

EMOTIONAL EXHAUSTION: CREATION OF A  
NEW MEASURE AND EXPLORATION  
OF THE CONSTRUCT

By

MEGHAN E. HILLS

Bachelor of Science in Psychology

Oklahoma State University

Stillwater, Oklahoma

2014

Submitted to the Faculty of the  
Graduate College of the  
Oklahoma State University  
in partial fulfillment of  
the requirements for  
the Degree of  
MASTER OF SCIENCE  
July, 2019

EMOTIONAL EXHAUSTION: CREATION OF A  
NEW MEASURE AND EXPLORATION  
OF THE CONSTRUCT

Thesis Approved:

Dr. Tony Wells

---

Thesis Adviser

Dr. Stephanie Mullins-Sweatt

---

Dr. DeMond Grant

---

Name: MEGHAN E. HILLS

Date of Degree: JULY, 2019

Title of Study: EMOTIONAL EXHAUSTION: CREATION OF A NEW MEASURE  
AND EXPLORATION OF THE CONSTRUCT

Major Field: PSYCHOLOGY

Abstract: Depression is an important mental health issue that affects many people each year. Understanding depression and its associated constructs is crucial to the prevention and treatment of this disorder. Until now, emotional exhaustion has been exclusively studied in the context of burnout and job satisfaction. The current study aims to bridge this gap in the literature by creating a new measure of emotional exhaustion that more broadly assesses the construct and relating it to other relevant measures. Emotional exhaustion has been shown to be related to depression in the context of burnout. The creation of the new measure of emotional exhaustion, the Emotional Exhaustion Questionnaire (EEQ), is described. The EEQ was administered to 200 adults through Amazon's MTurk service. The measure had excellent internal consistency and consisted of a single factor. Results supported the convergent validity of the EEQ as it was strongly and positively related to the traditional measure of emotional exhaustion used in burnout literature, the Maslach Burnout Inventory (MBI). The EEQ was also related in expected directions to a number of factors that have previously been associated with emotional exhaustion in the burnout literature including neuroticism, depression symptoms, effort-reward imbalance, and emotional dissonance. When added into a linear regression model predicting depression symptoms, the EEQ significantly improved upon a model including only the MBI, which suggests that the EEQ provides some incremental utility over the MBI. Exploratory analyses indicated that the EEQ was related to other relevant measures in expected ways including measures of suicidal ideation, distress tolerance, and non-suicidal self-injury. Overall, the EEQ is a brief, highly internally consistent measure of emotional exhaustion with good evidence for convergent validity. This provides good initial evidence to support future studies investigating the potential causal relationships between emotional exhaustion and psychopathology

## TABLE OF CONTENTS

Chapter	Page
I. INTRODUCTION.....	1
II. REVIEW OF LITERATURE.....	3
Emotional Exhaustion.....	3
Depression.....	8
III. METHODOLOGY .....	10
Goals and Hypotheses.....	10
Participants.....	11
Materials .....	12
Procedure .....	17

Chapter	Page
IV. FINDINGS.....	18
Descriptives.....	18
Analyses of Hypotheses.....	18
Exploratory Analyses.....	21
V. CONCLUSION.....	26
Discussion.....	26
Limitations and Future Directions.....	29
Strengths.....	30
Conclusions.....	30
REFERENCES.....	31
APPENDICES.....	38

## LIST OF TABLES

Table	Page
1.....	7
2.....	21
3.....	23
4.....	

## CHAPTER I

### INTRODUCTION

Major Depressive Disorder (MDD) is a significant mental health issue in the United States, as the lifetime prevalence rates for adults is approximately 16.5% (Kessler, Berglund, Demler, Jin, & Walters, 2005). Depression, and its associated difficulties, is also associated with significant financial burden with \$210.5 billion in associated costs in 2010 (Greenberg et al., 2015). Due to depression's substantial impact on society, it is critical that research on underlying processes is completed in order to better understand, and eventually treat, this mental health crisis.

One area of interest that has yet to be studied in the context of depression is emotional exhaustion, that is, the experience of "feeling tired of feeling". This construct is likely related to depression and other mental health outcomes. The current study proposes to examine those relationships and develop a measure for assessing emotional exhaustion within the context of clinical psychology

## CHAPTER II

### REVIEW OF THE LITERATURE

#### Emotional Exhaustion

The literature on emotional exhaustion is largely focused on job satisfaction and burnout. Burnout is described as emotional exhaustion and cynicism that often occurs in individuals who do “people-work,” with the key feature of the experience of burnout being an increase in emotional exhaustion (Maslach & Jackson, 1981; Wright & Cropanzano, 1998; Wright & Bonett, 1998). Emotional exhaustion occurs when an individual’s emotional resources are so depleted that they feel they no longer have anything to give psychologically to others (Maslach & Jackson, 1981). Additionally it has been described as a chronic state of depleted emotional resources that results from demanding jobs (Wright & Cropanzano, 1998).

#### *Factors Contributing to Emotional Exhaustion*

A number of factors have been identified as contributing to emotional exhaustion. For example, the conservation of resources (COR) model of stress (Wright & Cropanzano, 1998) states that emotional exhaustion is most likely to occur when actual resources (i.e., time, effort) are lost, there are perceived threats of resource loss, there is a situation where an individual’s resources are insufficient to meet demands at work, or if the anticipated returns (i.e., rewards) are not actually obtained on an investment of the individual’s resources. Incongruence between organizational demands and an individual’s resources to meet the demands leads to stress on the job, and over time emotional exhaustion. The COR theory predicts that individuals will experience discomfort



and then attempt to minimize losses by reducing effort or quitting their job. The COR theory also suggests that individuals will be emotionally exhausted when they feel they don't have enough emotional resources to deal with interpersonal stressors. Overall, an imbalance of effort and rewards are important in the COR model of emotional exhaustion.

Personality characteristics have also been associated with both burnout, broadly, and emotional exhaustion, specifically, with neuroticism most consistently implicated in this relationship. A meta-analysis of personality characteristics and burnout found negative affectivity and emotional stability (i.e., neuroticism) was significantly related to experiencing burnout, as was extraversion, conscientiousness, and agreeableness (Alarcon, Eschleman, & Bowling, 2009). Among primary school teachers it was found that personality traits, specifically neuroticism were significant predictors of burnout, over and above job stressors (Kokkinos, 2007). In a sample of teachers, high scores in agreeableness were found to be a protective factor for burnout, while low scores were found to be a vulnerability factor (Cano-García, Padilla-Muñoz, & Carrasco-Ortiz, 2005). High neuroticism and low extraversion were the most consistent predictors of burnout, and there was a positive relationship between neuroticism and higher burnout among individuals who had a lot of negative experiences in their position, but this relationship was not present in individuals who had few negative experiences in their position (Bakker, Van Der Zee, Lewig, & Dollard, 2006). This suggests that individuals that are higher in neuroticism may have stronger emotional reactions when they experience stressful situations; these individuals also tend to use more ineffective coping strategies, which could make them more vulnerable to the symptoms of burnout (Bakker, Van Der Zee, Lewig, & Dollard, 2006).

Fewer studies have examined personality characteristics and emotional exhaustion specifically but the results are consistent with results of studies examining burnout. For example, hotel managers high in neuroticism were more likely to experience emotional exhaustion, but individuals high in extraversion seemed to be protected from experiencing emotional exhaustion

(O'Neill & Xiao, 2010). Additionally in a sample of 80 volunteer counselors, neuroticism has been found to strongly predict emotional exhaustion among extraversion, agreeableness, conscientiousness, neuroticism, and autonomy, accounting for 13% of the variance in emotional exhaustion (Bakker, Van Der Zee, Lewig, & Dollard, 2006).

Emotional dissonance has also been implicated in emotional exhaustion. Emotional dissonance is defined as the conflict between expressed and experienced emotions (Abraham, 2000). Acting happy or pleasant while experiencing stress may cause emotional exhaustion due to experiencing tension from emotional dissonance or because resources are being drained by effortfully acting pleasant. A recent meta-analysis of 57 studies including over 16,000 employees found a consistent relationship between emotional dissonance and emotional exhaustion (Kenworthy, Fay, Frame, & Petree, 2014).

In summary, a number of factors have been proposed as contributors to emotional exhaustion. Major proposed contributors include: the imbalance between emotional resources and emotional demands, Big Five personality traits (particularly neuroticism, extraversion, and agreeableness), and emotional dissonance.

#### *Consequences of Emotional Exhaustion*

Emotional exhaustion has been linked to a number of negative work-related, physiological, and psychosocial outcomes. When considered in the context of burnout, emotional exhaustion can lead to lower quality of self-care by staff, job turnover, absenteeism, low morale, being physically exhausted, poor sleep, increase in usage of drugs or alcohol, and marital and family problems (Maslach & Jackson, 1981). Because emotional exhaustion is typically studied in the context of burnout, the consequences of burnout are reviewed below followed by the consequences of emotional exhaustion more specifically.

Burnout is consistently related to increased anxiety and depression (Maslach, Schaufeli, & Leiter, 2001). A study of health care workers supports the relationship between burnout and depression, suggesting they are distinct but related constructs (Leiter & Durup, 1994). Another study found the same result, that depression and burnout are very similar but separate entities (Brenninkmeyer, Van Yperen, & Buunk, 2001). In a study of OB/GYN residents, almost 90% were at least moderately 'burned out' and 34% were considered depressed, suggesting that not all individuals who experience burnout will become depressed, but a significant percentage will (Becker, Milad, & Klock, 2006).

Emotional exhaustion is strongly associated with several employment-related negative outcomes including role conflict at work, thoughts about leaving one's current job, training for new careers, and actually leaving one's job (Jackson, Schwab, & Schuler, 1986). A study of social welfare workers found that even after controlling for positive and negative affect, emotional exhaustion was still a significant predictor of whether employees would show poorer job performance or even quit their jobs (Wright & Cropanzano, 1998). In a sample of nurses, emotional exhaustion and depression were strongly associated, while a factor analysis confirmed their discriminant validity (Glass, McKnight, & Valdimarsdottir, 1993).

Overall, burnout and emotional exhaustion are related to a number of negative outcomes, both psychological and work related. Individuals experiencing either show worse job performance and tend to quit their jobs. Additionally, emotional exhaustion is associated with higher rates of depression and other negative psychological outcomes.

#### *Measurement of Emotional Exhaustion*

The main instrument used to measure emotional exhaustion comes in the form of the Maslach Burnout Inventory (MBI), which assesses the three components of burnout: emotional exhaustion, depersonalization, and reduced personal accomplishment (Maslach, Jackson, Leiter,

Schaufeli, & Schwab, 1986). There are eight items in the emotional exhaustion subscale (see Table 1, below). These items have been well validated as a measure of burnout (Schutte, Tomppinene, Kalimo, & Schaufeli, 2000; Schaufeli, Bakker, Hoogduin, Schaap, & Kladler, 2001), but the subscale has two major limitations as a potential broader measure of emotional exhaustion.

*Table 1. Emotional Exhaustion Scale Questions of the MBI*

1. I feel emotionally drained by my work.
2. I feel used up by the end of the day.
3. I feel fatigued when I have to get up in the morning to face another day on the job.
4. Working with people all day is really a strain for me.
5. I feel ‘burned out’ from my work.
6. I feel frustrated by my job.
7. I feel I’m working too hard in my job.
8. I feel like I’m at the end of my rope.

First, emotional exhaustion is proposed as a state of depleted emotional resources, but many of the questions have low face validity and questionable connection to depleted emotional resources. For example, Item 3 addresses fatigue, which may be distinct from *emotional* exhaustion. Item 4 mentions strain when working with people, which could be due to emotional exhaustion or a number of other factors (e.g., social anxiety, a low sense of self-efficacy, low assertiveness). Item 6 mentions frustration, which may be related to emotional exhaustion, but is its own distinct emotional experience. Item 7 mentions “working too hard”, which is hypothesized to lead to emotional exhaustion in some, but not all, circumstances (Wright & Cropanzano, 1998). Item 8 mentions being “at the end of my rope”, which is unclear and could be related to hopelessness,

helplessness, or low self-efficacy among other factors. Thus, many of the items have an unclear relationship to emotional exhaustion specifically.

Second, six of the eight questions refer specifically to “job”, “work”, or “working”. This substantially limits the applicability of the subscale to measuring emotional exhaustion in broader contexts. While many the proposed contributors to emotional exhaustion (imbalance in resources, neuroticism, emotional dissonance) have been studied in the context of work and burnout, they are more broadly applicable and may lead to emotional exhaustion in non-work contexts. As such, it is important to have a measure that can assess emotional exhaustion more broadly.

#### *Emotional Exhaustion Summary*

Emotional exhaustion has been widely studied in the burnout literature. It is related to personality characteristics and loss of resources. It predicts a number of negative employee related qualities, such as absenteeism and job turnover. Additionally it has been related to negative mental health outcomes such as poor sleep, depression, and use of drugs or alcohol. The MBI is currently the main instrument used to measure emotional exhaustion in the context of burnout. The scale is limited in its use for measuring emotional exhaustion outside the context of burnout though.

Firstly, many of the items show an unclear relationship to emotional exhaustion. Secondly, many of the items specifically reference work, which lowers the measure’s applications outside of employment evaluation. However, despite the consistent association between emotional exhaustion and depression, and other negative mental health outcomes, the relationship between emotional exhaustion and depression has not been studied outside the context of burnout. As such this represents a potentially fruitful area to examine emotional exhaustion.

#### Depression

Depression is a syndrome consisting of sad mood, loss of interest or pleasure, and other somatic and psychological symptoms, including thoughts of suicide or death (APA, 2013). As noted

before, depression is a significant mental health problem worldwide, with lifetime prevalence rates for adults around approximately 16.5% (Kessler, Berglund, Demler, Jin, & Walters, 2005). After puberty, depression is more common among females than males (Piccinelli & Wilkinson, 2000). Individuals with depression are likely to have a chronic course of the disorder, where it reoccurs over time (Harrington, 2001).

As noted above, a number of studies have indicated an association between emotional exhaustion and symptoms of depression (Maslach, Schaufeli, & Leiter, 2001; Leiter & Durup, 1994; Brenninkmeyer, Van Yperen, & Buunk, 2001; Glass, McKnight, & Valdimarsdottir, 1993; Becker, Milad, & Klock, 2006). However, this association has been studied exclusively in the context of burnout. The proposed study will examine a broader measure of emotional exhaustion and its relationship with depression symptoms in a broader context.

In addition, many of the factors that contribute to emotional exhaustion also contribute to depression. For example, individuals with higher neuroticism are at a greater overall risk for depression (Kendler, Kuhn, & Prescott, 2004). In addition, a greater effort-reward balance (i.e., when higher effort leads to higher rewards) seems to result in lower levels of depression (Lambert, 2006). Despite these connections, the link between emotional exhaustion and depression has not yet been established outside of work contexts.

## CHAPTER III

### METHODOLOGY

#### Goals and Hypotheses

The current study aimed to create a measure of emotional exhaustion outside the context of burnout and examine its relationship with symptoms of depression. The goals and hypotheses of the proposed study were:

*Goal 1* – Create a broad measure of emotional exhaustion outside the context of burnout.

*Goal 2* – Examine the internal consistency and factor structure of the measure.

*Hypothesis 1* – Based on pilot testing, we expected that the measure would have good internal consistency and would consist of a single factor. However, if there were items that substantially reduced the internal consistency or had poor fit with identified factors, we planned to remove them for any future studies using the measure.

*Goal 3* – Examine the convergent validity of our measure of emotional exhaustion with symptoms of depression and factors that have been shown to contribute to emotional exhaustion in the context of burnout.

*Hypothesis 2* – Our measure of emotional exhaustion would be significantly and positively correlated with symptoms of depression.

*Hypothesis 3* – Our measure of emotional exhaustion would be significantly and positively associated with the MBI measure of emotional exhaustion

*Hypothesis 4* – When entered into a hierarchical linear regression model predicting depression symptoms, our measure of emotional exhaustion would increase the variance predicted over and above the MBI measure of emotional exhaustion.

*Hypothesis 5* – Our measure of emotional exhaustion would be positively associated with neuroticism, effort-reward imbalance, and emotional dissonance.

Additional exploratory analyses were conducted examining the relationship between emotional exhaustion and other psychological factors of interest (e.g., nonsuicidal self-injury, anhedonia, distress tolerance). However, given the lack of prior research examining emotional exhaustion outside the context of burnout and employment, specific hypotheses were not made regarding these associations.

#### Participants

Participants for this study were adult individuals recruited from Amazon’s Mechanical Turk (MTurk) program. We recruited 200 participants with the goal of obtaining 180 participants with complete, usable data. This sample size was selected because a participant to measure item ratio of 20:1 has been shown to reduce error in determining factor structure (Costello & Osborne, 2005). A total of 5 participants were removed from analyses for having incomplete Emotional Exhaustion Questionnaire (EEQ; see below) data, but no participants were removed due to invalid data as indicated by validity items placed throughout the entire set of questionnaires. This resulted in a final sample of 195 for this study.

We recruited both males and females who were at least 18 years old. Participants must have had internet access and an account on MTurk to participate in this study.

Participants were paid \$1.38 per hour for their participation in this study, which was



based on the median MTurk hourly wage. We estimated that the study would take approximately 40 minutes, so MTurk participants were paid \$.69 for completing the study. All participants on MTurk can choose if they believe the compensation is fair, and can choose to not participate if they deem the compensation to be too low, thus we did not consider our payment coercive or exploitative. MTurk has many other researchers and companies offering online studies for money and the compensation of the proposed study was comparable to what others on the site are offering.

#### Materials

***Emotional Exhaustion Questionnaire (EEQ)***. The EEQ consists of 9 questions answered on a 5-point Likert scale. However, due to an administration error, only the first 8 questions of the EEQ were included in this study. Questions assess the construct of emotional exhaustion. Item scores are summed to create a total score to indicate the severity of emotional exhaustion.

Items were initially generated and evaluated by members of the Behavior, Affect, and Thinking lab. It was difficult to generate a large number of items because of the narrow scope of the construct, but items were generated and evaluated as suggested by Morey (2002). According to Morey (2002), there are seven guidelines to developing the stimulus properties of items: content, capturing phenomenology, specificity, not reflecting only extremes, non-offensiveness, simplicity, and avoiding slang. When developing the EEQ, items were generated to be face valid for the construct of emotional exhaustion (e.g., [Over the last 7 days, how much have you felt...]*emotionally exhausted*). Additionally, the items were developed to accurately capture the experience of emotional exhaustion, as felt by an individual experiencing it, and to be specific to emotional exhaustion. There are no extant theoretical or conceptual models of emotional exhaustion, so potential items were evaluated by having non-psychologists provide explanations of their interpretation of each potential item and what it was measuring. Items that elicited

confusion or that were described in a way that was inconsistent with emotional exhaustion were removed before the initial scale development. Items were developed so that they did not only represent the most extreme variations of emotional exhaustion, but rather the full spectrum of experiencing it (e.g., emotionally... tired, worn out, exhausted). Items were carefully constructed as not to be biased or offensive to anyone taking the measure. Items were constructed to be as simple and clear as possible, while still capturing the experience of emotional exhaustion. This was done by making items short and to the point, and by not using words that would be unfamiliar to individuals taking the survey. We do note that the word “depleted” (Item 7) has a Flesch-Kincaid grade level estimate of 8.4, which may be unfamiliar to participants with lower reading levels. In the construction of the EEQ, it was difficult to avoid using slang or colloquialisms (e.g., “worn out”, “drained”, “pushed to your limits”) in the attempt to accurately measure the construct. This may limit the ability of the EEQ to be translated to other languages or used with populations with less familiarity with standard United States English.

The EEQ uses a Likert scale for responding for two primary reasons. First, it is simple and easy to score and interpret. Additionally, according to Morey (2002), using a Likert scale can improve reliability by capturing more of the variation in each item.

***Maslach Burnout Inventory (MBI)***. The MBI (Maslach & Jackson, 1981) is a 22-item self-report measure that assesses burnout through three constructs, emotional exhaustion, depersonalization, and personal accomplishment. Items are rated on a 7-point Likert scale (0-6). The scale has shown good reliability ( $\alpha = .71-.90$ ) (Maslach & Jackson, 1981). We will specifically examine the emotional exhaustion subscale which, as noted above, is comprised of 8 items. In the current study, the internal consistency was good ( $\alpha = .89$ ).

***Patient Health Questionnaire-9 (PHQ-9)***. The PHQ-9 (Kroenke, Spitzer, & Williams, 2001) is a 9-item self-report measure, which is commonly used for assessing the 9 core symptoms of

depression according to the DSM-5. Items are rated on a 0 to 3 scale indicating how often they experience each symptom within a 2-week period. Possible responses include “not at all,” “several days,” “more than half the days,” or “nearly every day.” Participants are then asked to rate how difficult these problems have made it for them to do their work at school, at home, or get along with other people with responses ranging from “not difficult at all,” “somewhat difficult,” “very difficult,” or “extremely difficult.” Scores on the PHQ-9 range from 0 to 27, with scores of  $\geq 5$ ,  $\geq 10$ ,  $\geq 15$ , indicating mild, moderate and severe levels of depression severity, respectively. Several studies have examined the psychometric properties of the PHQ-9 and have revealed Cronbach’s alpha internal reliability between .86-.89, and test-retest reliability of .84 (e.g. Kroenke, et al., 2001; Kroenke, Spitzer, Williams, & Löwe, 2010). In the current study, the internal consistency was excellent ( $\alpha = .92$ ).

***Five Factor Model Rating Form (FFMRF)***. The FFMRF (Widiger, 2004) is a 30-item self-report measure of the Big Five model of personality. Items are rated on a 5-point Likert scale (1-5), ranging from “extremely low” to “extremely high”. The FFMRF has shown Cronbach’s alpha internal reliability between .51-.78 (Mullins-Sweatt, Jamerson, Samuel, Olson, & Widiger, 2006). In the current study, the internal consistency ranged from acceptable to good ( $\alpha = .70$ -.84). Neuroticism had the highest alpha at .84 whereas Openness had the lowest alpha at .70.

***Frankfurt Emotion Work Scales (FEWS) Emotional Dissonance Scale***. The FEWS emotional dissonance scale (Zapf et al., 1999) is a 4-item self-report measure that assesses how often participants engage in emotionally dissonant situations. In the current study, the internal consistency was good ( $\alpha = .83$ ).

***Effort-Reward Imbalance (ERI)***. The ERI (Siegrist, 1996) is a 7-item self-report measure that assesses perceived efforts and rewards put forth and gained by participants. In the current study, the internal consistency was acceptable ( $\alpha = .75$ ).

**Demographic information.** Participants will be asked to provide basic demographic information about age, sex, income, race, and prior medical and mental health history.

Measures for Additional Exploratory Analysis

**Generalized Anxiety Disorder-7 (GAD).** The GAD-7 (Spitzer, Kroenke, Williams, & Löwe, 2006) is a 7-item self-report questionnaire that assesses symptoms of generalized anxiety. Items are rated on a 4-point Likert scale (0-3). Items are summed to compute a total score. Scores fall in different severity categories; from 0-3 is none/minimal, 4-7 mild, 8-11 moderate, 12-15 high, and 16-21 severe. In the current study, the internal consistency was excellent ( $\alpha = .91$ ).

**Response Styles Questionnaire (RSQ).** The RSQ (Kühner, Huffziger, & Nolen-Hoeksema, 2007) is a 10-item self-report questionnaire that assesses how individuals typically respond when feeling sad or depressed. Items are rated on a 4-point Likert scale (1-4). There are two subscales, Brooding and Reflecting. Brooding subscale is the sum of items 1, 3, 6, 7, 8. Reflecting subscale is the sum of items 2, 4, 5, 9, 10. In the current study, the internal consistency was good for both scales ( $\alpha = .84$  for perceived brooding and  $\alpha = .82$  for reflecting.).

**Specific Loss of Interest and Pleasure Scale (SLIPS).** The SLIPS (Winer, Veilleux, & Ginger, 2014) is a 23-item self-report questionnaire that assesses loss of interest or pleasure in a number of things. Items are rated on a 4-point Likert scale (0-3). Scores are a sum of all items. In the current study, the internal consistency was excellent ( $\alpha = .96$ ).

**Hopelessness Depression Symptom Questionnaire- Suicidality Subscale (HDSQ-SS).** The HDSQ-SS (Metalsky & Joiner, 1997) is a 4-item self-report questionnaire that assesses suicidal ideation in the past two weeks. Items are rated on a 4-point Likert scale (0-3). Items are summed to compute a total score. In the current study, the internal consistency was good ( $\alpha = .89$ ).

***Distress Tolerance Scale (DTS)***. The DTS (Simons & Gaher, 2005) is a 15-item self-report questionnaire that assesses an individual's ability to tolerate distressing emotional experiences. Items are rated on a 5-point Likert scale (1-5). Items are summed to compute a total score. In the current study, the internal consistency was excellent ( $\alpha = .94$ ).

***Overall Distress and Impairment Severity Scale (ODISS)***. The ODISS (Campbell-Sills, Norman, Craske, Sullivan, Lang, Chavira, & Stein, 2009) is a 5-item self-report questionnaire that assesses emotional distress experienced in the last week. Items are rated on a 5-point Likert scale (0-4). Items are summed to compute a total score. In the current study, the internal consistency was good ( $\alpha = .82$ ).

***Interpersonal Needs Questionnaire (INQ)***. The INQ (Van Orden, 2009) is a 15-item self-report measure that assesses feelings of thwarted belongingness and perceived burdensomeness. Items are rated on a 7-point Likert scale (1-7). Items 1-6 are summed to score Perceived Burdensomeness. Items 7, 8, 10, 13, 14, and 15 are reverse scored, and then items 7-15 are summed for Thwarted Belongingness. In the current study, the internal consistency was excellent ( $\alpha = .96$ ) for perceived burdensomeness and good ( $\alpha = .84$ ) for thwarted belongingness.

***Inventory of Statements About Self-Injury (ISAS)***. The ISAS (Klonsky & Glenn, 2009) is a two-part self-report measure that assesses frequency and functions of self-injurious behaviors. The first part of the ISAS assesses 12 NSSI behaviors and asks the participant to estimate the number of times they have performed each behavior. There are five additional questions that assess descriptive and contextual factors of NSSI. Participants who endorse one or more NSSI behaviors then complete the second part of the ISAS, which assesses 13 potential functions for engaging in NSSI. Items are rated on a 3-point Likert scale (0-2). Internal consistency was excellent ( $\alpha = .88$ ; Klonsky & Glenn, 2009). In the current study, the internal consistency was excellent ( $\alpha = .96$ ).

## Procedure

Participants signed up on MTurk to complete the study, and they then were given a link to an online survey platform where they completed an informed consent as well as all of the questionnaires and demographic information. After completion of the questionnaires, participants were given a code to enter into the MTurk system, which indicated that they completed the study and then they were paid for their time.

## CHAPTER IV

### FINDINGS

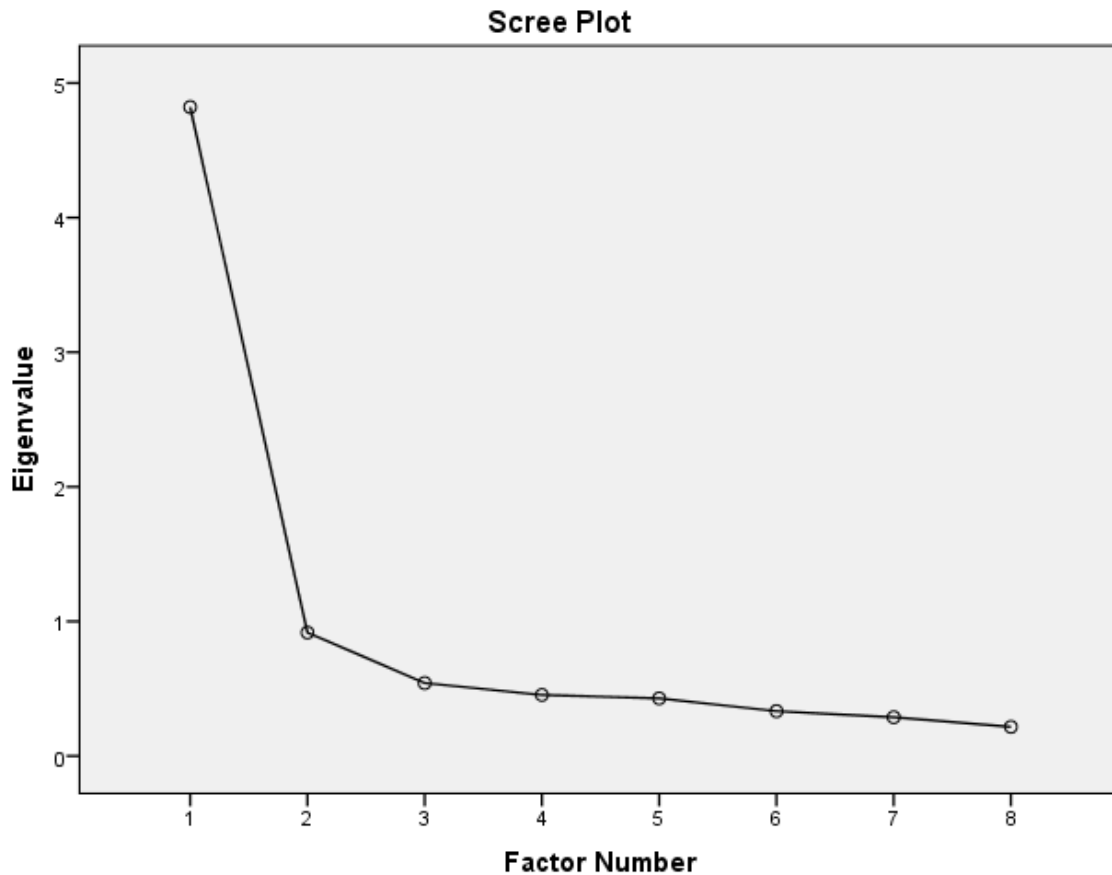
#### Descriptives

The mean age of the sample was 30.1 years old. The range was 19 to 41 years old. The sample was 38.1% female and 60.9% male, with .5% preferring not to respond. The race/ethnicity breakdown is as follows: 1.5% American Indian/Alaska Native, 29.7% Asian, 7.9% African American, .5% Native Hawaiian/Pacific Islander, 58.9% White, and 1.5% not listed.

#### Analyses of Hypotheses

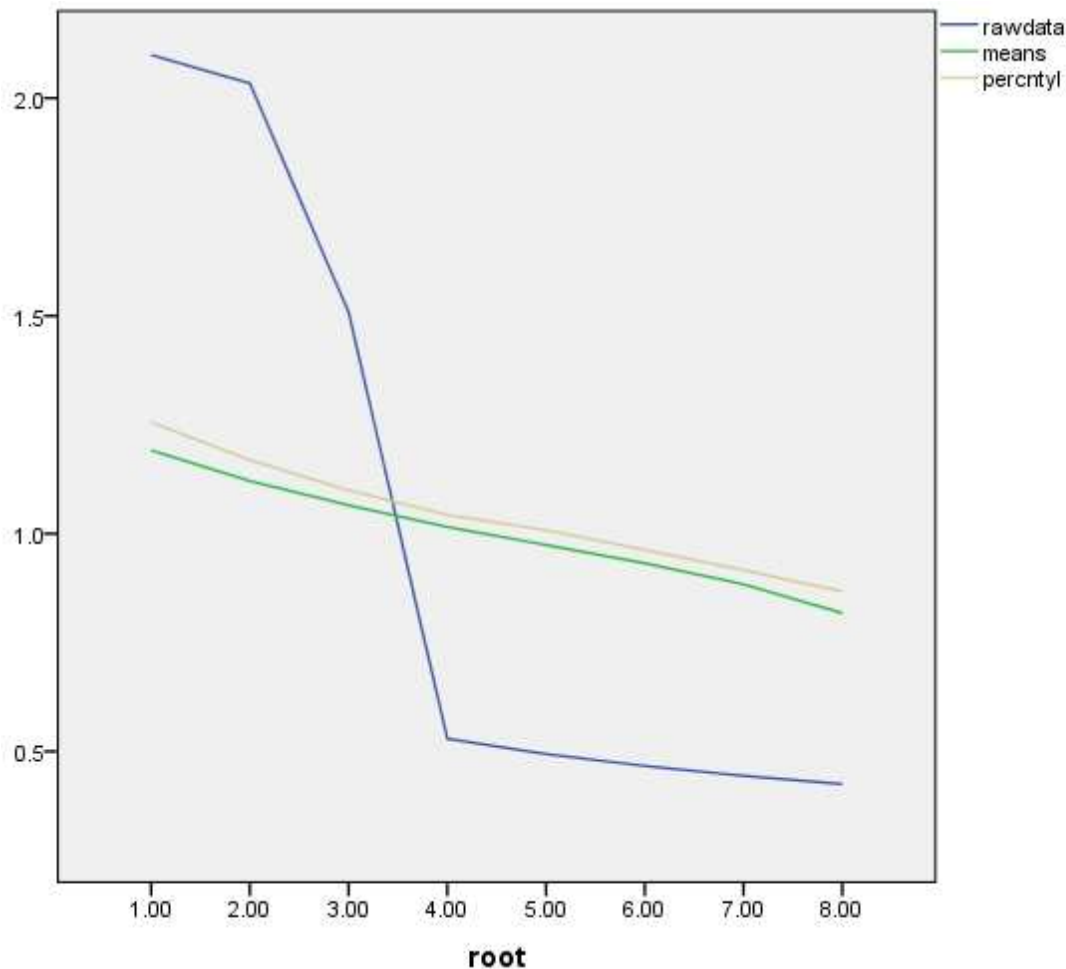
For Hypothesis 1, we conducted an exploratory factor analysis (EFA) and examined Cronbach's alpha for internal consistency of the EEQ. Cronbach's alpha was found to be .85. Without the reverse scored item (Item 4), the Cronbach's alpha would be .92, suggesting potential method variance effects. For the exploratory factor analysis, consistent with recommendations, maximum likelihood was used to extract factors (Fabrigar, Wegener, MacCallum, & Strahan, 1999). To determine the number of factors, both the number of eigenvalues above 1.0 and the break point in a scree plot of eigenvalues were examined. As has been recommended (Costello & Osborne, 2005), we first examined an oblique (oblimin) rotation because we did not have any evidence that any extracted factors (if there were more than one) would be uncorrelated. Items that had a loading of less than .32 on a single factor or more than .32 on multiple factors were considered for removal from the scale (Tabachnick & Fidell, 2001). Item 4 had a loading of .28, suggesting that it should be removed in future studies using the EEQ, which is consistent with the internal

consistency analysis. Similarly, a factor with only 1 or 2 items would result in considering removing those items. For a single factor, the eigenvalue was 4.82; for two factors, the eigenvalue was .92. Therefore, using this method, it appears that a single factor is the best fit. The scree plot also suggests that one factor is appropriate for the EEQ.



A parallel analysis was also used to evaluate the factor structure of the EEQ. This procedure identifies a maximum number of factors by testing the eigenvalues against those produced in 100 randomly generated datasets. Eigenvalues must be larger than those in the random datasets in order to be retained. Parallel analysis suggested a three-factor structure for the EEQ, with eigenvalues of 2.10, 2.03, and 1.51 for the first three factors. Below is the scree plot for the parallel analysis. The first factor accounted for 26.24% of the variance; the second factor 25.42%, and the third factor 18.86%. Factor 1 had items 1, 2, and 3. Factor 2 had items 4, 5, and 6. Factor 3 had items 7 and 8.





For Hypothesis 2, a zero-order correlation between the EEQ and PHQ-9 were examined, which was statistically significant ( $r = .63, p < .001$ ). For Hypothesis 3, the zero-order correlation between the EEQ and the MBI were examined, which was also statistically significant ( $r = .69, p < .001$ ). See Table 2 on page 20 below.

For Hypothesis 4, the MBI emotional exhaustion total score was entered into a hierarchical linear regression predicting PHQ-9 total scores. The model including only this predictor was significant  $R^2 = .28, F(1, 182) = 72.04, p < .001$ . When the total score on the EEQ was entered into the model, the overall model was significant  $R^2 = .41, F(2, 182) = 63.01, p < .001$ , and the EEQ significantly improved the model  $\Delta R^2 = .127, p < .001$ . The EEQ significantly predicted PHQ-9 scores as an individual predictor in this model  $\beta = .60, t(182) = 6.24, p < .001$ .

For Hypothesis 5, the zero-order correlation between the EEQ and Neuroticism scale of the FFMRF, the ERI, and the FEWS ED scales were examined. For Neuroticism, the correlation was statistically significant ( $r = -.45, p < .001$ ). For the

ERI, the correlation was also statistically significant ( $r = .45, p < .001$ ). For the FEWS ED scale, the correlation was also statistically significant ( $r = .61, p < .001$ ). See Table 2 below.

Table 2. Zero-order correlations between the variables

Measure	1.	2.	3.	4.	5.	6.
1. EEQ	-					
2. PHQ-9	.63**	-				
3. MBI	.69**	.53**	-			
4. Neuroticism	-.45**	-.53**	-.35**	-		
5. ERI	.45**	.33**	.33	-.212*	-	
6. FEWS ED	.61**	.55**	.57	-.299*	.363**	-

Note. \*\* =  $p < .001$ ; \* =  $p < .01$ ; PHQ-9 = Patient Health Questionnaire-9; MBI= Maslach Burnout Inventory; Neuroticism = Neuroticism scale of Five Factor Model Rating Form; ERI= Effort Reward Imbalance; FEWS ED= Frankfurt Emotion Work Scales Emotional Dissonance.

### Exploratory Analyses

Correlations between all measures included for exploratory analysis and the EEQ were examined. Measures included the GAD-7; FFMRF Openness, Conscientiousness, Extraversion, and Agreeableness scales; RSQ Brooding and Reflecting scales; HDSQ total score; INQ perceived burdensomeness and thwarted belongingness scales; DTS total score; ODISS total score; and SLIPS total score. In addition, we examined correlations between the EEQ and all subscales of the ISAS.

As expected, the EEQ was positively correlated with symptoms of generalized anxiety, rumination, suicidal ideation, perceived burdensomeness, thwarted belongingness, overall distress and impairment, and anhedonia. It was negatively correlated with distress tolerance. The EEQ was not significantly correlated with Openness, Extraversion, Conscientiousness, or Agreeableness. See Table 3 below. The top row contains the relevant correlations with the EEQ, but the other values are included for the sake of complete data reporting standards.

The EEQ was significantly and positively correlated with all self-harm functions subscales from the ISAS. The EEQ was most strongly correlated with Anti-suicide and Marking Distress functions. See Table 4 below. As with Table 3, the top

row of Table 4 contains the relevant correlations with the EEQ, but the other values are included for the sake of complete data reporting standards.

Table 3. Zero-order correlations between EEQ and exploratory measures.

Measure	1.	2.	3.	4.	5.	6.	.7	8.	9.	10.	11.	12.	13.	14.
1. EEQ	-	.65**	-.07	.06	-.04	.08	.53**	.53**	.63**	.60**	.30**	-.34**	.59**	.56**
2. GAD-7		-	.08	.30**	.09	.25*	.66**	.65**	.69**	.73**	.52**	-.43**	.70**	.69**
3. Openness			-	.58**	.53**	.59**	-.06	-.15*	-.02	-.08	.05	-.04	.01	.10
4. Conscient.				-	.57**	.63**	.17*	-.01	.11	.14	.22*	-.09	.21*	.24**
5. Extraversion					-	.52**	-.02	-.10	-.12	-.12	.08	.05	.02	.00
6. Agreeableness						-	.11	.02	.12	.13	.09	-.04	.19*	.23**
7. RSQ Brooding							-	.78**	.64**	.77**	.40**	-.30**	.61**	.59**
8. RSQ Reflect								-	.56**	.75**	.31**	-.21*	.49**	.53**
9. HDSQ									-	.71**	.32**	-.25**	.68**	.75**
10. INQ-PB										-	.42**	-.32**	.58**	.70**
11. INQ-TB											-	-.40**	.38**	.46**
12. DTS												-	-.36**	-.42**
13. ODISS													-	.72**
14. SLIPS														-

Note. \*\* =  $p < .001$ ; \*  $.001 < p < .05$ ; GAD-7= Generalized Anxiety Disorder Scale 7; Openness= FFMRF Openness scale; Conscient.= FFMRF Conscientiousness scale; Extraversion= FFMRF Extraversion scale; Agreeableness= FFMRF Agreeableness scale; RSQ Brooding= Response Styles Questionnaire Brooding scale; RSQ Reflect= Response Styles Questionnaire Reflecting scale; HDSQ= Hopelessness Depression Symptom Questionnaire- Suicidality Subscale; INQ-PB= Interpersonal Needs Questionnaire Perceived Burdensomeness scale; INQ-TB= Interpersonal Needs Questionnaire Thwarted Belongingness scale; DTS= Distress Tolerance Scale; ODISS= Overall Distress and Impairment Severity Scale; SLIPS= Specific Loss of Interest and Pleasure Scale.

Measure	1.	2.	3.	4.	5.	6.	.7	8.	9.	10.	11.	12.	13.	14.
1. EEQ	-	.34**	.34**	.39**	.34**	.35**	.43**	.32**	.37**	.28**	.40**	.31**	.38**	.36**
2. AR		-	.45**	.47**	.48**	.51**	.47**	.51**	.45**	.46**	.51**	.40**	.45**	.36**
3. IB			-	.45**	.59**	.64**	.71**	.65**	.67**	.71**	.66**	.68**	.70**	.70**
4. SP				-	.42**	.49**	.51**	.48**	.54**	.45**	.50**	.57**	.45**	.52**
5. SC					-	.53**	.56**	.69**	.61**	.58**	.61**	.58**	.70**	.61**
6. AD						-	.55**	.62**	.66**	.64**	.62**	.66**	.64**	.61**
7. AS							-	.60**	.59**	.59**	.61**	.63**	.69**	.61**
8. PB								-	.67**	.68**	.57**	.70**	.72**	.66**
9. II									-	.63**	.60**	.69**	.75**	.67**
10. T										-	.57**	.65**	.66**	.73**
11. MD											-	.54**	.66**	.62**
12. R												-	.67**	.72**
13. A													-	.73**
14. SS														-

Table 4. Zero-order correlations between EEQ and ISAS subscales.

Note: \*\*=  $p < .001$ ; EEQ= Emotional Exhaustion Questionnaire; AR= Affect Regulation; IB= Interpersonal Boundaries; SP= Self-punishment; SC= Self-care; AD= Anti-Dissociation/Feeling Generation; AS=Anti-Suicide; SS=Sensation Seeking; PB= Peer Bonding; II= Interpersonal Influence; T=Toughness, MD= Marking Distress; R=Revenge; A=Autonomy.



## CHAPTER V

### CONCLUSION

#### Discussion

Overall, the EEQ is a highly internally consistent measure of emotional exhaustion with a single interpretable factor and is associated with related constructs in expected ways. Specifically, results supported Hypothesis 1, indicating that the EEQ has high internal consistency and is best described by a single factor. Both of these analyses suggested that the EEQ would be improved by removing the reverse scored item (Item 4). This likely indicates a method variance effect since this item was the only reverse scored item. It should be noted that a parallel analysis suggested 3 factors rather than one. However, there were a several items with multiple factor loadings which would result in factors with fewer than 3 items, and the scales were not easily interpretable as unique subscales. Given the high internal consistency and the single factor indicated by the maximum likelihood extraction eigenvalues and scree plot, a one factor solution appears to be most parsimonious and appropriate.

As expected, the EEQ was positively and significantly correlated with depression symptom severity, which supports Hypothesis 2. This provides evidence of convergent validity for the EEQ. It also establishes a relationship between depression and emotional exhaustion outside of the context of burnout and job satisfaction. This fits with existing literature that suggests that emotional exhaustion is related to depression but that they are distinct constructs

(Brenninkmeyer, Van Yperen, & Buunk, 2001; Glass, McKnight, & Valdimarsdottir, 1993).

Future research should seek to clarify the direction of this relationship.

Hypothesis 3 was also supported as the EEQ was significantly and positively correlated with emotional exhaustion as measured by the MBI. This also provides evidence of convergent validity for the EEQ because it is related as expected to an established measure of emotional exhaustion. However, the EEQ has a wider application outside of work contexts and seems to more clearly measure emotional exhaustion as compared to the MBI, which includes some items that seem to assess other constructs.

The results also supported Hypothesis 4 in that the EEQ predicted variance in depression symptom severity above and beyond MBI emotional exhaustion in a hierarchical regression. This is evidence that the EEQ is at least somewhat distinct from the MBI measure of emotional exhaustion and offers incremental utility in predicting depression. The EEQ also may be an improvement on the MBI measure since it may be a more accurate depiction of the construct of emotional exhaustion.

Results supported Hypothesis 5, specifically greater levels of Neuroticism were associated with increased levels of emotional exhaustion. Additionally, increased emotional exhaustion was associated with greater effort-reward imbalance and more emotional dissonance. These findings are consistent with prior research that suggested the most robust relationship between personality and emotional exhaustion as neuroticism (Alarcon, Eschleman, & Bowling, 2009; Kokkinos, 2007). Also, it is consistent with the idea that a greater effort-reward imbalance leads to increases in emotional exhaustion (Wright & Cropanzano, 1998). Additionally, it is consistent with the findings that engaging in emotionally dissonant behavior leads to an increase in emotional exhaustion (Kenworthy, Fay, Frame, & Petree, 2014). These relationships should be examined in future research to determine the direction of these relationships.



Models of emotion regulation may help provide a conceptual understanding of the relationship between depression and emotional exhaustion. As described in the introduction, emotional dissonance is conflict between experienced and expressed emotions. In work contexts, emotional dissonance may manifest in *surface acting* in which employees suppress experienced negative emotions and express positive emotions (e.g., when interacting with a demanding or difficult customer. Surface acting at work results in depleted emotional resources and emotional exhaustion in individuals who are forced to engage in this activity (Hülshager, Alberts, Feinholdt, & Lang, 2013). Individuals who are depressed often engage in suppression-based emotion regulation strategies, which are generally ineffective in the long-term regulation of negative affect (Ehring, Tuschen-Caffier, Schnülle, Fischer, & Gross, 2010; Gross & John, 2003). Combining these models would suggest that increased depression symptoms would be associated with increased use of suppression-based emotion regulation strategies such as surface acting, which leads to emotional dissonance. Emotional dissonance then leads to emotional exhaustion. Results from the current study are consistent with such a conceptual model, but additional longitudinal or experimental research will be needed to better understand the directionality and causality of these relationships.

Exploratory analyses provided additional evidence for the convergent and discriminant validity of the EEQ. For convergent validity, the EEQ was related in the expected direction to anxiety, brooding and reflecting rumination, suicidal ideation, perceived burdensomeness, thwarted belongingness, distress tolerance, overall distress and impairment, and anhedonia. While none of these relationships were specifically predicted, they make sense conceptually. Future work will be needed to better understand the directionality and potential causality of these relationships.

For discriminant validity, the EEQ was not related to Openness, Extraversion, Agreeableness, or Conscientiousness on the Five Factor Model Rating Form. This is interesting because a meta-analysis of personality characteristics and burnout found that extraversion, conscientiousness, and

agreeableness were significantly and negatively related to burnout (Alarcon, Eschleman, & Bowling, 2009). Additionally, in a sample of teachers, high scores in agreeableness were found to be a protective factor for burnout, while low scores were found to be a vulnerability factor (Cano-García, Padilla-Muñoz, & Carrasco-Ortiz, 2005). However, the current study did not find any relationships between the EEQ and any of the personality characteristics except neuroticism. This may mean that the EEQ potentially only covers more extreme versions of emotional exhaustion since it was unrelated to other personality factors that seem to have some buffering effects on the experience of emotional exhaustion. Because the EEQ does not mention working or jobs, it may not be capturing the aspects of emotional exhaustion that are related to things like conscientiousness, agreeableness, and extraversion. Additionally, since it appears that the MBI might cover some constructs that are not directly related to emotional exhaustion, this could explain this lack of relationship found with the EEQ which we believe more directly measures emotional exhaustion. The EEQ was significantly related to all of the functions of self-harm as measured by the ISAS.

#### Limitations and Future Directions

One of the major limitations of this study is that it is entirely self-report. It relies on participants to be accurate and thoughtful in their reporting of current and past events related to mental health. Another limitation was that the EEQ was accidentally administered without the final item of the scale. Additionally, no causation can be inferred because of the cross-sectional design. Another limitation was that there was no correction done for multiple comparisons in the exploratory analysis, so it is possible that some relationships were due to chance and do not actually represent true relationships. Additionally, the EEQ was designed in a way to measure a narrow conceptualization of emotional exhaustion, so it would be difficult to extract more than one factor from the measure. Future research should employ a longitudinal design to examine the temporal effects of emotional exhaustion on other variables of interest, such as depression. For example,

does depression lead to emotional exhaustion, does emotional exhaustion lead to depression, or is there a reciprocal relationship? Future research with the EEQ should utilize additional measures to more clearly demonstrate discriminant validity. Also, it would be beneficial to use the EEQ in clinical populations to help demonstrate greater external validity and clinical utility.

### Strengths

One of the major strengths of this study is that it is the first to our knowledge to examine emotional exhaustion outside the context of burnout and job satisfaction. Additionally, this study utilized an adult sample from MTurk, so it may be more representative than a typical undergraduate student sample. The brief nature of the EEQ allows it to be quickly administered, scored, and interpreted. Also, this study had a large sample size, which increases our confidence in the internal consistency and factor structure of the EEQ (c.f., Costello & Osborne, 2005).

### Conclusions

The EEQ is a brief, face-valid, internally consistent measure of emotional exhaustion that is comprised of a single factor. The EEQ is the first broad measure of emotional exhaustion outside burnout and occupational contexts. Given the relationship between emotional exhaustion and various types of psychopathology (depression, anxiety, suicidal ideation, NSSI, etc.), the EEQ may be useful for further exploring these relationships and, in the future, identifying emotional exhaustion as a potential target for intervention.

## REFERENCES

- Abraham, R. (2000). The role of job control as a moderator of emotional dissonance and emotional intelligence–outcome relationships. *The Journal of Psychology, 134*(2), 169-184.
- Adams, G. A., & Buck, J. (2010). Social stressors and strain among police officers: It’s not just the bad guys. *Criminal Justice and Behavior, 37*(9), 1030-1040.
- Alarcon, G., Eschleman, K. J., & Bowling, N. A. (2009). Relationships between personality variables and burnout: A meta-analysis. *Work & stress, 23*(3), 244-263.
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders (DSM-5®)*. American Psychiatric Pub.
- Bakker, A. B., Van Der Zee, K. I., Lewig, K. A., & Dollard, M. F. (2006). The relationship between the big five personality factors and burnout: A study among volunteer counselors. *The Journal of social psychology, 146*(1), 31-50.
- Becker, J. L., Milad, M. P., & Klock, S. C. (2006). Burnout, depression, and career satisfaction: cross-sectional study of obstetrics and gynecology residents. *American journal of obstetrics and gynecology, 195*(5), 1444-1449.

- Brenninkmeyer, V., Van Yperen, N. W., & Buunk, B. P. (2001). Burnout and depression are not identical twins: is decline of superiority a distinguishing feature?. *Personality and individual differences, 30*(5), 873-880.
- Campbell-Sills, L., Norman, S. B., Craske, M. G., Sullivan, G., Lang, A. J., Chavira, D. A., & Stein, M. B. (2009). Validation of a brief measure of anxiety-related severity and impairment: the Overall Anxiety Severity and Impairment Scale (OASIS). *Journal of affective disorders, 112*(1-3), 92-101.
- Cano-García, F. J., Padilla-Muñoz, E. M., & Carrasco-Ortiz, M. Á. (2005). Personality and contextual variables in teacher burnout. *Personality and Individual differences, 38*(4), 929-940.
- Clark, L. A., & Watson, D. (1995). Constructing validity: Basic issues in objective scale development. *Psychological assessment, 7*(3), 309.
- Costello, A. B., & Osborne, J. (2005). Practical assessment, research & evaluation. *The Journal of Consumer Marketing, 10*(7), 1-9.
- Diefendorff, J. M., Erickson, R. J., Grandey, A. A., & Dahling, J. J. (2011). Emotional display rules as work unit norms: a multilevel analysis of emotional labor among nurses. *Journal of occupational health psychology, 16*(2), 170.
- Ehring, T., Tuschen-Caffier, B., Schnülle, J., Fischer, S., & Gross, J. J. (2010). Emotion regulation and vulnerability to depression: spontaneous versus instructed use of emotion suppression and reappraisal. *Emotion, 10*(4), 563.
- Fabrigar, L. R., Wegener, D. T., MacCallum, R. C., & Strahan, E. J. (1999). Evaluating the use of exploratory factor analysis in psychological research. *Psychological methods, 4*(3), 272.

- Glass, D. C., McKnight, J. D., & Valdimarsdottir, H. (1993). Depression, burnout, and perceptions of control in hospital nurses. *Journal of consulting and clinical Psychology, 61*(1), 147.
- Grandey, A. A. (2003). When “the show must go on”: Surface acting and deep acting as determinants of emotional exhaustion and peer-rated service delivery. *Academy of management Journal, 46*(1), 86-96.
- Greenberg, P. E., Fournier, A. A., Sisitsky, T., Pike, C. T., & Kessler, R. C. (2015). The economic burden of adults with major depressive disorder in the United States (2005 and 2010). *The Journal of clinical psychiatry, 76*(2), 155-162.
- Gross, J. J., & John, O. P. (2003). Individual differences in two emotion regulation processes: Implications for affect, relationships, and well-being. *Journal of Personality and Social Psychology, 85*(2), 348-362. <http://dx.doi.org/10.1037/0022-3514.85.2.348>
- Harrington, R. (2001). Depression, suicide and deliberate self-harm in adolescence. *British Medical Bulletin, 57*(1), 47-60.
- Hülshager, U. R., Alberts, H. J., Feinholdt, A., & Lang, J. W. (2013). Benefits of mindfulness at work: the role of mindfulness in emotion regulation, emotional exhaustion, and job satisfaction. *Journal of Applied Psychology, 98*(2), 310.
- Jackson, S. E., Schwab, R. L., & Schuler, R. S. (1986). Toward an understanding of the burnout phenomenon. *Journal of applied psychology, 71*(4), 630.
- Kendler, K. S., Kuhn, J., & Prescott, C. A. (2004). The interrelationship of neuroticism, sex, and stressful life events in the prediction of episodes of major depression. *American Journal of Psychiatry, 161*(4), 631-636.

- Kessler, R. C., Berglund, P., Demler, O., Jin, R., Merikangas, K. R., & Walters, E. E. (2005). Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication. *Archives of general psychiatry*, 62(6), 593-602.
- Kokkinos, C. M. (2007). Job stressors, personality and burnout in primary school teachers. *British Journal of Educational Psychology*, 77(1), 229-243.
- Kroenke, K., Spitzer, R. L., & Williams, J. B. (2001). The PHQ-9: validity of a brief depression severity measure. *Journal of general internal medicine*, 16(9), 606-613.
- Kroenke, K., Spitzer, R. L., Williams, J. B., & Löwe, B. (2010). The patient health questionnaire somatic, anxiety, and depressive symptom scales: a systematic review. *General hospital psychiatry*, 32(4), 345-359.
- Kühner, C., Huffziger, S., & Nolen-Hoeksema, S. (2007). *Response styles questionnaire: RSQ-D*. Hogrefe.
- Lambert, K. G. (2006). Rising rates of depression in today's society: consideration of the roles of effort-based rewards and enhanced resilience in day-to-day functioning. *Neuroscience & Biobehavioral Reviews*, 30(4), 497-510.
- Leiter, M. P., & Durup, J. (1994). The discriminant validity of burnout and depression: a confirmatory factor analytic study. *Anxiety, stress, and coping*, 7(4), 357-373.
- Leiter, M. P. (2017). Burnout as a developmental process: Consideration of models. In *Professional burnout* (pp. 237-250). Routledge.
- Maslach, C., & Jackson, S. E. (1981). The measurement of experienced burnout. *Journal of organizational behavior*, 2(2), 99-113.

- Maslach, C., & Jackson, S. E. (1986). *Maslach Burnout Inventory—Manual* (2nd ed.). Palo Alto, CA: Consulting Psychologists Press.
- Maslach, C., Jackson, S. E., Leiter, M. P., Schaufeli, W. B., & Schwab, R. L. (1986). *Maslach burnout inventory* (Vol. 21, pp. 3463-3464). Palo Alto, CA: Consulting Psychologists Press.
- Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. *Annual review of psychology*, 52(1), 397-422.
- Mullins-Sweatt, S. N., Jamerson, J. E., Samuel, D. B., Olson, D. R., & Widiger, T. A. (2006). Psychometric properties of an abbreviated instrument of the five-factor model. *Assessment*, 13(2), 119-137.
- O'Neill, J. W., & Xiao, Q. (2010). Effects of organizational/occupational characteristics and personality traits on hotel manager emotional exhaustion. *International Journal of Hospitality Management*, 29(4), 652-658.
- Piccinelli, M., & Wilkinson, G. (2000). Gender differences in depression: Critical review. *The British Journal of Psychiatry*, 177(6), 486-492.
- Rohland, B. M., Kruse, G. R., & Rohrer, J. E. (2004). Validation of a single-item measure of burnout against the Maslach Burnout Inventory among physicians. *Stress and Health: Journal of the International Society for the Investigation of Stress*, 20(2), 75-79.
- Schaufeli, W. B., Bakker, A. B., Hoogduin, K., Schaap, C., & Kladler, A. (2001). On the clinical validity of the Maslach Burnout Inventory and the Burnout Measure. *Psychology & health*, 16(5), 565-582.



- Schutte, N., Toppinen, S., Kalimo, R., & Schaufeli, W. (2000). The factorial validity of the Maslach Burnout Inventory-General Survey (MBI-GS) across occupational groups and nations. *Journal of Occupational and Organizational psychology*, 73(1), 53-66.
- Seidler, A., Thinschmidt, M., Deckert, S., Then, F., Hegewald, J., Nieuwenhuijsen, K., & Riedel-Heller, S. G. (2014). The role of psychosocial working conditions on burnout and its core component emotional exhaustion—a systematic review. *Journal of occupational medicine and toxicology*, 9(1), 10.
- Siegrist, J. (1996). Adverse health effects of high effort/low reward conditions. *Journal of Occupational Health Psychology*. 1:27–41
- Spitzer, R. L., Kroenke, K., Williams, J. B., & Löwe, B. (2006). A brief measure for assessing generalized anxiety disorder: the GAD-7. *Archives of internal medicine*, 166(10), 1092-1097.
- Tabachnick, B. G., & Fidell, L. S. (2001). *Using Multivariate Statistics*. Boston: Allyn and Bacon.
- Widiger, T. (2004). Five factor model rating form (FFMRF). Retrieved May, 19, 2009.
- Winer, E. S., Veilleux, J. C., & Ginger, E. J. (2014). Development and validation of the Specific Loss of Interest and Pleasure Scale (SLIPS). *Journal of Affective Disorders*, 152, 193-201.
- Wright, T. A., & Bonett, D. G. (1997). The contribution of burnout to work performance. *Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior*, 18(5), 491-499.
- Wright, T. A., & Cropanzano, R. (1998). Emotional exhaustion as a predictor of job performance and voluntary turnover. *Journal of applied psychology*, 83(3), 486.

Zapf, D., Vogt, C., Seifert, C., Mertini, H., & Isic, A. (1999). Emotion work as a source of stress: The concept and development of an instrument. *European Journal of work and organizational psychology*, 8(3), 371-400.

	Not at all	Several days	More than half the days	Nearly every day
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed, or hopeless	0	1	2	3
3. Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself-or that you are a failure or have let yourself or your family down	0	1	2	3
7. Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8. Moving or speaking so slowly that other people could have noticed? Or the opposite—being so fidgety or restless that you have been moving around a lot more than usual	0	1	2	3
9. Thoughts that you would be better off dead or of hurting yourself in some way	0	1	2	3

APPENDICES

APPENDIX A: Study Measures

**PHQ-9**

**Over the last 2 weeks, how often have you been bothered by the following problems?**

**If you checked off any problems, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?  
Circle one:**

Not difficult at all

Somewhat difficult

Very difficult

Extremely difficult

## Maslach Burnout Inventory

Please answer this questionnaire about your feelings regarding your current job. If you are not currently employed, please answer the question about your most recent job.

0- Never, never

1- Seldom, few times a year or less

2- Now and then, few times a month or less

3- Regular, few times a month

4- Often, once a week

5- Very often, few times a week

6 - Always, every day

1. I feel emotionally drained by my work
2. I feel used up at the end of the day
3. I feel fatigued when I have to get up in the morning to face another day on the job
4. Working with people all day is really a strain for me
5. I feel 'burned out' from my work
6. I feel frustrated by my job
7. I feel I'm working too hard in my job
8. I feel like I'm at the end of my rope

## EEQ

Below is a list of feelings that people sometimes have. Read each item to determine how well it describes your recent feelings and experiences. Then select the option that best describes how much you have felt or experienced things this way during the past seven days, including today.

<b><u>In the last 7 days</u>, how much have you felt...</b>	<b>Not at all</b>	<b>A little bit</b>	<b>Moderately</b>	<b>Quite a bit</b>	<b>Extremely</b>
1. Emotionally exhausted	0	1	2	3	4
2. Tired of feeling upset, distressed, anxious, sad, etc.	0	1	2	3	4
3. Emotionally worn out	0	1	2	3	4
4. That you had plenty of emotional resources left	0	1	2	3	4
5. Emotionally drained	0	1	2	3	4
6. Pushed to your limits emotionally	0	1	2	3	4
7. Emotionally depleted	0	1	2	3	4
8. Emotionally worn down	0	1	2	3	4
9. Emotionally fatigued	0	1	2	3	4

*Note:* As indicated in the Methods section, due to an administration error, only the first 8 items were administered in this study.

## Five Factor Model Rating Form

Please describe yourself on a 1 to 5 scale on each of the following 30 personality traits, where 1 is extremely low (i.e., extremely lower than the average person), 2 is low, 3 is neither high nor low (i.e., does not differ from the average person), 4 is high and 5 is extremely high. Use any number from 1 to 5. Please provide a rating for all 30 traits.

For example on the first trait (anxiousness), a score of 1 would indicate that you think you are extremely low in anxiousness (i.e., relaxed, unconcerned, cool). A score of 2 would indicate that you think you are low in anxiousness (lower than the average person, but not extremely low). A score of 5 would indicate that you think you are extremely high in anxiousness (i.e., fearful, apprehensive); a score of 4 would indicate you think you are higher than the average person in anxiousness, but not extremely high. A score of 3 would indicate that you think you are neither high nor low in anxiousness (does not differ from the average person) or that you are unable to decide. Circle the number that applies to the individual for each of the 30 traits.

**5= Extremely high 4= High 3= Neither high nor low 2= Low 1=Extremely Low**

Neuroticism vs. Emotional Stability

1. Anxiousness (fearful, apprehensive) --- (relaxed, unconcerned, cool)
2. Angry Hostility (angry, bitter) --- (even-tempered)
3. Depressiveness (pessimistic, glum) --- (optimistic)
4. Self-consciousness (timid, embarrassed) --- (self-assured, glib, shameless)
5. Impulsivity (tempted, urgency) --- (controlled, restrained)
6. Vulnerability (helpless, fragile) --- (clear-thinking, fearless, unflappable)

Extraversion vs. Introversion

7. Warmth (cordial, affectionate, attached) --- (cold, aloof, indifferent)
8. Gregariousness (sociable, outgoing) --- (withdrawn, isolated)
9. Assertiveness (dominant, forceful) --- (unassuming, quiet, resigned)
10. Activity (vigorous, energetic, active) --- (passive, lethargic)
11. Excitement-Seeking (reckless, daring) --- (cautious, monotonous, dull)
12. Positive Emotions (high-spirited) --- (placid, anhedonic)

Openness vs. Closedness to one's own Experience

13. Fantasy (dreamer, unrealistic, imaginative) --- (practical, concrete)

- 14. Aesthetics (aberrant interests, aesthetic) --- (uninvolved, no aesthetic interests)
- 15. Feelings (self-aware) --- (constricted, unaware, alexythymic)
- 16. Actions (unconventional, eccentric) --- (routine, predictable, habitual, stubborn)
- 17. Ideas (strange, odd, peculiar, creative) --- (pragmatic, rigid)
- 18. Values (permissive, broad-minded) --- (traditional, inflexible, dogmatic)

#### Agreeableness vs. Antagonism

- 19. Trust (gullible, naïve, trusting) --- (skeptical, cynical, suspicious, paranoid)
- 20. Straightforwardness (confiding, honest) --- (cunning, manipulative, deceptive)
- 21. Altruism (sacrificial, giving) --- (stingy, selfish, greedy, exploitative)
- 22. Compliance (docile, cooperative) --- (oppositional, combative, aggressive)
- 23. Modesty (meek, self-effacing, humble) --- (confident, boastful, arrogant)
- 24. Tender-Mindedness (soft, empathetic) --- (tough, callous, ruthless)

#### Conscientiousness vs. Undependability

- 25. Competence (perfectionistic, efficient) ---- (lax, negligent)
- 26. Order (ordered, methodical, organized) --- (haphazard, disorganized, sloppy)
- 27. Dutifulness (rigid, reliable, dependable) --- (casual, undependable, unethical)
- 28. Achievement (workaholic, ambitious) --- (aimless, desultory)
- 29. Self-Discipline (dogged, devoted) --- (hedonistic, negligent)
- 30. Deliberation (cautious, ruminative, reflective) --- (hasty, careless, rash)



## Frankfurt Emotion Work Scales

1. How often do you have to display emotions that do not agree with your true feelings?
2. How often do you feel like you have to display emotions that do not agree with your actual feelings towards other people?
3. How often do you have to suppress emotions in order to appear neutral on the outside?
4. How often do you have to display pleasant emotions (e.g., friendliness) or unpleasant emotions (e.g., strictness) on the outside, while actually feeling different inside?

## Effort Reward Imbalance

Effort items:

1. I have constant pressure in my life due to heavy demands at school, work, or with family.
2. I have many interruptions and disturbances that keep me from getting ahead in life.
3. Over the past few years, my life has become more and more demanding.

Reward items:

4. I receive the respect I deserve from people in my life.
5. Considering all my efforts in life, I receive the respect and prestige I deserve.
6. Considering all my efforts in life, my job prospects are good.
7. Considering all my efforts in life, my income is good.

## **ODISS**

The following items ask about your emotional distress. Emotional distress includes anxiety, fear, sadness, depression, stress, and generally feeling emotionally upset. For each item indicate the answer that best describes your experience over the past week

**1. In the past week, how often have you felt emotionally distressed?**

- 0 *Never*. No emotional distress in the past week.
- 1 *Infrequent* emotional distress. Felt distressed a few times.
- 2 *Occasional* emotional distress. Felt distressed as much of the time as not.
- 3 *Frequent* emotional distress. Felt distressed most of the time.
- 4 *Constant* emotional distress. Felt distressed all of the time.

**2. In the past week, when you have felt emotionally distressed, how intense or severe was your distress?**

- 0 *Little or none*: emotional distress was absent or barely noticeable.
- 1 *Mild*: emotional distress was at a low level.
- 2 *Moderate*: emotional distress was at a medium level.
- 3 *Severe*: emotional distress was intense.
- 4 *Extreme*: emotional distress was overwhelming.

**3. In the past week, how often did you avoid situations, places, objects, or activities because of your emotional distress?**

- 0 *Never*: I never avoided places, situation, activities, or things because of emotional distress.
- 1 *Infrequent*: I avoided some things once in a while. My lifestyle is not affected.
- 2 *Occasional*: I avoided some things about half the time. My lifestyle is only changed in minor ways by my avoidance.
- 3 *Frequent*: I avoided things most of the time. I have made significant changes in my life to avoid things.
- 4 *Constant*: I have avoided things pretty much all of the time. Avoidance has taken over my life.

**4. In the past week, how much did your emotional distress interfere with your ability to do the things you needed to do at work, at school, or at home?**

- 0 *Little or none*: no interference at work, home, or school from anxiety.
- 1 *Mild*: emotional distress caused some interference. Things are difficult, but everything that needed to be done got done.
- 2 *Moderate*: emotional distress definitely interfered with tasks. Most things got done but not as well as in the past.
- 3 *Severe*: emotional distress really challenged my ability to get things done. Some things got done, but many things did not.
- 4 *Extreme*: emotional distress was incapacitating. I was unable to complete tasks at all.

**5. In the past week, how much did your emotional distress interfere with your social life and relationships?**

- 0 *Little or none*: emotional distress did not affect my relationships.
- 1 *Mild*: emotional distress slightly interfered with my relationships but overall my social life was still fulfilling.
- 2 *Moderate*: emotional distress interfered some with my social life but I still socialized sometimes.

- 3 *Severe*: my friendships and other relationships have suffered a lot because of my emotional distress.
- 4 *Extreme*: emotional distress has completely disrupted my social activities. All of my relationships have suffered.

**INVENTORY OF STATEMENTS ABOUT SELF-INJURY (ISAS) – SECTION I. BEHAVIORS**

This questionnaire asks about a variety of self-harm behaviors. Please only endorse a behavior if you have done it intentionally (i.e., on purpose) and without suicidal intent (i.e., not for suicidal reasons).

---

**1. Please estimate the number of times in your life you have intentionally (i.e., on purpose) performed each type of non-suicidal self-harm (e.g., 0, 10, 100, 500):**

---

Cutting	_____	Severe Scratching	_____
Biting	_____	Banging or Hitting Self	_____
Burning	_____	Interfering w/ Wound Healing (e.g., picking scabs)	_____
Carving	_____	Rubbing Skin Against Rough Surface	_____
Pinching	_____	Sticking Self w/ Needles	_____
Pulling Hair	_____	Swallowing Dangerous Substances	_____
Other _____,	_____		

\*\*\*\*\*

***Important:* If you have performed one or more of the behaviors listed above, please complete the final part of this questionnaire. If you have not performed any of the behaviors listed above, you are done with this particular questionnaire and should continue to the next.**

\*\*\*\*\*

---

**2. If you feel that you have a *main* form of self-harm, please circle the behavior(s) on the first page above that you consider to be your main form of self-harm.**

---

---

**3. At what age did you:**

---

First harm yourself? \_\_\_\_\_ Most recently harm yourself? \_\_\_\_\_  
(approximate date – month/date/year)

---

**4. Do you experience physical pain during self-harm?**

---

Please circle a choice: YES SOMETIMES NO

---

**5. When you self-harm, are you alone?**

---

Please circle a choice: YES SOMETIMES NO

---

**6. Typically, how much time elapses from the time you have the urge to self-harm until you act on the urge?**

---

Please circle a choice:

< 1 hour

1 - 3 hours

3 - 6 hours

6 - 12 hours

12 - 24 hours

> 1 day

---

**7. Do/did you want to stop self-harming?**

---

Please circle a choice:

YES

NO



## INVENTORY OF STATEMENTS ABOUT SELF-INJURY (ISAS) – SECTION II. FUNCTIONS

Name: \_\_\_\_\_

Date: \_\_\_\_\_

---

### **Instructions**

This inventory was written to help us better understand the experience of non-suicidal self-harm. Below is a list of statements that may or may not be relevant to your experience of self-harm. Please identify the statements that are most relevant for you:

- Circle **0** if the statement **not relevant** for you at all
- Circle **1** if the statement is **somewhat relevant** for you
- Circle **2** if the statement is **very relevant** for you

<b>“When I self-harm, I am ...</b>	<b><u>Response</u></b>		
1. ... calming myself down	0	1	2
2. ... creating a boundary between myself and others	0	1	2
3. ... punishing myself	0	1	2
4. ... giving myself a way to care for myself (by attending to the wound)	0	1	2
5. ... causing pain so I will stop feeling numb	0	1	2

6. ... avoiding the impulse to attempt suicide	0	1	2
7. ... doing something to generate excitement or exhilaration	0	1	2
8. ... bonding with peers	0	1	2
9. ... letting others know the extent of my emotional pain	0	1	2
10. ... seeing if I can stand the pain	0	1	2
11. ... creating a physical sign that I feel awful	0	1	2
12. ... getting back at someone	0	1	2
13. ... ensuring that I am self-sufficient	0	1	2
14. ... releasing emotional pressure that has built up inside of me	0	1	2
15. ... demonstrating that I am separate from other people	0	1	2
16. ... expressing anger towards myself for being worthless or stupid	0	1	2

---

**Response Key:** 0 – not relevant, 1 – somewhat relevant, 2 – very relevant

**“When I self-harm, I am ...**

17. ... creating a physical injury that is easier to care for than my emotional distress	0	1	2
18. ... trying to feel something (as opposed to nothing) even if it is physical pain	0	1	2
19. ... responding to suicidal thoughts without actually attempting suicide	0	1	2
20. ... entertaining myself or others by doing something extreme	0	1	2
21. ... fitting in with others	0	1	2
22. ... seeking care or help from others	0	1	2
23. ... demonstrating I am tough or strong	0	1	2
24. ... proving to myself that my emotional pain is real	0	1	2
25. ... getting revenge against others	0	1	2
26. ... demonstrating that I do not need to rely on others for help	0	1	2
27. ... reducing anxiety, frustration, anger, or other overwhelming emotions	0	1	2
28. ... establishing a barrier between myself and others	0	1	2
29. ... reacting to feeling unhappy with myself or disgusted with myself	0	1	2
30. ... allowing myself to focus on treating the injury, which can be gratifying or satisfying	0	1	2
31. ... making sure I am still alive when I don't feel real	0	1	2
32. ... putting a stop to suicidal thoughts	0	1	2

33. ... pushing my limits in a manner akin to skydiving or other extreme activities	0	1	2
34. ... creating a sign of friendship or kinship with friends or loved ones	0	1	2
35. ... keeping a loved one from leaving or abandoning me	0	1	2
36. ... proving I can take the physical pain	0	1	2
37. ... signifying the emotional distress I'm experiencing	0	1	2
38. ... trying to hurt someone close to me	0	1	2
39. ... establishing that I am autonomous/independent	0	1	2

---

**Response Key:** 0 – not relevant, 1 – somewhat relevant, 2 – very relevant

(Optional) In the space below, please list any statements that you feel would be more accurate for you than the ones listed above:

## HDSQ-SS

Please read all of the statements in a given group. Check the one statement in each group that describes you best for the past ***two weeks***. If several statements in a group seem to apply to you, pick the one with the higher number. *Be sure to read all of the statements in each group before making your choice.*

### (A)

- 0 I do not have thoughts of killing myself.
- 1 Sometimes I have thoughts of killing myself.
- 2 Most of the time I have thoughts of killing myself.
- 3 I always have thoughts of killing myself.

### (B)

- 0 I am not having thoughts about suicide.
- 1 I am having thoughts about suicide but have not formulated any plans.
- 2 I am having thoughts about suicide and am considering possible ways of doing it.
- 3 I am having thoughts about suicide and have formulated a definite plan.

### (C)

- 0 I am not having thoughts about suicide.
- 1 I am having thoughts about suicide but have these thoughts completely under my control.
- 2 I am having thoughts about suicide but have these thoughts somewhat under my control.
- 3 I am having thoughts about suicide but have little or no control over these thoughts.

### (D)

- 0 I am not having impulses to kill myself.
- 1 In some situations I have impulses to kill myself.
- 2 In most situations I have impulses to kill myself.
- 3 In all situations I have impulses to kill myself.

## DTS

Think of times that you feel distressed or upset. Circle the number from the column that best describes your beliefs about feeling distressed or upset.

	<b>Strongly agree</b>	<b>Mildly agree</b>	<b>Agree and disagree equally</b>	<b>Mildly disagree</b>	<b>Strongly disagree</b>
1. Feeling distressed or upset is unbearable to me	1	2	3	4	5
2. When I feel distressed or upset, all I can think about is how bad I feel	1	2	3	4	5
3. I can't handle feeling distressed or upset	1	2	3	4	5
4. My feelings of distress are so intense that they completely take over	1	2	3	4	5
5. There's nothing worse than feeling distressed or upset	1	2	3	4	5
6. I can tolerate being distressed or upset as well as most people	1	2	3	4	5
7. My feelings of distress or being upset are not acceptable	1	2	3	4	5
8. I'll do anything to avoid feeling distressed or upset	1	2	3	4	5
9. Other people seem to be able to tolerate feeling distressed or upset better than I can	1	2	3	4	5
10. Being distressed or upset is always a major ordeal for me	1	2	3	4	5

11.	I am ashamed of myself when I feel distressed or upset	1	2	3	4	5
12.	My feelings of distress or being upset scare me	1	2	3	4	5
13.	I'll do anything to stop feeling distressed or upset	1	2	3	4	5
14.	When I feel distressed or upset, I must do something about it immediately	1	2	3	4	5
15.	When I feel distressed or upset, I cannot help but concentrate on how bad the distress actually feels	1	2	3	4	5



SLIPS

**This questionnaire consists of 23 groups of statements. Please read each group of statements carefully, and then pick out the one statement in each group that best describes the way you are feeling**

**1.**

- 0 I still enjoy going out with friends.
- 1 I don't enjoy going out with friends as much as I used to.
- 2 I no longer enjoy going out with friends.
- 3 I have never enjoyed going out with anyone.

**2.**

- 0 Being with my friends makes me feel as good or better than it ever has.
- 1 Being with my friends doesn't make me feel as good as it used to.
- 2 Being with my friends no longer makes me feel good.
- 3 I don't have friends.

**3.**

- 0 I have not lost enjoyment for leisure activities that involve other people.
- 1 I have less enjoyment for leisure activities that involve other people.
- 2 I have lost most enjoyment for leisure activities that involve other people.
- 3 I have never enjoyed leisure activities that involve other people.

**4.**

- 0 I get as much pleasure as I ever did from the things I enjoy.
- 1 I don't enjoy things as much as I used to.
- 2 I get very little pleasure from the things I used to enjoy.
- 3 I can't get any pleasure from the things I used to enjoy.

**5.**

- 0 When people tell me about their problems and hang-ups, I am usually interested.
- 1 Lately, when people tell me about their problems and hang-ups, I am less interested than I used to be.
- 2 Lately, when people tell me about their problems and hang-ups, I am not really interested.
- 3 I have never been interested when people tell me about their problems and hang-ups.

**6.**

- 0 I have not lost affection for those who are close to me.
- 1 I have less affection than I used to for those who are close to me.
- 2 I have very little affection for those who are close to me.
- 3 I have never had affection for others.

- 7.**
- 0 I have not lost interest in having long, personal conversations with friends.
  - 1 I have less interest than I used to for long, personal conversations with friends.
  - 2 I no longer have interest in having long, personal conversations with friends.
  - 3 I have never had interest in having long, personal conversations with friends.
- 8.**
- 0 I like making new friends no less than I did before.
  - 1 I don't like making new friends as much as I used to.
  - 2 I have little to no interest in meeting new people.
  - 3 I have never had interest in meeting new people.
- 9.**
- 0 I prefer to live amongst people rather than to live all alone in a cabin in the woods.
  - 1 I don't prefer to live amongst people as much as I used to.
  - 2 Recently, I have lost most interest for living amongst people.
  - 3 I have always preferred to live all alone in a cabin in the woods, rather than to live amongst people.
- 10.**
- 0 I have not lost interest in other people's daily activities and opinions.
  - 1 People's daily activities and opinions are less interesting to me than they used to be.
  - 2 People's daily activities and opinions are no longer interesting to me.
  - 3 People's daily activities and opinions have never been interesting to me.
- 11.**
- 0 I have not lost interest in having strong relationships with people.
  - 1 I have less interest than I used to in having strong relationships with people.
  - 2 I have lost most interest in having strong relationships with people.
  - 3 I have never been interested in having strong relationships with people.
- 12.**
- 0 I enjoy talking to people no less than before.
  - 1 I enjoy talking to people less than I used to.
  - 2 I hardly find enjoyment in talking to people anymore.
  - 3 I never enjoyed talking to people.

- 13.**  
0 I have not had a loss of pleasure from the physical activities I enjoy.  
1 I don't get as much pleasure as I used to from the physical activities I enjoy.  
2 I get very little pleasure from the physical activities I used to enjoy.  
3 I have never gotten pleasure from physical activities.
- 14.**  
0 I have not lost interest in other people.  
1 I have less interest in other people.  
2 I have lost most of my interest in other people.  
3 I have never had interest in other people.
- 15.**  
0 I like my friends no less than before.  
1 I don't like my friends as much as I used to.  
2 I don't like my friends anymore.  
3 I have never liked my friends.
- 16.**  
0 I have not lost pleasure in interacting with a co-worker or classmate.  
1 I get less pleasure than I used to from interacting with a co-worker or classmate.  
2 I get little pleasure from interacting with a co-worker or classmate.  
3 I have never gotten pleasure from interacting with a co-worker or classmate.
- 17.**  
0 It seems like my friends enjoy my company no less than before.  
1 It seems like my friends don't enjoy my company as much as they used to.  
2 It seems like my friends don't enjoy my company any more.  
3 I have never felt like my friends enjoy my company.
- 18.**  
0 My job performance is no less important than it used to be.  
1 I don't care about my job performance as much as I used to.  
2 I no longer care about my job performance.  
3 I have never cared about my job performance.

**19.**

- 0 I prefer to eat with other people no less than I used to.
- 1 I don't like to eat with other people as much as before.
- 2 I don't like eating with people anymore.
- 3 I have never liked eating with other people.

**20.**

- 0 I have not lost interest in watching my favorite types of movies.
- 1 I have lost interest in watching the types of movies I have always enjoyed.
- 2 I have little to no interest in watching the types of movies I have always enjoyed.
- 3 I have never enjoyed watching any type of movie.

**21.**

- 0 I have not lost interest in my favorite activities.
- 1 I have less interest in my favorite activities.
- 2 I have lost most interest in my favorite activities.
- 3 It's always been hard to get interested in activities.

**22.**

- 0 I am looking forward to something exciting coming up in my life.
- 1 I am not looking forward to a future exciting event as much as I used to look forward to things.
- 2 I no longer look forward to anything coming up in my life.
- 3 I have never looked forward to upcoming exciting events.

**23.**

- 0 I get excited the night before a fun event as much or more than I ever have.
- 1 I get less excited the night before a fun event than I used to.
- 2 I no longer get excited the night before a fun event.
- 3 I have never been excited the night before a fun event.

## INQ

The following questions ask you to think about yourself and other people. Please respond to each question by using your own current beliefs and experiences, NOT what you think is true in general, or what might be true for other people. Please base your responses on how you have been feeling recently. Use the rating scale to find the number that best matches how you feel and circle that number. There are no right or wrong answers: we are interested in what *you* think and feel.

	<b>Not at all true for me</b>			<b>Somewhat true for me</b>			<b>Very true for me</b>
1.	1	2	3	4	5	6	
2.	1	2	3	4	5	6	
3.	1	2	3	4	5	6	
4.	1	2	3	4	5	6	
5.	1	2	3	4	5	6	
6.	1	2	3	4	5	6	
7.	1	2	3	4	5	6	
8.	1	2	3	4	5	6	
9.	1	2	3	4	5	6	

These days, I am fortunate to have							
10. many caring and supportive friends.	1	2	3	4	5	6	

11. These days, I feel disconnected from other people.	1	2	3	4	5	6	
--------------------------------------------------------	---	---	---	---	---	---	--

12. These days, I often feel like an outsider in social gatherings.	1	2	3	4	5	6	
---------------------------------------------------------------------	---	---	---	---	---	---	--

13. These days, I feel that there are people I can turn to in times of need.	1	2	3	4	5	6	
------------------------------------------------------------------------------	---	---	---	---	---	---	--

14. These days, I am close to other people.	1	2	3	4	5	6	
---------------------------------------------	---	---	---	---	---	---	--

15. These days, I have at least one satisfying interaction every day.	1	2	3	4	5	6	
-----------------------------------------------------------------------	---	---	---	---	---	---	--

Scoring:

Burdensomeness = Sum of 1 through 6

Thwarted belongingness – first reverse score #s 7, 8, 10, 13, 14, and 15 – then sum 7 through 15

	Not at all	Several days	More than half the days	Nearly every day
1. Feeling nervous, anxious or on edge	0	1	2	3
2. Not being able to stop or control worrying	0	1	2	3
3. Worrying too much about different things	0	1	2	3
4. Trouble relaxing	0	1	2	3
5. Being so restless that it is hard to sit still	0	1	2	3
6. Becoming easily annoyed or irritable	0	1	2	3
7. Feeling afraid as if something awful might happen	0	1	2	3

**GAD-7**

**Over the last 2 weeks, how often have you been bothered by the following problems?**

## RSQ

People think and do many different things when they feel sad. Please read each of the items below and indicate whether you never, sometimes, often, or always think or do each one when you feel down, sad, or depressed. Please indicate what you generally do, not what you think you should do. Please circle a number to the right of the statement that best describes you.

	Almost Never	Sometimes	Often	Almost Always
1. Think "What am I doing to deserve this?"	1	2	3	4
2. Analyze recent events to try to understand why you are depressed.	1	2	3	4
3. Think, "Why do I always react this way?"	1	2	3	4
4. Go away by yourself and think about why you feel this way.	1	2	3	4
5. Write down what you are thinking and analyze it.	1	2	3	4
6. Think about a recent situation, wishing it had gone better.	1	2	3	4
7. Think, "Why do I have problems other people don't have?"	1	2	3	4
8. Think, "Why can't I handle things better?"	1	2	3	4
9. Analyze your personality to try to understand why you are depressed.	1	2	3	4
10. Go someplace alone to think about your feelings.	1	2	3	4

Scoring:

Brooding subscale = sum of items 1, 3, 6, 7, 8

Reflecting subscale = sum of items 2, 4, 5, 9, 10



## APPENDIX B: **Review of the Literature**

Major Depressive Disorder (MDD) is a significant mental health issue in the United States, as the lifetime prevalence rates for adults is approximately 16.5% (Kessler, Berglund, Demler, Jin, & Walters, 2005). Depression, and its associated difficulties, is also associated with significant financial burden with \$210.5 billion in associated costs in 2010 (Greenberg et al., 2015). Due to of depression's substantial impact on society, it is critical that research on underlying processes is completed in order to better understand, and eventually treat, this mental health crisis.

One area of interest that has yet to be studied in the context of depression is emotional exhaustion, that is, the experience of “feeling tired of feeling”. This construct is likely related to depression and other mental health outcomes. The current study proposes to examine those relationships and develop a measure for assessing emotional exhaustion within the context of clinical psychology.

### **Emotional Exhaustion**

The literature on emotional exhaustion is largely focused on job satisfaction and burnout. Burnout is described as emotional exhaustion and cynicism that often occurs in individuals who do “people-work,” with the key feature of the experience of burnout being an increase in emotional exhaustion (Maslach & Jackson, 1981; Wright & Cropanzano, 1998; Wright & Bonett, 1998). Emotional exhaustion occurs when an individual's emotional resources are so depleted that they feel they no longer have anything to give psychologically to others (Maslach & Jackson, 1981). Additionally it has been described as a chronic state of depleted emotional resources that results from demanding jobs (Wright & Cropanzano, 1998).

#### *Factors Contributing to Emotional Exhaustion*

A number of factors have been identified as contributing to emotional exhaustion. For example, the conservation of resources (COR) model of stress (Wright & Cropanzano, 1998) states that emotional exhaustion is most likely to occur when actual resources (i.e., time, effort) are lost, there are perceived threats of resources loss, there is a situation where an individual's resources are insufficient to meet demands at work, or if the anticipated returns (i.e., rewards) are not actually obtained on an investment of the individual's resources. Incongruence between organizational demands and an individual's resources to meet the demands leads to stress on the job, and over time emotional exhaustion. The COR theory predicts that individuals will experience discomfort and then attempt to minimize losses by reducing effort or quitting their job. The COR theory also suggests that individuals will be emotionally exhausted when they feel they don't have enough emotional resources to deal with interpersonal stressors. Overall it seems that an imbalance of effort and rewards are important in the COR model of emotional exhaustion.

Personality characteristics have also been associated with both burnout, broadly, and emotional exhaustion, specifically, with neuroticism most consistently implicated in this relationship. A meta-analysis of personality characteristics and burnout found negative affectivity and emotional stability (i.e., neuroticism) was significantly related to experiencing burnout, as was extraversion, conscientiousness, and agreeableness (Alarcon, Eschleman, & Bowling, 2009). Among primary school teachers it was found that personality traits, specifically neuroticism were significant predictors of burnout, over and above job stressors (Kokkinos, 2007). In a sample of teachers, high scores in agreeableness were found to be a protective factor for burnout, while low scores were found to be a vulnerability factor (Cano-García, Padilla-Muñoz, & Carrasco-Ortiz, 2005). High neuroticism and low extraversion were the most consistent predictors of burnout, and there was a positive relationship between neuroticism and higher burnout among individuals who had a lot of negative experiences in their position, but this relationship was not present in individuals who had few negative experiences in their position (Bakker, Van Der Zee, Lewig, &

Dollard, 2006). This suggests that individuals that are higher in neuroticism may have stronger emotional reactions when they experience stressful situations; these individuals also tend to use more ineffective coping strategies, which could make them more vulnerable to the symptoms of burnout (Bakker, Van Der Zee, Lewig, & Dollard, 2006).

Fewer studies have examined personality characteristics and emotional exhaustion specifically but the results are consistent with results of studies examining burnout. For example, hotel managers high in neuroticism were more likely to experience emotional exhaustion, but individuals high in extraversion seemed to be protected from experiencing emotional exhaustion (O'Neill & Xiao, 2010). Additionally in a sample of 80 volunteer counselors, neuroticism has been found to strongly predict emotional exhaustion among extraversion, agreeableness, conscientiousness, neuroticism, and autonomy, accounting for 13% of the variance in emotional exhaustion (Bakker, Van Der Zee, Lewig, & Dollard, 2006).

Emotional dissonance has also been implicated in emotional exhaustion. Emotional dissonance is defined as the conflict between expressed and experienced emotions (Abraham, 2000). Acting happy or pleasant while experiencing stress may cause emotional exhaustion due to experiencing tension from emotional dissonance or because resources are being drained by effortfully acting pleasant. A recent meta-analysis of 57 studies including over 16,000 employees found a consistent relationship between emotional dissonance and emotional exhaustion (Kenworthy, Fay, Frame, & Petree, 2014).

In summary, a number of factors have been proposed as contributors to emotional exhaustion. Major proposed contributors include: the imbalance between emotional resources and emotional demands, Big Five personality traits (particularly neuroticism, extraversion, and agreeableness), and emotional dissonance.

#### *Consequences of Emotional Exhaustion*

Emotional exhaustion has been linked to a number of negative work-related, physiological, and psychosocial outcomes. When considered in the context of burnout, emotional exhaustion can lead to lower quality of self-care by staff, job turnover, absenteeism, low morale, being physically exhausted, poor sleep, increase in usage of drugs or alcohol, and marital and family problems (Maslach & Jackson, 1981). Because emotional exhaustion is typically studied in the context of burnout, the consequences of burnout are reviewed below followed by the consequences of emotional exhaustion more specifically.

Burnout is consistently related to increased anxiety and depression (Maslach, Schaufeli, & Leiter, 2001). A study of health care workers supports the relationship between burnout and depression, suggesting they are distinct but related constructs (Leiter & Durup, 1994). Another study found the same result, that depression and burnout are very similar but separate entities (Brenninkmeyer, Van Yperen, & Buunk, 2001). In a study of OB/GYN residents, almost 90% were at least moderately 'burned out' and 34% were considered depressed, suggesting that not all individuals who experience burnout will become depressed, but a significant percentage will (Becker, Milad, & Klock, 2006).

Emotional exhaustion is strongly associated with several employment-related negative outcomes including role conflict at work, thoughts about leaving one's current job, training for new careers, and actually leaving one's job (Jackson, Schwab, & Schuler, 1986). A study of social welfare workers found that even after controlling for positive and negative affect, emotional exhaustion was still a significant predictor of whether employees would show poorer job performance or even quit their jobs (Wright & Cropanzano, 1998). In a sample of nurses, emotional exhaustion and depression were strongly associated, while a factor analysis confirmed their discriminant validity (Glass, McKnight, & Valdimarsdottir, 1993).

Overall, burnout and emotional exhaustion are related to a number of negative outcomes, both psychological and work related. Individuals experiencing either show worse job performance and tend to quit their jobs. Additionally, emotional exhaustion is associated with higher rates of depression and other negative psychological outcomes.

*Measurement of Emotional Exhaustion*

The main instrument used to measure emotional exhaustion comes in the form of the Maslach Burnout Inventory (MBI), which assesses the three components of burnout: emotional exhaustion, depersonalization, and reduced personal accomplishment (Maslach, Jackson, Leiter, Schaufeli, & Schwab, 1986). There are eight items in the emotional exhaustion subscale (see Table 1, below). These items have been well validated as a measure of burnout (Schutte, Tomppinene, Kalimo, & Schaufeli, 2000; Schaufeli, Bakker, Hoogduin, Schaap, & Kladler, 2001), but the subscale has two major limitations as a potential broader measure of emotional exhaustion.

*Table 1. Emotional Exhaustion Scale Questions of the MBI*

1. I feel emotionally drained by my work.
2. I feel used up by the end of the day.
3. I feel fatigued when I have to get up in the morning to face another day on the job.
4. Working with people all day is really a strain for me.
5. I feel ‘burned out’ from my work.
6. I feel frustrated by my job.
7. I feel I’m working too hard in my job.
8. I feel like I’m at the end of my rope.

First, emotional exhaustion is proposed as a state of depleted emotional resources, but many of the questions have low face validity and questionable connection to depleted emotional resources. For example, Item 3 addresses fatigue, which may be distinct from *emotional* exhaustion. Item 4 mentions strain when working with people, which could be due to emotional exhaustion or a number of other factors (e.g., social anxiety, a low sense of self-efficacy, low assertiveness). Item 6 mentions frustration, which may be related to emotional exhaustion, but is its own distinct emotional experience. Item 7 mentions “working too hard”, which is hypothesized to lead to emotional exhaustion in some, but not all, circumstances (Wright & Cropanzano, 1998). Item 8 mentions being “at the end of my rope”, which is unclear and could be related to hopelessness, helplessness, or low self-efficacy among other factors. Thus, many of the items have an unclear relationship to emotional exhaustion specifically.

Second, six of the eight questions refer specifically to “job”, “work”, or “working”. This substantially limits the applicability of the subscale to measuring emotional exhaustion in broader contexts. While many the proposed contributors to emotional exhaustion (imbalance in resources, neuroticism, emotional dissonance) have been studied in the context of work and burnout, they are more broadly applicable and may lead to emotional exhaustion in non-work contexts. As such, it is important to have a measure that can assess emotional exhaustion more broadly.

#### *Emotional Exhaustion Summary*

Emotional exhaustion has been widely studied in the burnout literature. It is related to personality characteristics and loss of resources. It predicts a number of negative employee related qualities, such as absenteeism and job turnover. Additionally it has been related to negative mental health outcomes such as poor sleep, depression, and use of drugs or alcohol. The MBI is currently the main instrument used to measure emotional exhaustion in the context of burnout. The scale is limited in its use for measuring emotional exhaustion outside the context of

burnout though. Firstly, many of the items show an unclear relationship to emotional exhaustion. Secondly, many of the items specifically reference work, which lowers the measure's applications outside of employment evaluation. However, despite the consistent association between emotional exhaustion and depression, and other negative mental health outcomes, the relationship between emotional exhaustion and depression has not been studied outside the context of burnout. As such this represents a potentially fruitful area to examine emotional exhaustion.

## **Depression**

Depression is a syndrome consisting of sad mood, loss of interest or pleasure, and other somatic and psychological symptoms, including thoughts of suicide or death (APA, 2013). As noted before, depression is a significant mental health problem worldwide, with lifetime prevalence rates for adults around approximately 16.5% (Kessler, Berglund, Demler, Jin, & Walters, 2005). After puberty, depression is more common among females than males (Piccinelli & Wilkinson, 2000). Individuals with depression are likely to have a chronic course of the disorder, where it reoccurs over time (Harrington, 2001).

As noted above, a number of studies have indicated an association between emotional exhaustion and symptoms of depression (Maslach, Schaufeli, & Leiter, 2001; Leiter & Durup, 1994; Brenninkmeyer, Van Yperen, & Buunk, 2001; Glass, McKnight, & Valdimarsdottir, 1993; Becker, Milad, & Klock, 2006). However, this association has been studied exclusively in the context of burnout. The proposed study will examine a broader measure of emotional exhaustion and its relationship with depression symptoms in a broader context.

In addition, many of the factors that contribute to emotional exhaustion also contribute to depression. For example, individuals with higher neuroticism are at a greater overall risk for depression (Kendler, Kuhn, & Prescott, 2004). In addition, a greater effort-reward balance (i.e., when higher effort leads to higher rewards) seems to result in lower levels of depression

(Lambert, 2006). Despite these connections, the link between emotional exhaustion and depression has not yet been established outside of work contexts.



VITA

Meghan Elizabeth Hills

Candidate for the Degree of

Master of Science

Thesis: EMOTIONAL EXHAUSTION: CREATION OF A NEW MEASURE AND  
EXPLORATION OF THE CONSTRUCT

Major Field: Psychology

Biographical:

Education:

Completed the requirements for the Master of Science/Arts in Psychology at  
Oklahoma State University, Stillwater, Oklahoma in July, 2019.

Completed the requirements for the Bachelor of Science in Psychology at  
Oklahoma State University, Stillwater, Oklahoma in 2014.

Experience: Graduate Teaching Assistant: Fall 2015- Spring 2018  
Undergraduate Research Assistant: 2013-2015