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Development and Validation of the Scale of Emotional Functioning: Educators (SEF:ED)

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I am submitting herewith a dissertation written by Lezli Suzanne Anderson entitled "Development and Validation of the Scale of Emotional Functioning: Educators (SEF:ED)." I have examined the final electronic copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in School Psychology.

R. Steve McCallum, Major Professor

We have read this dissertation and recommend its acceptance:

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Development and Validation of the Scale of Emotional Functioning: Educators (SEF:ED)

A Dissertation Presented for the

Doctor of Philosophy

Degree

The University of Tennessee, Knoxville

Lezli Suzanne Anderson

August 2021

Acknowledgements

Throughout graduate school, I received invaluable guidance from my dissertation committee members. First and foremost, I would like to thank Dr. R. Steve McCallum, my advisor and dissertation chair, for his patience, encouragement, and wisdom. He has provided me with infinite support during my time at the University of Tennessee, and I am forever grateful for the instrumental role he has played in my education. Additionally, thank you to Dr. Sherry Bell, Dr. Merilee McCurdy, and Dr. Brian Wilhoit. You have all contributed to my learning in meaningful ways and I am appreciative of your expertise which made this dissertation possible.

Further acknowledgements are due to my colleagues for their support and encouragement. In particular, to Michelle Fast and Dr. Baileigh Kirkpatrick, thank you for always being willing to listen and to provide guidance. It has been a joy to learn from you and alongside you. I would also like to thank my fellow School Psychology peers for their support and friendship. I am so proud to call you friends and I cannot wait to see what you accomplish next.

Lastly, and perhaps most importantly, thank you to my family for inspiring me to pursue a career that promotes the education of others, and thank you for your unwavering support and love. I would not be where I am today without you, and I hope to make you proud as I continue in my professional journey.

Abstract

Data collected from 97 educators provide preliminary support for the psychometric integrity of an experimental self-report instrument designed to operationalize emotional intelligence (EI) specific to educators, the Scale of Emotional Functioning: Educators, or SEF:ED. Data analyses relied in part on results from an exploratory factor analysis, which revealed an acceptable three-factor solution and item-scale correlations. Reliability estimates (i.e., split-half reliability correlations) obtained for the SEF:ED subscales of Emotional Awareness, Emotional Management, and Interpersonal Relations subscales are .86, .80, and .71, respectively. Correlation coefficients (i.e., Pearson r) between the SEF:ED composite and the Profile of Emotional Competence composite (PEC; Brasseur et al., 2013) range from .35 to .72 and provide some evidence for concurrent validity of the SEF:ED. Based on mean difference analyses, the SEF:ED Total score was statistically significantly different (and higher) than the PEC Composite ($p < .01$), though that pattern did not extend to all of the more molecular comparisons between the SEF:ED and PEC subscale scores. Finally, correlation coefficients obtained between SEF:ED and the Maslach Burnout Inventory for Educators (MBI-ES; Maslach et al.,1986) range from -.21 to .59 and provide limited evidence of its predictive validity for important outcomes (e.g., in this case, burnout). Implications for application of the SEF:ED are discussed.

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CHAPTER I

Emotional intelligence (EI), broadly defined as the ability to recognize and effectively regulate emotional and social behavior (Mayer & Salovey, 1997; Pekaar et al., 2018), recently has become a topic of interest as it relates to a number of important work-related variables (e.g., job satisfaction, social skills, employee productivity and relationships, and burnout) (Lea et al., 2019; Malouff et al., 2014; Platsidou, 2010; Schutte et al., 2001; Vesely et al., 2018; Zysberg et al., 2017). In the field of education, EI is related not only to educators' well-being and life success, but also to "teacher-specific" domains, including classroom performance, teacher efficacy, reducing peer-to-peer bullying, and student engagement (Brackett, 2018; Maguire et al., 2017; Vesely et al., 2018). Though EI has been operationalized in the literature using various strategies (i.e., self-report, third-party informants, and examinee characterizations of behaviors assumed to reflect EI), the self-report measure is considered to be the most efficient strategy for identifying and predicting important outcomes across contexts (Keefer, 2015). However, there is no self-report measure available specifically created to reflect EI of educators within the classroom context. Thus, the purpose of this study is to: (a) describe development and refinement of a psychometrically sound measure of EI for educators, and (b) to compare educators' EI with burnout, a real-world outcome with implications for teacher success and well-being.

Review of the Literature

This literature review includes: (a) a brief history of the operationalization and measurement of emotional intelligence (EI); (b) a discussion of EI and related constructs, including health, stress, life satisfaction, job satisfaction, and burnout; (c) an in-depth examination of the EI of educators and how it relates to student outcomes; and (d) a description

of efforts to assess the EI of educators. The literature review is followed by the rationale for the current study and research questions.

A Brief History of Emotional Intelligence

An electronic database search, using OneSearch through the University of Tennessee Libraries, revealed an increase in the amount articles pertaining to emotional intelligence over the past three decades. This increase suggests not only heightened knowledge of the subject matter, but also heightened interest in its relation to specific areas of functioning. From 1990 to 1999, 9,141 articles were published on EI. This number more than tripled during the next decade, with 38,021 articles published from 2000 to 2009. This number continued to increase in 2010 to 2019, with 92,890 articles published on EI.

Although the EI literature has grown exponentially over the years (Boyatzis, 2018; Windingstad et al., 2011), there is still not a widely accepted consensus regarding its definition or best practice for measuring it. Unlike the extensive literature base focusing on the measurement of cognitive intelligence, operationalized most often by the Intelligence Quotient (IQ), the focus on EI is relatively recent as described below. The historical overview in the next section provides background information on the evolution of the concept of EI.

Early Development

The roots of emotional intelligence (EI) in the psychological literature can be traced at least to E. L. Thorndike's (1920) concept of "social intelligence," which referred to the ability to understand people and to act wisely in human relations. However, EI did not appear in the scholarly literature until the late 20th century (Mayer et al., 1990; Payne, 1985). Salovey and Mayer (1990) defined EI as the adaptive ability to appraise, express, and regulate emotions, while also utilizing emotions to solve problems. Not long after, EI gained attention and

popularity in Daniel Goleman's 1995 best-selling book, *Emotional Intelligence*. Goleman argued

that although cognitive intelligence (i.e., IQ) alone predicts (statistically) significant life success,

EI is a better indicator of career and interpersonal success. He also argued that EI is not fixed and

can be nurtured and strengthened over the course of a lifetime. Goleman (1995) presented a five-

factor model of EI, which included knowing one's emotions, managing emotions, motivating

oneself, recognizing emotions in others, and handling relationships. This model, as noted by

Mayer et al. (2011), provided a more inclusive conceptualization of EI (relative to the models

available at the time). In particular, Goleman's model included a focus on motivation and

handling relationships, which were not typically considered within the models of the day.

Recent Delineations

Conceptualizations of EI have continued to change. For example, in the *Handbook of

Intelligence*, Mayer et al. (2000) updated their original definition of EI to place more emphasis

on cognition, defining EI as "the ability to perceive and express emotion, assimilate emotion in

thought, understand and reason with emotion, and regulate emotion in the self and others" (p.

396). More recent conceptualizations of EI emerged in response to several influences (e.g., the

need to consider how nonverbal communication contributes to its expression, the extent to which

people accurately identify the emotions of others, and the bi-directional influence of thoughts

and emotions) (Mayer et al., 2011). Mayer et al. (2016) revisited their previous EI model and

provided a modified four-factor model to include more problem-solving components, and in the

process provided support for their claim that EI should be considered a "broad" intelligence.

Based on the Cattell-Horn-Carroll "three-factor model" of intelligence, Mayer et al. (2016)

placed EI as a broad construct at the top of the hierarchy and name four branches of

subconstructs underneath. These subconstructs are more narrow abilities of EI, namely

"perceiving emotions…, facilitating thought by using emotions…, understanding emotions…, and managing emotions in oneself and others" (Mayer et al., 2016, p. 293).

Other experts in the field emphasize social competency as an essential, foundational aspect of EI. For example, Bar-On developed the "emotional-social intelligence" (ESI) model, characterized as encompassing interrelated emotional and social competencies and skills that determine understanding and expression of one's own emotion, ability to understand and relate to others, and capacity to cope with daily challenges (Bar-On, 1997). Bar-On (2010) posits EI as an integral part of the field of positive psychology, with data to identify specific influence on human performance, happiness, well-being, and self-actualization.

Ability Versus Trait Operationalizations of EI

As the EI literature expanded, researchers began to distinguish and operationalize EI as either an ability or a trait. Both models conceptualize the behaviors within the construct similarly, such as the extent to which one accurately identifies and manages emotions. However, the main differences between ability and trait models hinge on assumptions regarding the origin and operationalization of EI (Siegling et al., 2015). The ability model assumes that these skills are acquired like most other human abilities, through the interaction between one's inherited capacity to learn (e.g., neurological integrity) and the environment, which either facilitates or inhibits acquisition of new knowledge. The ability model operationalizes EI as the capability to perceive or perform (e.g., the *ability* to recognize, the *ability* to understand, and the *ability* to regulate emotions) (Windingstad et al., 2011). Contrary to the ability model, the trait model assumes that EI is acquired much like the building blocks of personality and is predominantly a function of inherited gene-pair characteristics, i.e., temperament. The trait model operationalizes EI by gathering information directly from informants, i.e., gathering perceptions related to

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emotions and interpersonal relations. Overall, research of EI has produced inconsistent results across the two etiological models, which could be a function of the methodological differences adopted by researchers to operationalize the two models (Brackett & Mayer, 2003; Martins et al., 2010).

Researchers who conceptualize EI with the ability model assume that foundational abilities can be objectively measured through performance tests (Brackett et al., 2006). For example, instruments that measure ability EI contain items that are designed to tap solutions to emotion-related problems and examinee performance is defined by the correctness of their answers (Mayer et al., 2004). Because items and tasks relating to emotions are difficult to score according to purely objective criteria, alternative scoring procedures rely on "consensus" and "expert" opinion (Petrides, 2011). Consequently, ability measures are open to criticism related to interpretability (Petrides, 2011; Siegling et al., 2015). Perhaps the most prominent measure of ability EI is the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT; Mayer et al., 2002), which is considered to be a comprehensive measure of ability EI. This measure is described in more detail later.

On the other hand, trait EI is typically operationalized via self or others' perceptions (Petrides, 2011) of items embedded on rating scales. More specifically, trait EI is assessed typically using self-report instruments. Over the last 10-20 years, many instruments have been developed to measure trait EI, suggesting the need for and utility of such scales. Scales that will be discussed in more detail are the Profile of Emotional Competence (PEC), the Schutte Self-Report Emotional Intelligence Test (SSEIT; Schutte et al., 1998), the Wong and Law Emotional Intelligence Scale (WLEIS; Wong & Law, 2002), the Emotional Quotient Inventory (EQ-i; Bar-On, 1997), and the Trait Emotional Intelligence Quotient (TEIQue; Petrides, 2001, 2009).

Measures of Emotional Intelligence

One of the biggest challenges associated with measuring EI is the subjective nature of the emotional experience (Watson, 2000). Because emotions are internally experienced (though manifestations may be overt), it is challenging to objectively measure EI in a consistent manner. As discussed previously, competency measures of EI have been criticized for inadequate or misguided operationalizations, e.g., use of items that are assumed to reflect EI subconstructs but have only limited support in the literature (Petrides, 2011). Additionally, the reliability and validity of self-report measures are considered suspect by some because examinees may have limited insight into their mental processing and true abilities (Dunning et al., 2004) or because they tend to respond in a manner consistent with social norms/expectations, sometimes referred to as the social desirability bias (Bouffard & Narciss, 2011). However, research offers strong support for the value of subjective beliefs as predictors of observable behavior (Elliot & Dweck, 2005), i.e., those with high self-efficacy based on effort are more likely to utilize negative emotions to motivate additional effort and to exhibit better emotional and social adjustment than low self-efficacious peers (Keefer, 2015). Research defining these and related relationships have various operationalizations of EI, such as those described below. See Table 1 for detailed information of each measure.

Profile of Emotional Competence

The Profile of Emotional Competence (PEC) is a 50-item self-report measure of EI that has been validated with individuals aged 15 to 84 years (Brasseur et al., 2013). Participants are instructed to respond to items how they "would normally respond" on a 5-point Likert-like scale. Responses range from 1 – *statement does not describe you at all or you never respond like this* to 5 – *statement describes you very well or that you experience this particular response very often*

(Brasseur et al., 2013). The PEC yields 10 subscale scores, and 3 composite scores for Intrapersonal EI, Interpersonal EI, and Global EI. Intrapersonal and Interpersonal composite scores each contain 5 subscales: Identification, Understanding, Expression, Regulation, and Utilization. Scores are given on each of these subscales under the Intrapersonal and Interpersonal composites, yielding the 10 subscale scores (see Figure 1 for a breakdown of the subscales). All scores contribute to the Global EI score.

Mayer-Salovey-Caruso Emotional Intelligence Test

Mayer et al. (2002) constructed a series of scales to measure EI based on their four-factor model, named the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT). The four factors, or branches, are: perceiving emotions, facilitating thought, understanding emotions, and managing emotions. The MSCEIT is an ability-based measure designed for adults ages 17 and older and contains 144 items (e.g., Question: A feeling of worry most closely aligns with which of the following clusters? Answer: fear, anxiety, caring, anticipation). Split-half reliability coefficients were .93 for total EI, .91 for perceiving emotions, .79 for facilitating thought, .80 for understanding emotions, and .83 for managing emotions (Mayer et al., 2002). This instrument has been widely used across settings (i.e., organizational, educational, clinical, social, and health settings) but remains controversial because the subscales and related scoring criteria are not supported unequivocally within the EI literature (Siegling et al., 2015).

Schutte Self-Report Emotional Intelligence Test

The Schutte Self-Report Emotional Intelligence Test (SSEIT) is a 33-item measure of EI developed by Schutte et al. (1998) based on Salovey and Mayer's (1990) four-factor model. The SSEIT is a widely used measure that has been cited more than 3,000 times with adult populations (O'Connor et al., 2019). Items are rated on a 5-point Likert-like scale, ranging from 1 (*strongly*

disagree) to 6 (*strongly agree*) (e.g., I am able to control my emotions). Internal consistency

reliability of a one-factor structure was .90 during initial testing and .87 during replication

(Schutte et al., 1998). Findings also suggest evidence of predictive validity and discriminant

validity (Schutte et al., 1998).

Wong and Law Emotional Intelligence Scale

The Wong and Law Emotional Intelligence Scale (WLEIS) is a 16-item self-report scale

based on four factors: self-emotion appraisal (SEA), others' emotion appraisal (OEA), use of

emotion (UOE), and regulation of emotion (ROE) (Wong & Law, 2002). Reliability estimates

(Cronbach's alphas) for SEA, OEA, UOE, and ROE were .87, .90, .84, and .83, respectively

(Wong & Law, 2002). Items are rated on a 5-point Likert-like scale, from 1 (*strongly disagree*)

to 5 (*strongly agree*) (e.g., I set goals for myself and work hard to achieve them). The WLEIS

was designed for use in the workforce, particularly for leadership and management skills. It has

been validated with adolescents and adults (ages 13 and older) (Kong, 2017).

Emotional Quotient Inventory

Bar-On (1997) developed the Emotional Quotient Inventory (EQ-i) based on his model of

five theoretical clusters that cover 15 specific facets: Intrapersonal (self-regard, emotional self-

awareness, assertiveness, independence, and self-actualization), Interpersonal (empathy, social

responsibility, and interpersonal relationship), Stress Management (stress tolerance and impulse

control), Adaptability (reality-testing, flexibility, and problem-solving), and General Mood

(optimism and happiness). The EQ-i is a 133-item self-report measure of social-emotional

intelligence that is designed to measure capabilities, competencies, and skills. Items are rated on

a 5-point Likert-like scale, ranging from a 1 (*very seldom true or not true for me*) to 5 (*very often

true or true of me*) (e.g., I am aware of how my mood affects others). Reliability coefficients

(Cronbach's alphas) ranged from .69 to .86 across all facets and .76 overall (Bar-On, 2002).

Findings demonstrated construct validity in that the EQ-i demonstrated more overlap (i.e.,

significant shared variance) with EI measures than with cognitive or personality tests. In addition

to the EQ-i (designed for ages 17 years and older), there is a short version of the instrument (EQ-

i:S, for ages 17 years and older), a youth version (EQ-i:YV, for ages 7 to 17 years), and more

recent adult version (EQ-i 2.0, for ages 17 years and older) (Siegling et al., 2015).

Trait Emotional Intelligence Questionnaire

The Trait Emotional Intelligence Questionnaire (TEIQue; Petrides, 2001, 2009) measures

perceptions of emotional abilities. This scale has been used in a variety of workplaces, including

organizational and educational settings, with individuals aged 17 years and older. The TEIQue is

a 153-item self-report measure that provides scores on 15 facets, 4 factors, and a global trait.

Items are answered on a 7-point Likert-like scale, ranging from 1 (*completely disagree*) to 7

(*completely agree*) (e.g., I am generally able to deal with stress). Additional forms are available

for a short version (TEIQue-SF), peer ratings (TEIQue-360), adolescents (TEIQue-AF,

recommended age range of 13 to 17 years), and children (TEIQue-CF, designed for ages 8 to 12

years). Internal consistency coefficients (Cronbach's alpha) for the factors of Emotionality, Self-

Control, Sociability, and Well-Being were .75, .78, .79, and .83, respectively for women, and

.80, .78, .82, and .84, respectively for men (Petrides, 2009).

The aforementioned measures are not an exhaustive list of scales designed to measure EI;

however, they are included in this review as they are relevant for the development of the

SEF:ED. In addition, because EI is related to performance across a number of academic and

vocational fields, the following brief review is offered to elucidate some of the more salient

relationships.

Emotional Intelligence and Related Constructs

EI is related to many other constructs and is regarded as a powerful predictor of many important life outcomes. These include, but are not limited to, health, interpersonal relations, academic and professional success, and burnout (Petrides et al., 2016). However, there is some conflicting evidence regarding the utility of EI (Davis & Nichols, 2016); research suggests that there are optimal levels of EI, as high EI can contribute to deleterious intrapersonal (e.g., hyperawareness of emotions overwhelms ability to regulate; over-reactivity to stress) and interpersonal outcomes (e.g., emotional manipulation).

Health and Wellness

The EI literature supports the relationship between EI and health and wellness. That is, not only is EI a strong positive predictor of well-being and mental health, but it is also negatively related to psychopathology in both children and adults (Martins et al., 2010; Mikolajczak et al., 2009; Sinclair & Feigenbaum, 2012). EI may also serve as a stress-buffer, i.e., those with high EI recover more quickly from a stressor than those with low EI (Lea et al., 2019). Furthermore, Mikolajczak et al. (2015) demonstrated that EI predicts incremental variance in healthcare (i.e., doctor visits and hospitalizations) over and above well-established health indicators, such as age, gender, body mass index, social support, and health behaviors.

Interpersonal Skills

EI is positively associated with relational skills across the lifespan. For example, EI has been linked to prosocial behavior and positive peer interactions in children (Mavroveli & Sanchez-Ruiz, 2011). Similarly, EI has been positively linked to marital satisfaction, relationship quality, and constructive communication between partners in adults (Malouff et al., 2014).

Job Performance

Researchers have consistently demonstrated a highly significant relationship between EI and occupational performance (Bar-On, 2010; O'Boyle et al., 2011). In the workplace, EI is positively related to job satisfaction, flourishing (Schutte & Loi, 2014), and leadership behavior and skill (Walter et al., 2011) and negatively related to job stress and burnout (Mikolajczak et al., 2007).

Burnout

Perhaps most importantly, EI is related to and predictive of burnout and related work characteristics within some fields, including job performance and satisfaction. Burnout, as defined by Maslach (2017), consists of three dimensions: emotional exhaustion, depersonalization, and reduced personal accomplishment. Burnout occurs as a function of perceptions of being overworked and incapable of managing stress and work load appropriately. With exhaustion as the central quality of burnout (Maslach et al., 2001), employees typically experience fatigue and low energy, then begin to distance themselves from their work. The other two factors, depersonalization and reduced personal accomplishment, often occur as stressors continue. According to the literature, EI is negatively correlated with burnout in some settings (Chan, 2006; Mikolajczak et al., 2007). In other words, a person who has high EI is less likely to experience burnout. Thus, EI is considered to be a protective factor of burnout (Chan, 2006; Zysberg et al., 2017).

As previously noted, burnout has been studied in several occupational settings, particularly within those that involve components of human service such as health care and business (Chan, 2006; Kirkpatrick, 2019). Burnout is often measured using the Maslach Burnout Inventory (MBI; Maslach et al., 1986). This instrument has been adapted for several work

settings, including education and health services. In the work setting, burnout is related to lower job performance, lower productivity, and prolonged stress (Chan, 2006). Recent models offer explanations for how to best address burnout in a therapeutic setting, such as judging the fit of the person and the job, and how to prevent burnout in the workplace, like enhancing one's sense of accomplishment and reducing the likelihood of emotional exhaustion (Chan, 2006; Maslach, 2017). Beierle et al. (2018) proposed that increasing one's awareness of their current EI levels could reduce burnout. In a study with medical residents, Beierle et al. (2018) reported that following only one EI workshop designed to inform participants of the construct, residents' EI increased over time, though these results are tentative as the methodology did not allow control of threats to internal validity. The researchers pointed out the need for further examination of the directionality of the relationship between EI and burnout.

Maslach Burnout Inventory for Educators. The Maslach Burnout Inventory for Educators (MBI-ES; Maslach et al., 1986) is a 22-item self-report measure of burnout specifically designed for educators (ages 18-70 years). This tool is a modified version of the original Maslach Burnout Inventory Human Services Survey (MBI-HSS) to include wording more specific to education (for example, the MBI-ES uses the term "student" instead of "recipient"). The MBI-ES consists of statements measuring the frequency of participants' feelings towards work. Responses are based on a 7-point Likert-like scale with each score indicating: 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 yields three subscale scores: Emotional Exhaustion, Depersonalization, and Personal Accomplishment. Burnout is an important construct for educators because of the stress within the profession and

the high rate at which teachers leave the profession. Burnout appears to be one variable affecting career longevity and success, as described below.

Emotional Intelligence of Educators

Teaching is considered a high-risk profession due to a highly stressful workplace environment and the related risk factors that impact educators' health (Chan, 2006; Mérida-López & Extremera, 2017). In the workplace, teachers report a wide variety of stressors, including workload, role ambiguity, lack of workplace social support, and classroom management difficulties (Chan, 2006; Mérida-López & Extremera, 2017). Furthermore, teachers report a high level of burnout, which has been related to higher absenteeism, lower job satisfaction, and poorer health outcomes (Maslach et al., 2001). The rate of attrition is high, with an estimated 40% to 50% of teachers leaving the profession within the first five years of their career (Gallup, 2014).

Beyond the impact that low EI (and burnout) may have on educators' health, these variables can either positively or negatively impact their students. Jennings and Greenberg (2009) pointed out that teachers set the tone of their classroom and serve as role models to their students. Throughout the school day, teachers model a wide variety of explicit behaviors to students such as time management, problem solving, and communication skills. Additionally, teachers demonstrate skills that are often internally regulated, such as emotional and stress management, to students, too. By modeling, encouraging, and reinforcing effective EI skills, teachers can help students acquire appropriate strategies for displaying emotions.

Relevant Measures of Emotional Intelligence in the Field of Education

Though EI has been the focus of some research within education, there are no instruments that have been generally accepted as psychometrically and contextually adequate

operationalizations of educators' EI to date. Rather, researchers who have focused on assessing educators' EI have used universal scales, such as the Schutte Self-Report Emotional Intelligence Test (SSEIT; Schutte et al., 1998) or the Wong and Law Emotional Intelligence Scale (WLEIS; Wong & Law, 2002), to measure the EI of teachers.

One scale has been developed specifically for the purpose of measuring teachers' EI (Emotional Intelligence Scale; Wu, 2004). The Emotional Intelligence Scale (Wu, 2004), is a 25-item self-report measure (e.g., I can easily recognize if I am sad). Almost all items are generally worded, i.e., no items refer to working at a school or being in the classroom. Only one item refers to an educator-specific interaction (e.g., students). Items are rated on a 5-point Likert-like scale, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The measure yields a total score and five subscale scores. The subscales are Self-awareness, Managing Emotions, Self-motivation, Empathy, and Handling Relationships and internal consistency reliabilities were .66, .66, .73, .70, and .80, respectively (Wu, 2004). The internal consistency reliability for the total scale was .80. The author of the scale reported these findings and suggested a need for further evidence to clarify reliability and examine validity. However, further evidence supporting the psychometric properties of this measure could not be located within the literature.

The SSEIT, a universal scale designed to measure EI, was used to evaluate teachers' EI and further analyzed to determine the appropriateness of a multi-factor structure. Chan (2004) proposed a four-factor structure of secondary school teachers using the SSEIT. The factors were empathic sensitivity, positive regulation, positive utilization, and emotional appraisal, with three items per subscale. Internal consistencies (Cronbach's alphas) ranged from 0.60 to 0.71. The global scale score of this abbreviated version correlated highly ($r = 0.92$, $p < 0.001$) with the total scale score, suggesting that the brief version was a viable alternative to the 33-item scale

(Chan, 2006). Although this scale has been used to assess EI among educators, items were not created with the educational context in mind.

There is evidence that teachers' EI can be improved through effective intervention. In one study, Hen and Sharabi-Nov (2014) conducted an EI training in Israel ($n = 186$) that focused on experiencing, learning, and reflecting upon emotions over 14 weeks. The study used the SSEIT to gather pre- and post-data scores of teachers' EI. The results revealed a significant increase in overall EI ($p < .001$) and across all subscales ($p < .05$) over the course of the training (Hen & Sharabi-Nov, 2014). In a related study, Vesely et al. (2014) implemented a five-week intervention with pre-service teacher candidates from two Canadian universities ($n = 49$). The intervention utilized a workshop format, group discussion, and workbook exercises with home assignments. Scores on the TEIQue-SF (Petrides, 2009) and WLEIS (Wong & Law, 2002) indicated that while participants in the control group reported non-significant and unchanged EI abilities after intervention, participants who received the EI intervention reported an increase. Changes over time were more robust on the WLEIS ($p < .01$) than the TEIQue-SF ($p < 1.00$). A third study (Fast, 2021) conducted a virtual EI training with in-service teachers ($n = 48$) and also assessed burnout. The intervention included electronic learning modules with options for reflection and application through vignettes. Though quantitative results suggested minimal change in EI or burnout over time, qualitative results suggested that participants found the intervention helpful for managing their classrooms and relating to their students. Overall, the literature provides evidence that teachers experience high rates of stress and burnout and furthermore, skill trainings can prevent or reduce these negative impacts by targeting pre-service and in-service teachers' EI.

Statement of the Problem and Rationale for the Study

Based on the current literature, EI seems critical not only for teachers' well-being and life success, but also to "teacher-specific" domains, including classroom performance, teacher efficacy, bullying, and student engagement (Brackett, 2018; Maguire et al., 2017; Vesely et al., 2018). However, the field lacks a psychometrically sound operationalization of EI using an array of items embedded within the educational context, i.e., with a focus on the unique environments, situations, and populations that educators face. The goal of the current study is to address this need by developing a self-report measure of EI. The goal is to describe the development of the Scale of Emotional Functioning: Educators (SEF:ED), the theoretical model upon which it is based, and preliminary psychometric properties, including indicators of reliability and validity. Specific research questions include:

Research Questions

1. Is there evidence to support examinee response validity based on consistent responding to yoked items?

2. Is there evidence to support the anticipated three-factor structure of the SEF:ED as determined by a series of exploratory factor analyses? Based on item-selection criteria, is there support for eliminating items?

3. Is there evidence to support the basic psychometric integrity of the SEF:ED, via item-scale correlations and internal consistency reliability?

4. Is there evidence to support the concurrent validity of the SEF:ED as determined by the relationship between it and an established measure in the field, the Profile of Emotional Competence (PEC; Brasseur et al., 2013)?

5. Is there evidence to support the predictive validity of the SEF:ED for an important related construct among educators, i.e., burnout as assessed by the Maslach Burnout Inventory for Educators (MBI-ES; Maslach et al., 1986) scales?

CHAPTER II

Methods

Participants and Setting

Participants included 102 educators currently employed in a public school district in the southeastern United States. After data cleaning procedures (discussed later in Results), the sample included 97 participants, the majority of which were female (83.5%). Participants ranged in age from their 20s to their 60s, with 83.5% between the ages of 20 and 59 years. Most participants were teachers; however, 27.8% held specialist or administrative positions in their schools. Experience within the field of education ranged from 1 to 43 years, with 87.6% having more than 5 years of experience. Demographic data are detailed further in Table 3. Participants were administered the following scales in counterbalanced order: Scale of Emotional Functioning: Educators (SEF:ED), the Profile of Emotional Competence (PEC), and the Maslach Burnout Inventory- Educators Survey (MBI-ES).

Instruments

Scale of Emotional Functioning: Educators

The Scale of Emotional Functioning: Educators (SEF:ED) is a 45-item self-report scale of emotional intelligence specific to educators (see Appendix B). The SEF:ED was modeled after an experimental scale designed to reflect EI functioning within another professional setting, medicine. The Scale of Emotional Functioning: Medicine (SEF:MED; McCallum & Kirkpatrick, 2019) was developed based on a review of the EI literature and scrutiny of other published and unpublished measures of EI. It is characterized by promising psychometric data. The SEF:MED consists of 36 items embedded within three subscales (12 items per subscale) that align with common definitions and operationalizations of EI: Emotional Awareness (EA), Emotional

Management (EM), and Interpersonal Relations (IR). Results of a confirmatory factor analysis, conducted by authors R. Steve McCallum and Baileigh Kirkpatrick (2019), yielded data consistent with a three-factor solution and promising psychometric data (e.g., Cronbach's alphas of .82, .84, and .81 for EA EM, and IR, respectively), concurrent validity with the Profile of Emotional Competence (PEC; Brasseur et al., 2013), a self-report measure of emotional intelligence, and expected relationships with burnout defined by the Maslach Burnout Inventory – Human Services Survey for Medical Personnel (MBI-HSS (MP); Maslach et al., 1986), a self-report measure of burnout. Concurrent validity was demonstrated by strong correlations between the SEF:MED and the PEC. The Total EI composite score on the SEF:MED was significantly positively correlated with Global EI on the PEC ($r = 0.68$, $p < 0.01$, $r^2 = 0.46$) and with the PEC Intrapersonal and Interpersonal subscales ($r = 0.64$, $p < .01$, $r^2 = 0.41$; $r = 0.64$, $p < 0.01$, $r^2 = 0.41$, respectively) (Kirkpatrick, 2019). Additionally, scores on the SEF:MED and MBI-HSS (MP) suggest a strong relationship between EI and burnout. The Total EI composite score of the SEF:MED was significantly negatively correlated with the MBI-HSS (MP) Emotional Exhaustion and Depersonalization ($r = -.50$, $p<.01$, $r^2=.25$; $r = -.44$, $p<.01$, $r^2=.19$, respectively) and was significantly positively correlated with Personal Accomplishment ($r = .52$, $p<.01$, $r^2 = .27$) (Kirkpatrick, 2019). The SEF:MED was used as a template for development of the SEF:ED and the Scale of Emotional Functioning: Pre-service Educators (SEF:PED), as described below, but items were added or modified to reflect content appropriate for educators.

The SEF:ED yields a total EI score as well as scores for the following subscales: Emotional Awareness (EA), Emotional Management (EM), and Interpersonal Relations (IR). Each subscale contains 15 items specific to that scale. The EA subscale consists of items that target an educator's ability to recognize emotions and emotional changes in themselves and

others. The EM subscale measures an educator's ability to regulate and manage emotions in themselves and others. Finally, items on the IR subscale focus on an educator's ability to appreciate and manage interpersonal relationships. Because educators work with a variety of individuals, items on the SEF:ED reflect this. Items focus on assessing interactions between the educator and their coworkers, students, and parents. Examinees are instructed to select the option that best characterizes their behavior based on a 5-point Likert-like scale indicating the following: *Never, Rarely, Sometimes, Often,* or *Always*. Every other item on the SEF:ED is reverse scored; thus, a *Never* response is scored 1 or 5, *Rarely* is scored 2 or 4, *Sometimes* is scored 3, *Often* is scored 2 or 4, and *Always* is scored 1 or 5. Positive and negatively worded items were alternated and later reversed scored to preclude set effects. Raw scores are averaged to obtain subscale scores. Total EI is computed as an average of all raw item scores. The SEF:ED instrument was developed for this study and is based in part on psychometrics obtained from a study conducted during the 2018-2019 academic year.

SEF:ED Pilot Testing. A pilot version of the SEF:ED was administered to a sample of aspiring educators in 2018-2019 (i.e., students in a pre-service university-based education course). The pilot sample consisted of 88 undergraduate students in the following concentration areas: elementary education, early childhood education, special education, education of the deaf and hard of hearing, English as a second language, secondary English, secondary math, secondary history, and secondary science. Of these students, 81.8% ($n = 72$) of the participants were female, 18.2% ($n = 16$) were male; 9.1% ($n = 8$) were freshmen, 37.5% ($n = 33$) were sophomores, 42.0% ($n = 37$) were juniors, 8.0% ($n = 7$) were seniors, and 3.4% ($n = 3$) were non-traditional students. Ages of participants ranged from 18-37 years of age ($M = 20.3$, $SD = 2.4$). The SEF:ED, designed for in-service teachers, includes questions pertaining to relations with

coworkers, students, and parents. Items were selected based on an extensive review of the literature, including several EI instruments. Because the pilot sample population had limited interactions with parents of their students, questions pertaining to parents were removed from this version of the instrument and it was named The Scale of Emotional Functioning: Pre-service Educators (SEF:PED); the SEF:PED contained a total of 39 self-report items, with 13 items for each subscale: EA, EM, and IR.

Item selection for the final version of the SEF:PED was determined by factor analytic data, followed by examination of item-scale correlation coefficients and reliability statistics. After consideration of exploratory factor analyses (principal components solution, varimax orthogonal rotation of two-factor, three-factor, and four-factor solutions) and related statistics (item-scale correlations), results from a two-factor solution were considered the best fit with 15 items per scale. Items that did not load highly with either factor were omitted from the scale (9 items were removed). Items with factor loadings greater than .30 on the intended subscales were examined and retained if they reflected behavior consistent with the two-factor scale: EA and EM. Item-scale correlation coefficients were also examined as were the reliability fit statistics, i.e., items which enhanced the reliability of the subscales were retained if they improved the subscale reliability. For the final version of the SEF:PED, inter-item correlations range from -.16 to .76 and item-scale correlation coefficients range from .31 to .73 (see Table 2 for factor loadings and item-scale coefficients). Subscale reliability estimates (i.e., Cronbach's alphas) for the EA and EM scales are .88 and .83, respectively. The psychometric data are promising and may be informative for future use when assessing the EI of undergraduate students in education; in addition, these SEF:PED data informed development of the SEF:ED to some extent. However, because the SEF:ED was designed for in-service educators who interact with students,

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colleagues, and parents, the original three factor structure with 45 items was retained, rather than the two-factor structure obtained from SEF:PED analyses.

Profile of Emotional Competence

As discussed in the literature review, the Profile of Emotional Competence (PEC; Appendix C) is a 50-item self-report measure of EI and yields 10 subscale scores, and 3 composite scores for Intrapersonal EI, Interpersonal EI, and Global EI (Brasseur et al., 2013). Reliability and validity data of the PEC were examined by Brasseur and colleagues (2013). Internal consistency coefficient alphas of the subscales range from .60 to .83, and for composite scores alphas are .84 or above (Brasseur et al., 2013). Kirkpatrick (2019) reported Cronbach's coefficient alphas for the Intrapersonal and Interpersonal scales as .87 and .85, respectively. The PEC has strong convergent validity with another measure of EI, the Trait Emotional Intelligence Questionnaire- Short Form (TEIQue-SF; Brasseur et al., 2013). The PEC Intrapersonal, Interpersonal, and Global EI scales are correlated with the TEIQue-SF at .78, .52, and .77, respectively. Furthermore, higher EI scores on the PEC are associated with related constructs such as increased happiness, better social relationships, and positive affect (Brasseur et al., 2013).

Maslach Burnout Inventory for Educators

Also discussed in the literature review, the Maslach Burnout Inventory for Educators (MBI-ES; Appendix D; Maslach et al., 1986) is a 22-item self-report measure of burnout specifically designed for educators. This tool is a modified version of the original Maslach Burnout Inventory Human Services Survey (MBI-HSS) to include wording more specific to education (for example, the MBI-ES uses the term "student" instead of "recipient"). The MBI-

ES yields three subscale scores: Emotional Exhaustion, Depersonalization, and Personal Accomplishment.

Reliability and validity estimates of the MBI-ES have been examined in several studies and results suggest that the scale has good psychometric properties (Maslach et al., 2016). Cronbach's coefficient alphas for the Emotional Exhaustion, Depersonalization, and Personal Accomplishment subscales are .90, .76, and .76, respectively (Iwanicki & Schwab, 1981); .88, .74, and .72, respectively (Gold, 1984); and .87, .76, and .84, respectively (Chang, 2013). Similarly, Cronbach's coefficient alphas for the Emotional Exhaustion, Depersonalization, and Personal Accomplishment subscales on the MBI-HSS (MP) (.91, .75, and .80 respectively) were consistent with the previously reported alphas for the MBI-HSS (Kirkpatrick, 2019). Test-retest reliability estimates were .60 for Emotional Exhaustion, .54 for Depersonalization, and .57 for Personal Accomplishment (Jackson et al., 1986). These lower estimates were hypothesized to be attributed to the changing work situations that teachers often face (Maslach et al., 2016). Validity of the MBI-ES has been demonstrated by examining the relationship of the burnout scales with other aspects of the work experience such as role conflict, work overload, classroom climate, (Byrne, 1994) and job settings (Koustelios & Tsigilis, 2005); related stressors of working relationships, such as student misbehavior (Chang, 2013), students with behavior problems (Lambert et al., 2009), principal leadership (Fernet et al., 2012), and witnessing co-workers being harassed (Astrauskaite et al., 2010); and long-term outcomes such as personal well-being and literacy skills of students (Hoglund et al., 2015).

Procedure

After receiving permission from school and district administrators and the University's Institutional Review Board, a district-wide email list was released to researchers. All educators

in the district were asked to participate in the study by completing online versions of the

SEF:ED, MBI-ES and PEC. The instruments were administered in counter-balanced order via

Qualtrics[XM] Online Survey Software. Consent was included in the online administration prior to

the instruments. All responses were assigned a random identification number to preserve

anonymity.

Data Analyses

Data analyses examining descriptive statistics including means, standard deviations,

ranges, skewness, and kurtosis were calculated. In addition, correlational analyses were

conducted, yielding factor analytic solutions, item-scale correlation coefficients, reliability

estimates, and coefficients showing the relationships between the SEF:ED and the PEC and

MBI.

CHAPTER III

Results

This section addresses the following topics: Research Question 1, descriptive statistics, then Research Questions 2 through 4. Research Question 1 is addressed first because the results of that analysis changed the descriptive statistics; that is, examination of response consistency resulted in elimination of 5 inconsistent participants.

Research Question 1: Evidence of Respondent Validity

The SEF:ED includes six consistency pairs (12 items total; see Appendix E). These pairs were identified based on content and modeled after the SEF:MED (McCallum & Kirkpatrick, 2019). The consistency pairs were yoked items that were identified as having similar content; therefore, respondents were expected to provide the same rating on both items. To measure consistent responding, the absolute difference was calculated for each consistency pair. The absolute differences were then summed, which yielded an overall measure of inconsistency. An Inconsistency score two standard deviations above the mean was determined to be a significant outlier, indicative of an inconsistent response style (Ilyas & Chu, 2019). Thus, participants with an Inconsistency score at or above two standard deviations above the mean were removed from the sample.

Inconsistency scores ($n = 102$) ranged from 0 to 8 ($M = 2.70$, $SD = 1.63$, mode = 3). Of the participants, 8.8% ($n = 9$) had an inconsistency score of 0 (indicating that they responded consistently across all item pairs), 13.7% ($n = 14$) had an inconsistency score of 1, 24.5% ($n = 25$) had an inconsistency score of 2, 25.5% ($n = 26$) had an inconsistency score of 3, 14.7% ($n = 15$) had an inconsistency score of 4, 7.8% ($n = 8$) had an inconsistency score of 5, 2.9% ($n = 3$) had an inconsistency score of 6, 1.0% ($n = 1$) had an inconsistency score of 7, and 1.0% ($n = 1$)

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had an inconsistency score of 8. Participants with an inconsistency score of 6 or greater were identified as having an inconsistent response style. Consequently, their results ($n = 5$) were removed from the participant pool. After the data cleaning process, a total of 97 participants remained in the sample.

Descriptive Statistics

Following data cleaning procedures to remove inconsistent respondents, scores for the SEF:ED, PEC, and MBI-ES were obtained from the sample ($n = 97$). For the SEF:ED, Total EI scores and subscale scores were calculated. For the PEC, the Global EI score, composite scores, and subscale scores were obtained. For the MBI-ES, the authors discourage use of global scores, so only subscale scores were obtained. Minimum and maximum scores, means, standard deviations, skewness, and kurtosis are presented for all variables and shown in Tables 4-6. Normality of data was evaluated based on Abbott's (2016) recommendations, which suggests that distributions are considered to be "normal" and balanced if they do not exceed a skewness or kurtosis greater than the absolute value of three. Scores across all three measures are normally distributed, with skewness and kurtosis falling between -1.0 and +1.0.

Adjusted SEF:ED Total scores ranged from 89.00 to 141.00 with a mean of 114.91 ($SD =$ 8.80, $n = 97$); item means ranged from 2.97 to 4.70 with a mean of 3.83 ($SD = .29$, $n = 97$). Total scores on the EA subscale ranged from 27.00 to 47.00 with a mean of 38.34 ($SD = 3.65$, $n = 97$); item means ranged from 2.70 to 4.70 with a mean of 3.83 ($SD = .36$, $n = 97$). Total scores on the EM subscale ranged from 27.00 to 47.00 with a mean of 35.44 ($SD = 4.16$, $n = 97$); item means ranged from 2.70 to 4.70 with a mean of 3.54 ($SD = .42$, $n = 97$). Finally, total scores on the IR subscale ranged from 33.00 to 49.00 with a mean of 41.14 ($SD = 3.31$, $n = 97$); item means ranged from 3.30 to 4.90 with a mean of 4.11 ($SD = .33$, $n = 97$). The SEF:ED scores are

considered to be normally distributed, with skewness ranging from -.40 to .09 and kurtosis ranging from -.30 to .55. See Table 4 for SEF:ED descriptive statistics.

The PEC Global EI scores ranged from 2.50 to 4.56 with a mean of 3.68 ($SD = .42$, $n = 97$). Scores on the Intrapersonal EC ranged from 2.56 to 4.76 with a mean of 3.74 ($SD = .50$, $n = 97$). Mean scores on the Intrapersonal EC subscales (Identification, Understanding, Expression, Regulation, and Utilization) ranged from 3.45 to 3.98 and standard deviations ranged from .63 to .75. Scores on the Interpersonal EC ranged from 2.32 to 4.60 with a mean of 3.61 ($SD = .47$, $n = 97$). Mean scores on the Interpersonal (Identification, Understanding, Expression, Regulation, and Utilization) ranged from 2.93 to 4.00 and standard deviations ranged from .54 to .81. Across all PEC measures, skewness ranged from -.82 to .03 and kurtosis ranged from -.87 to .79. Thus, the scores are considered to be normally distributed. See Table 5 for PEC descriptive statistics.

On the MBI-ES, total scores for Emotional Exhaustion ranged from .00 to 47.00 with a mean of 25.50 ($SD = 11.18$, $n = 97$). Total scores for Depersonalization ranged from .00 to 20.00 with a mean of 6.29 ($SD = 4.79$, $n = 97$). Total scores for Personal Accomplishment ranged from 16.00 to 45.00 with a mean of 32.82 ($SD = 5.10$, $n = 97$). The MBI-ES scores are normally distributed, with skewness ranging from -.51 to .57 and kurtosis -.67 and .51. See Table 6 for MBI-ES descriptive statistics.

Research Question 2: Evidence of Best-Fit Factor Structure and Item Selection

After consideration of a series of exploratory factor solutions, a 3-factor scale was determined to be most defensible based on a principal components solution with a varimax rotation, examination of Eigenvalues, and related statistics (item-scale correlations); based on these analyses, 15 items were removed. Results revealed acceptable loadings for items across the three SEF:ED scales (EA, EM, and IR), each with 10 items, for a total of 30 items (e.g., all but

one item loaded at .35 or higher within their assigned scales). The item loading of one item is negative (Item 11), which was likely due to a methodological flaw. That is, prior to final data collection, the items were written to prevent response set by including both positive and negative language in an alternating pattern; however, the language of item 11 inadvertently did not fit the pattern. Consequently, the polarity was negative but should have been positive. See Table 7.

Research Question 3: Evidence of Psychometric Integrity of the SEF:ED

Split-half reliability correlations were calculated for the EA, EM, and IR scales and are .86, .80, and .71, respectively. These split-half correlations are considered acceptable estimates of internal consistency (Salkind, 2010). Item-scale correlations were analyzed when considering the removal of items, and these results helped define the final three-factor scale. Corrected item-total correlations ranged from .06 to .61, but most were in the .40 to .50 range.

Research Question 4: Evidence of Concurrent Validity

SEF:ED concurrent validity was determined by evaluating the relationship between the SEF:ED and PEC composite and subscale scores via Pearson r correlation coefficients. Effect sizes were estimated from coefficients of determination (r^2). The SEF:ED Total EI composite score is significantly positively correlated with Global EI on the PEC ($r = 0.72$, $p < 0.01$, $r^2 = 0.52$). SEF:ED Total EI is also significantly positively correlated with the PEC Intrapersonal and Interpersonal composites ($r = 0.66$, $p < .01$, $r^2 = 0.44$; $r = 0.59$, $p < 0.01$, $r^2 = 0.35$, respectively). The SEF:ED subscales and PEC composites are also positively related. The SEF:ED EA subscale is significantly positively correlated with the Global EI, Intrapersonal, and Interpersonal composites on the PEC ($r = 0.60$, $p < 0.01$, $r^2 = 0.36$; $r = 0.48$, $p < 0.01$, , $r^2 = 0.23$; $r = 0.56$, $p < .01$, $r^2 = 0.31$, respectively). The SEF:ED EM subscale is significantly positively correlated with the PEC Global EI, Intrapersonal, and Interpersonal composites ($r = 0.58$, $p < 0.01$, $r^2 = 0.34$; $r =$

0.65, $p < .01$, $r^2 = 0.42$; $r = 0.35$, $p < .01$, $r^2 = .12$, respectively). Lastly, the SEF:ED IR subscale

is significantly positively correlated with the Global EI, Intrapersonal, and Interpersonal

composites on the PEC ($r = 0.53$, $p < .01$, $r^2 = 0.28$; $r = 0.40$, $p < .01$, $r^2 = 0.16$; $r = 0.52$, $p < .01$,

$r^2 = 0.27$, respectively) (see Table 9).

Research Question 5: Evidence of Predictive Validity

Predictive validity of the SEF:ED was determined via Pearson r and r^2 values and address

the relationship between scores on the SEF:ED and the MBI-ES. Results reveal significant

correlations between scores on the SEF:ED and MBI-ES. The Total EI score on the SEF:ED is

significantly negatively correlated with the EE and DP subscales on the MBI-ES ($r = -.39$, $p <$

$.01$, $r^2 = .15$; $r = -.52$, $p < .01$, $r^2 = .27$, respectively) and significantly positively correlated with

the PA subscale on the MBI-ES ($r = .59$, $p < .01$, $r^2 = .34$). The EA subscale is also significantly

negatively correlated with the EE and DP subscales ($r = -.21$, $p < .05$, $r^2 = .04$; $r = -.30$, $p < .01$,

$r^2 = .09$, respectively) and significantly positively correlated with the PA subscale ($r = .37$, $p <$

$.01$, $r^2 = .14$). The EM subscale is significantly negatively correlated with the EE and DP

subscales ($r = -.48$, $p < .01$, $r^2 = .24$; $r = -.40$, $p < .01$, $r^2 = .16$, respectively) and significantly

positively correlated with the PA subscale ($r = .55$, $p < .01$, $r^2 = .31$). Finally, the IR subscale is

significantly negatively correlated with the Emotional Exhaustion and Depersonalization

subscales ($r = -.21$, $p < .05$, $r^2 = .04$; $r = -.55$, $p < .01$, $r^2 = .30$, respectively) and significantly

positively correlated with the Personal Accomplishment subscale ($r = .45$, $p < .01$, $r^2 = .21$). The

shared variance between the SEF:ED and the MBI-ES ranges from 4% to 31%, and indicates

some overlap between EI and burnout for most comparisons. See Table 10.

CHAPTER IV

Discussion

Emotional intelligence (EI), or one's ability to recognize the emotions of their self and others and to respond effectively, is important for both intrapersonal and interpersonal success. EI supports personal growth, as well as relational and professional growth. The origin of the systematic study of emotional intelligence dates back to the late twentieth century (Mayer et al., 1990; Payne, 1985).

The impact of EI is evident in many areas of one's life, with one of the most salient areas being professional success. Experts and decision-makers from many professions who study workplace success have embraced EI as a consideration for employment (e.g., particularly with health care and business settings); thus, the literature has expanded significantly in recent years, with close to 100,000 articles published on the topic within the last decade, per an electronic database search using OneSearch through the University of Tennessee Libraries. And most relevant for this study, educational researchers have begun to focus on the relationship between teaching effectiveness, teacher well-being, and EI, in part because of the high stress and high rates of burnout within the profession (Chan, 2006; Gallup, 2014; Mérida-López & Extremera, 2017). According to the research, almost half of all teachers leave the profession within the first five years of their career, which is salient considering the need for experienced educators and data showing teacher shortages in many areas (Gallup, 2014; Sutcher et al., 2019).

EI is important for teachers because of the impact it has on their health, their satisfaction, and their students (Chan, 2006; Jennings & Greenberg, 2009; Mérida-López & Extremera, 2017). However, in spite of the increasing interest, research is limited in this area. For example, there is not a contextually adequate and valid self-report operationalization of EI for teachers,

designed *expressly* for teachers. Thus, the purpose of the current study was to develop and

validate a measure of EI specific to the field of education and then examine the relationship of EI

and burnout, which are related constructs according to the literature (Chan, 2006; Mikolajczak et

al., 2007; Zysberg et al., 2017). The scale of focus for this study, The Scale of Emotional

Functioning for Educators (SEF:ED), uses education-specific language (e.g., "students" and

"classroom") and includes references to relevant parties (e.g., coworkers and parents of

students). Results provide preliminary support for the psychometric integrity of the SEF:ED.

These results, limitations, and implications for the EI literature and in school contexts are

described below.

      Research Question 1 addressed consistency of scoring. To achieve this, responses were

examined to compare answers on yoked consistency items. As previously noted, the majority of

participants' responses (95%) were consistent and were assumed to provide evidence of one type

of response validity; therefore, they were retained. This method of creating a validity scale for

identifying valid responses aligns with consistency scales within other behavioral reporting

measures, such as the Behavior Assessment System for Children, Third Edition (BASC-3;

Reynolds & Kamphaus, 2015) and the SEF:MED (Kirkpatrick, 2019). Elimination of

(in)consistent respondents increases the integrity of the scale by reducing error in the scores.

      Results from **Research Question 2** focused on determination of best-fit structure and

item selection for the SEF:ED. After a series of exploratory factor analyses (principal

components solution and varimax rotation), a three factor-structure was determined to be the

most defensible. After item analyses, the retained items loaded on three subscales, each with 10

items, and almost all items have acceptable loadings on their respective scale (i.e., $\geq$ .35), with

one exception. One retained item loaded at .27, but strengthened the reliability estimate of the

subscale. The structure of the SEF:ED is similar to that of the SEF:MED (McCallum &

Kirkpatrick, 2019). That is, each contains three subscales assessing similar subconstructs of EI.

This structure is consistent with the definition of EI, which emphasizes the awareness of one's

EI, the ability to use this awareness to help manage work place stressors, and the ability to build

and maintain interpersonal relationships (Beierle et al., 2018; McCallum & Kirkpatrick, 2019).

Research Question 3 focused on examination of the psychometric integrity of the

SEF:ED; results of various statistical analyses were interpreted as providing preliminary

evidence for its psychometric integrity. For example, internal consistency reliability estimates

range from moderately high to strong (split-half reliability estimates are .86, .80, and .71 for the

EA, EM, and IR subscales, respectively) and the factor loadings are acceptable. The reliability

estimates are similar to the PEC, the measure being used to evaluate concurrent validity of the

SEF:ED. That is, according to the PEC Manual, the PEC yielded Cronbach's alphas of .84 or

above (Brasseur et al., 2013). Additionally, the test that provided an initial model for the

SEF:ED, i.e., the SEF:MED, produced Cronbach's alphas of .82, .84, and .81 for EA EM, and

IR, respectively (Kirkpatrick, 2019). These internal reliability coefficients are considered to be

strong and are similar to those of previously validated EI scales, e.g., the Mayer-Salovey-Caruso

Emotional Intelligence Test (split-half reliability coefficients ranged from .79 to .93), Wong and

Law Emotional Intelligence Scale (Cronbach's alphas ranged from .83 to .90), Emotional

Quotient Inventory (Cronbach's alphas ranged from .69 to .86), the Trait Emotional Intelligence

Questionnaire (Cronbach's alphas ranged from .75 to .84) (Bar-On, 2002; Mayer et al., 2002;

Petrides, 2001, 2009; Wong & Law, 2002). Also, the SEF:ED internal reliabilities are similar to

the only self-report EI measure developed purportedly for use with educators, the Emotional

Intelligence Scale, with Cronbach's alphas ranging from .66 to .80 (Wu, 2004). These data

inform (and support) the psychometric integrity of the SEF:ED based on criteria from Salkind (2010).

Results addressing **Research Question 4** examined the concurrent validity of the SEF:ED by examining the relationship between it and the PEC, an established measure of EI created to address EI generically. The SEF:ED Total EI composite score is significantly correlated with the PEC Global score and both of the PEC composite scores. In addition, the SEF:ED subscales are significantly correlated with the PEC Global score and the PEC composite scores. The strength of the correlations generally aligns as expected. Specifically, the SEF:ED EM subscale is more strongly related to the PEC Intrapersonal composite than the PEC Interpersonal composite. This relationship is expected, as EM is more focused on managing one's own emotions than regulating a relationship. Another expected trend is reflected by the stronger relationship of the SEF:ED IR to the PEC Interpersonal composite than to the PEC Intrapersonal composite. These constructs are also theoretically aligned, i.e., both focus on managing relations with other persons.

Results addressing **Research Question 5** operationalized the relationship of EI and burnout by exploring the predictive validity of the SEF:ED with the MBI-ES. Across all comparisons between the SEF:ED and the MBI-ES, the SEF:ED scores were significantly correlated with the MBI-ES scores. These correlations were positively/negatively charged in the directions expected. Specifically, emotional strengths on the SEF:ED (e.g., Emotional Awareness, Emotional Management, and Interpersonal Relations) were positively correlated with emotional strengths on the MBI-ES (e.g., Personal Accomplishment). Similarly, emotional strengths on the SEF:ED were negatively correlated with emotional weaknesses on the MBI-ES (e.g., Emotional Exhaustion and Depersonalization). All correlations were modest to moderate in

magnitude (correlation coefficients ranged from |.21| to |.59|). The strongest correlation was found between the total score on the SEF:ED and the Personal Accomplishment subscale on the MBI-ES. Overall, these scores suggest that the relationship of emotional intelligence and burnout is modest. These results are generally consistent with the previous literature exploring the relationship between EI and burnout for teachers (Chan, 2006; Mikolajczak et al., 2007). The results suggest that targeting and attempting to strengthen the EI of educators may reduce burnout.

Because there are validity data from teachers reported in the MBI-ES Manual, it is possible to compare in a gross manner the mean scores for participants in the current study to those from the MBI-ES standardization sample, though a direct statistical comparison is not possible. Means from the participants in this study for the EE, DP, and PA scales are 2.84, 1.25, and 4.10, respectively and are similar to the reported means in the MBI Manual (i.e., 2.36, 2.20, and 4.19 for EE, DP, and PA scales, respectively, for a sample of primary and secondary teachers) (Maslach et al., 2016). In general, scores suggest that the participants within the current sample reported similar levels of burnout and accomplishment compared to those within the MBI-ES Manual.

Limitations of the Study

Though the results provide some support for the utility of the SEF:ED, there are a number of limitations of this study that suggest the need for cautious interpretation of the findings, several of which relate to the sample and generalizability. Though the sample included a diverse grouping of ages (ranging from 20 to 69 years of age), experience (ranging from 1 to 55 years), and grade levels taught (ranging from pre-k to college), it was limited in other ways. For example, the sample was relatively small ($n = 97$) from one particular area of the country (e.g.,

the southeast), and included mostly female participants. However, the gender breakdown of participants is similar to national demographics (Taie & Goldring, 2020).

Another limitation is the method for operationalizing EI, i.e., the SEF:ED is a self-report instrument and is subject to the limitations of that methodology (e.g., subjective responding, faking good). In addition, the SEF:ED only includes one validity scale, specifically, the Consistency Index. It lacks a "Fake Good" index to address social desirability bias (Bouffard & Narciss, 2011). Socially desirable responses are subject to participants' ideas of socially acceptable behavior, and these responses may lead to less valid results (Huang et al., 1998; Kirkpatrick, 2019). Future exploration of the psychometric integrity of the SEF:ED would be enhanced by examining its social desirability characteristics. Authors of the scale have developed an item-yoked third-party informant version amenable for additional data collection. This version has been designed to allow peers and supervisors to assess the EI of those completing the self-report version, which has the potential to reflect multiple perspectives (Kirkpatrick, 2019).

Another limitation is related to the language used within the study, and specifically use of the word "predictive." Traditionally, the term predictive implies that there is a temporal relationship between two variables, and that one variable may predict another after some time has elapsed. That chronological design was not built into this study (i.e., all the variables were collected concurrently, typically during one to three sessions within the same day). So, the term as used in this study does *not* imply a temporal relationship between the variables, but only a statistical one.

Summary, Implications, and Future Directions

In summary, results support a three-factor solution for the SEF:ED and provide tentative

evidence of the SEF:ED as a measure of EI specific to education (i.e., data provide preliminary

evidence of reliability and validity). More specifically, the three factors supported by the scale

are Emotional Awareness (ability to recognize one's own and other's emotions), Emotional

Management (ability to regulate emotions in one's self and others), and Interpersonal Relations

(ability to manage interpersonal relationships). Additionally, support for concurrent validity of

the SEF:ED was obtained by the comparison of it and the PEC (i.e., EI as measured by the

SEF:ED was significantly correlated with EI as measured by the PEC). Finally, the results also

provide evidence of predictive validity of the SED:ED for teachers when the criterion variable is

a real-world outcome, burnout. Consistent with previous studies, the results demonstrated the

linkage between these two variables for educators.

Additionally, because there was not a psychometrically sound and generally accepted

measure of EI available that operationalizes EI in the educational context, this measure fills a gap

in the literature and field of practice. However, evidence of psychometric integrity of the

SEF:ED is lacking and the results of this study only begin the process of establishing its

psychometric quality. Future research is needed to continue this effort. For example, follow-up

data allowing use of a confirmatory factor analysis (CFA) could provide additional evidence of

the three-factor structure underlying the scales. Finally, there is a need to examine responses

from teachers and other participants within educational specialties, using sample sizes large

enough to allow adequate determination of the internal and external validity of the SEF:ED.

Overall, the SEF:ED appears to have the potential to be useful for determining the EI of

educators. It can be completed in a short amount of time, can be administered in a group format,

and is easy to score. Because the scale contains three subscales, the scores can be used to obtain tentative perspectives as to strengths/weaknesses related to specific subconstructs of EI. In addition, because the SEF:ED and MBI scores are significantly related, it has the potential to help identify educators who may be at-risk of burnout. Finally, there is emerging evidence available suggesting that targeted interventions may be useful for improving educators' EI (Fast, 2021; Hen & Sharabi-Nov, 2014; Vesely et al., 2014). Consequently, supervisors who have knowledge of the SEF:ED results may be able to help supervisees obtain needed professional development. That is, identifying educators who are at-risk for adverse work-related phenomena, such as poor social functioning, and limited health, wellness, and life satisfaction, may be a first step in increasing self-awareness and in promoting resilience.

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APPENDIX

Appendix A

Tables and Figures

Table 1

Matrix of Pertinent Emotional Intelligence Measures

Name of Measure	Model	Format	Scores Yielded	Limitations

The Profile of Emotional Competence (PEC; Brasseur et al., 2013)	Trait	• 50 items
		• Two factors
			• Global EI score
			• 2 **composites**: 5 subscales
			  ○ **Intrapersonal EI** (relating to one's own emotions): Identification, Understanding, Expression, Regulation, and Utilization
			  ○ **Interpersonal EI** (relating to other's emotions): Identification, Understanding, Expression, Regulation, and Utilization
				• Generic scale for measuring EI
				• Few items per subscale

Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT; Mayer et al., 2002)	Ability	• 144 items
		• Four factors
			• Four factors
			  ○ Perceiving emotions
			  ○ Facilitating thought
			  ○ Understanding emotions
			  ○ Managing emotions
				• Generic scale for measuring EI
				• Lengthy administration time due to number of items
				• The subscales and related scoring criteria are not widely supported within the EI literature

Table 1 continued

Name of Measure	Model	Format	Scores Yielded	Limitations
The Schutte Self-Report Emotional Intelligence Test (SSEIT; Schutte et al., 1998)	Trait	• 33 items • One factor	• One-factor solution	• Generic scale for measuring EI • Only measures one factor

The Wong and Law Emotional Intelligence Scale (WLEIS; Wong & Law, 2002)	Trait	• 16 items
		• Four factors
			• Four factors
			  ○ Self-emotion appraisal
			  ○ Others' emotion appraisal
			  ○ Regulation of emotion
			  ○ Uses of emotion
				• Generic scale for measuring EI
				• Few items per factor
				• Does not yield a total score
				• Designed for use with leadership and management

Emotional Quotient Inventory (EQ-I; Bar-On, 1997)	Trait	• 133 items
		• Five composites comprised of 15 subscales
			• Total EQ score
			• 5 **composites:** 15 subscales
			  ○ **Intrapersonal:** self-regard, emotional self-awareness, assertiveness, independence, and self-actualization
			  ○ **Interpersonal:** empathy, social responsibility, and interpersonal relationship
			  ○ **Stress Management:** stress tolerance and impulse control
			  ○ **Adaptability:** reality-testing, flexibility, and problem-solving
			  ○ **General Mood:** optimism and happiness
				• Generic scale for measuring EI
				• Lengthy administration time due to number of items

Table 1 continued

Name of Measure	Model	Format	Scores Yielded	Limitations
The Trait Emotional Intelligence Questionnaire (TEIQue; Petrides, 2001, 2009)	Trait	• 153 items • Four factors and 15 facets	• Global score • 4 factors: well-being, self-control, emotionality, and sociability • 15 facets: adaptability, assertiveness, emotion expression, emotion management, emotion perception, emotion regulation, low impulsiveness, relationships, stress management, self-esteem, self-motivation, social awareness, trait empathy, trait happiness, and trait optimism	• Generic scale for measuring EI • Lengthy administration time due to number of items

The Emotional Intelligence Scale (Wu, 2004)	Trait	• 25 items
		• Five factors
			• Five factors
			  ○ Self-awareness
			  ○ Managing emotions
			  ○ Self-motivation
			  ○ Empathy
			  ○ Handling relationships
				• "Specific" scale for educators, but only one item contains wording that is unique to education
				• Few items per factor
				• Limited evidence of psychometric integrity

Table 2

Factor Loadings for Exploratory Factor Analysis With Varimax Rotation of the Scale of Emotional Functioning for Pre-service Educators (SEF:PED)

| | Emotional Intelligence Scales | |
Items	Emotional Awareness ($\alpha = .88$)	Emotional Management ($\alpha = .83$)
1. recognize the feelings of others.	.562	
2. express concern for my students' feelings	.651	
3. take time to learn how others are feeling	.658	
4. relate to students easily	.663	
5. lack respect for the feelings of students	.597	
6. take time to calm students who are upset	.572	
7. have difficulty showing affection	.538	
8. exhibit a calming influence in the classroom	.643	
9. experience emotions that seem compatible with those of others	.534	
10. find it difficult to get along with coworkers	.464	
11. am able to interpret the emotions of students	.564	
12. create positive relationships with students	.731	
13. can easily calm an anxious student	.636	
14. am fun to be with	.498	
15. am aware of the emotional needs of my students	.578	
16. lack empathy for my students		.425
17. interact with students reluctantly		.306
18. have difficulty compromising		.539
19. have difficulty remaining effective when upset		.733
20. let stress overwhelm me		.703
21. maintain a healthy attitude about negative evaluations		.453
22. find it difficult to be resilient		.324
23. am unable to shake pessimistic moods		.576
24. have trouble performing well under pressure		.681
25. am dissatisfied with my life		.482
26. misinterpret nonverbal communication of students		.649
27. handle upsetting situations poorly		.621
28. use criticism constructively		.542
29. have difficulty recognizing when I offend students		.403
30. misinterpret nonverbal communication		.658

Table 3

Demographic Information

	N	%		N	%
Gender	97	--	Years of education	97	--
Male	16	16.5	experience		
Female	81	83.5	1-5	12	12.4
Age	97	--	6-10	25	25.8
20-29	8	8.2	11-15	18	18.6
30-39	29	29.9	16-20	14	14.4
40-49	31	32.0	21-25	12	12.5
50-59	21	21.6	26-30	13	13.5
60-69	8	8.2	31-35	4	4.0
Educator Title	97	--	36-40	--	--
Teacher	70	72.2	41-55	1	1.0
Specialist	8	8.2	Grades levels taught	97	--
Administrator	7	7.2	Pre-K	15	15.5
Special Ed. Case Manager	4	4.2	K	26	26.8
School Counselor	2	2.1	1	32	33.0
RTI Coordinator	2	2.1	2	31	32.0
School Psychologist	2	2.1	3	26	26.8
Teacher Assistant	1	1.0	4	25	25.8
Highest degree attained	97	--	5	27	27.8
High school diploma/GED	2	2.1	6	31	32.0
Bachelor's degree	26	26.8	7	36	37.1
Master's degree	46	47.4	8	36	37.1
Education specialist	22	22.7	9	26	26.8
Doctoral	1	1.0	10	29	29.9
Type of classroom taught	86	--	11	28	28.9
General education	47	54.7	12	29	29.9
Inclusion	11	12.8	College	5	5.2
Resource	11	12.8			
Self-contained	10	11.6			
RTI classroom	3	3.5			
Related Service classroom	4	4.7			

Table 4

SEF:ED Descriptive Statistics

	N	Total Min	Total Max	Total *M*	Total *SD*	Item Min	Item Max	Item *M*	Item *SD*	Skewness	Kurtosis
SEF:ED Total EI	97	89.00	141.00	114.91	8.80	2.97	4.70	3.83	.29	-.03	.37
SEF:ED Emotional Awareness	97	27.00	47.00	38.34	3.65	2.70	4.70	3.83	.36	-.40	.55
SEF:ED Emotional Management	97	27.00	47.00	35.44	4.16	2.70	4.70	3.54	.42	.04	-.30
SEF:ED Interpersonal Relations	97	33.00	49.00	41.14	3.31	3.30	4.90	4.11	.33	.09	.02

Table 5

PEC Descriptive Statistics

	N	Min	Max	*M*	*SD*	Skewness	Kurtosis
PEC Global EI	97	2.50	4.56	3.68	.42	-.21	-.15
PEC Intrapersonal	97	2.56	4.76	3.74	.50	-.15	-.42
PEC Intrapersonal- Identification	97	2.40	5.00	3.97	.63	-.28	-.66
PEC Intrapersonal- Understanding	97	1.60	5.00	3.98	.71	-.82	.79
PEC Intrapersonal- Expression	97	1.60	5.00	3.74	.75	-.31	-.34
PEC Intrapersonal- Regulation	97	1.40	5.00	3.45	.74	.03	-.35
PEC Intrapersonal- Utilization	97	1.80	4.80	3.55	.64	-.36	.01
PEC Interpersonal	97	2.32	4.60	3.61	.47	-.24	-.21
PEC Interpersonal- Identification	97	2.40	5.00	4.00	.54	-.29	.09
PEC Interpersonal- Understanding	97	2.00	5.00	3.75	.56	-.28	.32
PEC Interpersonal- Expression	97	1.80	5.00	3.88	.64	-.47	.25
PEC Interpersonal- Regulation	97	2.00	4.80	3.50	.59	-.09	-.03
PEC Interpersonal- Utilization	97	1.20	4.40	2.93	.81	-.30	-.87

Table 6

MBI-ES Descriptive Statistics

	N	Min	Max	*M*	*SD*	Skewness	Kurtosis
MBI-ES Emotional Exhaustion	97	0.00	47.00	25.55	11.18	-.23	-.67
MBI-ES Depersonalization	97	0.00	20.00	6.29	4.79	.57	-.16
MBI-ES Personal Accomplishment	97	16.00	45.00	32.82	5.10	-.51	.51

Table 7

Factor Loadings for Exploratory Factor Analysis With Varimax Rotation of the Scale of Emotional Functioning: Educators (SEF:ED)

	Emotional Intelligence Scales		
Items	Emotional Awareness ($r_s = .86$)	Emotional Management ($r_s = .80$)	Interpersonal Relations ($r_s = .71$)
1. recognize the feelings of others.	*.536*		
2. am able to interpret the emotions of students.	*.565*		
3. misinterpret nonverbal communication of students.	*.615*		
4. have difficulty recognizing the emotional tone within groups.	*.747*		
5. have difficulty recognizing when I offend students.	*.631*		
6. misinterpret nonverbal communication.	*.692*		
7. am aware of the emotional needs of students.	*.412*		
8. recognize the feelings of parents.	*.623*		
9. misinterpret nonverbal communication of parents.	*.593*		
10. am able to interpret the emotions of parents.	*.647*		
11. express concern for my students' feelings.		*-.413*	
12. have difficulty remaining effective when upset.		*.521*	
13. am easy-going.		*.516*	
14. let stress overwhelm me.		*.729*	
15. maintain a healthy attitude about negative evaluations.		*.638*	
16. find it difficult to be resilient.		*.627*	
17. am unable to shake pessimistic moods.		*.658*	
18. am energized by change.		*.271*	
19. handle upsetting situations poorly.		*.486*	
20. am fun to be with.		*.483*	
21. lack empathy for my students.			*.549*
22. interact with my students reluctantly.			*.431*
23. relate to students easily.			*.648*
24. lack respect for the feelings of students.			*.490*
25. take time to calm students who are upset.			*.619*
26. exhibit a calming influence in the classroom.			*.490*
27. find it difficult to get along with coworkers.			*.388*
28. create positive relationships with students.			*.443*
29. can easily calm an anxious student.			*.558*
30. lack empathy for parents.			*.413*

Table 8

Correlation Coefficients Expressing the Relations Between the SEF:ED Scales

	SEF:ED Total EI	SEF:ED Emotional Awareness (EA)	SEF:ED Emotional Management (EM)	SEF:ED Interpersonal Relations (IR)
SEF:ED Total EI	__	.77**	.83**	.77**
SEF:ED Emotional Awareness (EA)	—	—	.42**	.41**
SEF:ED Emotional Management (EM)	—	—	—	.48**
SEF:ED Interpersonal Relations (IR)	—	—	—	—

**Correlation is significant at the .01 level (2-tailed)
*Correlation is significant at .05 level (2-tailed)

Table 9

Correlation Coefficients Expressing the Relations Between the SEF:ED and the PEC Global Scores

	SEF:ED Total EI	SEF:ED Emotional Awareness (EA)	SEF:ED Emotional Management (EM)	SEF:ED Interpersonal Relations (IR)
PEC Global EI	.72*	.60*	.58*	.53*
PEC Intrapersonal Composite	.66*	.48*	.65*	.40*
PEC Interpersonal Composite	.59*	.56*	.35*	.52*

*Correlation is significant at the .01 level (2-tailed)

Table 10

Correlation Coefficients Between the SEF:ED and MBI-ES

	SEF:ED Emotional Awareness (EA)	SEF:ED Emotional Management (EM)	SEF:ED Interpersonal Relations (IR)	SEF:ED Total EI
MBI-ES Emotional Exhaustion (EE)	-.21*	-.48**	-.21*	-.39**
MBI-ES Depersonalization (DP)	-.30**	-.40**	-.55**	-.52**
MBI-ES Personal Accomplishment (PA)	.37**	.55**	.45**	.59**

**Correlation is significant at the .01 level (2-tailed)
*Correlation is significant at .05 level (2-tailed)

Dimensions	Self	Other
Identification	Identify my emotions	Identify others' emotions
Understanding	Understand my emotions	Understand others' emotions
Expression	Express my emotions	Listen to others' emotions
Regulation	Regulate my emotions	Regulate others' emotions
Use	Use my emotions	Use others' emotions
	Intrapersonal EI	**Interpersonal EI**
	Global EI	

Figure 1. Table of PEC scales

Pilot Version of the SEF:ED

Scale of Emotional Functioning: Educators (SEF:ED)

Self-Report Format

R. Steve McCallum, Baileigh A. Kirkpatrick, & Lezli S. Anderson

Date:_____   Age:_____   Date of Birth:_____

Educator Title (teacher, administrator, etc.): _____

Type of classroom (if applicable): _____ Grades: _____

Years in the field: _____ Highest degree attained: _____

Please respond to the following items by circling the response that best characterizes your behavior.

I...					
1. recognize the feelings of others.	Never	Rarely	Sometimes	Often	Always
2. lack empathy for my students.	Never	Rarely	Sometimes	Often	Always
3. express concern for my students' feelings.	Never	Rarely	Sometimes	Often	Always
4. interact with my students reluctantly.	Never	Rarely	Sometimes	Often	Always
5. take time to learn how others are feeling.	Never	Rarely	Sometimes	Often	Always
6. respond appropriately to the emotions of others.	Never	Rarely	Sometimes	Often	Always
7. relate to students easily.	Never	Rarely	Sometimes	Often	Always
8. lack respect for the feelings of students.	Never	Rarely	Sometimes	Often	Always
9. take time to calm students who are upset.	Never	Rarely	Sometimes	Often	Always
10. have difficulty showing affection.	Never	Rarely	Sometimes	Often	Always

11. am friendly.	Never	Rarely	Sometimes	Often	Always
12. have difficulty compromising.	Never	Rarely	Sometimes	Often	Always
13. work well with coworkers.	Never	Rarely	Sometimes	Often	Always
14. have difficulty remaining effective when upset.	Never	Rarely	Sometimes	Often	Always
15. am easy-going.	Never	Rarely	Sometimes	Often	Always
16. let stress overwhelm me.	Never	Rarely	Sometimes	Often	Always
17. maintain a healthy attitude about negative evaluations.	Never	Rarely	Sometimes	Often	Always
18. find it difficult to be resilient.	Never	Rarely	Sometimes	Often	Always
19. exhibit a calming influence in classroom.	Never	Rarely	Sometimes	Often	Always
20. am unable to shake pessimistic moods.	Never	Rarely	Sometimes	Often	Always
21. experience emotions that seem compatible with those of others.	Never	Rarely	Sometimes	Often	Always
22. have trouble performing well under pressure.	Never	Rarely	Sometimes	Often	Always
23. make eye contact when receiving criticism.	Never	Rarely	Sometimes	Often	Always
24. find it difficult to get along with coworkers.	Never	Rarely	Sometimes	Often	Always
25. am energized by change.	Never	Rarely	Sometimes	Often	Always
26. am dissatisfied with my life.	Never	Rarely	Sometimes	Often	Always
27. am able to interpret the emotions of students.	Never	Rarely	Sometimes	Often	Always
28. misinterpret nonverbal communication of students.	Never	Rarely	Sometimes	Often	Always
29. create positive relationships with students.	Never	Rarely	Sometimes	Often	Always
30. have difficulty recognizing the emotional tone within groups.	Never	Rarely	Sometimes	Often	Always
31. am able to predict how others will react to me.	Never	Rarely	Sometimes	Often	Always
32. handle upsetting situations poorly.	Never	Rarely	Sometimes	Often	Always

33. can easily calm an anxious student.	Never	Rarely	Sometimes	Often	Always
34. have difficulty being a good listener to students.	Never	Rarely	Sometimes	Often	Always
35. use criticism constructively.	Never	Rarely	Sometimes	Often	Always
36. have difficulty recognizing when I offend students.	Never	Rarely	Sometimes	Often	Always
37. am fun to be with.	Never	Rarely	Sometimes	Often	Always
38. misinterpret nonverbal communication.	Never	Rarely	Sometimes	Often	Always
39. am aware of the emotional needs of students.	Never	Rarely	Sometimes	Often	Always
40. lack empathy for parents.	Never	Rarely	Sometimes	Often	Always
41. recognize the feelings of parents.	Never	Rarely	Sometimes	Often	Always
42. have difficulty remaining effective with parents when upset.	Never	Rarely	Sometimes	Often	Always
43. am easy-going with parents.	Never	Rarely	Sometimes	Often	Always
44. misinterpret nonverbal communication from parents.	Never	Rarely	Sometimes	Often	Always
45. am able to interpret the emotions of parents.	Never	Rarely	Sometimes	Often	Always

Note: Demographic information deviated slightly from what is presented here due to an electronic delivery method.

The Profile of Emotional Competence (PEC)

Scoring key: freely available on request at moira.mikolajczak@uclouvain.be

Note for the readers: items are presented in a random order

The questions below are designed to provide a better understanding of how you deal with your emotions in daily life. Please answer each question spontaneously, taking into account the way you would normally respond. There are no right or wrong answers as we are all different on this level.

For each question, you will have to give a score on a scale from 1 to 5, with 1 meaning that the statement does not describe you at all or you never respond like this, and 5 meaning that the statement describes you very well or that you experience this particular response very often.

	1	2	3	4	5
1. As my emotions arise I don't understand where they come from.					
2. I don't always understand why I respond in the way I do.					
3. If I wanted, I could easily influence other people's emotions to achieve what I want.					
4. I know what to do to win people over to my cause.					
5. I am often a loss to understand other people's emotional responses.					
6. When I feel good, I can easily tell whether it is due to being proud of myself, happy or relaxed.					
7. I can tell whether a person is angry, sad or happy even if they don't talk to me.					
8. I am good at describing my feelings.					
9. I never base my personal life choices on my emotions.					

10. When I am feeling low, I easily make a link between my feelings and a situation that affected me.					
11. I can easily get what I want from others.					
12. I easily manage to calm myself down after a difficult experience.					
13. I can easily explain the emotional responses of the people around me.					
14. Most of the time I understand why people feel the way they do.					
15. When I am sad, I find it easy to cheer myself up.					
16. When I am touched by something, I immediately know what I feel.					
17. If I dislike something, I manage to say so in a calm manner.					
18. I do not understand why the people around me respond the way they do.					
19. When I see someone who is stressed or anxious, I can easily calm them down.					
20. During an argument I do not know whether I am angry or sad.					
21. I use my feelings to improve my choices in life.					
22. I try to learn from difficult situations or emotions.					
23. Other people tend to confide in me about personal issues.					
24. My emotions inform me about changes I should make in my life.					
25. I find it difficult to explain my feelings to others even if I want to.					
26. I don't always understand why I am stressed.					
27. If someone came to me in tears, I would not know what to do.					

28. I find it difficult to listen to people who are complaining.					
29. I often take the wrong attitude to people because I was not aware of their emotional state.					
30. I am good at sensing what others are feeling.					
31. I feel uncomfortable if people tell me about their problems, so I try to avoid it.					
32. I know what to do to motivate people.					
33. I am good at lifting other people's spirits.					
34. I find it difficult to establish a link between a person's response and their personal circumstances.					
35. I am usually able to influence the way other people feel.					
36. If I wanted, I could easily make someone feel uneasy.					
37. I find it difficult to handle my emotions.					
38. The people around me tell me I don't express my feelings openly.					
39. When I am angry, I find it easy to calm myself down.					
40. I am often surprised by people's responses because I was not aware they were in a bad mood.					
41. My feelings help me to focus on what is important to me.					
42. Others don't accept the way I express my emotions.					
43. When I am sad, I often don't know why.					
44. Quite often I am not aware of people's emotional state.					
45. Other people tell me I make a good confidant.					

46. I feel uneasy when other people tell me about something that is difficult for them.					
47. When I am confronted with an angry person, I can easily calm them down.					
48. I am aware of my emotions as soon as they arise.					
49. When I am feeling low, I find it difficult to know exactly what kind of emotion it is I am feeling.					
50. In a stressful situation I usually think in a way that helps me stay calm.					

Appendix D

MBI for Educators Survey

Christina Maslach, Susan E. Jackson & Richard L. Schwab

*The purpose of this survey is to discover how educators view their job
and the people with whom they work closely.*

Instructions: On the following page are 22 statements of job-related feelings. Please read each statement carefully and decide if you ever feel this way about *your* job. If you have *never* had this feeling, write the number "0" (zero) in the space before the statement. If you have had this feeling, indicate *how often* you feel it by writing the number (from 1 to 6) that best describes how frequently you feel that way. An example is shown below.

How often:	0	1	2	3	4	5	6
	Never	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week	Every day

Example:

How often 0-6	Statement:

1. _____   I feel depressed at work.

If you never feel depressed at work, you would write the number "0" (zero) under the heading "How often." If you rarely feel depressed at work (a few times a year or less), you would write the number "1." If your feelings of depression are fairly frequent (a few times a week but not daily), you would write the number "5."

MBI for Educators Survey

How often:	0	1	2	3	4	5	6
	Never	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week	Every day

How often
0-6   **Statements:**

1. _____   I feel emotionally drained from my work.
2. _____   I feel used up at the end of the workday.
3. _____   I feel fatigued when I get up in the morning and have to face another day on the job.
4. _____   I can easily understand how my students feel about things.
5. _____   I feel I treat some students as if they were impersonal objects.
6. _____   Working with people all day is really a strain for me.
7. _____   I deal very effectively with the problems of my students.
8. _____   I feel burned out from my work.
9. _____   I feel I'm positively influencing other people's lives through my work.
10. _____   I've become more callous toward people since I took this job.
11. _____   I worry that this job is hardening me emotionally.
12. _____   I feel very energetic.
13. _____   I feel frustrated by my job.
14. _____   I feel I'm working too hard on my job.
15. _____   I don't really care what happens to some students.
16. _____   Working with people directly puts too much stress on me.
17. _____   I can easily create a relaxed atmosphere with my students.
18. _____   I feel exhilarated after working closely with my students.
19. _____   I have accomplished many worthwhile things in this job.
20. _____   I feel like I'm at the end of my rope.
21. _____   In my work, I deal with emotional problems very calmly.
22. _____   I feel students blame me for some of their problems.

(Administrative use only)

EE Total score: _____   DP Total score: _____   PA Total score: _____

EE Average score: _____   DP Average score: _____   PA Average score: _____

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Appendix E

Consistency Pairs for the SEF:ED

1. recognize the feelings of others.	4. have difficulty recognizing the emotional tone within groups.
2. am able to interpret the emotions of students.	7. am aware of the emotional needs of students.
3. misinterpret nonverbal communication of students.	6. misinterpret nonverbal communication.
12. have difficulty remaining effective when upset.	19. handle upsetting situations poorly.
22. interact with my students reluctantly.	28. create positive relationships with students.
26. exhibit a calming influence in classroom.	29. can easily calm an anxious student.

Final Version of the SEF:ED

Scale of Emotional Functioning: Educators (SEF:ED)

Self-Report Format

R. Steve McCallum, Lezli S. Anderson, Baileigh A. Kirkpatrick & Michelle L. Fast

Date:_____ **Age:**_____ **Date of Birth:**_____

Educator Title (teacher, administrator, etc.): _____

Type of classroom (if applicable): _____ **Grades:** _____

Years in the field: _____ **Highest degree attained:** _____

Please respond to the following items by circling the response that best characterizes your behavior.

I...					
1. recognize the feelings of others.	Never	Rarely	Sometimes	Often	Always
2. am able to interpret the emotions of students.	Never	Rarely	Sometimes	Often	Always
3. misinterpret nonverbal communication of students.	Never	Rarely	Sometimes	Often	Always
4. have difficulty recognizing the emotional tone within groups.	Never	Rarely	Sometimes	Often	Always
5. have difficulty recognizing when I offend students.	Never	Rarely	Sometimes	Often	Always
6. misinterpret nonverbal communication.	Never	Rarely	Sometimes	Often	Always
7. am aware of the emotional needs of students.	Never	Rarely	Sometimes	Often	Always
8. recognize the feelings of parents.	Never	Rarely	Sometimes	Often	Always
9. misinterpret nonverbal communication from parents.	Never	Rarely	Sometimes	Often	Always

10. am able to interpret the emotions of parents.	Never	Rarely	Sometimes	Often	Always
11. express concern for my students' feelings.	Never	Rarely	Sometimes	Often	Always
12. have difficulty remaining effective when upset.	Never	Rarely	Sometimes	Often	Always
13. am easy-going.	Never	Rarely	Sometimes	Often	Always
14. let stress overwhelm me.	Never	Rarely	Sometimes	Often	Always
15. maintain a healthy attitude about negative evaluations.	Never	Rarely	Sometimes	Often	Always
16. find it difficult to be resilient.	Never	Rarely	Sometimes	Often	Always
17. am unable to shake pessimistic moods.	Never	Rarely	Sometimes	Often	Always
18. am energized by change.	Never	Rarely	Sometimes	Often	Always
19. handle upsetting situations poorly.	Never	Rarely	Sometimes	Often	Always
20. am fun to be with.	Never	Rarely	Sometimes	Often	Always
21. lack empathy for my students.	Never	Rarely	Sometimes	Often	Always
22. interact with my students reluctantly.	Never	Rarely	Sometimes	Often	Always
23. relate to students easily.	Never	Rarely	Sometimes	Often	Always
24. lack respect for the feelings of students.	Never	Rarely	Sometimes	Often	Always
25. take time to calm students who are upset.	Never	Rarely	Sometimes	Often	Always
26. exhibit a calming influence in classroom.	Never	Rarely	Sometimes	Often	Always
27. find it difficult to get along with coworkers.	Never	Rarely	Sometimes	Often	Always
28. create positive relationships with students.	Never	Rarely	Sometimes	Often	Always
29. can easily calm an anxious student.	Never	Rarely	Sometimes	Often	Always
30. lack empathy for parents.	Never	Rarely	Sometimes	Often	Always

VITA

Lezli Anderson was born in Lubbock, Texas to Buck and Sheila Anderson. She graduated from the University of Texas in 2016 with a Bachelor of Arts degree in Psychology, a Business Foundations Certificate, and a Bridging Disciplines Certificate with a focus on Intervention and Vulnerable Children and Adolescents. In August 2016, Lezli accepted a position in the School Psychology doctoral program at the University of Tennessee, Knoxville. She earned a Master of Science degree in Applied Educational Psychology in 2018. Lezli completed an APA-accredited internship with the Lewisville Independent School District (LISD) in Lewisville, Texas during the 2020-2021 school year. She is a Licensed Specialist in School Psychology (LSSP) and plans to continue working at LISD as a LSSP. In July 2021, Lezli will complete her doctorate degree.