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Evaluating the Impact of Brief Electronic Professional Development on Emotional Intelligence and Burnout Among In-Service Educators

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Evaluating the Impact of Brief Electronic Professional Development on Emotional Intelligence and Burnout Among In-Service Educators

Abstract

To evaluate the impact of an intervention to improve emotional intelligence (EI) and reduce burnout in educators, 48 in-service educators were randomly assigned to a control or experimental group and administered the Scales of Emotional Functioning: Educators (SEF:ED; McCallum et al., 2019) and the Maslach Burnout Inventory – Educators Survey (Maslach et al., 2016) before and after intervention. The control group served as a waiting control and completed these instruments again after receiving the intervention. No statistically significant interaction effects from pre to post-test occurred for the SEF: ED Total EI score. A significant main effect did occur between the experimental and control group for the Personal Accomplishment (PA) scale; the experimental group yielded a higher mean PA score than the control group. For the waiting control participants, no significant change occurred from posttest administration to post-posttest administration on the EE or DP scales. Recommendations for future research are discussed.

Keywords

emotional intelligence, burnout

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Literature Review

Skills that comprise emotional intelligence (EI) have been the focus of speculation and inquiry for centuries, and of interest to psychologists for approximately 100 years. Since the later part of the 20th century as psychologists started to focus more on studying the positive as well as the negative aspects of social/interpersonal skills and on efforts to accurately define and then operationalize these within an overarching, cohesive construct. EI has been shown to positively impact many facets of life, including mental, psychosomatic, and physical health (Martins et al., 2010); interpersonal relations (Schutte et al., 2001); job performance (Joseph et al., 2015); job satisfaction (Miao et al., 2017); and burnout (Manju, 2017).

Within the PreK-12 population, EI has been linked to increased academic performance, decreased problem behaviors, increased well-being, and decreased bullying (Brackett, 2018), as well as increased student engagement (Maguire et al., 2017). While most of the research has been conducted investigating the importance of developing/promoting EI in students, there is limited research addressing the potential benefits of developing EI in those responsible for teaching those students: the educators. The purpose of this study is to determine the potential benefits of teaching in-service educators about EI, how it is defined, how it might be related to burnout, how it is related to facilitating classroom interactions, and specifically whether this information improves educators' knowledge of their EI and decreases burnout.

Emotional Intelligence and Related Constructs

Emotional Intelligence (EI) has been shown to positively impact many facets of life, including mental, psychosomatic, and physical health (Martins et al., 2010); interpersonal

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relations (Schutte et al., 2001); job performance (Joseph et al., 2015); job satisfaction (Ilyas & Abdullah, 2016; Miao et al., 2017); and burnout (Manju, 2017). Within the PreK-12 population, EI has been linked to increased academic performance, decreased problem behaviors, increased well-being, and decreased bullying (Brackett, 2018), as well as increased student engagement (Maguire et al., 2017). The relationship between EI and each of these constructs is discussed in more detail below.

Health and Well-Being

Multiple meta-analyses have linked EI and health, finding that EI may be a good predictor of physical, psychosomatic, and mental health (Martins et al., 2010; Schutte et al., 2007). Dimitrijević et al. (2018) emphasized the power of EI to positively affect happiness and general life satisfaction. Research has shown that those with higher EI tend to have greater social support, resiliency, adaptive coping skills, and stress-management skills (Sánchez-Álvarez et al., 2016). Presumably, these characteristics provide more variability within the emotional response continua, and are therefore hypothesized to lead to greater psychological health and feelings of well-being. Schutte et al. (2007) suggested that the greater reports of physical health may be in part related to having greater satisfaction with social supports, which leads to the next construct associated with EI: interpersonal relations.

Interpersonal Relations

The correlation between EI and interpersonal relations, empathy, and relationships as a whole has been supported through the literature (Klare et al., 2014; Schutte et al., 2001; Zeidner et al., 2009). Consistent with the hypothesis of Salovey and Mayer, individuals with higher EI earned higher scores on measures of empathic perspective taking and self-monitoring in social situations. In addition to empathy and self-monitoring, individuals with higher EI demonstrated

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greater social skills and had higher scores for close and affectionate relationships. Furthermore, couples' ratings of marital satisfaction were higher when they rated their partners as having higher EI (Schutte et al., 2001). Finally, participants anticipated greater satisfaction in relationships with individuals who were described as having greater EI suggesting that EI may likely be a desirable characteristic when considering possible romantic partners.

Job Performance and Satisfaction

Two additional areas that have been shown to be impacted by EI are job performance and job satisfaction. Joseph et al., (2015) demonstrated a correlation between EI and job performance, with high self-reported EI found to be a good predictor of job performance. Studies have also made the connection between EI and job satisfaction clear and direct (Ilyas & Abdullah, 2016), and this linkage apparently holds across age, gender, or job tenure (Miao et al., 2017). When individuals have greater EI, they are also able to access additional resources, such as support from coworkers, supervisors, or subordinates, which assists in job satisfaction. Miao et al. (2017) argued that this increased access to job resources based on greater EI may be due to greater social effectiveness. In other words, those with greater EI are better able to manage social interactions and therefore garner greater assistance from those around them. This may lead to greater job performance and satisfaction, which has the potential to reduce the likelihood of burnout.

Burnout

Burnout has been defined as “a prolonged response to chronic emotional and interpersonal stressors on the job” (Maslach et al., 2001, p. 397). There is ample research literature targeting burnout in an attempt to define it and identify its causes. Beierle, et al., (2019) found an inverse relationship between EI and burnout in medical residents, suggesting that

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targeting EI in residency curriculum may be a beneficial manner in which to target the high burnout rates in physicians. Further, researchers have identified multiple fields that have been impacted by burnout including business, social services, and helping occupations such as clinic staff, teachers, and policemen (Chen et al., 2012). The burgeoning research base demonstrates how widespread burnout really is.

Burnout and emotional intelligence mirror each other in many ways, with a direct negative relationship being found between EI and depersonalization and an indirect positive relationship between EI and emotional exhaustion (Lee & Ok, 2012). Given that education is reportedly one of the fields most impacted by burnout and turnover (Larrivee, 2012), and one of the primary presentations of burnout is emotional exhaustion (Maslach et al., 2001), there is support for the need to better understand the relationship between EI and burnout in educational settings.

Measurement of EI in Educators

A number of instruments have been created to assess EI. Measures have varied based on how the construct of EI is viewed (and therefore how it would best be measured) and how each author conceptualized EI within their specific field. From a theoretical perspective, EI can be perceived as either a trait *or* an ability. Those who view EI as a trait believe it can be operationalized through self-reflection, and therefore argue for measurement via self-report (Petrides, 2011). However, those who view EI as an ability argue that it develops much like cognitive ability, as a result of biological predispositions *and* environmental influences, and should be measured by asking examinees to respond to emotionally-charged stimuli such as questions, vignettes, and pictures and rating the “emotional intelligence” of the responses.

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Correlations between trait-EI and ability-EI have been relatively low and results have varied depending on the population assessed.

As examples of the use of either trait-based or ability-based measures by which EI has been operationalized, Bar-On (2006), who relied on his definition of ESI shared above, developed the Emotional Quotient Inventory, or EQ-i. It has been utilized within organizations and uses a self-report or third-party informant response style. A direct assessment instrument (the Mayer-Salovey-Caruso Emotional Intelligence Test) was developed as an ability-based or performance-based measure of EI (Windingstad et al., 2011). This measure requires an examinee to respond to various objective or impersonal questions and provides scores based on how examinees perform tasks or solve personal problems.

While there is an emerging corpus of research devoted to measuring EI within an organization, few measures have been identified to target EI specifically in educators. To address this need, researchers at the University of Tennessee have developed the Scale of Emotional Functioning: Educators, or SEF:ED (McCallum et al., 2019). An early version of this instrument contained 45 self-report items and was created to assess EI in pre-service educators and in-service educators. It was subsequently modified, and a more detailed description of its development is described below and by Anderson (n.d.), and is summarized in the Method section of this study. It consists of items placed within the context of a school setting, thereby making it relevant for educators and operationalizes EI within three scales: Emotional Awareness (EA), Emotional Management (EM), and Interpersonal Relations (IR).

Improving EI in Educators

Despite Goleman's (1995) view that EI can be increased, research does not conclusively describe the extent to which this goal may be accomplished (Pool & Qualter, 2012). Cherniss

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and Goleman (2001) argue evidence addressing the effectiveness of EI-like strategies can be found in the literature focusing on related constructs. When this broader view is taken, research designed to improve human relations, research/interventions created to model appropriate leadership, and self-management skills would be considered relevant. Also, a number of studies have been conducted at the college level to target EI in students who will be entering the workforce. Pool and Qualter (2012) provided intervention to college students through an undergraduate course and successfully increased self-efficacy and some aspects of emotional intelligence. Connolly and Reinicke (2016) reported EI intervention through an undergraduate course for IT Project Management students and observed increased emotional intelligence, communication, and critical thinking in participants following completion of the course. While these results have been supportive of EI-like interventions and the positive impact it can have on an individual's EI, they have not studied PreK-12 educators or students.

Although there are admonitions in the literature to educators encouraging them to improve their EI and the EI of their students (Torrente et al., 2016) and specifically for educator training (Zeidner & Matthews, 2017), there are few examples of how this might be accomplished. Perusal of the literature reveals one study conducted in Israel which focused on EI-based educator training and reported improvements in educators' EI and empathic concern after training (Hen & Sharabi-Nov, 2014). In this study, in-service educators received interventions that provided the opportunity to reflect upon teaching experiences, emotions, and interpersonal awareness in an attempt to create behavioral changes within themselves and with their students. The intervention included self-reflection through dialogue and journaling, and role play. Results supported an increase in emotional intelligence and perspective taking in participants. A similar study found that following EI intervention, educators reported enhanced

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EI competencies and integration of these competencies into personal, professional, and group components of their lives (Dolev & Leshem, 2016). Pre- and post-test data using the EQ-i suggested modest increases in group EI after a two-year intervention using group workshops and personal coaching, with significant changes noted in assertiveness and stress tolerance. Brackett et al. (2013) reported lower expression of frustration and anger from teachers implementing RULER (an ability-based EI intervention developed for both students and adult stakeholders in schools). While studies of the efficacy of the RULER approach to EI instruction have reported positive findings, the majority of reports are centered on student outcomes and less so on educator outcomes. Obviously, there is a need for more research into the effectiveness of EI based training, specifically on educators.

Rationale

Research demonstrates the link between educator EI and student performance, and educator job satisfaction and burnout. However, there is little research designed to address the effect of EI training on educator knowledge of EI, perceived effect on the training of classroom management among educators, and the relationship between EI training and burnout. The minimal research that has been conducted has shown improvement in educator EI following face-to-face interventions (Brackett et al., 2013; Dolev & Leshem, 2016). The purpose of this study is to determine the potential benefits of teaching in-service educators about EI, how it is defined, how it might be related to burnout, how it is related to facilitating classroom interactions, and specifically whether this information improves educators' knowledge of their EI and decreases burnout.

Research Questions

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1. Will educators who participate in EI training, consisting of four electronic EI modules and one electronic workshop, earn significantly higher posttest mean scores on a self-report test of emotional functioning (i.e., SEF: ED) when compared to a control group of educators receiving no EI training?

2. Will educators who participate in EI training, consisting of four electronic EI modules and one electronic workshop, earn significantly lower mean scores on a self-report test of burnout (i.e., Maslach Burnout Inventory-Educator Survey; MBI-ES) when compared to a control group of educators receiving no EI training?

Methods

Participants and Setting

Participants included in-service educators (i.e. teachers, aides, school psychologists, speech-language pathologists, and principals) in a rural school district in the southeastern United States. Data were collected as part of a larger data-gathering project over three administrations: initially, pretest data were gathered during the first phase, i.e., Administration One (SEF:ED, MBI-ES, and a third instrument, the Profile of Emotional Competence (PEC) from both experimental and control groups); Administration Two consisted of gathering posttest data from the SEF:ED and MBI-ES from both experimental and control groups; Administration Three allowed collection of post-posttest SEF:ED and MBI-ES from the control group only. The PEC data were collected as part of another study and will not be included in analyses of data for this study, except to address the psychometrics of the SEF: ED.

As part of the recruitment process, following initial dissemination of the pretest scales, educators within the district were given a brief explanation of the study during in-service meetings at each school and volunteers were asked to participate. Emails were also sent to all educators in the district and announcements were published on the staff social media website.

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Those who consented to participate were randomly assigned to experimental and control groups. IRB permission was obtained from the University Office of Research and Engagement.

Demographic information was collected during Administration One along with the pretest data and included gender, age, educator title, highest degree attained, years of education experience, grade level(s) taught, and type of classroom taught (e.g., general education, inclusion, resource, self-contained, RTI, and related service settings). Data are presented in Table 1.

Instruments

SEF:ED

The SEF:ED is a self-report scale of emotional intelligence specific to educators that was adapted from the Scale of Emotional Functioning: Medicine (SEF:MED). The SEF:MED pilot testing completed in 2017 by researchers at the University of Tennessee-Knoxville revealed reliability estimates (i.e., Cronbach's Alpha's) of .85, .87, and .88 for the subscales EA, EM, and IR respectively (Kirkpatrick, 2020). Items from the SEF:MED were revised to include language suitable for educators and the 45-item scale was administered to 98 participants as part of another study designed to determine its reliability and validity (Anderson, n.d.). After item analyses the final version of the SEF:ED scale was reduced to 30 items. It provides an overall measure of EI, and like the SEF:MED, also provides subscales for EA, EM, and IR. Split-half reliability estimates were derived using the Spearman-Brown formula, and values of .86, .71, and .80 were obtained for EA, EI, and IR, respectively. Evidence for the concurrent validity of the SEF:ED was established by comparing it to an established measure of Emotional Intelligence, the PEC, and correlation coefficients between the scales of the PEC and SEF:ED ranged from

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.35 to .72; a more detailed analysis of the relationship between the two instruments is available from Anderson (n.d.).

In order to prevent item response set for the SEF:ED, the positive and negative nature of the items were counterbalanced and presented in a 5-point Likert-like format using the following options: Never, Rarely, Sometimes, Often, and Always. For the purpose of this study, the scale was delivered electronically through Qualtrics and participants were able to click on the answer that best characterized their behaviors. From these, data were collected to inform reliability (internal consistency) and validity (concurrent and construct).

MBI-ES

Data collection from the MBI-ES relied on a 22-item, self-report survey designed for educators. Questions address educators' feelings about work and target the three primary areas of burnout within three scales: Emotional Exhaustion (EE), Depersonalization (DP), and Personal Accomplishment (PA). Questions are presented in a 6-point Likert-like format with the following response options: 0-Never, 1-A few times a year or less, 2-Once a month or less, 3-A few times a month, 4-Once a week, 5-A few times a week, and 6-Every day.

The MBI-ES Manual does not provide reliability and validity data, but it was constructed as an adaptation to the Maslach Burnout Inventory – Human Services Survey (MBI-HSS). Cronbach Alpha's of .90, .79, and .71 for the EE, DP, and PA subscales respectively have been reported for that version (Maslach et al., 2016). Multiple studies have been conducted to examine the test-retest reliability of the MBI-HSS and indices have ranged from .50 to .82 (Lee & Ashforth, 1993; Maslach et al., 2016).

Procedures

Pretest

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Data were collected across three test administrations. Prior to intervention, pretest data were collected from the following scales: Scale of Emotional Functioning: Educators (SEF:ED), Profile of Emotional Competence (PEC), and Maslach Burnout Inventory-Educator Survey (MBI-ES), although the PEC data were eliminated from analyses, as described earlier. All educators within the school system were sent electronic versions of the SEF:ED, PEC, and MBI-ES presented in counter-balanced order and they were instructed to complete the scales in that order. These were sent to educators via email and consent was included in the inventory prior to actual inventory questions. All email addresses were assigned codes linked with a master list of all staff email addresses for the district and then email addresses were removed from responses to preserve anonymity and allow for later comparison between experimental and control groups. Email addresses and codes were kept in a password-protected file on the author's computer.

Intervention

After initial completion of the electronic SEF:ED, PEC, and MBI-ES, educators were offered the option to participate in EI professional development lessons, which consisted of four electronic modules, responses to vignettes, and one pre-recorded workshop. Estimated time for completion of all components was three hours (20 minutes for initial inventory completion, 20 minutes per electronic module, one hour for final workshop and 20 minutes for final inventory completion). Educators were given information about the intervention at staff development meetings and given the opportunity to sign up at that time or instructed to contact the author at a later time if they were interested in participating. They were also given the opportunity to express interest by responding to district-wide recruitment emails and social media announcements. Following completion of the pretest, those in the experimental group were sent the four electronic EI modules. The first module provided a recorded overview of EI and

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research evidence to support the use of EI instruction in educational settings. The remaining three modules provided information pertaining to three prominent areas of EI: EA, EM, and IR. Each of these modules defined the specific area of EI, provided strategies to improve that area of EI, and ended with two vignettes specific to the content covered in the module. Educators were prompted to provide answers to two questions presented within each vignette before moving onto the next module. A final recorded workshop was offered to conclude the series and provide an opportunity to review real-world scenarios encountered in the school settings based on feedback provided by participants in the previous modules. All participating educators who completed the electronic modules and the workshop were awarded professional development points, which could be applied toward educator licensure renewal.

Posttest

After the experimental group completed the final workshop, participants from the experimental and control groups completed electronic versions of the SEF:ED and MBI-ES. Those in the control group, who had not received the training, served as a waiting control and were provided the intervention. These participants completed a survey requesting feedback about the utility of the intervention. Finally, after the waiting control group completed the interventions and the SEF:ED and MBI-ES, they were sent the final survey containing qualitative questions pertaining to their perceptions of the intervention.

Results

Descriptive Statistics

Following removal of incomplete or inconsistent respondents, the adjusted totals and means for the SEF:ED Total EI score and subscales scores on the SEF:ED were obtained from the final pool of participants ($N = 48$) at pretest and posttest for both experimental and waiting

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control groups, and a third post-posttest administration was obtained from the waiting control group ($N = 24$). Additionally, mean scores for the three subscales of the MBI-ES were obtained at each administration time. Data are presented in Tables 2 and 3.

Research Question 1: Evaluating Posttest SEF:ED Scores between Experimental and Waiting Control

To determine the extent to which the EI intervention produced changes in mastery of EI knowledge, pre and posttest data were evaluated via repeated measures ANOVAs; the initial analysis reveals no statistically significant interaction effect, i.e., gain scores from pre to posttest for the two groups were similar for Total EI, $F(1, 46) = .01, p = .92$, Wilk's $\lambda = 1.00$.

Furthermore, no significant interaction effect is found between treatment groups and pre-posttest administration on the EA scale, $F(1, 46) = .08, p = .78$, Wilk's $\lambda = 1.00$, the EM scale, $F(1, 46) = .14, p = .71$, Wilk's $\lambda = 1.00$, nor the IR scale, $F(1, 46) = .59, p = .45$, Wilk's $\lambda = .99$.

To explore the extent to which both groups may have improved their EI knowledge from pre to posttest administration, the main effects F from the repeated measures ANOVAs were evaluated. No significant main effects are noted between pretest and posttest on Total EI, $F(1, 46) = 1.00, p = .32$, Wilk's $\lambda = .98$, EA, $F(1, 46) = .26, p = .62$, Wilk's $\lambda = .99$, nor EM, $F(1, 46) = .14, p = .71$, Wilk's $\lambda = 1.00$. However, a significant main effect is evident for IR, $F(1, 46) = 4.78, p = .03$, Wilk's $\lambda = .91$, with mean scores decreasing from pretest ($M = 40.97$) to posttest ($M = 39.91$).

No main effects are evident by group for Total EI, $F(1, 46) = .26, p = .62$, EA, $F(1, 46) = .00, p = .98$, EM, $F(1, 46) = 1.45, p = .24$, or IR, $F(1, 46) = .06, p = .80$. Because there is no interaction effect or main effect with regard to Group IR, the main effect noted with IR from

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pretest to posttest indicates that similar changes were produced in both the experimental and control groups.

Because the control group was a waiting control, Repeated Measures ANOVA was conducted to analyze the change in Total mean EI and mean scores on each subscale from the posttest administration to the post-posttest administration (i.e., after the waiting control group received the intervention). The Repeated Measures ANOVA shows no significant change from posttest administration to post-posttest administration on Total EI, $F(1, 23) = 1.00, p = .33$, Wilk's $\lambda = .96$. Although no significant mean difference is found between posttest and post-posttest for the waiting control group in EA, $F(1, 23) = 1.00, p = .76$, Wilk's $\lambda = 1.00$ or IR, $F(1, 23) = .81, p = .38$, Wilk's $\lambda = .97$, a significant difference is seen between the EM means from posttest to post-posttest, $F(1, 23) = 5.33, p = .03$, Wilk's $\lambda = .81$. This change in emotional management was in the expected direction, with educators in the waiting control group reporting higher emotional management after receiving the intervention. Data are presented in Table 4.

Research Question 2: Posttest MBI-ES Scores between Experimental and Waiting Control

No interaction effects are identified between treatment group and pre- to posttreatment administration time on the MBI-ES subscales. More specifically, no interaction effect is identified on the EE subscale, $F(1, 46) = .79, p = .38$, Wilk's $\lambda = .98$, DP subscale, $F(1, 46) = .00, p = .97$, Wilk's $\lambda = 1.00$, or PA subscale, $F(1, 46) = .48, p = .49$, Wilk's $\lambda = .99$. No main effects are noted between pretest and posttest means on the EE scale, $F(1, 46) = 2.43, p = .13$, Wilk's $\lambda = .95$, DP scale, $F(1, 46) = .91, p = .35$, Wilk's $\lambda = .98$, nor the PA scale, $F(1, 46) = 1.00, p = .32$, Wilk's $\lambda = .98$. Additionally, no main effects are noted for the control and experimental groups on the EE scale, $F(1, 46) = 3.69, p = .06$ or the DP scale, $F(1, 46) = .13, p = .72$. A significant main effect is noted between the experimental and control group on the PA

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scale $F(1, 46) = 5.09, p = .03$, with the experimental group reporting higher PA ($M = 34.65$) than the control group ($M = 31.83$). Apparently, when scores are collapsed across administrations those, in the experimental group earn higher mean scores than those in the control group. Again, because the control group was a waiting control, a Repeated Measures ANOVA was conducted to analyze the change in rating on the MBI-ES subscales from the posttest administration to post-posttest administration (i.e., after the waiting control group received the intervention as well). The Repeated Measures ANOVA shows no significant change from posttest administration to post-posttest administration on the EE scale, $F(1, 23) = 2.34, p = .14$, Wilk's $\lambda = .91$ or the DP scale $F(1, 23) = .24, p = .63$, Wilk's $\lambda = .99$. A significant mean difference is apparent from posttest to post-posttest on the PA scale, $F(1, 23) = 4.24, p = .05$, Wilk's $\lambda = .84$. This change is in the expected direction, with Personal Accomplishment increasing from posttest ($M = 31.96$) to post-posttest ($M = 35.25$). Data are presented in Table 4.

Discussion

The role that EI plays in the field of education more specifically has become increasingly evident as well, with mounting pressure for educators to foster social-emotional growth in their students; many, if not most teachers, have not received direct training related to social-emotional learning or related EI knowledge. Additionally, with the link between EI and career burnout becoming more evident (Mérida-López & Extremera, 2017), and the recognition that educators experience burnout at an alarmingly high rate (Larrivee, 2012), it is evident that educators need knowledge and strategies to help them combat the daily stressors of their jobs with the goal of reducing burnout (Manju, 2017; Mérida-López & Extremera, 2017). An assumption based on the limited research suggests that educators who master more effective strategies for identifying and managing their emotions and those of others may have a more positive impact on their students.

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More research is needed to investigate this assumption and that was the purpose of this study. A unique feature was the electronic delivery of the EI instruction.

Does EI Training Improve Performance of In-Service Educators?

While some have argued for increased training and intervention opportunities related to EI for educators (Torrente et al., 2016; Zeidner & Matthews, 2017), current literature on such interventions has been relatively limited in scope. However, there are promising early indicators (Brackett et al., 2013; Dolev & Leshem, 2016; Hen & Sharabi-Nov, 2014). The literature that supports the positive linkages between EI mastery and teaching performance provides the rationale for this study, which was designed to help determine whether an electronically delivered EI intervention can actually improve EI knowledge, then whether that mastery can help educators better handle the stressors of their jobs, and therefore reduce the likelihood of burnout and related problems. Two primary research questions guided the methodology.

Research question 1 addresses one of the basic questions raised above, i.e., can systematic EI training increase knowledge of one's own EI. Results from this study do not support the contention that electronically delivered training effectively improves in-service educators' mastery of their EI based on an operationalization of EI from self-report measures of their EA, EM, and IR abilities and the methodology within the study. Results reveal no significant difference in EI or burnout between the experimental and control groups. More specifically, no significant change was noted in Total EI, EA, or EM. Review of the data obtained after the waiting control group received the intervention does show an increase in emotional management.

While the literature is not conclusive, some previous studies do report positive effects of EI training from fact-to-face intervention, though others report more limited success. Studies

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conducted with undergraduate students reported increased self-efficacy (Pool & Qualter, 2012), aspects of EI (Connolly & Reinicke, 2016), and communication and critical thinking skills (Connolly & Reinicke, 2016). However, none of these specifically targeted EI in in-service educators. Those studies that did target educators reported increased EI (Brackett et al., 2013; Dolev & Leshem, 2016), increased empathic concern for students (Hen & Sharabi-Nov, 2014), and changes in assertiveness and stress tolerance (Dolev & Leshem, 2016). The results of this study are mixed at best, but in general, do not comport with the more positive results from other researchers.

The studies mentioned above that do yield positive training outcomes designed for educators primarily used reflections through dialogue, journaling, role-play, workshops, and coaching (Brackett et al., 2013; Dolev & Leshem, 2016). The intervention developed for this study was similar to these previous studies in that opportunities for reflection were provided at numerous points within each module, i.e., participants were asked to reflect upon vignettes, share personal experiences related to the topic of each module, and/or to pose questions they may have related to EI or burnout. However, the intervention delivery in this study differed from previous studies; specifically, it was designed to be disseminated electronically in an effort to make participation easier for educators who expressed concern over finding the time to dedicate to in-person workshops and to prevent the likelihood of contagion. By presenting materials in this format, the opportunities for direct interaction of participants provided in previous studies through role-play and direct coaching, was eliminated. This difference in format, with minimal direct interaction between the author and the participants or among participants, may have contributed to less positive outcomes. Additionally, at least one of the previous studies was significantly longer in duration than the present study, lasting up to two years, and most were

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longer than the training within the methodology of this study. Participants in this study could have completed the training, including the vignettes and related questions, in as little as one day. On the one hand, this delivery system allowed quick dissemination of the material and efficient completion but may have contributed to lack of internal validity.

Research question 2 addresses the extent to which EI training can impact burnout, given the evidence that the two constructs are linked. That is, data from this study and from previous research show significant correlations between the subconstructs of EI and those of burnout. Beierle, et al. (2019) and Kirkpatrick (2020) reported significant correlation coefficients between EI and burnout using a related instrument, the SEF:MED, and in another population devoted to the helping professions—medical residents. The EI subconstructs of EA and EM were negatively related to EE and DP and positively related to PA among these residents. A similar pattern occurred for in-service educators assessed in this study. That is, the SEF:ED Total EI is significantly negatively correlated with emotional exhaustion and depersonalization, and positively correlated with personal accomplishment. Furthermore, each of the emotional intelligence subscales, including emotional awareness, emotional management, and interpersonal relations, are negatively correlated with depersonalization and emotional exhaustion, and positively correlated with personal accomplishment (Tables 5 and 6). Most of these relationships are statistically significant, and those that are not are still in the expected direction. These analyses were conducted again at posttest, and in every case, correlations at posttest are higher.

The stronger coefficients at posttest may be due to the fact that participants had an opportunity to see both instruments as part of the pretest, and the EI and burnout linkages may have become more apparent to them with repeated exposure. These correlations were also in the same direction as those found between the SEF:MED and MBI-HSS, a measure of burnout in

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human services, and they were consistent across all three administrations. With each administration the relationship between SEF:ED Total EI, EA, EM, and IR revealed negative correlations coefficients with EE and DP, and positive coefficients with PA. Obviously, EI and burnout are linked, even though the results of this study do not provide compelling evidence that improving one (i.e., EI) improves the other (i.e., burnout). Additional research is needed to determine the nature, extent, and direction of these relationships.

Although there is limited data explicating the relationship between EI and burnout, as described above, previous studies reviewing the impact of EI-related interventions on educators did not address the impact of EI intervention and educator reported burnout. This study offers only support for the assertion that electronically delivered EI training can positively affect burnout. Specifically, repeated measures ANOVAs revealed no significant interactions showing pre- and posttest mean differences as a function of group (control vs. experimental) on the MBI-ES scales assessing emotional exhaustion, depersonalization, or personal accomplishment, nor were significant differences obtained for tests of main effects of group (control and experimental) and administration time (pretest to posttest), with one exception. The experimental group PA, post-posttest administration mean was higher after receiving the EI intervention than before. Given that the PA scale assesses perspectives related to job success and satisfaction, it is conceivable that learning more about EI success could have contributed positively to the score.

Limitations of the Study

There are a number of limitations within this study. Although both the SEF:ED and MBI-ES were chosen because of their item specificity (i.e., both contain items related specifically to education and teaching), both are self-report measures and are subject to social desirability/faking good (Holtgraves, 2004). Neither contain a Fake Good scale. The SEF:ED

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does contain a validity scale to flag for possible inconsistent response patterns, but no other validity scales exist to date.. Further, the MBI-ES does not contain any validity scales. Future studies may benefit from including a social desirability scale, such as the Marlowe-Crowne Social Desirability Scale (MCSDS; Crowne & Marlow, 1960) to determine the effect of social desirability. Like all self-report measures the instruments used in this study may be susceptible to influences that contribute to inaccurate self-perceptions, (Brackett et al., 2013). Therefore, future research may benefit from inclusion of observer or supervisor ratings to help determine construct/concurrent validity of the two instruments.

In addition to these limitations is the relatively high attrition rate, as noted above. Less than 50 participants yielded usable results out of more than 450 potential participants. There are a number of possible reasons for this high attrition rate, including school closures due to a higher-than-typical incidence of sickness, technical issues with the survey-delivery method (i.e., broken survey links through Qualtrics), or personal/family issues of the respondents (e.g., death or sickness in the family). Multiple participants reported the inability to complete the modules following school closures due to falling behind in other job responsibilities and not being able to find the time.

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Table 1

Demographic Information

	<i>N</i>	%		<i>N</i>	%
Gender	48	--	Years of education	48	--
Male	4	8.3	experience		
Female	44	91.7	1-5	8	16.7
Age	48	--	6-10	14	29.2
20-29	5	10.4	11-15	7	14.6
30-39	18	37.5	16-20	5	10.4
40-49	13	27.1	21-25	6	12.5
50-59	10	20.8	26-30	6	12.5
60-69	2	4.2	31-35	2	4.2
Educator Title	48	--	Grades levels taught	48	--
Teacher	30	62.5	Pre-K	11	22.9
Specialist	6	12.5	K	18	37.5
Administrator	2	4.2	1	22	45.8
Special Ed. Case Manager	3	6.3	2	23	47.9
School Counselor	2	4.2	3	20	41.7
RTI Coordinator	3	6.3	4	18	37.5
School Psychologist	2	4.2	5	22	45.8
Highest degree attained	48	--	6	20	41.7
Bachelor's degree	13	27.1	7	23	47.9
Master's degree	19	39.6	8	23	47.9
Education specialist	10	21.0	9	13	27.1
Doctoral	1	2.1	10	12	25.0
Type of classroom taught	48	--	11	12	25.0
General education	15	31.3	12	12	25.0
Inclusion	5	10.4	College	1	2.1
Resource	9	18.8			
Self-contained	6	12.5			
RTI classroom	3	6.3			
Related Service classroom	3	6.3			

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Table 2

SEF:ED Descriptive Statistics - Combined

	<i>N</i>	Min	Max	<i>M</i>	<i>SD</i>	Skewness	Kurtosis
Emotional Awareness							
Pretest	48	31.72	44.00	38.72	2.84	-.51	-.09
Posttest	48	29.00	43.00	38.54	2.63	-1.23	3.01
Post-Posttest	24	29.00	46.00	38.33	4.03	-.72	1.04
Emotional Management							
Pretest	48	27.00	44.00	35.69	3.98	-.19	-.31
Posttest	48	29.00	43.00	35.85	3.17	-.18	-.51
Post-Posttest	24	27.00	50.00	36.74	4.33	.73	3.37
Interpersonal Relations							
Pretest	48	34.00	49.00	40.97	3.11	.17	.64
Posttest	48	31.00	47.00	39.91	3.19	-.26	.90
Post-Posttest	24	33.00	50.00	40.54	3.65	.66	.38
SEF:ED Total EI							
Pretest	48	100.00	134.00	115.38	7.65	.25	-.38
Posttest	48	92.00	131.00	114.31	7.17	-.54	1.64
Post-Posttest	24	98.00	146.00	115.61	10.04	1.05	2.60

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Table 3

MBI-ES Descriptive Statistics – Combined

	<i>N</i>	Min	Max	<i>M</i>	<i>SD</i>	Skewness	Kurtosis
Emotional Exhaustion							
Pretest	48	5.00	47.00	23.98	10.23	.14	-.55
Posttest	48	5.26	45.00	22.24	9.40	.23	-.58
Post-Posttest	24	.00	40.00	22.25	10.78	-.18	-.74
Depersonalization							
Pretest	48	.00	20.00	6.77	4.82	.67	.08
Posttest	48	.00	19.00	6.21	4.50	.59	-.27
Post-Posttest	24	.00	18.00	5.50	5.07	.86	-.14
Personal Accomplishment							
Pretest	48	16.00	40.00	32.82	5.01	-.88	1.43
Posttest	48	21.00	45.00	33.65	5.59	.25	-.20
Post-Posttest	24	24.00	48.00	35.25	5.77	.13	.73

Table 4

Pretest and Posttest Mean and Standard Deviation for SEF:ED and MBI-ES Total Scores

Variable	Pretest				Posttest				Post-Posttest	
	Experimental <i>n</i> = 24		Control <i>n</i> = 24		Experimental <i>n</i> = 24		Control <i>n</i> = 24		Control <i>n</i> = 24	
	Mean	<i>SD</i>	Mean	<i>SD</i>	Mean	<i>SD</i>	Mean	<i>SD</i>	Mean	<i>SD</i>
SEF:ED										
EA	38.78	3.02	38.66	2.72	38.50	2.92	38.58	2.38	38.33	4.03
EM	36.33	3.70	35.04	4.22	36.33	3.32	35.38	3.00	36.74	4.33
IR	40.68	3.22	41.25	3.04	40.00	2.89	39.82	3.53	40.54	3.65
Total EI	115.80	8.13	114.95	7.29	114.83	7.45	113.78	7.00	115.61	10.04
MBI-ES										
EE	22.04	9.37	25.91	10.86	19.31	9.66	25.17	8.33	22.25	10.78
DP	7.00	4.62	6.54	5.11	6.42	4.94	6.00	4.11	5.50	5.07
PA	33.96	4.05	31.71	5.68	35.55	5.18	31.96	5.57	35.25	5.77

