The Efficacy of Emotional Intelligence Training for the Emotion Regulation of Bullying Students: A Randomized Controlled Trial

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ABSTRACT

Studies have shown that 80% of people's success relates to skills that are in some way related to emotional intelligence. So, the present study aims to determine the impact of a 5-week emotional intelligence training on regulated negative emotion and perceived empathy among bullying students (n = 40). We randomly assigned participants to an experimental group (n = 20) and a control group (n = 20). Participants in the experimental group received an emotional intelligence training program. Pretest and posttest evaluating regulated negative emotion and perceived empathy were administered to the experimental and control groups. Although regulated negative emotion and perceived empathy improved over the 5 weeks of the study for participants in the experimental group, the training program evaluated in this randomized controlled trial did not result in a meaningful improvement in regulated negative emotion dimensions and perceived empathy when post training changes are compared between both groups. This finding concludes that an appropriate control group plays an important role in studies evaluating interventions to survey emotional intelligence on the emotion regulation of bullying students.

Key Words: Emotional Intelligence, Emotion Regulation, Bullying Students, Intervention

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Introduction

Student bullying, especially during adolescence, is an important international problem (Pepler and Craig, 2008) because over 100 to 600 million adolescences every year are directly involved in bullying behaviors worldwide (Volk et al., 2006). Bullying studies show that about 30% of students are involved in some way in bullying behaviors, as a bully, victim or both (Cohn and Canter, 2003; Harris and Willoughby, 2003). According to the National Institute of Child Health and Human Development report, of the 30 percent of the students involved in bullying behavior, 13% reported bullying on other students, 11 percent reported being victims of bullying, and 6 percent reported involving in both (Kass et al., 2003). In a study on 360 primary school students from fourth to sixth grade, 56.4% of the students reported being victims of bullying (Greeff, 2004). The results of the Kartal survey on elementary school students in Turkey also showed that 79.6% of the students were victimized during the past month in bullying (Kartal, 2009).

Emotion regulation is one of the important factors affecting mental health which has so far been neglected in relation to bullying behaviors (Ebrahimi et al., 2017). According to the Emotion Dysregulation Theory, some patterns of emotion regulation or lack of it can disrupt the function of an individual and create and sustain pathological symptoms (Cole et al., 1994). Studies have shown that the levels of emotional adjustment and control among children with externalization making problems,
including bullying and behavioral disorders, are lower compared with children with internalization making problems and normal children (Blair et al. 2001). Such difficulties in the emotional information processing are the result of inadequacies in the sense of fear, empathy, and sin (Frick et al., 2003).

Evidence suggests that people who have incomplete emotion regulation abilities are likely to show aggressive behaviors (Frick et al., 2003). Card and Little (2006) conducted a meta-analysis study of the literature on aggression and psychosocial compatibility on people under 18 age years and found that two forms of aggression (proactive and reaction) were associated with emotion dysregulation, ADHD symptoms, and attention deficit. Also, research on child growth shows that emotion dysregulation predicts child aggression behaviors (Frick et al., 2003). Hansen et al., (2012) also showed that negative emotionality is one of the psychological factors associated with bullying/school victimization.

Nowadays, emotional intelligence is considered as the latest development in understanding the relationship between thinking and emotion in different areas of psychology (Bar-on and Parker, 2000). Many studies have been conducted on emotional intelligence that indicates the role of emotional intelligence and its components in various aspects of life such as academic achievement, education, occupations, marriage, individual development and social relationships. Emotional intelligence refers to emotional, personality and social intelligence dimensions that is often considered more important and more prominent than the cognitive dimensions of intelligence for everyday activities (Bar-on and Parker, 2000). Bullying behaviors and victimization by it are associated with some emotional intelligence skills (Kokkinos and Kipritsi, 2012). Some studies reported that there is a significant relationship between the skills and empathy (Gini et al., 2007; Jolliffe and Farrington, 2006). Bullying behaviors in adolescents are associated with a lower empathic response and less sympathetic concern than others (Gini et al., 2007). Sahin (2012) also indicated that the empathy training program, as an emotional intelligence dimension, significantly reduces the bullying behaviors of student.

However, evidence of direct relationships between emotional intelligence skills and regulated cognitive emotion among physicians is lacking. We conducted a randomized controlled trial to test the effects of an emotional intelligence training program on regulated cognitive emotion for students with bullying behaviors. Regulated negative emotion was used as an indicator of regulated cognitive emotion (Garnefski and Kraaij, 2006). Also, perceived empathy was used as an indicator of emotional intelligence (Auyeung et al., 2009).

Methods

Study design, setting, and participants
A randomized controlled trial of three high schools was conducted in Kunming (China). We conducted over 8 weeks from the beginning of October to the end of November 2016. Bullying students were recruited through the Olweus Bullying Scale. We received the written informed consent from the participants in both groups who participated voluntarily. The study was approved by an Educational Counseling Center in Kunming. We randomly assigned participants to an emotional intelligence group (n = 20) and a control group (n = 20). Participants in both groups completed pretest and posttest (8 weeks) survey.

Study arms
In addition to instruments pre-testing of changes in emotion regulation (i.e., regulated negative emotion) pre-post study (see below) students with bullying behaviors participated in both emotional intelligence and control groups completed brief weekly surveys consisted 2-3 question included assessing overall emotion regulation. This was done so that participants in the experimental group received a 5 sessions training program (60 minute per session). In addition, a 2-session program (45 minute per session) was taught to the parents and the school coaches using lecture, group discussion, role play, question and answer, and educational pamphlets. The training intervention was designed in the framework of Social Support Theory and considered specific strategies to change in each dimension of the theory. To create a change in the emotional support dimension, a social network was formed consisting of students in the experimental group and their parents and educators and hold group discussion sessions in these networks. To create a change in the information support dimension, a consultation and guidance of students, their parents and their coaches was considered by sending an SMS, email and holding training sessions. About the tooling
support, some educational materials were provided for each session, such as a guideline booklet for enhancing students' emotional intelligence, educational CDs on ways to increase emotional intelligence in children and their parents and educators, and educational pamphlet on emotional intelligence components for students and their parents, and distributed among participants in the experimental group. In addition, an educational blog was designed to discuss ways to increase emotional intelligence for students in the experimental group, and their parents and educators, and the blog address was shared with the participants. To create a change in the evaluation support dimension, a role-playing session was conducted using self-assessment checklist to inform students about the status of their communication skills and their stress levels. At the last session, the self-assessment checklist was re-completed and the results of these assessments were transferred to the relevant student.

**Study outcomes**

Study participants completed the regulated negative emotion scale of the short version of the Cognitive Emotion Regulation Questionnaire at before the training and 9 weeks after baseline (Garnefski and Kraaij, 2006; Garnefski et al., 2001). The scale consisted of 18 questions and ranged on a five-degree Likert scale from 1 (never) to 5 (hardly ever). This scale was made for people 12 years and older. The scale is used to measure cognitive strategies that described as individual styles responding to stressful events and used in a special pressure event or position.

We used the variable perceived empathy of the children's Empathy Quotient and Systemizing Quotient (EQ-SQ) questionnaire (Auyeung et al., 2009) which consists of 55 questions in the original version. The scale ranged from 1 (absolutely true) to 4 (totally wrong). Some studies supported the reliability and validity of the EQ-SQ scale (Groen et al., 2015). Our study obtained an alpha coefficient of 0.77 at baseline and of 0.78 at posttest.

**Statistical analysis**

The standard summary statistics was used to characterize participants in both groups. We also used Fisher's Exact and Kruskal-Wallis tests to analyze differences in the emotional intelligence group and the control group from before the emotional intelligence training to after the training. The critical value of this study was 5%.

**Results**

Our sample consisted of 40 students with bullying behaviors. We received the written informed consent of participants in both groups. We equally and randomly assigned participants to the experimental and control groups. Over 95% of the students with bullying behaviors in each group completed the pretests (there was 1 drop out in each group). We observed no baseline differences between the experimental group and the control group in age (experimental group: mean=17.2, SD=1.34; control group: mean=17.31, SD=1.09), gender (experimental group: about 55% boy and 35% girl; control group: about 50% boy and 30% girl). Furthermore, we observed no baseline differences between the groups in relationship status, Educational year and regulated negative emotion (Table 1).

The change in regulated negative emotion (self-blame, blaming others, rumination, and catastrophe-making) and perceived empathy before and after the training in the experimental and control groups was shown in Table 2. Participants in the experimental reported improvements in self-blame (baseline: mean=5.78, SD=2.13; after intervention: mean=5.77, SD=2.25), blaming others (baseline: mean=4.46, SD=1.45; after intervention: mean=4.45, SD=1.46), rumination (baseline: mean=6.29, SD=2.31; after intervention: mean=6.28, SD=2.24), catastrophe-making (baseline: mean=5.11, SD=1.97; after intervention: mean=5.11, SD=1.91), and perceived empathy (baseline: mean=3.28, SD = 1.11; after intervention: mean=3.29, SD =1.05). For the control group, Table 2 also shows similar improvements in self-blame (baseline: mean=5.78, SD=2.21; after intervention: mean=5.77, SD =2.81), blaming others (baseline: mean=4.45, SD=1.39; after intervention: mean=4.45, SD=1.44), rumination (baseline: mean=6.29, SD=2.19; after intervention: mean=6.30, SD=2.01), catastrophe-making (baseline: mean=12, SD=1.62; after intervention: mean=5.11, SD=2.01), and perceived empathy (baseline: mean=3.26, SD=1.12; after intervention: mean=3.26, SD=1.28).

The changes from baseline to after intervention for the experimental and the control group were shown in Table 3. Although there are significant improvements in regulated negative
emotion dimensions and perceived empathy in the experimental group, compared with the control group, we observed no statistically significant improvement for the experimental group.

Discussion
The aim of our study was to evaluate emotional intelligence training for the emotion regulation of bullying students. The findings showed that emotional intelligence training has a positive effect on emotion regulation so that there were significant differences from baseline to end of study for the bullying students participated in the experimental group. This result is consistent with previous studies (Giarrochi et al., 2001; Gross et al., 2015; Peña-Sarrionandia et al., 2015). Ciarrochi et al., (2001)
found that students who were empowered to recognize the feelings of others were among the most popular school subjects and showed the most emotional stability. What is certain is that emotions as well as how people cope with them are part of human personality and affect their health. Gross et al., (2011) and Rokni et al., (2014) examined the relationship between emotional intelligence and emotion regulation among learners of English and showed that there is a positive relationship between emotional intelligence and emotion regulation so that emotional intelligence significantly predicts emotion regulation. Also, Peña-Sarrionandia et al., (2015) in a meta-analysis showed that the effect size of the relationship between emotional intelligence and emotion regulation is significant so that people with high emotional intelligence have a better ability to regulate their emotions. In explaining the effect of the emotional intelligence training on emotion cognitive regulation, those who are more conscious about emotions have more skills in emotion problems management and experience more mental health. In this way, people who can recognize a special emotion in a stressful situation spend less time paying attention to their emotional reactions and use less cognitive resources. This allows them to survey other responses and make them think about other assignments or adapt more adaptive strategies (Extemera and Fernández-Berrocal, 2006).

Although our finding was consistent with previous studies and executed with an acceptable participation rate, the emotional intelligence training intervention evaluated in this randomized controlled trial did not result in a meaningful improvement in regulated negative emotion dimensions and perceived empathy when post training changes are compared between the experimental and control groups. According to the findings can be said that participants in the experimental group were more likely to report participating compared with participants in the control group. So we can conclude that future researchers should focus on an appropriate control group to improve regulated negative emotion and perceived empathy.

References
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