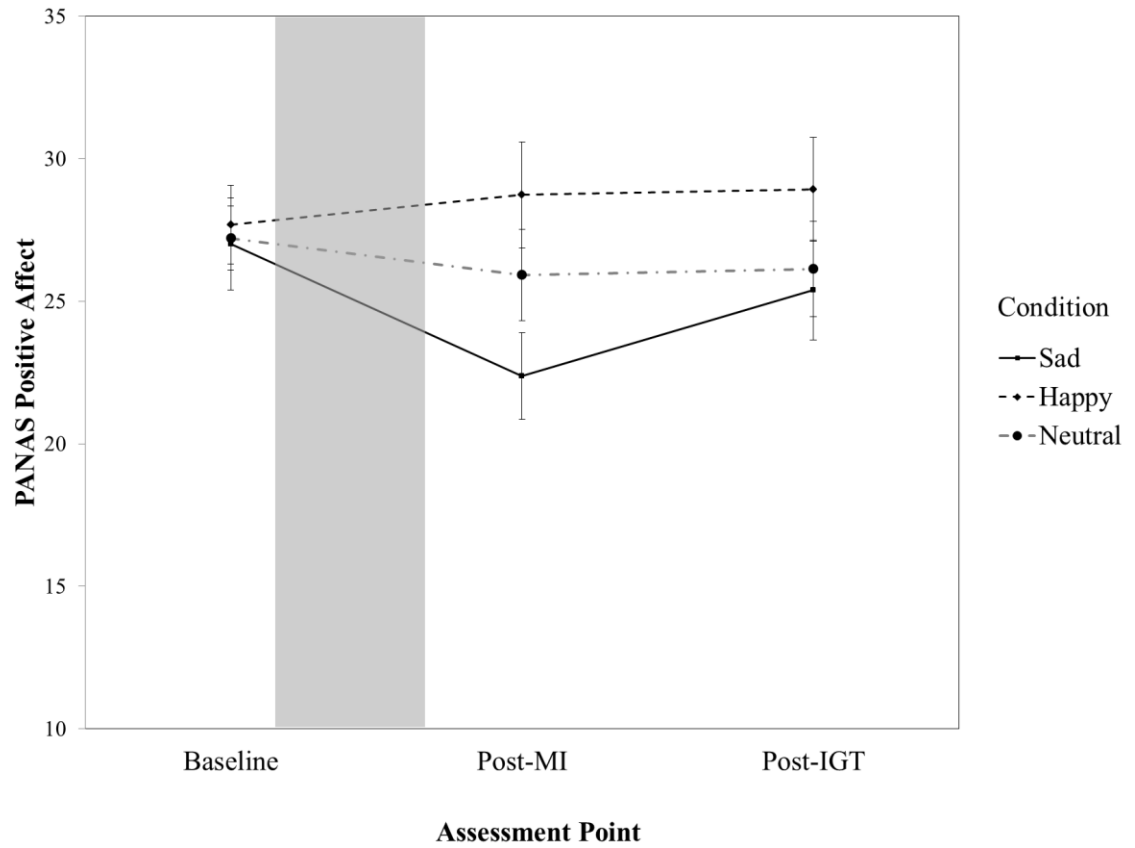


Figure 1. Averaged positive affect (mean \pm SEM) by condition across procedures with shaded area indicating mood induction.

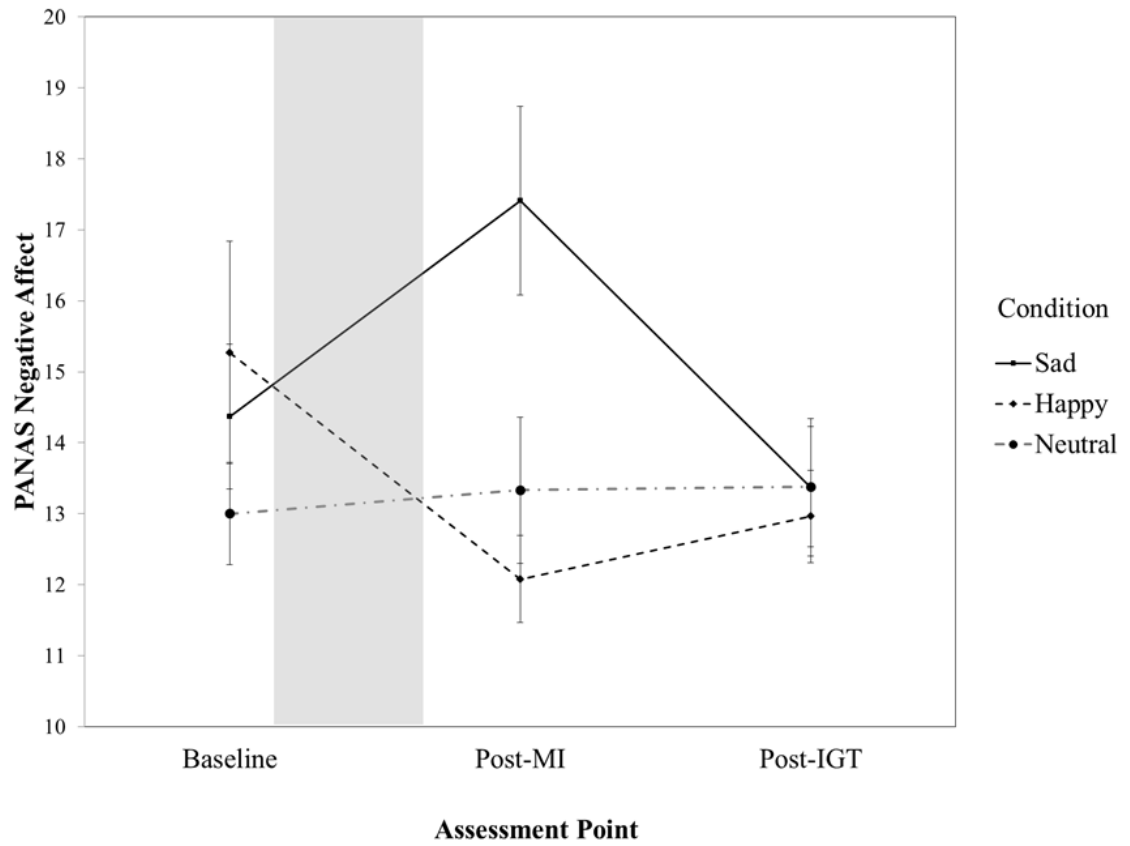


Figure 2. Averaged negative affect (mean \pm SEM) by condition across procedures with shaded area indicating mood induction.

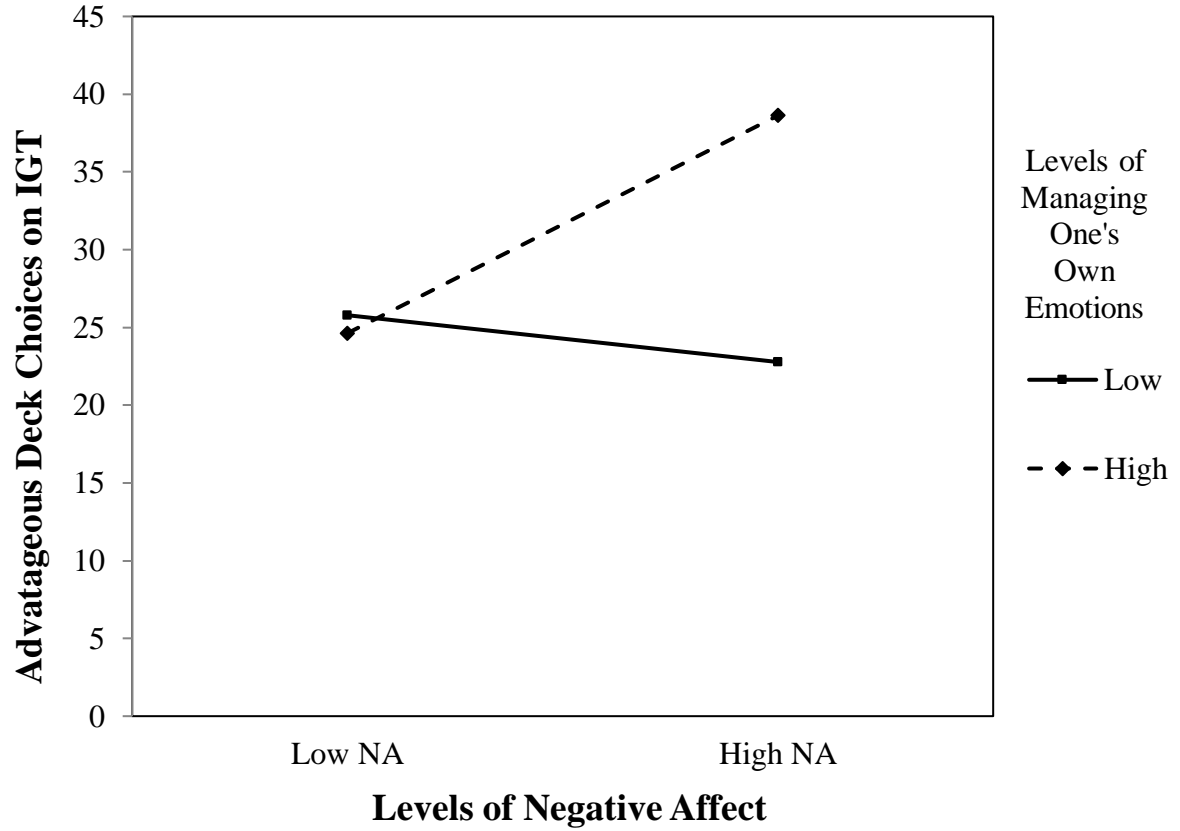


Figure 3. Moderation of managing one's own emotions on the relationship between negative affect and advantageous choices on the Iowa Gambling Test.