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EVALUATING A MINDFULNESS PROGRAM FOR TEACHERS AS AN  
INTERVENTION FOR TEACHER BURNOUT IN URBAN, LOW-INCOME  
SCHOOLS


By  
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THESIS APPROVAL PAGE

This is to certify that the thesis prepared by Matthew Ancona entitled, *Evaluating a Mindfulness Program for Teachers as an Intervention for Teacher Burnout in Urban, Low-Income Schools* has been approved by the thesis committee as satisfactorily completing the thesis requirements for the degree Master of Art.

  
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## ABSTRACT

### EVALUATING A MINDFULNESS PROGRAM FOR TEACHERS AS AN INTERVENTION FOR TEACHER BURNOUT IN URBAN, LOW-INCOME SCHOOLS

Matthew Ancona

This study evaluated the efficacy of a mindfulness program for teachers to mitigate teacher burnout. Forty three teachers completed baseline and posttest measures of teacher stress, teacher efficacy, and teacher burnout. Those in the intervention group participated in 6 one hour sessions of a mindfulness program over three weeks. The intervention was led by the Holistic Life Foundation and consisted of deep breathing techniques, body relaxation techniques, and brief meditations. This intervention proved useful for reducing stress and burnout symptoms however analyses failed to detect a significant effect. Further study should address the issue of sample size and also refine the timing and elements of the intervention.

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## **CHAPTER ONE:**

### **INTRODUCTION AND LITERATURE REVIEW**

#### Evaluating a Mindfulness Program for Teachers as an Intervention for Teacher Burnout in Urban, Low-Income Schools

A major problem facing urban schools in low-income areas is a significant teacher shortage (Howard, 2004). Howard (2004) reports that low-income, urban schools are more profoundly affected by teacher shortages than schools differing in type or location. A lack of qualified teachers in this type of school setting can have a considerable impact on the student, the school, and the community.

Ingersoll (2001) found that the cause of the teacher shortage is not a shortage of new teachers entering the field but a large amount of teachers leaving the field. It has been shown that close to half of all teachers leave the profession within five years and the overall attrition rate for teachers is roughly 5% above the average for all professions (Howard, 2004). This produces a cycle of teachers entering and exiting the United States public school system at an estimated cost of 7 billion dollars or more per year (National Commission on Teaching and America's Future, 2007).

The teaching occupation has been extensively researched and found to be an extremely demanding job with teachers facing a significantly high risk for burnout (Dunham & Varma, 1998; Kyriacou & Sutcliffe, 1977; McCarthy, Lambert, O'Donnell, & Melendres, 2009). Freudenberger (1974) originated the term burnout and many researchers have since attempted to define the concept. Jennet, Harris, and Mesibov (2003) provide a succinct description of burnout as the endpoint of coping unsuccessfully with long term occupational stress. The prevalence of burnout amongst teachers is

demonstrated by the fact that 22% of all participants in research on burnout are teachers (Schaufeli & Enzmann, 1998). The sizable effect of this crisis is also reflected in the previously mentioned teacher attrition rates. McCarthy et al. (2009) supports this assertion by suggesting that burnout often results in teachers leaving the profession.

The consequences of burnout are not limited to attrition and teacher shortage. A large number of teachers who choose to stay in the profession commonly demonstrate symptoms of burnout, which can negatively impact students. Maslach, Jackson, and Leiter (1996) describe the symptoms of burnout as feelings of emotional exhaustion, depersonalization, and lack of accomplishment. Emotional exhaustion refers to feelings of being emotionally overextended and feeling drained of one's emotional resources. Depersonalization refers to the development of a cold and negative attitude about those one interacts with daily due to their occupation. A teacher demonstrating symptoms of emotional exhaustion and depersonalization may become withdrawn, unhelpful, and indifferent towards their career and their students (Kokkinos, 2007). This has a deleterious impact on those teachers' classroom outcomes. Emotional exhaustion has been referred to as the component of burnout most associated with high stress levels and has also been identified as the most obvious and critical aspect of burnout (Maslach, Schaufeli, & Leiter, 2001; McCarthy et al., 2009). Due to these findings, emotional exhaustion scores will be used to reflect burnout levels in this study.

Rudrow (1999) found that teachers suffering from symptoms of burnout are consistently outperformed and achieve fewer educational goals. Additionally, it has been shown that burnt out teachers frequently fail to meet the needs of more challenging students (Kokkinos, Panayiotou, & Davazoglou, 2005). This disproportionately affects

low-income, urban schools as students in those settings are typically academic underachievers (Howard, 2004). Baltimore City is one of these settings with the graduation rate of African American males at 57.3% (Bowie, 2010).

Teacher burnout, having been established as an important issue facing the urban school systems, has spawned a large amount of research (see Brouwers & Tomic, 2000; Hughes, 2001; Pines, 2002). A number of objective factors have been associated with teacher burnout including; workplace conditions, larger class sizes, policy-related issues, and teaching children with behavioral problems (Zellars, Hochwater, & Perrewe, 2004). This thesis, however, will focus on two subjective factors associated with teacher burnout; teacher stress and teacher efficacy.

A review of the literature produced a number of studies that demonstrate a correlation between stress and teacher burnout (Kokkinos, 2007; Zellars et al., 2004). A description of the study conducted by McCarthy et al. (2009) that substantiates this finding will be provided below. Additionally, a significant correlation has also been found between teacher efficacy and teacher burnout (Skaavlik & Skaavlik, 2007). A synopsis of a recent study by Skaavlik and Skaavlik (2010) that reinforces this conclusion will also be presented. The volume of research regarding teacher burnout is sizeable however few studies have been aimed at prevention of teacher burnout (Lambert & McCarthy, 2006).

Hughes (2001) suggests that aggressive interventions are necessary for the prevention of teacher burnout and the accompanying negative effects. Lambert and McCarthy (2006), by pointing out the lack of research regarding burnout prevention, emphasizes researchers' opportunity to test new and innovative interventions to this



dilemma. This study will assess a mindfulness intervention's affect on teacher burnout (emotional exhaustion), teacher stress, and teacher self-efficacy. A mindfulness intervention was selected for several reasons.

Mindfulness techniques have been used for thousands of years in order to increase tolerance to difficult situations and feelings (Greason & Cashwell, 2009). Bishop, Lau, Shapiro, Carlson, Anderson, and Carmody (2004) have defined mindfulness as becoming aware of thoughts and sensations as they occur but not acting upon or judging them. Recently, mindfulness-based practices have been applied to smoking cessation, marriage counseling methods, and treatment of those with chronic pain (Bowen & Marlatt, 2009; Gambrel & Keeling, 2010; Kabat-Zinn, 1982). Interestingly, Granath, Ingvarsson, von Thiele, and Lunberg (2006) found yoga (an aspect of mindfulness training) to be equally effective as cognitive behavioral therapy (CBT) for stress reduction. That study will be reviewed in greater detail below. The conclusions reached by Granath et al. (2006) echo the findings of many other studies that have shown mindfulness programs to be beneficial for a spectrum of physical and mental ailments across a range of populations.

Moreover, Franco, Manas, Cangas, Moreno, and Gallego (2010) found that a mindfulness training program for teachers significantly reduced reports of psychological distress for a variety of ailments. The effects of the program were found to still be present four months after the intervention. A more detailed analysis of this study will follow. The demonstrated benefits of a mindfulness program for teachers on a number of mental health impairments also support the candidacy of this type of program as an intervention for teacher burnout (emotional exhaustion), teacher stress, and teacher efficacy.

## **Teacher Stress and Teacher Burnout**

As previously mentioned, a large amount of research has shown a significant, positive correlation between teacher stress and teacher burnout (see Kokkinos et al., 2005; Rudow, 1999; Russel, Altmaier, & Van Velzen, 1987). Stress is so prominently associated with burnout that the term is included in Jennet et al.'s (2003) definition of burnout. While the pool of literature is vast regarding teacher stress and teacher burnout, a recent study by McCarthy et al. (2009) provides strong support for this relationship.

McCarthy et al. (2009) designed a study to investigate a number of potential correlates to the presence of burnout symptoms amongst elementary school teachers. The study was conducted by collecting data from 451 teachers from both urban and suburban school districts in southeastern United States. Participating teachers were sampled from thirteen schools serving demographically diverse student populations. Schools varied with six schools designated as Title I schools and four schools surpassing yearly progress goals as determined by the No Child Left Behind Act. Burnout was measured through the use of the Maslach Burnout Inventory- Educators Survey (MBI-ES; Maslach, et al., 1996) and teacher stress was quantified by completion of the Classroom Appraisal of Resources and Demands (Lambert, McCarthy, & Abbott-Shim, 2001).

The analysis of the collected data resulted in several compelling conclusions. First, stress was found to be a strong predictor of burnout. Secondly, no difference was found in teachers' experience of stress or burnout between teachers at different schools. These findings are noteworthy as they suggest that burnout results from individual teachers' internal characteristics rather than from systemic issues associated with schools

such as resources and class size. This supports the use of interventions aimed at internal processes of teachers when exploring burnout.

### **Self-Efficacy and Teacher Burnout**

Reported levels of self-efficacy in teachers have been shown to have a significant, direct relationship with job satisfaction and a significant, inverse relationship with teacher stress levels (Betoret, 2006; Klassen, Bong, Usher, Chong, Huan, Wong, & Georgiou, 2009). Caprera, Barbaranelli, Borgogni, and Steca (2003) affirmed this finding by concluding that teachers' self-efficacy is the foremost predictor of job satisfaction and length of tenure in the field. Skaalvik and Skaalvik (2010) recently investigated the relationship between teacher self-efficacy and teacher burnout.

Skaalvik and Skaalvik are prominent researchers of self-efficacy and its implications for teachers. They conducted a study of 2,249 Norwegian elementary and middle school teachers aimed at assessing the teacher self-efficacy and teacher burnout. Teacher self-efficacy was measured by use of the Norwegian Teacher Self-Efficacy Scale (Skaalvik & Skaalvik, 2007) and burnout symptoms were measured through completion of the MBI-ES.

Teachers' self-efficacy was found to significantly predict lower levels of teacher burnout. Another interesting conclusion reached by this study is teacher self-efficacy was found to be predictive of greater job satisfaction. These results not only support the findings of previous research but further them by linking teacher self-efficacy to job satisfaction. Additional analysis of the data found teacher burnout and teacher job satisfaction to be inversely correlated.

## **Mindfulness and Stress**

Yoga is a main component of many mindfulness programs. Granath, Ingvarsson, von Theile, and Lundberg (2006) define yoga as a practice focusing on breathing, meditation, and muscle relaxation. Malathi, Damodaran, Shah, Patil, and Maratha (2000) concluded that yoga is a promising method for the treatments of problems associated with high stress levels. Additionally, a large amount of research has shown yoga to be beneficial in managing and limiting stress (Chan, Tsunaka, Tsang, Chong, & Cheung, 2011; Smith, Hancock, Blake-Mortimer, & Eckert, 2007; Waelde, Thompson, & Gallagher-Thompson, 2004). While a number of interventions have also been shown to relieve stress, Granath et al. (2006) conducted a study comparing the outcomes of yoga and CBT in regards to stress management.

Thirty-three participants were recruited from a Swedish finance company and assigned to receive either a 10 session yoga program or 10 sessions of CBT. Stress was measured pre and post intervention by completion of the Perceived Stress Scale (PSS; Cohen, Kamarck, & Mermelstein, 1983) and Daily Stressors survey (Burell, 1996). Physiological indications of stress were also collected by measuring cortisol in saliva, blood pressure, heart rate, and urinary catecholamine.

The results of this study showed that stress related outcomes on all measures (both subjective and physiological) were significantly reduced for participants in both the yoga and CBT groups. There was no significant difference found between the outcomes in either group. This conclusion shows the potential benefit of yoga to be equal to more well-known and researched interventions such as CBT. This study serves to establish yoga as a viable option when considering methods for stress reduction.

## **Mindfulness and Self-Efficacy**

Self-efficacy has been shown to be both positively related to teacher job satisfaction and negatively related to teacher burnout (Skaalvik & Skaalvik, 2010). These findings make it necessary to examine potential interventions for increasing self-efficacy in teachers. While mindfulness programs are rarely provided to teachers, similar interventions have been offered to individuals in other fields. Greason and Cashwell (2009) examined the benefits of a mindfulness program for self-efficacy amongst master's and doctoral level counseling students.

Greason and Cashwell (2009) studied 179 master's and doctoral level students and evaluated both their mindfulness levels and self-efficacy for counseling activities. The study was designed to support prior research which concluded that promoting self-efficacy in counseling students is essential to successful counselor development (Duryee, Brymer, & Gold, 1996). Mindfulness was assessed using the Five Factor Mindfulness Questionnaire (FFMQ; Baer, Smith, Hopkins, Krietemeyer, & Toney, 2006). Self-efficacy was measured by completion of the Counselor Activity Self-Efficacy Scales (CASES; Lent, Hill, & Hoffman, 2003). All participation in the study was voluntary and packets containing the measures were distributed at the end of class or internship sessions.

The researchers' hypothesis that mindfulness would be a significant predictor of counseling self-efficacy was supported. Results showed scores on the FFMQ to predict ratings on the CASES. This study shows the importance of mindfulness when cultivating self-efficacy in counseling students and provides a theoretical framework for the examination of mindfulness's effect on self-efficacy amongst those in other professions.

## **Mindfulness Intervention for Teachers**

Teachers have been shown to disproportionately suffer from psychological ailments ranging from anxiety, depression, and low self-esteem (Morian & Herruzo, 2004). A variety of causes for this problem, such as student behavior, salary, and administrative demands, have been suggested however few interventions have been proposed (Lambert & McCarthy, 2006). Franco et al. (2010) addressed this issue by examining the potential benefits of a mindfulness training program when presented to teachers.

Franco et al. (2010) measured teachers' psychological distress through completion of the Symptom Checklist-90-R (SCL-90-R). The SCL-90-R was given to 68 school teachers from schools in Granada, Spain. The teachers were randomly assigned to receive the mindfulness training program group or a control group which received a psychomotor therapy program. The psychomotor therapy program included game playing, light exercises, and listening to relaxing music. The mindfulness training program consisted of 10 sessions over a 10 week period. Mindfulness was taught through flow meditation practices. After completion of the programs all participating teachers again reported psychological distress through the SCL-90-R. A follow up test was done four months after the initial post-test.

The results from Franco et al.'s (2010) research found significant reductions in reports of every psychological impairment measured. Interestingly, as mentioned, the effects of the intervention were still present in the sample four months after exposure. These findings show the efficacy of mindfulness programs in regards to teachers. This population specific conclusion, in addition to the conclusions of Granath et al. (2006)

who found an aspect of mindfulness to be as effective as CBT in treating stress in financiers and Greason and Cashwell (2009) who found mindfulness programs increased self-efficacy in counseling students, suggests it is plausible that this type of intervention could also prove useful for combating the specific problem of burnout amongst a unique population of urban teachers.

### **Present Study**

The present study intended to evaluate a mindfulness program for teachers as a potential intervention for teacher burnout. It was expected that a decrease in burnout symptoms in teachers could ultimately mitigate the high level of turnover in this profession. As discussed, prior research has demonstrated a link between both teacher stress and teacher efficacy with teacher burnout (McCarthy et al., 2009; Skaalvik & Skaalvik, 2007). Studies have also shown mindfulness to be predictive of efficacy and to be negatively correlated with stress (Granath et al., 2006; Greason & Cashwell, 2009). Due to these findings, I hypothesized that a mindfulness program for teachers will mitigate the relationship between chronic stress and burnout by providing teachers with additional and innovative coping strategies. Figure 1 provides a theoretical model for the timing and impact of this proposed intervention. While it is unrealistic to aspire to prevent stress, it was the goal of this intervention to provide techniques for limiting and managing stress.

In review, Jennet et al. (2003) define burnout as the endpoint of coping unsuccessfully with chronic stress. Subsequently, Granath et al. (2006) found that a mindfulness program and CBT were equally beneficial for stress reduction. Additionally, Franco et al.'s (2010) study, which used teachers as participants in a school setting, found

mindfulness programs useful for relieving a number of their reported mental health symptoms. These collective conclusions make a mindfulness based intervention a logical and promising method for the moderation of chronic stress amongst urban teachers.

Specifically, I hypothesized that teachers exposed to a mindfulness program would report a decrease in stress levels, an increase in teacher efficacy, and consequently, a decrease in emotional exhaustion. Additionally, I hypothesized that teachers with higher baseline stress levels would report a greater reduction in stress and emotional exhaustion at posttest after exposure to the mindfulness program. A large number of teachers do successfully manage stress by utilizing a variety of coping strategies however those that are not able to effectively cope are at highest risk for burnout (Skaalvik & Skaalvik, 2007). This suggests that the high stress teacher either is unaware of positive coping mechanisms or is failing to exercise them. This group may benefit most from a program that both teaches new coping skills and provides a structured time to practice.



## **CHAPTER 2:**

### **METHODS AND RESULTS**

#### **Participants**

The sample consisted of 43 elementary and middle school teachers from seven schools in Baltimore City. Schools were recruited jointly with the Holistic Life Foundation, Inc. (HLF). The participating schools were Bay Brook Elementary/ Middle School, Johnston Square Elementary School, Matthew Henson Elementary School, Midtown Academy, New Hope Academy, The Mount Washington School, and Robert Coleman Elementary School.

The 7 schools accurately represented the general performance of Baltimore City schools as seen in the percentage of students who are proficient in reading, math and science. The city averages for proficiency are; reading- 50.3, mathematics- 47.2, science- 36.5. In comparison, the means of the sampled schools' student proficiency percentages are; reading- 45.3, mathematics- 47.1, science- 36.8.

The sampled teachers' age group varied with 23.35% 20- 29 years old ( $n= 10$ ), 34.88% 30- 39 years old ( $n= 15$ ), 25.58% 40- 49 years old ( $n= 11$ ), and 16.28% 50 and older ( $n= 7$ ). Participants reported races were 41.9% African American ( $n= 18$ ), 41.9% White ( $n= 18$ ), and 16.3% other ( $n= 7$ ). See Table 1 for additional demographic and baseline data by group.

#### **Measures**

**Teacher Demographics Form.** Demographic information was collected on each teacher participating in the study. Data gathered by the Teacher Demographic Sheet

includes age, race, and career characteristics (exs., tenure at current school, career length, courses taught, etc.).

**Maslach Burnout Inventory- Educators Survey (MBI-ES).** The MBI-ES (Maslach et al., 1996) was used to assess burnout symptoms of participating teachers. Maslach and Jackson are authorities on the topic of burnout and were the first to develop an encompassing measure of burnout (McCarthy et al., 2009). The MBI is the paramount tool for assessing burnout and has been used in over 90% of the research regarding burnout (Hastings, Horne, & Mitchell, 2004). The MBI-ES is a list of 22 statements concerning teachers' feelings about their job. Teachers are asked to report, on a seven-point frequency scale, how often they experience the feeling or event described in each statement. The frequency scale ranges from 0 (*never*) to 7 (*everyday*). Examples of statements on the MBI-ES include "*I don't really care what happens to some students*" and "*I accomplish a lot at my job*". The MBI-ES consists of three subscales which measure Emotional Exhaustion, Depersonalization, and Personal Accomplishment. As discussed, Emotional Exhaustion has been suggested as the core component of burnout in teachers. Due to this, the Emotional Exhaustion score was the data used from the MBI-ES. The Cronbach's alpha estimates for the Emotional Exhaustion subscale of the MBI-ES has been reported as .90 (Maslach et al., 1996). The Cronbach's alpha for the current sample is .93.

**Teacher Stress Inventory (TSI).** The TSI (Fimian, 1988) was used to assess teacher stress. Vance, Nutter, and Humphreys (1989) found the TSI to be an effective tool for psychologists when assessing teacher stress and studying issues in the school system caused by stress. The TSI is composed of 49 items that are designed to

incorporate 10 factors that contribute to the occupational stress of teachers. The items are scored on a 5-point Likert scale and consist of statements such as; *“There isn’t enough time to get things done.”*; *“The pace of the school day is too fast.”*; *“I feel frustrated having to monitor pupil behavior.”*. Cronbach’s alpha estimates for the TSI have been reported as .93 (Fimian, 1988). The Cronbach’s alpha for the current sample is .91.

**Teacher Self-Efficacy Scale: Short Form (TSES).** The TSES (Tschannen-Moran & Woolfolk Hoy, 2001) was used to assess the self-efficacy of each teacher as it pertains to their occupation. Woolfolk Hoy and Burke Spero (2005) report that the TES is the premium measure of teachers’ efficacy and is more reliable than all previous measures. The short form of the TES consists of 10 questions which produce scores for two subscales; Teaching Efficacy (TE) and Personal Efficacy (PE). This study was concerned with changes in teaching efficacy and therefore only this scale was analyzed. Examples of TE statements are; *“If students aren’t disciplined at home, they aren’t likely to accept any discipline.”* and *“If parents would do more for their children, I could do more.”*. The Cronbach’s alpha for the TE score in one study was estimated at .84 (Woolfolk Hoy, 2000). The Cronbach’s alpha for the current sample is .79.

**Job Satisfaction.** Replicating the method used by Skaalvik and Skaalvik (2010), three questions regarding teacher job satisfaction were asked of each participant. The three questions are; *“How much do you enjoy working as a teacher?”*; *“If you could choose your occupation today, would you choose to be a teacher?”*; *“Have you ever thought about leaving the teaching profession?”*. Responses will be given on a 5-point scale with answer ranges appropriate for each question. Skaalvik and Skaalvik (2010) report the Cronbach’s alpha for these three questions as .71. Three additional questions

were asked to gauge job satisfaction; “*Would you encourage family or friends to become a teacher?*”; “*Do you consider teaching to be a respected and valued profession?*” using the same scale as above; and “*Are you satisfied with your current position?*” with responses Yes (2), Somewhat (1), No (0);

**Mindful Attention Awareness Scale (MAAS).** The MAAS (Brown & Ryan, 2003) was used to assess each participant’s mindfulness levels. The MAAS is modeled to measure the extent to which a participant is aware of their actions and experiences on a daily basis. Individuals are directed to report on a 6-point Likert scale how often they experience things such as; “*I find it difficult to stay focused on what’s happening in the present.*”; “*I rush through activities without being really attentive to them.*”; “*I find myself doing things without paying attention.*”. Cronbach’s alphas for this measure have been reported as .87 (Brown & Ryan, 2003).

## **Procedure**

Participants were recruited for this study through presentations at staff meetings, distribution of flyers, and individual recruitment. All participants signed informed consent forms and completed all of the measures at both baseline and post-test. Schools were randomly assigned to either receive the intervention or to serve as controls. The intervention was held at two of the schools, in groups of ten and eleven, on dates that could accommodate the group. Six sessions were held after school in a spacious, empty classroom. A subset of participants in the intervention group were interviewed after post-testing regarding the program and their experience.

## **Intervention Components**

The Mindfulness Program for Teachers, used as the intervention, was designed by the HLF. The Mindfulness Program for Teachers curriculum was intended for reduction of stress unique to teachers and to provide additional coping skills for classroom stressors.

HLF is a nonprofit organization based in Baltimore city. They have been teaching yoga classes and providing mindfulness-based interventions for over ten years. HLF founders Ali Smith, Atman Smith, and Andres Gonzales jointly designed and implemented the intervention used in this study. Recently, a mindfulness-based intervention for youth designed by HLF was found to significantly reduce depression correlates in a sample of low-income, urban students (Mendelson, Greenberg, Dariotis, Gould, Rhoades, & Leaf, 2010).

The Mindfulness Program for Teachers focused on the correct way to breathe deeply to encourage relaxation and attentiveness, body relaxation techniques that do not require participants to leave their seats, and brief meditations. The curriculum for this program is adapted from the curriculum designed for students previously studied by researchers from both Johns Hopkins University and Penn State University.

Each member of HLF led two sessions in which they introduced and reinforced different techniques and skills. Topics covered included the following: Methods for recognizing activation of the stress response and calming both mentally and physically, practices for relaxing and strengthening the body, and a number of breathing techniques.

## **Results**

### **Preliminary Analyses**

As preliminary analyses, the normality of the distributions for the scores on the three primary measures (MBI-ES Emotional Exhaustion (EE), Teacher Stress Inventory (TSI), TSES- Teacher Efficacy (TE)) were analyzed using skew and kurtosis values and histograms. Baseline and post-test scores on all three measures were found to be normal.

Additionally, the intervention and control groups were examined to determine if participants in each group differed significantly in age, race, years teaching, years teaching in Baltimore, and in baseline scores of EE, TSI, and TE. Chi square tests were used to analyze the categorical variables of race and age and no significant difference was found between the groups on either variable. T-tests were run on the continuous variables of years teaching, years teaching in Baltimore, and on baseline scores of the EE, TSI, and TE. Again, no significant difference was found between the control and intervention groups. Table 1 presents the means and standard deviations or percentages and frequencies for the discussed variables as well as the comparison results.

Finally, raw scores for each analyzed variable were transformed to z-scores. Correlations of the z-scores are presented in Table 2. Both baseline and posttest emotional exhaustion (burnout) were significantly correlated with baseline stress, baseline emotional exhaustion, and posttest stress. No significant correlation was found between group and any of the variables at baseline or posttest.

### **Experimental Analyses**

According to the proposed theoretical model of teacher burnout it was hypothesized that baseline stress level and baseline teacher efficacy would be correlated

with baseline teacher burnout. A multiple regression ran with baseline teacher efficacy and baseline stress entered as predictors and baseline burnout as the outcome variable supported this aspect of the model;  $R^2 = .598$ ,  $F(2, 40) = 29.805$ ,  $p < .01$ . This analysis indicates that stress and teacher efficacy level account for 60% of the variance in burnout level at baseline. Stress was positively correlated with burnout indicating that higher stress scores are linked with greater levels of burnout. Additionally, the negative value of the teacher efficacy beta weight indicates that lower levels of teacher efficacy correlate with higher levels of burnout (See Table 3).

In addition to the theoretical model, two specific hypotheses were proposed for this study. First, it was expected that teachers in the intervention group would report lower post test stress, greater teacher efficacy, and less emotional exhaustion. Second, teachers in the intervention group who reported higher stress levels at baseline were predicted to report greater changes in stress and burnout than those who initially reported to be less stressed.

A multiple regression showed no significant main effect of condition on posttest teacher efficacy. Only baseline level of teacher efficacy significantly predicted posttest teacher efficacy (see Table 4).

An additional multiple regression showed that there was no significant main effect of group on posttest teacher stress. Additionally, there was no significant interaction effect of baseline stress level and group on posttest stress level. Only baseline stress level significantly predicted posttest stress level (See Table 5).

A third multiple regression showed that there was no significant main effect of group on posttest teacher burnout. Additionally, there was no significant interaction

effect of baseline stress level and group on posttest burnout. Only baseline burnout level proved to significantly predict posttest burnout (See Table 6).

### **Additional Analyses**

The effects of the intervention, while insignificant, trend toward significance. The intervention and control group differed most notably in posttest stress;  $p = .076$ , *partial r* =  $-.280$ . The  $.280$  effect size is very near the medium effect sizes that are commonly seen in mindfulness research (Krusche, Cyhlarova, King, & Williams, 2012). A simple examination of mean scores provides an unsophisticated alternative method for exploring trends. Table 7 presents the means and standard deviations for emotional exhaustion, stress, and teacher efficacy scores at baseline and posttest by group. Difference scores are also shown by group.

Descriptively, the control group reported an increase in emotional exhaustion from baseline to posttest while the intervention group reported a decrease. Additionally, both groups reported a decrease in stress from baseline to posttest however the intervention group reported a greater decline. Similarly, both groups had an increase in teacher efficacy but the intervention group had a greater increase at posttest.



### **CHAPTER THREE:**

#### **DISCUSSION**

The present study aimed to support the findings of prior teacher burnout and mindfulness research. Additionally, my objective was to advance these findings by implementing a mindfulness program designed specifically to address urban teachers and the psychological origins of burnout.

The results of this study found only stress to be significantly correlated with burnout symptoms. This finding substantiates the conclusions of McCarthy et al (2009) and provides support for Jennet et al.'s (2003) definition of burnout. Teacher efficacy, however, was not found to be predictive of burnout which contradicts the findings of Skaalvik and Skaalvik (2010). Exposure to the mindfulness program was also not significantly predictive of burnout. These findings suggest that the proposed theory for the psychological origins of burnout and the impact of a mindfulness intervention may require additional examination.

I also hypothesized that teachers in the mindfulness program would report lower stress levels, higher teacher efficacy, and less burnout symptoms. This hypothesis was not supported as analyses on each of these variables did not detect a statistically significant difference between the teachers' scores. Further, I hypothesized that those who reported higher stress at baseline would experience a greater change in stress and burnout levels after exposure to the program. This hypothesis was not supported. Again, an analysis of the data failed to reveal distinct differences in change amongst all the teachers in the intervention group regardless of baseline stress level.

These conclusions may appear to offer little promise for a mindfulness intervention as a potential intervention for teacher burnout in urban environments. A closer look at the data, however, suggests that this type of intervention may be beneficial. Stress, teacher efficacy, and reports of burnout all trended in the expected direction. Teachers who received the mindfulness program did report less stress and burnout than controls as well as increased efficacy however the changes were not statistically significant. There are a number of reasons why the analyses could not detect a significant difference and they will be addressed below in the discussion of study limitation.

Additionally, qualitative data collected from participants of the mindfulness program offers support for the feasibility of this type of intervention. One teacher noted that, “teachers in this city need programs like this.” When encouraged to expand on this statement the teacher reported that, “teaching in Baltimore city is much different than teaching in other school systems and we aren’t provided no extra help or ways to cope.” Another teacher spoke more specifically about the program saying, “I found the breathing techniques useful for calming myself in the evenings and have encouraged some of my more difficult students to give them a try.” The same teacher also stated, “I enjoyed each class and looked forward to them. They gave me time to destress after the usual chaos in my classroom.” A third teacher found the program to be far different than what was expected noting that each instructor of the intervention had a different style yet every class “gave me something new to try and something new to think about.”

### **Study Limitations**

The major limitation to this study was the extremely small sample size. A number of factors contributed to this limitation including school size, a need for stronger

recruitment efforts, and a condensed time period to complete the study. The lack of a sufficient  $n$  may explain why the data trended in the proposed direction but analyses still failed to support the hypotheses.

Another limitation that may impact results is the length of the program. The intervention consisted of only six sessions. This is a rather low dosage to create noticeable change. Mindfulness techniques are new to most teachers therefore a longer program that provides additional practice and further explanation may prove more beneficial.

Lastly, the timing of the intervention may have had negative consequences. The intervention was conducted very near the end of the school year. This time is commonly different than most of the other months in the academic year. The end of the year may cause an increase in stress and burnout for some teachers as state tests and final grades are pending. Other teachers may experience a decrease in stress and burnout due to the approaching summer break.

### **Directions for Future Research**

The findings of this study provide a strong starting point for further research. Adjustments that address the limitations of sample size, intervention length, and intervention timing are needed to truly assess the potential benefits of a mindfulness intervention for urban teachers.

The sample size may be increased by improved recruitment processes. First, recruitment activities should include a member of the community who is trusted by the staff at each school. Secondly, a large number of schools with an administration that

supports the program should be initially recruited. These two steps may encourage greater participation.

Intervention length is also important to consider when designing further study of this intervention. The brief three week duration provided a small dose of the techniques and practices taught in the program. This may have contributed to the small effect of the intervention. The original proposed length of the program was eight classes over four weeks and this would be the optimal number of sessions.

## **APPENDICES**

## Appendix A: Tables

Table 1: Means and Percentages for Socio-demographics and Stress Related Factors

	<b>Intervention (n= 21)</b>	<b>Control (n= 22)</b>	<b>Difference</b>
	<b>% (f)</b>	<b>% (f)</b>	$\chi^2$
<b><u>Age Group</u></b>			
20-29	14% (3)	32% (7)	$\chi^2 (3) = 1.878, p = .598$
30-39	38% (8)	32% (7)	
40-49	28% (6)	22% (5)	
50+	19% (4)	14% (3)	
<b><u>Race</u></b>			
White	57% (12)	27% (6)	$\chi^2 (2) = 5.774, p = .056$
Black	38% (8)	46% (10)	
Other	5% (1)	27% (6)	
	<b>Mean (SD)</b>	<b>Mean (SD)</b>	<b>T</b>
<b>Years Teaching</b>	7.90 (5.53)	9.05 (10.02)	$t (41) = -.459, p = .158$
<b>Years Teaching in Baltimore</b>	6.93 (4.66)	8.14 (9.54)	$t (41) = -.523, p = .155$
<b>MBI- Emotional Exhaustion</b>	31.48 (10.04)	30.05 (12.51)	$t (41) = .412, p = .398$
<b>Teacher Stress Inventory</b>	2.85 (.74)	2.75 (.61)	$t (41) = .498, p = .238$
<b>Teacher Efficacy</b>	14.48 (5.64)	14.23 (5.86)	$t (41) = .142, p = .702$



Table 3: Predictors of Baseline Teacher Burnout

<b>Predictor</b>	<b><math>\beta</math></b>	<b><math>t</math></b>	<b><i>Partial r</i></b>
Baseline Stress	.753	7.502**	.765
Baseline Teacher Efficacy	-.230	-2.287*	-.340
** $p < .001$ * $p < .05$			



Table 4: Predictors of Posttest Teacher Efficacy

<b>Predictor</b>	<b><math>\beta</math></b>	<b><i>t</i></b>	<b><i>Partial r</i></b>
Baseline Teacher Efficacy	.857	10.957**	.869
Group	-.163	-.478	-.076
Baseline Stress x Group	.299	.878	.139
** $p < .001$			

Table 5: Predictors of Posttest Teacher Stress

<b>Predictor</b>	<b><math>\beta</math></b>	<b><math>t</math></b>	<b><i>Partial r</i></b>
Baseline Stress	.708	6.659**	.729
Group	-.839	-1.822	-.280
Baseline Stress x Group	.664	1.438	.224
** $p < .001$			

Table 6: Predictors of Posttest Teacher Burnout

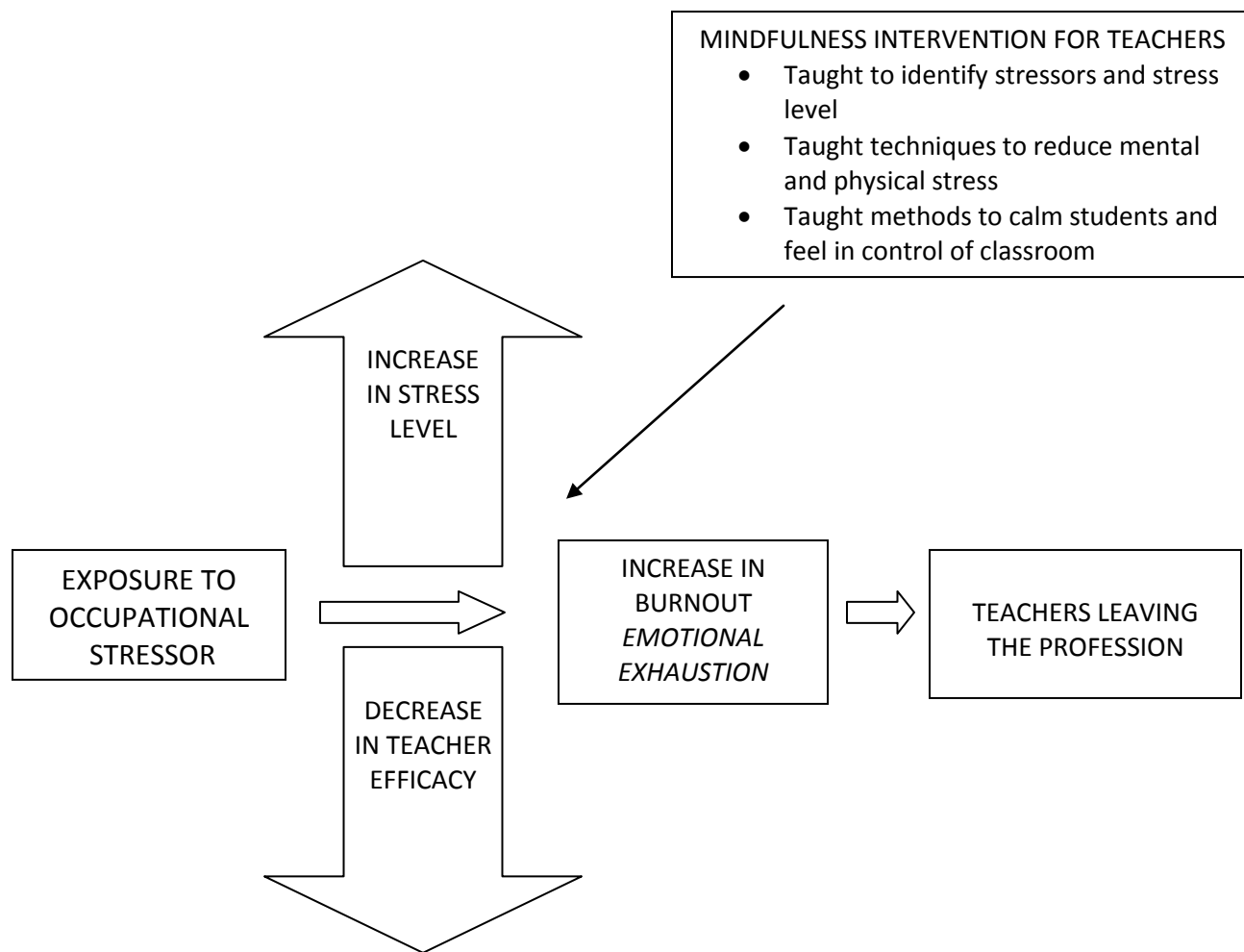
<b>Predictor</b>	<b><math>\beta</math></b>	<b><math>t</math></b>	<b><i>Partial r</i></b>
Baseline Stress	.003	.024	.004
Baseline Burnout	.876	7.253**	.762
Group	-.173	-.485	-.078
Baseline Stress x Group	.073	.204	.033
** $p < .001$			

Table 7: Means and Standard Deviations for Baseline and Posttest Scores of Burnout, Stress, and Teacher Efficacy

		<u>Baseline</u>	<u>Posttest</u>	<u>Difference</u>
<b>Burnout</b>	<i>Intervention</i>	31.48 (10.04)	29.81 (8.50)	-1.67
	<i>Control</i>	30.05 (12.51)	30.68 (10.81)	.63
<b>Stress</b>	<i>Intervention</i>	2.85 (.74)	2.56 (.63)	-.29
	<i>Control</i>	2.75 (.61)	2.71 (.64)	-.04
<b>Teacher Efficacy</b>	<i>Intervention</i>	14.48 (5.63)	16.33 (5.88)	1.85
	<i>Control</i>	14.23 (5.85)	14.68 (5.47)	.45

## Appendix B: Figure

Figure 1: Theoretical Model of Teacher Burnout and a Mindfulness Intervention's Function.



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