ORIGINAL RESEARCH

Curr Res Soc Sci (2021), 7(1) • 1-14

Effectiveness of an Intensive Three-Day Emotional Intelligence Training**

Üç Günlük Yoğun Bir Duygusal Zekâ Eğitiminin Etkililiği

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Abstract

Emotional Intelligence (EI) is considered an ability which helps to recognize and regulate of one's own and others' emotions. EI was suggested to be one of the important factors for maintaining a successful personal and professional life. EI is considered as an ability that can be developed through practice. Thus, numerous studies attempted to examine effects of EI training programs. This study examined the effects of an intensive three-day training program on EI, difficulties in emotional regulation, reflective functioning, and psychological symptoms. The participants were 18 adults in the treatment group and 18 adults in the control group. The results showed that the EI training have led to a significant decrease in difficulties in emotional regulation over three days of training among participants in the treatment group. In particular, participants' in the treatment group impulse control difficulties decreased, whereas such a decrease was not observed in the control group. There was some increase in the Reflective Functioning Uncertainity scores of the participants' in the treatment group. There were no significant changes in overall emotional intelligence and psychological symptoms. The findings suggested that the intensive EI training led to better impulse control ability and an increase in mentalizing capacity.

Keywords: Emotional Intelligence Training, Emotion Regulation, Reflective Functioning, Psychological Symptoms.

Öz

Duygusal Zeka (DZ), bireyin kendisinin ve başkalarının duygularını tanımasını ve düzenlemesine yardımcı olan bir beceri olarak bilinir. DZ başarılı bir kişisel ve profesyonel hayat yürütmek için var olan önemli faktörlerden biridir. DZ'nin uygulama yaptıkça gelişen bir beceri olduğu düşünülür. Dolayısıyla, pek çok program DZ eğitim programlarının etkilerini araştırmıştır. Bu çalışmada, üç günlük yoğun bir DZ eğitim programının DZ, duygu düzenlemede güçlükler, yansıtıcı işleyiş ve psikolojik semptomlar üzerine etkisi incelenmiştir. Katılımcılar, müdahale ve kontrol gruplarında eşit sayıda olmak üzere toplam 36 yetişkindir. Sonuçlar, üç gün süren yoğun DZ eğitiminin müdahale grubunda duygu düzenlemede güçlükleri anlamlı ölçüde azalttığına işaret etmiştir. Spesifik olarak, müdahale grubundaki katılımcıların dürtü kontrol güçlüğünde azalma görülmüştür; ancak böyle bir azalma kontrol grubunda görülmemiştir. Ayrıca, müdahale grubunda Yansıtıcı İşleyiş Ölçeği Belirsizlik alt ölçeği puanlarında bir yükselme görülmüştür. Genel DZ puanlarında ve psikolojik semptomlarda ise bir değişiklik gözlenmemiştir. Bu sonuçlar yoğun DZ eğitiminin dürtü kontrolündeki ve zihinselleştirme kapasitesindeki iyileşme ile ilişkili olduğuna işaret etmiştir.

Anahtar Kelimeler: Duygusal Zeka Eğitimi, Duygu Düzenleme, Yansıtıcı İşleyiş, Psikolojik Semptomlar.

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Article Info / Makale Bilgileri:
Received / Gönderim: 15.06.2020 Accepted / Kabul: 24.11.2020

** This study was supported by the 'Emotion to Motion Emotional Intelligence Skills Development to Foster Youth Employability' Erasmus+ K2 project (2015-3-TR01-KA205-024834).

To cite this article / Atıf için:
Bilican, F. I., Camcı, Y., Cihan, A., Yaman, H., Uğur, A. M., Juričko, A., Arzenšek, A., Winkels, K., Reichrath, G., Kovachev, L., & Vasileiadis, A. (2021). Effectiveness of an intensive three-day emotional intelligence training. *Curr Res Soc Sci, 7*(1), 1-14.

To link to this article / Bağlantı için:
http://dx.doi.org/10.30613/curesosc.945196

Introduction

1.1. What is Emotional Intelligence?

There are two major approaches to the definition of Emotional Intelligence (EI). The first model suggests that EI refers to a mental ability, which includes emotions and intelligence. It involves a set of interrelated skills which contribute of appraisal, expression, and regulation of emotion in oneself and others, and using emotions in adaptive ways such as to motivate, plan, and achieve in life (Salovey & Mayer, 1990; Mayer et al., 2000; Mayer et al., 2008). Individuals with high EI were expected to pay attention, use, understand, and manage emotions in a way that would benefit themselves and others (Mayer et al., 2004; Salovey & Grewal, 2005). The four branch model of EI suggests that EI involves emotional abilities from four classes: *Perceiving emotions, using emotions to facilitate thought, understanding emotions,* and *managing emotions*. The four branch model of EI includes perception and appraisal of emotion (i.e. infants perceiving emotions in caregiver's face); utilizing emotional experiences to facilitate thinking and direct attention (i.e. a manager using a low-energy emotion to help himself to focus on a detailed task); understanding and reasoning about emotions and using language to explain emotions (i.e. understanding anger stems from unjust behavior); management and regulation of emotions in self and others (i.e. calming a friend's anxiety) (Mayer et al., 2008; Mayer et al., 2011). On the other hand, the second model, mixed model of EI, suggests that EI has a broader concept. It includes abilities of EI mixed with personality characteristics that might accompany EI, such as genuineness, warmth, persistence, optimism, diversity-sensitivity (Salovey & Mayer, 1990; Bar-On, 1997; Petrides & Furnham, 2001; Mayer et al., 2011).

EI was shown to be a predictor of successful social relationships, work performance, and mental and physical well-being (Ruiz-Aranda et. al, 2012; Slaski & Cartwright, 2013). High levels of EI contributed to better physical and mental characteristics (Mayer et al., 2008). People with higher EI detected variations in their heartbeats better (Schneider et al., 2005) and more accurately recognized and reasoned about the emotional consequences of events (Dunn et al., 2007). Emotional knowledge of children influenced academic achievement after controlling for intelligence, emotionality, and attention (Trentacosta & Izard, 2007). Understanding and analyzing emotions predicted cumulative grade point average (Mohzan et al., 2013) and literacy and numeracy scholastic performance (Billings et al., 2014). EI predicted engagement in risky behaviors. Higher levels of EI were associated with lower levels of substance abuse, adjustment problems, and aggressive behavior (Rivers et al., 2013). A greater ability to perceive emotions of others in adolescents was associated with lower levels of alcohol consumption and participation in group street drinking behavior, and episodes of drunkenness (Gonzales-Yubero et al., 2019). In males, lower levels of EI were associated with illegal drug and alcohol use, deviant behaviors, and poor relationships with friends (Brackett et al., 2004). Couples with low EI showed lowest scores on the depth, support, and positive relationship quality, and highest scores on conflict and negative relationship quality (Brackett et al., 2005).

1.2. Nature of EI Trainings

EI has been considered as an ability that can be developed through deliberate practices. EI trainings were provided in various settings, such as firms and schools (Mayer, et al., 2008; Motamedi et. al, 2017). EI trainings mainly focused on two abilities: emotional awareness and emotion regulation. In order to increase emotional awareness, facial recognition software exercises, self-assessment measures of EI, and ranking emotions were used. Also mindfulness, perspective taking, and relaxation techniques were taught to improve emotion regulation (Thory, 2013). The trainings in corporate settings emphasized empathy, building social relationships, a sense of belongingness, and getting in contact with coworkers. Ultimate aim of the most EI programs appeared to be developing a wiser inner self that is capable of handling emotions of one's self and others and thus creating a trustful, motivating and meaningful environment (Thory, 2016). Duration of the EI trainings varied in different studies. Training programs were designed as daily, weekly, or monthly sessions.

Sessions at one sitting have lasted from an hour to full day of training (Groves et al., 2008; Fletcher, et. al, 2009).

1.3. Effectiveness of EI Trainings

Previous studies showed after the EI trainings, the experiment groups' EI scores increased while there was a slight decrease in scores in time as measured by the follow-up measurements (Karahan & Yalcin, 2009; Nelis et. al, 2009; Ruiz-Aranda et al., 2012; Mehrabi et al., 2017). The findings suggested EI was a skill that could be developed through training and sustained over time for the most part with deliberate practice (Motamedi et. al, 2017).

Effectiveness of EI trainings were demonstrated in various studies. Gorgas et al. (2015) conducted a very brief intervention focusing only one sub-skill of EI, social awareness. Participants received a 2-hour session training covering basic information about EI concepts and discussion of four case scenarios. The findings showed that EI scores for intervention group (N = 19) increased from pre-test to follow-up (at 6 months) while control group's (N = 14) scores remained stable. In another brief intervention study, a single session workshop for 4-hours, nurses focused on recognizing and managing emotions (Kozlowski et al., 2018). The researchers provided a detailed personalized report for each participant in a private feedback session two weeks after the intervention. The results showed elevated EI scores for the intervention group but no change was observed in the control group. Elevated EI scores remained stable for 3 months after the intervention. Another study investigated effects of an 8-hour training program, which delivered general knowledge about EI and discussed hypothetical emotionally challenging situations and ways to manage these situations. After the intervention, participants received personal feedback from the trainers. The findings of this study indicated that this intervention enhanced participants' recognition, understanding, and management of emotional skills, which remained significantly elevated one year after the intervention (Dugan et al., 2014).

EI training programs were utilized to increase not only emotional intelligence but also to improve health and work-related variables. After an EI training, an increased perception of self-efficacy was observed among female patients with multiple sclerosis (Mehrabi et. al., 2017); participants in the intervention group displayed fewer clinical symptoms such as lower levels of anxiety, somatization, and atypicality (Ruiz-Aranda et al., 2012); participants' consistent anger levels decreased significantly after the training and the results remained stable 3 months after the intervention (Yilmaz, 2009). An intervention led to an increase in EI in trained healthcare staff compared with the control group (Bamberger et al., 2016). In another study, twelve educators participated in coach certification based on EI skills. The findings showed that at post training the educators and their clients showed deeper commitment to teaching EI skills, increases in self-awareness and self-management, and improved relationships with others (Patti et al., 2015). On the other hand, Slaski & Cartwright's (2013) study showed that even though participants benefitted from EI personally and had higher levels of health and well-being scores post-training, the training program did not affect their work performance. Several factors determined how effective utilization of EI techniques was going to be, such as time pressure, hierarchical position in the company, and perception of the technique (Thory, 2013). For example, managers and employees adopted different conflict management strategies due to their positions and tolerating disagreements were perceived as losing control by some of them. Police officers experienced problems in regulation of negative emotions, because acceptance and tolerance of negative emotions were associated with loss of control, helplessness, and "giving up" in their high-risk job (Berking et al., 2010). In addition, personality characteristics were among moderating variables that enhanced or prevented benefiting from EI training programs. Agreeableness and conscientiousness traits of the Big Five were found to moderate the effectiveness of EI training. People who were high in agreeableness and conscientiousness benefited significantly more from the EI training when compared to people who were low in these traits (Herpertz et al., 2016). Duration of EI training programs is another factor which affects the outcome, besides personality, working environment, and health related variables. An EI training taught EI skills through teaching perception,

understanding and managing emotions via using mini-lectures, video clips, case studies, group tasks, discussions, and role-playing for 2 hours for 11 weeks (Pool & Qualter, 2012). The findings showed a significant effect of intervention on understanding and managing emotions. Pool and Qualter (2012) compared their study with Nelis et al.'s (2009) study which was carried out over 4 weeks and did not produce significant results regarding understanding emotions. The researchers stated that longer period of their study may have led to success in understanding emotions.

In summary, EI trainings varied in duration, content, and teaching techniques. These variables affected the outcome of the EI trainings in positive and negative directions (Nelis, 2009; Pool & Qualter, 2012; Dugan et al., 2014; Gorgas et al., 2015). A metanalysis study suggested techniques used in the training programs enhanced positive outcomes more compared to the duration of the intervention (Mattingly & Kraiger, 2019). Techniques such as analyzing a case or meeting with a coach were suggested to lead to a more active and personal training and eventually a higher effect size for studies.

Previous research showed improvements in EI could be accomplished through cost and time efficient brief EI training programs. Current study aimed to investigate the effects of a time-limited EI program on participants' EI, emotion regulation difficulties, mentalizing abilities, and psychological symptoms. The training program offered a theoretical understanding of the EI while utilizing practical tools such as role-playing, classroom discussions, psychodrama activities, mindfulness exercises, and relaxation techniques. Compared to other brief EI interventions described in the literature, both theoretical information about all domains of the EI and practice was integrated in this study.

1.4. Hypotheses

Significant increases in EI and mentalization scores were expected among the treatment group at post training. Significant decreases in emotional regulation difficulties and psychological symptoms were expected among the treatment group at post training.

Method

2.1. Participants

Eighteen participants participated the training from several European countries, including Turkey (7), Netherlands (5) Greece (2), Slovenia (2), Spain (1) and Bulgaria (1). The participants in the intervention group consisted of 13 females and 5 males. The participants worked in education and psychology. The age varied between 24 and 62 (M= 35.5, SD=11.13). Eleven participants held 4-year college degree, 6 of them held a master's degree, and 1 of the participants held a doctoral degree. Yearly income levels fell into four groups: less than 10.000$ (*N* =6), between 10.000$ - 29.999 (*N* =7), between 30.000$ – 49.999$ (*N* =1), between 50.000$ and 69.999$ (*N* =6). Most participants were employed either for wages (*N* = 14) or self-employed (*N* = 1). The participants were referred to this study by the project partners of an EU Erasmus+ project. After receiving this training, the participants were going to train the youth on EI in their home countries.

The control group consisted of 15 females and 3 males who resided in Turkey. The participants in the control group were matched to the ones in the intervention group regarding occupation and education levels. They worked in psychology (*N*=6) and education (*N* =5). Age ranged between 21 and 59 (M= 35.9, SD=11.36). The majority of the participants held a 4-year college degree (*N* =12); one held a 2-year college degree (*N* =1); four had a master's degree; and one participant had a doctoral degree. The control group's yearly income levels fell into two categories, less than 10.000$ (*N* =12) and between 10.000$ - 29.999$ (*N* =6). Similar to the experimental group, majority of the control group was employed for wages (*N* =12), three were retired, one was a student, and two were unemployed.

2.2. Measures

2.2.1. Schutte Self-Report Emotional Intelligence Scale (SSEIT) (Schutte et al., 1998)

The SSEIT was designed to measure emotional intelligence. It involves 33 items scored on a 5-point Likert Scale, scored as 1= strongly disagree, 2= disagree, 3= neutral, 4= agree, 5= strongly agree. Higher scores indicate higher levels of EI. The SSEIT has high test-retest reliability (.78) and internal consistency of Cronbach's alpha .90. The SSEIT has positive correlations with mood and optimism, and negative correlations with alexithymia, depression and impulsivity measures. In this study, Cronbach alpha values for SSEIT showed internal consistency for pre-training ($\alpha = .87$) and post-training ($\alpha = .88$).

2.2.2. Difficulties in Emotional Regulation Scale (DERS) (Gratz & Reamer, 2004)

The DERS was designed to measure individuals' ability to regulate one's own emotions. The DERS consists of 36 items and it is scored on a 5-point Likert Scale. Higher scores indicate greater difficulty in emotion regulation. It has 6 factors, including nonacceptance of emotional responses (NONACCEPT), difficulty in engaging goal-directed behavior (GOALS), impulse control difficulties (IMPULSE), lack of emotional awareness (AWARENESS), limited access to emotion regulation strategies (STRATEGIES) and lack of emotional clarity (CLARITY). The scale has high internal consistency (Cronbach's alpha $\alpha = .93$). Its construct validity was established with emotion regulation and emotional expressivity measures. Cronbach alpha values for the DERS measurements at pre and post training were .90 and .92, respectively; which indicated a high level of internal consistency.

2.2.3. Symptom Checklist 90-R (SCL-90-R) (Derogatis, 1977)

The SCL-90-R assesses the intensity of psychopathological symptoms. It gives a total score of psychopathology as well as subscale scores in nine categories. The subscales are somatization, obsession-compulsion, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, and psychoticism. The 90 items are scored on a 5-point Likert scale, between 0 and 4. Higher scores indicate more severe psychological symptoms. The SCL-90-R has high internal consistency (Cronbach's alfa between .77 and .90) and test-retest reliability (between .78 and .90). The Cronbach alpha values of SCL-90-R in this study were .97 at pre-training and .97 at post-training.

2.2.4. Reflective Functioning Questionnaire (RFQ) (Fonagy et al., 2016)

The RFQ measures mentalizing ability which refers to a capacity to interpret both the self and others in terms of mental states such as feelings, wishes, goals, desires, and attitudes (Allen et al., 2008). The ability to mentalize one's own and others' feelings can be seen an important determinant of EI due to its necessity in empathy, emotional awareness, and emotional regulation. The scale's total score is assessed in two different categories which indicates either hypermentalizing (RFQ_C, certainty about mental states) or hypomentalizing (RFQ_U, uncertainty about mental states). Higher points in hypomentalizing shows an inability to understand complex models of one's own mind and/or that of others. On the other hand, higher scores in hypermentalizing refer to excessive mentalizing which leads to the generation of mentalistic representation of actions without sufficient observable evidence. The RFQ consists of 54 items that are scored on a 7-point Likert Scale between 1 (strongly disagree) and 7 (strongly agree). Scores on both scales can range from 0 to 78. Very high scores on the RFQ-U reflect complete lack of knowledge about mental states, while lower scores reflect acknowledgment of opaqueness of own and others' mental states, which is a characteristic of genuine mentalizing (Fonagy et al., 2016). Very high scores on the RFQ-C reflects extreme expressions of certainty about mental states of others that can be seen as extraordinary. RFQ's positive correlation with mindfulness and perspective taking, and negative correlation with symptoms of Borderline Personality Disorder indicates construct validity of the scale. Test re-test reliability of RFQ_U and RFQ_C are 0.84 and 0.75, respectively.

In this study, RFQ_C scale Cronbach alpha values were .89 at pre-training and .91 at post training. Cronbach alpha values for RFQ_U at pre and post trainings were .79 and .74, respectively.

2.3. Procedure

This study was conducted as a part of an EU Erasmus+ Program Project for cooperation for innovation and the exchange of good practices in June 2017, in Ljubljana, Slovenia. The participants signed an informed consent prior to the participation of this study. The ultimate goal of the project was to increase EI skills of the youth to increase employability. The participants in the intervention group attended a 3-day (30 hours in total) EI training program. The training program was generated as an intellectual output of this Erasmus+ project and first used in this study.

For this study, an intensive EI training program was conducted in 3 consecutive days. The training provided detailed information about EI as a general concept and its' subdomains. Following the EI as an ability approach, the content of the training was arranged according to the 4 domains of the EI: Perception of emotions and using emotions to facilitate thought processes (targeted on the first day), understanding emotions (targeted on the second day), and managing emotions (targeted on the third day). Theoretical information about EI was provided and engaging exercises were used to teach the concepts. All domains of the EI were introduced to the participants in detail and psychodrama activities, classroom discussions, group activities, self-reflection, relaxation techniques, and role playing activities were utilized to teach the materials under each domain.

First day of the training covered information about meaning of emotions, emotional intelligence in private and professional life, emotional awareness, emotional responses in difficult situations, coping with unpleasant emotions at the workplace, and working with thoughts that trigger emotions. Icebrakers, panel discussions, watching videos regarding EI, small group discussions, teamwork on concepts of EI, individual reflective exercise on listening to music and reflection on feelings were utilized. The training on the second day covered a mindful approach to emotion regulation, understanding stress response, stress coping mechanism, resilience, empathy, defining difficult emotions, and effective emotional awareness and regulation. Exercises on mindfulness (i.e. mindful drawing and mindful breathing), detecting authenticity of emotions, role plays regarding reacting to coworker's difficult emotions, team work, observing group members, individual self-reflection, relaxation exercises, and use of media showing facial expressions were utilized. The third day of the training covered information about conflict, conflict management, detecting others' emotions, working with difficult people, role of communication skills, building credibility in the organization, developing assertiveness in the working team, and general assessment of trainings. Individual weaknesses were determined, strategies for dealing with difficult people, and strategies for assertiveness were discussed. Participants filled out the questionnaires prior to the start of the training and at the end of the training.

2.4. Data Analyses

Demographic variables were correlated with the SHUTTE, DERS, SCL-90-R, and RFQ total scores in order to determine the covariates in the study. Repeated Measures ANCOVA tests were computed to assess change in the SHUTTE, DERS, SCL-90-R, and RFQ total and subscale scores.

Results

3.1. The Relationships between the Demographic Variables and Dependent Variables

Demographic variables were correlated with the intervention group SSEIT, DERS, SCL-90-R, and RFQ total scores in order to determine the covariates which had substantial correlation with the dependent variable and to adjust the results for differences existing among the participants before the start of the study (George & Mallery, 2006). Demographic variables that showed significant correlations were treated as covariates in the following Repeated Measures ANCOVA analyses. As shown on Table 1, race and income were significantly correlated with the SSEIT total score; race and income were significantly correlated with the DERS total

scores; marital status was significantly correlated with the SCL-90-R total score; race was significantly correlated with the RF uncertainty score.

There was a negative correlation between DERS pre training and post training scores and income, r= -.52, p=.04, r= -.62, p=.01, respectively. There was a marginal significant relationship between race and DERS post training scores, r= .46, p=.058. There was a negative correlation between SCL-90-R post training total score and marital status, r= -.47, p=.05. There was a negative correlation between SSEIT pre training and post training scores and race, r= -.50, p=.04, r= -.60, p=.00, respectively.

3.2. Change in the SSEIT Scores

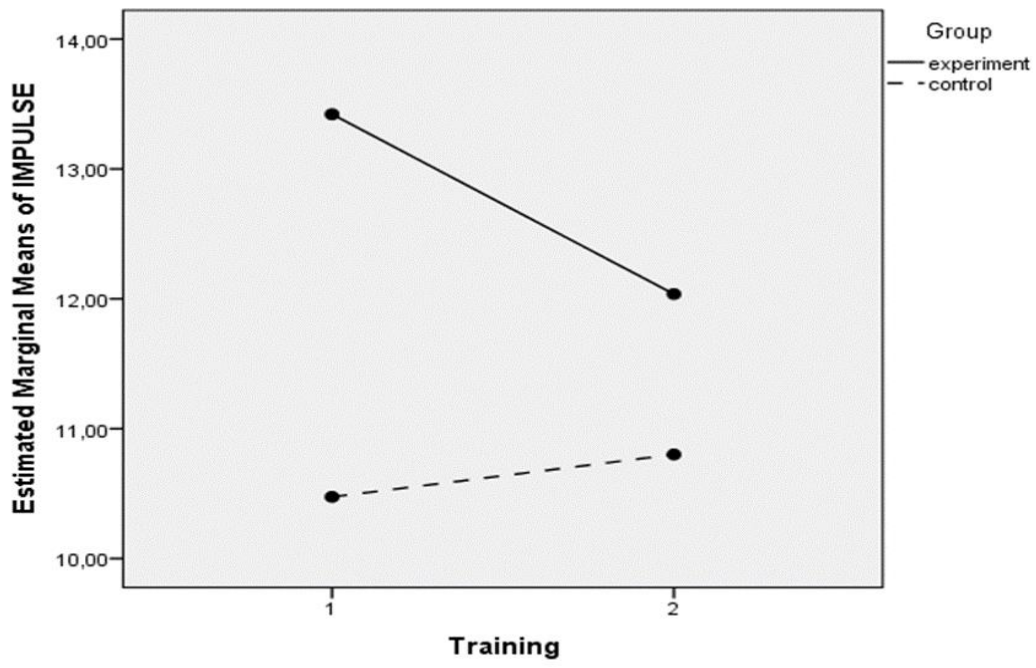
A Repeated Measures ANCOVA test was computed to examine change on the SSEIT from pre-training to post-training. Race and income were included as the covariates. The results showed that there was no significant difference between intervention and control groups regarding change on the SSEIT from pre-training to post-training, $F(1,30)= .10$, $p= .75$, $\eta p2= .00$.

3.3. Change in the DERS Total and Subscale Scores

A Repeated Measures ANCOVA test was computed to examine change on the DERS IMPULSE scores from pre-training to post-training, where race and income were treated as covariates. The results showed that change in DERS IMPULSE scores was significant from pre-training to post-training, $F(1,30)= 12.40$, $p= .00$, $\eta p2= .29$. As shown on Figure 1, there was an interaction effect of the DERS IMPULSE score and treatment group. The rate of change in IMPULSE scores from pre-training to post-training was different for people in the intervention group and control group $F(1,30)= 5.13$, $p= .03$, $\eta p2= .15$, the intervention group pre-training (M=12.70, SD=4.32), post-training (M=11.11, SD=3.08), the control group pre-training (M=11.81, SD=3.97), post-training (M=11.00, SD=3.23).

Figure 1

DERS IMPULSE Scores from Pre-Training to Post-Training for People in the Intervention Group and Control Group



A Repeated Measures ANCOVA test was computed to examine change on the DERS total score from pre-training to post-training, where race and income were treated as covariates. The results showed that there was not a significant difference between intervention and control groups regarding decrease on the DERS total score from pre-training, post-training, $F(1,30)= .48$, $p= .49$, $\eta p2= .02$, no interaction effects were observed. There was a significant effect of income on DERS total scores, $F(1,30)= 4.04$, $p= .05$, $\eta p2=.12$.

Repeated Measures ANCOVAS were computed to examine change in subtests of the DERS, as income and race were covariates. There was no significant difference between intervention and control groups regarding change on the NONACCEPT pre-training and post-training scores, $F(1,30)= .02$, $p= .89$, $\eta p2= .00$, no interaction effects were observed.

When race and income were controlled, there was no significant difference between intervention and control groups regarding change on the GOALS scores from pre-training to post-training , $F(1,30)= .66$, $p= .42$, $\eta p2= .02$, no interaction effects were observed.

There was no significant difference between intervention and control groups regarding change on the AWARE scores from pre-training to post-training, $F(1,30)= .97$, $p= .33$, $\eta p2= .03$, when race and income were controlled. No interaction effects were observed.

There was no significant difference between intervention and control groups regarding change on the STRATEGIES scores from pre-training to post-training, $F(1,30)= .38$, $p= .54$, $\eta p2= .01$, when race and income were controlled.

There was no significant difference between intervention and control groups regarding change on the CLARITY scores from pre-training to post-training, $F(1,30)= .00$, $p= .99$, $\eta p2= .00$, when race and income were covariates.

3.4. Change in the SCL-90-R Scores

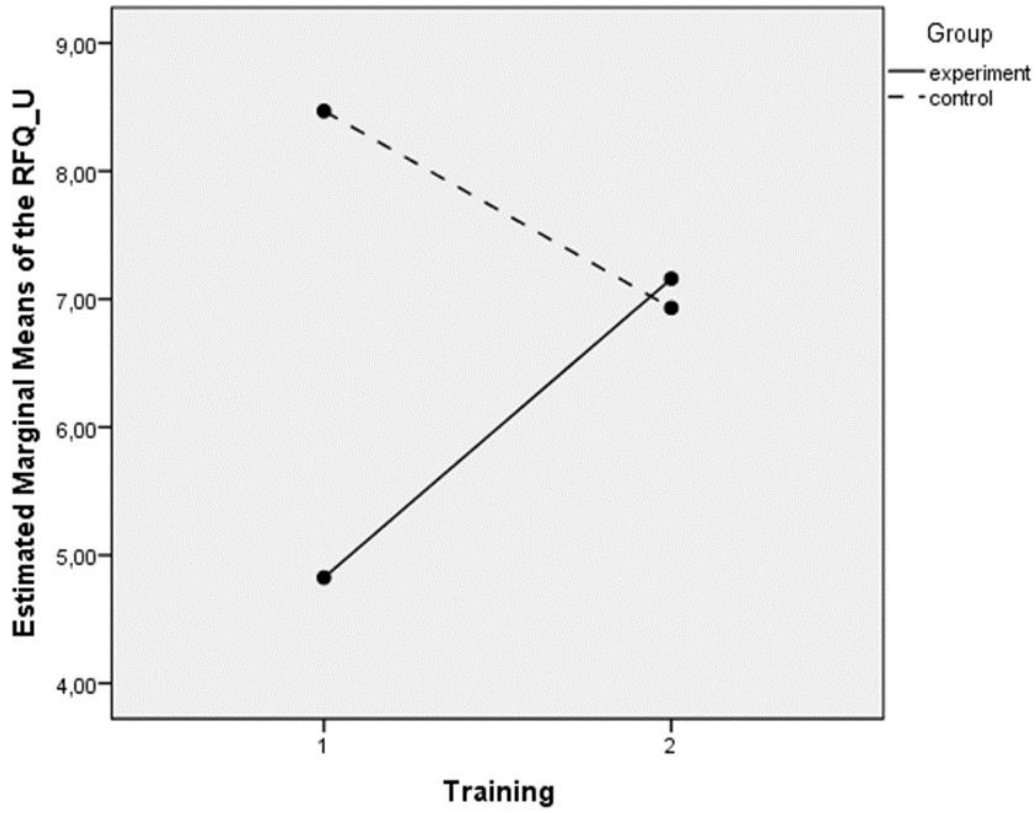
There was no significant difference between intervention and control groups regarding change on the SCL-90 from pre-training to post-training, $F(1,29)= .00$, $p= 985$, $\eta p2= .00$, when marital status was treated as a covariate. Furthermore, no significant changes were observed on the subscales of the SCL-90-R from pre-training to post-training between intervention and control groups. From pre-training to post-training, there was no change on somatization, $F(1,29)= .54$, $p= .47$, $\eta p2= .02$; obsession-compulsion, $F(1,29)= .11$, $p= .74$, $\eta p2= .00$; interpersonal sensitivity, $F(1,29)= .00$, $p= .95$, $\eta p2= .00$; depression, $F(1,29)= .27$, $p= .61$, $\eta p2= .01$; anxiety, $F(1,29)= .00$, $p= .95$, $\eta p2= .00$; hostility, $F(1,29)= .41$, $p= .53$, $\eta p2= .01$; phobic anxiety, $F(1,29)= .00$, $p= .99$, $\eta p2= .00$; paranoid ideation, $F(1,29)= .12$, $p= .74$, $\eta p2= .01$; and psychoticism, $F(1,29)= .16$, $p= .69$, $\eta p2= .01$, controlling for marital status.

3.5. Change in the RFQ Scores

A Repeated Measures ANCOVA test was computed to examine change on the RFQ scores from pre-training to post-training, where race and income were treated as covariates. The results showed that there was an interaction effect of the RFQ_U score and treatment group. As shown on Figure 2, the rate of change in RFQ_U score from pre-training to post-training was different for participants in the intervention group and control group, $F(1,28)= 5.75$, $p= .02$, $\eta p2= .17$, the intervention group pre-training ($M=4.86$, $SD=4.43$), post-training ($M=6.64$, $SD=5.80$); the control group pre-training ($M=8.44$, $SD=7.14$), post-training ($M=7.33$, $SD=6.24$). While change was marginally significant for the intervention group, $F(1,11)= 4.48$, $p= .058$, $\eta p2= .29$; it was not significant for the control group, $F(1,16)= .01$, $p= .92$, $\eta p2= .00$. Change in the RFQ certainity from pre-training to post-training was not significant for the participants in the intervention group and control group, $F(1,28)= .99$, $p= .33$, $\eta p2= .03$.

Figure 2

RFQ_U Scores from Pre-Training to Post-Training for People in the Intervention Group and Control Group



Covariates appearing in the model are evaluated at the following values: What is your race? = 1,0938, What is your own yearly income? = 1,5313

Table 1

Correlation of the Variables for the Intervention Group

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. Age	1																
2. Gender	.27	1															
3. Marital Status	-.48*	-.20	1														
4. Race	-.24	-.15	-.10	1													
5.Religous affiliation	-.23	-.18	.37	.22	1												
6.Education level	.37	-.05	-.31	-.18	-.16	1											
7.Employment status	-.28	-.04	.25	-.10	.30	-.14	1										
8.Yearly income	.36	.08	-.10	-.26	-.61*	.24	-.34	1									
9. SSEIT pre-test	.22	.15	.30	-.50*	-.26	.17	.18	.45	1								
10. SSEIT post-test	.29	.18	.13	-.60**	-.37	-.01	.23	.50*	.83**	1							
11. DERS pre-test	-.27	.14	-.04	.03	.33	.30	-.08	-.52*	-.41	-.54*	1						
12. DERS post-test	-.32	.11	-.14	.46*	.40	.13	-.16	-.62*	-.47*	-.67**	.83**	1					
13. SCL90 pre-test	-.11	-.36	-.40	.13	.21	.10	-.12	-.39	-.56	-.55*	.49*	.50*	1				
14.SCL90 post-test	.22	-.19	-.47*	.42	.18	.05	-.18	-.44	-.46	-.51*	.28	.46	.71**	1			
15.RFQ-C pre-test	.37	.32	-.02	-.31	.50*	.04	-.09	.49	.66**	.65**	-.42	-.47	-.26	-.03	1		
16.RFQ-U pre-test	-.42	-.15	.08	.53*	.32	-.14	.02	-.30	-.67**	-.76**	.28	.44	-.33	.30	-.56*	1	
17.RFQ-C post-test	.43	.43	-.08	-.24	.38	-.06	.06	.44	.63**	.66**	-.48*	-.48	.31	-.08	.95**	-.61*	1
18. RFQ-U post-test	-.41	-.05	.02	.25	.27	.02	.07	-.40	-.39	-.62**	.40	.57*	.27	.14	-.67**	.75**	-.71**

* $p < .05$ ** $p < .01$

Discussion

The findings showed that there was a significant change on the DERS IMPULSE score at post-training compared to pre-training for the intervention group, even after controlling for differences existing among the participants before the start of the study, such as race and income, but not for the control group. Therefore, our second hypothesis was confirmed. This finding suggests that after receiving a 3-day training on the EI skills, individuals are able to learn to regulate their own emotions when they are upset. Upon completion of the training, the participants' impulse control difficulties decreased in the intervention group but not in the control group. Those in the intervention group reported less difficulty in emotions as overwhelming and out of control; in feeling and becoming out of control. Parts of the training, such as mindfulness practices, exercises which improved awareness of emotions, exercises which taught strategies to deal with difficult people might have contributed to this finding. In this training, participants in the intervention group learned how to recognize their negative emotions (such as frustration, worry, anger, dislike, and disappointment) but not necessarily to act on them. It appears this skill can be taught and implemented in an intensive 3-day EI training. Future studies might choose to investigate the role of specific activities that lead to changes in impulse control difficulties. Change in the DERS IMPULSE scores from pre-training to post-training suggests that 3-day EI training had met an important goal of an EI training, i.e. harnessing emotions productively and managing emotions (Salovey & Mayer, 1990; Goleman, 1996). This study also pointed out positive influences of a higher income on decreased levels of emotion regulation difficulties. This finding emphasizes the importance of equal employment opportunities among individuals for better emotion regulation skills.

Even though the participants reported significantly less difficulty in emotion regulation, no changes were observed in the SSEIT scores. While DERS only assesses emotion regulation difficulties, The SSEIT is a more comprehensive measure, as it assesses emotion perception, utilizing emotions, managing self-relevant emotions, and managing others' emotions. It is possible that change in all areas of EI require more extensive or longer lasting trainings. Also, the literature shows that the knowledge gained in EI trainings might take up to 6 months to translate into applied skills (Nelis et al., 2009). Previous research showed not all areas of EI change post-training. For instance, a study that utilized a 4-week EI training has shown there were no changes in emotion understanding at the end of the training (Nelis et al., 2009).

There were no changes in psychological symptoms as measured by the SCL-90-R. Previous research showed EI skills trainings had a positive effect on anxiety and depression levels (Ozcelik, 2007); and anger levels (Yilmaz, 2009). These findings suggest that changes in psychological symptoms might be prompted by skills training programs. However, these studies had a 12-week program to teach EI skills. It is possible that psychological symptoms are persistent, and individuals need longer than a 3-day program to show decreases in psychological symptoms. In addition, lack of changes on the SSEIT and SCL-90-R might be attributed to the limited sample size, as our power analysis showed the sample sizes would have to increase up to N = 54 for group differences to reach statistical significance at the .05 level.

On the RF, participants' RF_U scores were on the lower end to begin with, which was suggestive of a high mentalizing capacity. Still, RF_U scores of the intervention group increased, while such an increase was not observed among the control group. This suggests that after the EI training, participants in the experimental group acknowledged more lack of knowledge about mental states. This might enable participants' to decrease engaging in negative thoughts such as mind-reading. One would have also expected to find significant changes on the RFQ_C after the EI training. Nonetheless, lack of such a finding is compatible with previous research which showed no changes in self-understanding after a 4-week EI training (Nelis et al., 2009) and that significant changes in RF require more intense work and are obtained over long-term therapeutic work (Levy et al., 2006; Hörz-Sagstetter et al., 2015).

This study has several limitations. Due to the nature of this training, the number of participants had to be relatively small. Nevertheless, trainings provided to larger group of individuals might yield statistically more

robust results. Second, participants in the control group had to be recruited from only one country. This is a limitation of a control group and future studies might consider having a more inclusive control group. Third, having a 6-month follow-up could have enabled researchers to assess intervention gains and compare the results of this study to similar studies, which measured effectiveness of EI trainings. Finally, this study aimed to investigate effects of an intensive training lasted for 3 days. EI trainings longer in duration might result in more opportunities to apply acquired knowledge and therefore increase the gains from an EI training.

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