The Relationship between Burnout and Engagement: A Confirmatory Factor Analysis

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THE RELATIONSHIP BETWEEN BURNOUT AND ENGAGEMENT: A CONFIRMATORY FACTOR ANALYSIS

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of the requirements for the degree of
Master of Science

By

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Researchers have purported that burnout and engagement measure the same three latent constructs, energy, identification, and efficacy at work, but few have actually researched the theory (Maslach & Leiter, 1997; Schaufeli & Bakker, 2004). Burnout has been consistently related to workplace demands such as emotional labor (Brotheridge & Grandey, 2002; Brotheridge & Lee, 2002). The current study investigated whether burnout and engagement are comprised of energy, identification, and efficacy in a sample with high demands for emotional labor. A confirmatory factor analysis suggested that burnout and engagement might in fact be separate second order latent constructs comprised of only two constructs, emotional exhaustion and cynicism, and vigor and dedication for burnout and engagement, respectively.
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Introduction

Burnout is a serious issue for organizations. Research indicates that organizational outcomes of burnout are exhaustion, absenteeism, lowered productivity, less effectiveness at work, reduced commitment to the job, turnover intentions, and actual turnover (Cordes & Dougherty, 2003; Maslach, 2003; Maslach & Goldberg, 1998; Maslach, Schaufeli, & Leiter, 2001). For people, burnout can result in anxiety, depression, drops in self-esteem, substance abuse, and increased health problems. Burnout is also seen as contagious in the work environment and has a negative spillover effect on people’s home lives (Maslach, 2003; Maslach et al., 2001). In short, burnout is an important aspect of workplace stress.

Burnout is purported to be the erosion of energy, identification, and efficacy at work (Schaufeli & Bakker, 2004). We can see this erosion in the three steps of the burnout process emotional exhaustion, cynicism, and reduced personal accomplishment, all of which are modestly correlated with each other (Maslach et al., 2001). It is this process of erosion that leads to the negative outcomes of burnout. Recently, there has been inquiry into a concept that contrasts with burnout, engagement.

Engagement is purported to be the strengthening of energy, identification, and efficacy in work, rather than the erosion of these constructs. Engagement is considered to be the opposite of burnout (Maslach & Leiter, 1997), characterized by vigor, dedication, and absorption (Schaufeli, Martinez, Marques Pinto, Salanova, & Bakker, 2002; Schaufeli, Salanova, Gonzalez-Roma, & Baker, 2002). Engagement is important in the workplace because it can lead to personal investment in one’s work and increased organizational commitment (Hakanen, Bakker, & Schaufeli, 2006). Engagement as
defined by Maslach and Leiter (1997) is an emotional response to the work itself, much like burnout.

The burnout and engagement processes are hypothesized to be the erosion of, or enhancement of three latent constructs: energy, identification, and efficacy at work (Schaufeli & Bakker, 2004). The energy dimension refers to emotional energy people feel at work. Identification concerns the extent to which people relate to the work. Efficacy at work involves beliefs people hold that they can perform the job well (Gecas, 1989). These three latent constructs are hypothesized to comprise burnout and engagement.

Energy at work is the amount of vitality felt at work. It is the ability to mentally persist with tasks (Lykken, 2005). Energy involves being able to focus attention on tasks and assists with cognitive demands. It can lead to successful performance and constructive achievement. Low energy can lead to trouble making decisions, feeling overwhelmed, putting things off, and loss of interest (Fehnel, Bann, Hogue, Kwong, & Mahajan, 2004).

The identification construct refers to the extent which people relate to the work. Identification with the work involves value assessment, emotions, goals, and perception of the work. It is the extent to which people see a relationship between the work and themselves, through reputation, mannerisms, and popularity (Luhtanen & Crocker, 1992). People may also receive some sense of self worth from identifying with the work. People that do not identify with the work may not get a sense of worth from the work, and may not see a relationship between themselves and the work except for work providing pay.

Efficacy at work concerns the perception of ability to perform the job well. Cognitive theories of efficacy focus on people’s perceptions of ability, not necessarily
their true ability (Gecas, 1989). The current study investigated efficacy expectations, beliefs that people hold that they can successfully perform a particular action. Efficacy expectations do not focus on whether a given action will lead to certain outcomes. The focus of the expectancy is whether people believe they can perform the task adequately. People with low efficacy expectations may not feel a sense of perceived ability to perform a particular action.

The current study examined whether burnout and engagement are opposite ends of energy, identification, and efficacy continuums. It is imperative to determine whether burnout and engagement are measuring the same three latent constructs because the research will lead to a better theoretical understanding of the constructs that comprise burnout and engagement. Additionally, research on the second order latent constructs will lead to a better understanding of the constructs of burnout and engagement. With more precisely defined constructs of burnout and engagement we can further determine how burnout and engagement function in the workplace. This understanding can inform theories to prevent burnout and promote engagement.

**Burnout**

Burnout is an important aspect of workplace stress. The study of burnout originated in the helping professions such as nursing, law enforcement, and others, due to the high workplace demands and shortage of personnel in the helping professions (Maslach et al., 2001). People working in helping professions felt a loss of idealism and extreme fatigue. These issues prompted research in the field, leading to the development of the Maslach Burnout Inventory Human Services Survey (MBI-HSS) (Maslach &
Jackson, 1981) which measures burnout in human service professions. A comprehensive theory of stress is necessary for a better understanding of burnout.

Conservation of resources (COR) theory purports four types of resources that aid in preventing burnout: objects, conditions, personal characteristics, and energies (Hobfoll, 1989). Object resources are valued because of their physical nature or secondary status based on their expense or rarity. Conditions are resources to the degree they are sought after. Personal characteristics are resources to the degree they aid in dealing with stress. Energies are resources valued for their aid in acquiring other resources.

Conservation of resources theory asserts that the amount of resources at the disposal of people is important (Hobfoll, 1989; Hobfoll, Freedy, Lane, & Geller, 1990). The more resources people have at their disposal the more productive coping strategies will be employed, which will lead to more resources. Conversely, the less resources people have at their disposal the more maladaptive coping will be employed, leading to fewer resources in the future.

The lack of resources coupled with demands leads to burnout (Hobfoll et al., 1990). People with high demands and high resources may not burnout because they have a sufficient amount of resources to deal with the demands. People with low resources and low demands will not burnout because they do not have demands placed on them and are not using up the low resources at their disposal. People with high demands, such as long work hours, and low resources will burnout because there is a high demand and little or no resources to combat the demands. The coupling of low resources and high demands leads to an erosion of other resources such as energy, identification, and efficacy, which
is the burnout process. This theory was demonstrated in a study of Chinese teachers (Tang, Au, Schwarzer, & Schmitz, 2001). The study demonstrated that teachers with low resources were more likely to burnout. Similar findings were obtained in a heterogeneous group of working people (Brotheridge & Lee, 2002).

Burnout is exemplified by five characteristics (Maslach et al., 2001). First, there is a lack of energy such as mental or emotional exhaustion, fatigue, and depression. Second, the emphasis of burnout is on mental and behavioral symptoms more than physical ones. Third, burnout and its symptoms are work related. Fourth, the symptoms manifest themselves in people that do not suffer from psychopathology. Lastly, there is a decrease in performance and effectiveness at work because of negative attitudes and behaviors associated with burnout. The characteristics of burnout are exemplified in the three steps of the burnout process: emotional exhaustion, depersonalization/cynicism, and reduced personal accomplishment (Maslach et al., 2001).

The first step in burnout is emotional exhaustion (Leiter & Maslach, 1988). Emotional exhaustion consists of a feeling of not being able to give any more emotionally to the job because people have nothing more to give (Maslach & Goldberg, 1998; Maslach et al., 2001; Schaufeli et al., 2002a; Schaufeli et al., 2002b). Emotional exhaustion is characterized by a lack of emotional energy and a perception that emotional resources are depleted (Cordes & Dougherty, 1993). Emotional exhaustion is the response to chronic stressors in the workplace such as work overload. These stressors are constant over time and put pressure on people, causing emotional exhaustion. Emotional exhaustion is the step of burnout that most researchers purport spans across jobs because it is the most consistent aspect of burnout. Emotional exhaustion is the only construct that
is present in all the samples from previous research, regardless of profession (Cordes & Dougherty, 1993).

Emotional exhaustion is the depletion of the energy construct (Gonzalez-Roma, Schaufeli, Bakker, & Lloret, 2006). It is the lack of emotional energy, not physical energy. People are not physically fatigued from performing a strenuous job such as manual labor; rather it is the feeling of being emotionally drained from the lack of resources to deal with demands and stressors. This lack of energy, seen as a further loss of resources, will lead to maladaptive coping such as depersonalization.

Originally, the second step in the burnout process was depersonalization (Maslach et al., 2001). Depersonalization is an attempt to distance from the job and clients by actively ignoring the client’s unique and engaging qualities. Depersonalization can lead to dehumanization, treating people as objects. Depersonalization is seen as a form of coping because it distances workers from the job and clients. Human services professions require the providers to care about the individuals receiving their services, or at least to display the appropriate emotions (Brotheridge & Lee, 2002; Henderson, 2001; Lively, 2002). The human service workers who depersonalize at their job are attempting to block negative emotions, to reduce emotional exhaustion and regain resources, increasing energy.

Cynicism was introduced to substitute depersonalization in non-human service fields (Leiter & Schaufeli, 1996). Cynicism is a broader construct, including interactions with coworkers (Maslach et al., 2001). Cynicism is negativism and acting selfishly or callously. Cynicism can be directed toward people, work, or situations. An example of cynicism toward people would be thinking everyone at work is fake or out to hurt you.
Cynicism in regard to work would be exemplified by thoughts of work as meaningless. Situational cynicism can involve thinking cynically about the workplace but not the work; such as thinking other hospitals are better than the one they work in.

Depersonalization is a type of cynicism because people act callously towards others and treat them as objects; and they perceive the job as not significant or not worth doing well.

Depersonalization and cynicism are both types of distance coping. Distancing is a form of coping that enables people to mentally disengage from the stressful situation (Folkman & Moskowitz, 2004). Distancing occurs as a coping mechanism to emotional exhaustion, to disengage the person from the work, preventing further emotional exhaustion (Maslach, 2003; Maslach & Goldberg, 1998; Maslach et al., 2001). People attempt to cope with emotional exhaustion by becoming emotionally detached using distancing. They may become emotionally detached, but may also start to become callous and negative (Maslach et al., 2001).

Distancing is not an effective coping mechanism in most situations (Lazarus & Folkman, 1984). People with little or no control over the situation, such as hospice patients, may engage in distancing because there is nothing they can do to exert control over the situation. Distancing is maladaptive when people do have control over the situation because they may not engage in any problem-focused coping, thus not eliminating the stressor (Lazarus & Folkman, 1984). Distance coping may be a response to stressors characterized by high demands and low resources (Hobfoll, 1989). People may perceive distance coping as an effective means to disassociate with the demands or stressors. However, they lose more resources than are preserved due to possible lowered sense of identification or commitment that can result in lower morale, impaired social
functioning, and possible damage to health (Lazarus & Folkman, 1984). These consequences then lead to further resource loss (Hobfoll, 1989).

The distancing that occurs in burnout is an erosion of identification with work (Schaufeli & Bakker, 2004; Schaufeli et al., 2002b). People no longer relate to the job. As distancing occurs they become callous and negative about the job and perhaps the profession. People experience an erosion of identification with work, or no longer associates themselves with the job or profession. They may not perceive the work as meaningful to their self worth. The relationship previously held with work has dissipated, and people may not take pride in their work.

Reduced personal accomplishment is the third step in the burnout process (Leiter & Maslach, 1988). In burnout people feel a diminished sense of personal accomplishment, such as the perception that they cannot perform the job adequately. The perceived reduction in performance in human service professions stems from being emotionally exhausted and depersonalizing (Maslach et al., 2001). A recognized part of the job is caring about and helping others, but if people are depersonalizing they will perceive they are not doing an adequate job.

Reduced personal accomplishment is a decrease in one’s perceived professional efficacy (Maslach & Leiter, 1997). This feeling of decreased efficacy is exemplified in human-service and customer service fields such as nursing and customer service. In human service and customer service professions people may feel they should not be feeling the lack of emotional energy experienced in the emotional exhaustion and cynicism phases of burnout. The emotional dissonance that occurs from believing that they should not feel the lack of emotional energy and should not be engaging in the
distancing leads to more stressors and emotional exhaustion, leading to fewer resources. This process starts the spiral toward greater burnout and eventual turnover due to the lack of resources (Hobfoll, 1989; Hobfoll et al., 1990).

The burnout process is continuous. Burnout is not experienced as an intermittent process, in which people have to experience a certain threshold of emotional exhaustion and then start to de-personalize to a certain threshold, then feels a sense of reduced personal accomplishment. Rather, people may feel a small amount of emotional exhaustion, resulting in a small extent of de-personalization, which then leads to a small amount of reduced personal accomplishment. The reduced personal accomplishment then leads to more emotional exhaustion, continuing the burnout spiral. The spiral is depicted in Figure 1. People that experience burnout will continually burnout, increasing in emotional exhaustion, de-personalization, and reduced personal accomplishment until eventual turnover. This is a spiral into burnout, which slowly erodes energy, identification, and efficacy.

Engagement

Engagement, the opposite of burnout, is a considered to be a feeling of high energy, identification with the job, and high efficacy (Schaufeli et al., 2002b). Research on engagement is influenced by an emerging field of psychology called positive psychology, which focuses on human strengths and optimal functioning (Schaufeli et al., 2002b). It is important to differentiate between engagement and commitment, job satisfaction, or job involvement. Maslach and Goldberg (1998) conceptualize engagement as different from organizational commitment, which is a focus on the organization, whereas engagement is a focus on the work itself. Job satisfaction is the
“extent to which work is a source of need fulfillment and contentment, it does not entail a relationship with the work itself” (Maslach et al., 2001 p.416). Similarly, job involvement does not fully encompass engagement because it does not include energy or efficacy in it (Maslach et al., 2001). Engagement is seen as an emotional response to the work itself.

Demands are an integral part of engagement. Engaged people have moderate to high demands in the workplace. People that do not have any demands placed on them will not feel energetic, identified or efficacious with the job. A job such as nursing may have high demands but people can feel energy from completion of tasks, identification as a nurse, and efficacy because they perceive themselves doing a good job with the work.

Resources are important to engagement. Engaged people have many resources at their disposal (Hobfoll, 1990). These resources help people cope with stressors and complete tasks. For example, teachers that have enough time to complete their lesson plans will be more likely to be engaged than teachers that have very little time to get the lesson plans together. Resources that are available help people produce more actual resources for future demands. Resource accumulation starts a spiral towards more resources in the future, leading to better coping mechanisms.

Schaufeli et al. (2002b) have found engagement consists of vigor, dedication, and absorption as measured by the Utrecht Work Engagement Scale (UWES). Vigor is the first step in the process of engagement. Vigor is characterized by high levels of energy and mental resilience at work (Maslach & Goldberg, 1998; Maslach et al., 2001; Schaufeli et al., 2002b). People feel motivated at work due to an abundance of resources (Hakanen et al., 2006). Unlike people experiencing emotional exhaustion, they have an abundance of resources for dealing with the high demands at work.
Vigor is an abundance of energy at work, due to an abundance of resources (Schaufeli & Bakker, 2001; Schaufeli et al., 2002b). The vigor portion of the UWES indicates whether people are high on the energy construct; whereas emotional exhaustion from the MBI measures whether people are low on the energy construct. Vigor is conceptualized as the opposite of emotional exhaustion, because both measure the latent energy construct (Schaufeli & Bakker, 2004). Vigor has been consistently negatively correlated with emotional exhaustion (Gonzalez-Roma et al., 2006; Hakanen et al., 2006; Langelaan, Bakker, van Dooren, & Schaufeli, 2006; Schaufeli & Bakker, 2004; Schaufeli et al., 2002a; Schaufeli et al., 2002b).

The second step of engagement is dedication. Dedication is exemplified by a sense of significance, enthusiasm, challenge, pride, and inspiration (Schaufeli et al., 2002b). Dedication is significantly negatively correlated with organizational commitment (Hakanen et al., 2006), and has consistently been correlated with distancing found in burnout (Gonzalez-Roma et al., 2006; Hakanen et al., 2006; Langelaan et al., 2006; Schaufeli & Bakker, 2004; Schaufeli et al., 2002a; Schaufeli et al., 2002b). Resources assist in promoting dedication because people have enough resources to complete a task.

The consistent completion of tasks, abundance of resources and high energy at work will lead to dedication, which is identification with the work. Dedication is conceptualized as high levels of identification with the job (Schaufeli & Bakker, 2001; Schaufeli et al., 2002b). Whereas in burnout people are attempting to unidentify with the work due to emotional exhaustion; in engagement they highly relate themselves with the work.
Absorption is the third step of engagement. Absorption is characterized by focused attention, a clear mind, intrinsic enjoyment, loss of self-consciousness, distortion of time, a sense of complete control, and effortless concentration (Schaufeli et al., 2002b). Absorption is similar to the construct of flow, the difference between the two constructs is that flow is experienced in short peak episodes, whereas absorption is experienced in persistent and encompassing episodes, such as when an person is at work (Csikszentmihalyi, Abuhamdeh, & Nakamura, 2005; Schaufeli et al., 2002b).

Absorption is conceptualized as high efficacy in the workplace. People that are absorbed becomes so efficacious at work they become immersed in the work. Efficacy is the perception that one is doing good work and has control over the situation (Gecas, 1989). The latent efficacy construct does not have to do with the consequences of the work. Absorption is the perception that they are doing such good work and have so much control over the situation they immerse in the work for the sake of the work.

Engagement is a continuous process, in that people do not have to reach some threshold of vigor, followed by a threshold of dedication, then absorption, resulting in engagement. Instead people may feel some energy at work which leads to a little dedication, which leads to some absorption, which in turn increases energy, starting the process over again. This process is demonstrated in Figure 2. People will continually engage strengthening the three latent constructs: energy, identification, and efficacy until some other source intervenes.

**Burnout and Engagement Research**

There are two competing theories about how burnout and engagement relate to each other. The Maslach and Leiter theory (1997) purports that burnout and engagement
are comprised of three latent constructs. The latent constructs are energy, involvement, and efficacy. Burnout occurs from the erosion of the three constructs. Energy turns into emotional exhaustion, involvement turns into cynicism or depersonalization, and efficacy turns into reduced personal accomplishment. Engagement, in this theory, is measured by low scores on any version of the MBI. The theory purports the MBI measures the full range of the three latent constructs. The theory focuses on the burnout aspect of the relationship (the erosion of engagement being burnout). Little empirical support for the theory exists. Research has instead indicated that the MBI measures just the middle to low sides of the three latent constructs and does not measure engagement (Duran, Extremera, & Rey, 2004; Gonzalez-Roma et al., 2006; Hakanen et al., 2006; Langelaan et al., 2006; Schaufeli and Bakker, 2004; Schaufeli et al., 2002a; Schaufeli et al., 2002b). The MBIs were scaled with the intention of measuring people that had burned out. The scales on the MBIs measure how depleted the three latent constructs are, and thus have difficulty indicating if people are high on these constructs.

The Schaufeli and Bakker theory (2004) is a competing theory on the relationship between burnout and engagement. Schaufeli and Bakker (2004) built on the Maslach and Leiter theory, one key addition is that the MBI is purported to only measure the low side of the latent constructs, not the full construct. Another key difference is Schaufeli and Bakker removed the efficacy components of their theory of burnout and engagement after later research suggested the reduced personal accomplishment and absorption are not components. Schaufeli and colleagues developed a measurement of engagement, as discussed earlier (Schaufeli et al., 2002b) and have performed research on the relationship between burnout and engagement. As the research progressed they
demonstrated robustly that burnout and engagement, as measured by the MBI and UWES, are negatively correlated. Schaufeli and colleagues (Gonzalez-Roma et al., 2006) concurred with others (Cordes & Dougherty, 199; Shirom, 2003) that efficacy may be a personality characteristic rather than a burnout component. Schaufeli and colleagues’ research, along with others, has led to the hypothesis that burnout and engagement are comprised of only two latent factors: energy and identification (Schaufeli & Bakker, 2004). Research supports the hypothesis that at least two latent factors are evident in the burnout process (Gonzalez-Roma et al., 2006).

Research has demonstrated the relationship between burnout and engagement has three interrelated issues in the literature. First, certain work demands of the samples may be an issue worth investigating. Second, there are issues of applicability of the Maslach Burnout Inventory General Survey (MBI-GS) outside the human service professions. Lastly, there may be measurement issues with the scales. These issues are discussed in turn.

**Work Demands of Samples.** The demands of some jobs have consistently been shown to relate to burnout (Garden, 1987, 1989; Zapf, Seifert, Schmutte, Mertini, & Holz, 2001). Human service and customer service professions both have high demands for emotional labor (Zapf et al., 2001). Emotional labor is the demand that people display socially desirable emotions at work (Grandey, 2000). A study examined emotional labor across human service, customer service, and non-human service personnel such as bankers and call center staff (Zapf et al., 2001). Emotional labor predicted burnout in customer service and human service personnel. Additionally, personal accomplishment was predicted by sensitivity requirements across all jobs. Sensitivity requirements, a
subset of emotional labor requirements, measured the need for empathy and knowledge about clients’ feelings. These findings suggest emotional labor is a main component in the reduced personal accomplishment subscale. It is not just job demands that need to be measured, but also the right type of job demands for the specific jobs.

The lack of attention to the job demands of the human service profession has led to exclusion of reduced personal accomplishment and absorption from the theory. The issue is that the samples are all confounded with professions that require high and low emotional labor. People in professions with high demands for emotional labor may perceive personal accomplishment differently than other fields. For example, nurses may perceive displays of desirable emotions and empathy towards patients as necessary and fundamental requirement of the profession. When depersonalization/cynicism occurs, people may perceive they are not performing the job adequately because they may feel they should not feel those emotions. They become cynical towards the work, which entails the patient receiving care. Conversely, loan officers at a bank may experience cynicism towards the work, but since the emotional state of caring about the work is not present, the loan officers will not report reduced personal accomplishment on the MBI because the feeling of accomplishment may depend on something else. Loan officers at a bank may measure their personal accomplishment by the amount of loans completed in a quarter rather than feelings toward the loan recipient.

None of the Schuafeli research specifically inquired about professions with high emotional labor (Hakanen et al., 2006; Langelaan et al., 2006; Schaufeli & Bakker, 2004; Schaufeli et al., 2002a; Schaufeli et al., 2002b). One of the first studies to examine burnout and engagement included a variety of professions. Schaufeli et al. (2002b) used
the MBI-GS to assess several professions such as clerical, technical support, management, human services, sales, laboratory settings, production line operators, and students. They found that burnout and engagement were negatively correlated. A confirmatory factor analysis showed two core components of burnout, energy and identification, and three components to engagement. Burnout demonstrating only two factors may be indicative of the sample used. Engagement demonstrated three factors because it was created in this study, which had a diverse array of professions. The demands were not taken into account for burnout.

Schaufeli et al. (2002a) conducted a study of burnout and engagement specifically on students. The student versions of both the MBI-SS (Student Survey) and UWES-SS (Utecht Work Engagement Scale Student Version) were used. The student versions measure burnout and engagement in regards to the student’s academic experience, not any job they may have held at the time. In the study, a confirmatory factor analysis determined the MBI-SS and the UWES-SS each had three factors. They also found a negative correlation between burnout and engagement. As a whole, the study focused on the demands of the students and thus was able to get good factor loadings on the MBI-SS and the UWES-S. The reason for these results may be because the scales are specific enough to capture the specific demands of the students.

Another study by Schaufeli and Bakker (2004) included four separate samples: insurance company employees, employees of Occupational Health and Safety Services, a pension and fund company employees, and home-care institutions. They examined differences in burnout and engagement between the home-care institution employees (high emotional labor) and the other three professions (lower emotional labor). The path
coefficient between burnout and engagement was -.70 for people that worked in human service professions and -.34 to -.54 for non-human service professions. The path coefficient between burnout and turnover intentions was .48 for the home-care institution employees and between .19 and .25 for the other professions. It cannot be determined if there is significant difference between the samples because no tests were performed on the differences. However, it does suggest there may be differences between the professions. Engagement’s path coefficient to turnover intentions was relatively the same across all professions. This study demonstrated the MBI-GS might not be applicable outside of the human service personnel domain because of the different path coefficients between the human service and non-human service fields. Unfortunately the study did not emphasize these statistics, but rather concluded that burnout and engagement were not measuring the same constructs and focused on burnout by grouping all four professions. This lack of attention to the profession type may have led the researchers to determine that reduced personal accomplishment is not part of the burnout process.

*Applicability of MBI-GS.* Research supports the notion that the MBI is not applicable to all professions (Garden, 1987, 1989). Specifically, the need for an MBI-SS to measure burnout in college students demonstrates the demands of students were not being measured by the MBI-GS.

The MBI-GS is used to measure burnout across many different professions. Although it has been shown to predict turnover and performance in non-human service professions (Huang, Chuang, & Lin, 2003), it cannot be assumed that it measures burnout in all professions. The work demands of people in the samples used for norming the MBI-HSS, MBI-ES, and MBI-GS all had a specific demand in common, emotional labor.
This may have inadvertently influenced all versions of the MBI. The MBI-GS may or may not be applicable to other fields, because it has not been appropriately validated. As a result, it cannot be assumed that the same three constructs will be apparent in all professions. Further research should address the role of emotional labor and its implications for burnout before the MBI-GS is applied to other fields. Despite the fact that the MBI-GS may not be applicable to other fields that do not have high demands for emotional labor it has been used in numerous studies of burnout and engagement, which resulted in fundamental flaws such as the exclusion of the efficacy latent construct (Cordes & Dougherty, 1993; Gonzalez et al., 2006; Hakanen et al., 2006; Langelaan et al., 2006; Schaufeli & Bakker, 2004; Schaufeli et al., 2002a; Schaufeli et al., 2002b).

**Measurement Issues.** Measurement issues arose in studies examining the relationship between burnout and engagement. A principle components analysis was conducted with the emotional exhaustion and cynicism portions of the MBI and the vigor and dedication portions of the UWES (Gonzalez-Roma et al., 2006). The analyses performed provided inconsistent results for a single factor for emotional exhaustion and vigor and a single factor for cynicism and dedication. The principle components analysis demonstrated four constructs.

Mokken scaling was used to determine that emotional exhaustion and vigor were measuring the same latent factor, energy (Gonzalez-Roma et al., 2006). Similarly, cynicism and dedication were measuring the same latent factor, identification. Mokken scaling is similar to Item Response Theory, and is non-parametric. Mokken scaling is a model for cumulative items and tests whether two or more items belong on one dimension. The study examined the energy and identification components of the burnout-
engagement continuum and did not consider human service or similar professions, which require high amounts of emotional labor. Thus, there remains the question of whether burnout and engagement have an efficacy component.

Measurement issues were demonstrated in the Gonzalez-Roma et al. (2006) study. The two scales, the MBI and the UWES, measure three latent constructs. The problem is that they may be measuring only the low to medium ranges and medium to high ranges of the constructs, respectively. This is an issue with the scales, not the latent constructs.

The issue facing the burnout and engagement research has to do with wording. The scale is worded negatively so that higher scores reflect lower levels of the construct. In contrast, the UWES is worded positively so that higher scores represent higher levels of the construct. These differences in wording appear to lead to range restriction in the scores for these scales. The scores on the MBI appear to be restricted to low ends of the constructs, and the scores on the UWES are restricted to high ends of the constructs. When used together this creates somewhat of a bimodal distribution because there are fewer scores in the middle ranges of the latent constructs. This issue may be caused by answering bias or by the wording of the items.

Gonzalez-Roma et al. (2006) found people that responded low on both measures of a latent construct. People that responded high on the emotional exhaustion scale were expected to score low on the vigor scale, and vice versa. Responses for the two scales were submitted to a principle components analysis, which found evidence of two factors. There are two explanations for these findings. One is the two scales measure different constructs. That is, burnout and engagement might not be opposite ends of a continuum but distinct constructs. An alternative explanation is that the negative wording in the MBI
scale produces a separate wording factor. The latent constructs of energy and identification are still present, but the wording of the scales influences how individuals will respond.

Certain aspects of both the Maslach and Leiter (1997) and Schaufeli and Bakker (2004) theories can be taken to create one encompassing theory. There are three latent constructs in the burnout and engagement process. Burnout is the erosion of the three latent constructs, and engagement is the strengthening of these three latent constructs. To be burned out people must have low engagement scores and high burnout scores. Conversely, to be engaged people must have high engagement scores and low burnout scores. It is not enough to have low scores on the burnout scale to indicate engagement. Similarly, low scores on the engagement scale do not indicate burnout. There may be people at the job that will have low burnout and low engagement scores. These people will be neither burned-out nor engaged.

Current Study

The current study explored whether burnout and engagement are comprised of the same three latent constructs. If we can determine the constructs that comprise the burnout and engagement processes we can gain a better understanding of the process which people become burned-out or engaged. Furthermore we may intervene with the burnout process to prevent people from burning out. For example, if we see signs of low energy we intervene and stop the process while trying to promote higher energy leading to engagement. We can assist in the engagement process and promote personal and situational variables that will foster the strengthening of the three latent constructs: energy, identification, and efficacy. Additionally, if three latent constructs are evident
from the analyses it would support the theory for the efficacy construct in professions with high emotional labor demands, which may help clarify the concepts of burnout and engagement and some of the sampling issues that have surrounded them.

The current study used confirmatory factor analysis to determine whether burnout and engagement measure the same latent constructs in customer service personnel. The confirmatory factor analysis allowed a strict analysis of the number of factors. People employed in customer service professions were sampled to ensure that validity for all the subscales was present, because burnout and engagement as measured by the MBIs may only be applicable to certain professions. The current study concentrated on whether the three constructs that form the burnout process and the three constructs that form the engagement process are indicators of the same latent constructs. Measures of energy, identification, and work-place efficacy were used to determine convergent validity for the latent constructs. It was hypothesized that burnout and engagement, in human service and customer service jobs, measure the same three latent constructs of energy, identification, and efficacy at work.

The proposed best-fit model is:

H1: The model of best fit will be a three factor model where emotional exhaustion and vigor load onto one factor (energy), depersonalization/cynicism and dedication load onto one factor (identification), and reduced personal accomplishment and absorption will load onto one factor (efficacy).

Examining three other hypotheses would assess convergent and discriminant validity.

H2: The energy latent factor of the model will correlate with a measure of energy at work.
H3: The identification latent factor will correlate with a measure of identification at work.

H4: The efficacy latent factor will correlate with a measure of work self-efficacy.
Method

Sample and Procedure

Participants in this study were 250 introductory to psychology students at a Midwestern university, who participated for credit. A power analysis was conducted using a power analysis program, Gpower, and it was determined that a sample of 82 participants would have adequate power for the analyses to be conducted. However, a sample of at least 250 is needed to perform structural equation modeling (Kline, 2005). Students were recruited from an online data collection web site. The website stated the requirements for the study. To be included in the sample, students must have been employed a minimum of 15 hours a week. Previous burnout research suggests that part-time employment is a minimum of 15 hours a week (Chang, Rand, & Strunk, 2000). Additional inclusion criteria was that the job the student currently has must be a human services or customer service job. These professions require high amounts of emotional labor (Zapf et al., 2001). An emotional labor scale was included to validate people participating from the chosen professions are experiencing high amounts of emotional labor. A t-test was performed to determine if the participants were experiencing high emotional labor as a group. The MBI-GS and UWES measures were randomly combined into one 33-item questionnaire to avoid response bias (Gonzalez-Roma et al., 2006; Schaufeli et al., 2002b). None of the scales had the names of the scales on them to avoid response bias.

Measures

Emotional Labor. Emotional labor was measured with the Emotional Work Requirements Scale (Brotheridge & Grandey, 2002). It has two subscales which measure
positive and negative display rules for emotional labor in the workplace. Positive display rules are emotional labor requirements to display positive emotions (e.g. “I express friendly emotions.”) to be effective at their job. Negative display rules are emotional labor requirements to hide negative emotions (e.g. “I hide my disgust over something someone has done.”) to be effective at their job. The two scales consist of a total of eight-items, the positive display rules subscale has an internal consistency reliability of .78, and the negative display rules subscale has an internal consistency reliability of .77.

Energy. Energy was assessed with three scales, the emotional exhaustion subscale of the MBI-GS, the vigor subscale of the UWES, and the Motivation and Energy Inventory (Fehnel et al., 2004). The emotional exhaustion subscale of the MBI-GS consists of five items, the internal consistency reliability of the subscale is .90 (Maslach, Jackson, & Leiter, 1996). At the publisher’s request, the MBI-GS subscales are not presented in this document. Instead, the reader is directed to the MBI-GS manual where the information can be found. The vigor subscale of the UWES consists of five items (e.g. “When I get up in the morning, I feel like going to work.”), the internal consistency of the subscale is .80 (Schaufeli et al., 2002b). The emotional exhaustion and vigor subscales are both measured on a seven-point response scale ranging from 0 (“never”) to 6 (“always”).

The full range of the energy construct at work was measured using the Motivation and Energy Inventory (MEI) subscales for mental energy (Fehnel et al., 2004). The mental energy scale is nine items (e.g. “How often do you have problems concentrating?”). The mental energy scale is scored on a six-point response scale ranging from 0 (“never”) to 6 (“everyday or nearly everyday”). The Motivation and Energy
Inventory (MEI) was created with the intent to measure mental energy. The participants were given the questionnaire and a set of four cognitive interviews, which included think-aloud and directive probing techniques. The questionnaire results were compared to the cognitive interviews and were correlated. Factor analyses found three subscales to the MEI: mental energy, social motivation, and physical energy. The mental energy subscale is the only subscale that will be used in the research because social motivation and physical energy are not part of the energy construct the burnout and engagement processes. The internal consistency reliability of the measure is 0.89 (Fehnel et al., 2004). The scale was used to provide convergent validity for the energy component of the proposed model. If the underlying construct for the emotional exhaustion and vigor factor is energy it should correlate with the MEI. The scale was also used to demonstrate discriminant validity for the other two constructs.

Work Identification. Work identification was assessed with three scales, the cynicism subscale of the MBI-GS, the dedication subscale of the UWES, and an organizational identification scale modified to measure work identification. The cynicism subscale consists of five items, the internal consistency reliability of the subscale is .79 (Maslach, Jackson, & Leiter, 1996). The cynicism subscale is a part of the MBI-GS and cannot be reproduced in this document. The dedication subscale consists of five items (e.g. “To me, my job is challenging.”), the internal consistency of the subscale is .80 (Schaufeli et al., 2002b). The cynicism and dedication subscales are both measured on a seven-point response scale ranging from 0 (“never”) to 6 (“always”).

The full range of the work identification construct was measured using the four-item scale developed by Mael and Ashforth (1992). The Organizational Identification
Scale was created to measure what extent an person identifies with their organization. The scale has an internal consistency ranging from 0.81 to 0.87 and has been used in other studies as an indicator of identification (Van Knippenberg & Sleebos, 2006). The scale was be modified to measure identity with an person’s work (“When someone criticizes my work, it feels like a personal insult.”). All items on the work identification scale were scored in a five-point response scale ranging from 1 (“Strongly Agree”) to 5 (“Strongly Disagree”). The identity subscale will adequately measure whether the person identifies with they work. The scale was included to provide convergent validity for the identification component of the proposed model. If the underlying construct for the depersonalization/cynicism and dedication factor is identification it should correlate with the work identification scale. The scale was also used to demonstrate discriminant validity for the other two constructs.

**Efficacy.** Efficacy was assessed with three scales, the personal accomplishment subscale of the MBI-GS, the absorption subscale of the UWES, and the General Self-Efficacy Scale (Jerusalem & Schwarzer, 1993). The personal accomplishment subscale consists of six items, the internal consistency reliability of the subscale is .71 (Maslach, Jackson, & Leiter, 1996). The personal accomplishment subscale is a part of the MBI-GS and cannot be reproduced in this document. The absorption subscale consists of five items (e.g. “Time flies when I am at work.”), the internal consistency of the subscale is .75 (Schaufeli et al., 2002b). The personal accomplishment and absorption subscales are both measured on a seven-point response scale ranging from 0 (“never”) to 6 (“always”).

The General Self-Efficacy Scale (GSE) (Jerusalem & Schwarzer, 1993) was used to measure the full range of work self-efficacy. The GSE is a ten-item scale (e.g. “I can
always manage to solve difficult problems at work if I try hard enough.” which measures individual beliefs that one can perform novel or difficult tasks, or cope with adversity across various domains. The scale has been used to measure self-efficacy in numerous studies, and has been positively correlated with favorable emotions, dispositional optimism, and work satisfaction. It has been negatively correlated with stress, anxiety, depression, and health complaints. The scale has an internal consistency reliability ranging from .76 to .90 with the majority of the alphas in the high .80s (http://userpage.fu-berlin.de/~health/engscal.htm). The scale is one-dimensional and all the items are scored on a four-point agreement scale ranging from 1 (“not at all”) to 4 (“exactly true”). The scale was made to measure general self-efficacy, but has been modified in other studies to measure specific forms of efficacy (http://userpage.fu-berlin.de/~health/engscal.htm). The scale was modified to measure efficacy at work. The GSE was included to provide convergent validity for the efficacy component of the proposed model. If the underlying construct for the reduced personal accomplishment and absorption factor is efficacy it should correlate with the GSE. The scale was also included to demonstrate discriminant validity for the other two constructs.
Results

Checking Assumptions

The Mahalanobis distance statistics was run in AMOS to determine the significant outliers of the data set. Three cases were labeled as outliers, and were discarded from the data set. Tests for normality were conducted by examining skew and kurtosis of the variables. All variables had sufficient normality for structural equation modeling.

The means, standard deviations, and internal consistency reliability estimates calculated for the scales in the study are reported in Table 1 (MBI-GS scores are not reported at the request of the publisher). The current study’s means, standard deviations, and internal consistency reliabilities are considerably lower than the reported means, standard deviations, and internal consistency reliability estimates as reported in the MBI-GS manual. This difference may be due to the combination of the MBI-GS and the UWES. For this reason the scores in the current study were compared to the scores reported by Schaufeli et al (2002) that also combined the two scales. The scores reported by Schaufeli and colleagues for the MBI and UWES combined were comparable to those found in the current study. All scales in the study had acceptable internal consistency reliability estimates except the absorption subscale of the UWUES and the modified organizational identification scale, which had internal consistency reliabilities of .66 and .57 respectively.

Testing Hypotheses

A one-sample t-test was performed to determine whether the sample for the present study had significantly higher scores for display rules of emotional labor than the clerical worker sample reported by Brotheridge and Grandey (2002). The current sample
had significantly higher demands for displaying positive emotions, \( t(245) = 41.23, p < .001 \) (two-tailed) and for hiding negative emotions \( t(245) = 16.63, p < .001 \) (two-tailed).

The comparative fit index (CFI) and root mean square residual (SMRS) were the only indices used to determine goodness of fit, however the chi-square \( (\chi^2) \) and root mean square error of approximation (RMSEA) are reported for each model. Hu and Bentler (1999) found that two indices would adequately determine model fit, one from each of two categories. One index should utilize the maximum likelihood and the other index should be utilize either generalized least squares or asymptotically distribution-free estimators. The SMRS is the maximum likelihood based fit index and is the most sensitive to models with misspecified factor covariances or latent structures. The RMSEA and the CFI are both from the second category of indices. These two fit indices are the most sensitive to models with misspecified factor loadings. The CFI was chosen as the second index because it assesses the relative improvement of fit of the model with a null model that assumes zero population covariances among the observed variables. Additionally, the CFI does not assume perfect population fit for the model being tested.

A confirmatory factor analysis examined whether burnout and engagement measure the same three constructs, energy, identification, and efficacy. Model one, is a one-factor model and depicts a hypothesis of all the measures loading onto one factor. Model two is a two-factor model depicting emotional exhaustion, depersonalization/cynicism, and reduced personal accomplishment loading onto a burnout factor; and vigor, dedication, and absorption loading onto an engagement factor. This model hypothesized that burnout and engagement are separate processes, both with three steps. Model three is another hypothesis that burnout and engagement are separate
processes that do not share the same underlying constructs. Model three is a three-factor model depicting emotional exhaustion and vigor loading onto one factor, depersonalization/cynicism and dedication loading onto one factor, and reduced personal accomplishment and absorption loading onto one factor. Model three is hypothesized to be the best fitting model and depicts three main constructs energy, identification, and efficacy. Questions from the MBI-GS and the UWES subscales were parceled into two parcels per subscale. Parcels were used to create better fit for the models. Using parcels instead of the 33 questions reduces the parameters of the model, for better estimates of fit indices, but does not change the underlying constructs.

The Chi-squares, degrees of freedom, CFI, RMSEA, and SMRS estimates are reported in Table 2. None of the models hypothesized had adequate fit. As expected model one, the model that proposes one latent factor for all of burnout and engagement, has very poor fit with a CFI of .67, RMSEA .20, and SMRS .15. Model two, which proposes a three factor model of burnout and engagement, both as second order latent factors, also has poor fit with a CFI of .81, RMSEA .16, and SMRS .19. Model three, which proposes three latent constructs, energy, identification, and efficacy, also has poor fit with a CFI of .69, RMSEA .19, SMRS .15. Hypothesis one was not supported.

Hypotheses two, three, and four were not tested because model three did not have adequate fit. The model of best fit did not have second order latent constructs of energy, identification, or efficacy. The constructs cannot be tested for convergent or discriminant validity if the highest order factor is not the hypothesized latent constructs of energy, identification, or efficacy. Due to poor model fit of all the proposed models additional models were created to assess best model fit.
As discussed earlier the wording of the items on the tests may have played a role in the how participants responded to items on the scales. Two of the three burnout subscales are worded in negative terminology to assess burnout whereas, the third (PA) is worded positively and is reverse scored to determine burnout. All items on the engagement scale are worded positively, and none are reverse scored. This led to an exploratory hypothesis that the underlying second order latent factors for the cynicism and emotional exhaustion scale would be a latent factor of negative wording. Similarly, it was expected that the vigor, dedication, absorption, and personal accomplishment subscales are predicable of the second order latent construct of positive wording. Model four illustrates this model. Model four did not have adequate fit either, with a CFI of .92, RMSEA .10, and SMRS .08. The absorption latent construct was covarying with the second order construct of negatively worded items and the latent constructs under the second order latent constructs, emotional exhaustion and vigor.

Model five represents the six subscales of burnout and engagement as independent latent factors that covary. This model is proposed on the previous research that has found six latent constructs, three for the MBI and UWES. Research has indicated that all the constructs are, at the very least, associated with each other (Kline, 2005). Model five is a model that represents the theory of six latent constructs. Model five had adequate fit with a CFI of .96, RMSEA .09, and SMRS .05.

Model six was the model originally proposed by Schaufeli and Bakker (2002). This model consists of two second order latent constructs, burnout and engagement, with personal accomplishment and absorption as two independent latent constructs that covary with the burnout and engagement constructs. Burnout is comprised of emotional
exhaustion and cynicism, and engagement is comprised of vigor and dedication. Model six had adequate fit with a CFI of .95, RMSEA .09, and SMRS .06. No model was proposed that consisted of the latent constructs energy and identification with emotional exhaustion and vigor, and cynicism and dedication as lower order latent variables. The regression weights from model six did not justify attempting the model, as poor fit was sure to ensue. The covariance between absorption and personal accomplishment was .70. The high covariance between these two latent constructs led to the hypothesis that personal accomplishment and absorption may be part of the same second order latent construct. To test this, model seven was created.

Model seven represents a two factor structure of burnout and engagement, with third second order latent construct for efficacy. The strong correlation between the two variables indicated that they might be representative of a second order latent construct. Model seven was approaching adequate fit. The CFI for the model was .94, RMSEA .10, and SMRS .07.

The model chosen to best describe the data was model six. Although model seven had close to good fit the difference between the two models would not be significant. The models were compared theoretically because they were so close in fit. Model six is the preferred model because it has a stronger theoretical basis. Schaufeli et al. (2004) discussed when they created the absorption subscale they did not intend it to be, nor did they see it as a polar opposite of personal accomplishment. I had expected the two to be part of the same latent construct, but the covariance of .70 does not support that hypothesis. Similarly, the two constructs only correlated with each other at .54, which was significant but not strong enough to confirm convergent validity. Similarly, model
five is rejected because it does not tell us anything about the latent constructs except that they are all present and all covary with each other. There is no theory behind model five other than the six latent constructs have been found in the literature and have been found to covary.
Discussion

The current study used confirmatory factor analysis to examine the psychometric structure of burnout and engagement in a sample of employed students that had high demands for emotional labor. Results revealed that the current sample did have high demands for emotional labor. The best fitting model was not a model hypothesized in this study. Instead, it was a model that consisted of two second order latent factors and personal accomplishment and absorption as separate latent factors with no second order factor associated with them. The two second order latent factors are found in the study are assumed to be burnout and engagement, with burnout encompassing emotional exhaustion and cynicism, and engagement encompassing vigor and dedication.

It is assumed that burnout and engagement are the second order latent constructs for several reasons. First, none of the original three models had good fit. All three models had poor CFI s, RMSE As, and SMRSs. The models could not be rectified for better fit. Three there was no theoretical reason for making any modifications.

Second, the two latent factors are not assumed to be the wording of the items. If the two latent variables were the wording of the items, the personal accomplishment and absorption subscales would have both fallen under the second latent construct that accounted for vigor and dedication, as all are positively worded scales. Model four, which depicts two latent constructs, one for negatively worded items and one for positively worded items, did not have sufficient fit. The inadequate fit leads to the assumption that it is not just the wording of the items that is causing the items to fall on the certain second order latent constructs.
Third, model six was chosen over model five because of the theoretical support the model has over model five. Research has shown that burnout may only be comprised of emotional exhaustion and cynicism. It was originally hypothesized that personal accomplishment’s exclusion from burnout theory was due a lack of emotional labor demands for some people at work, and that burnout in people employed in professions with high demands for emotional labor would still exemplify a three-factor model. However, model six being the model of best fit demonstrates that burnout and engagement may only be comprised of two latent constructs. Model five did not have any theoretical basis for assuming the model.

Similarly, model six was chosen over model seven because model seven is contrary to the theoretical explanation of personal accomplishment and absorption. The two constructs, personal accomplishment and absorption, did have a moderate correlation, .54, but to be considered as measuring the same latent construct two variables should be correlated .85 or higher (Kline, 2005). Additionally, Schaufeli et al. (2002) explained that in creating the UWES absorption was not theoretically linked to personal accomplishment. The case was made in this paper that personal accomplishment and absorption may be measuring the same latent construct which was part of hypothesis one, but the data does not support this theory. Model fit was worse when absorption and personal accomplishment were joined under a second order latent construct.

No analyses on convergent and divergent validity were performed on the constructs of emotional exhaustion, cynicism, personal accomplishment, vigor, dedication, and absorption. The analyses were not performed because the second order latent constructs in the best fitting model are not assumed to be energy, identification, or
efficacy. The evidence that the two latent constructs are neither energy, identification, nor efficacy leads to the assumption that we cannot use the MEI, Work Identification, or General Self-Efficacy scales to provide convergent or divergent validity for the subscales of the MBI-GS or the UWES.

**Implications**

There are several implications of this study. The first implication is burnout and engagement are separate constructs, as depicted in the best fitting model. Future research should investigate the relationship between burnout and engagement. The second implication is that wording may have an impact on the scales. As seen in model 4, there is a strong relationship between all the negatively worded items and all the positively worded items. Model four did not have the best fit, but it was approaching adequate fit. This may suggest that wording causes the answering bias in the scales. Lastly, this study only examined people with high requirements for positive and negative display rules. The two factor structure model demonstrated in this study adds validity to the application of the MBI-GS across occupations. Two factors were found for burnout and engagement in individuals with high emotional labor, which may be interpreted as the type of profession not playing a role in burnout, however future research should address this question more in depth.

**Future Research**

Furthermore, to ensure that burnout and engagement are separate constructs one scale that is neutrally worded should be created to determine if the two constructs are mutually exclusive. The difference between the two scales may have to do with the wording of the scales. As stated previously, there are issues with range restrictions of the
scales; the MBI was created to predict the middle to low ends of the three latent constructs, and the UWES was created to measure the middle to high ends of the three latent constructs. Model four, which depicted two second order latent constructs of negatively worded items and positively worded items fit moderately well, although did not meet all the criteria for adequate fit for this study. A larger sample size would help determine which model is the best fitting model, as the current study may have capitalized on chance as the best fitting model is not a model hypothesized. Future research should also investigate differences in structure across professions with high, medium, and low requirements for emotional labor to ensure the applicability of the MBI-GS across occupations. Future research should also examine the differences between human service and customer service professions, and non-human service professions. The differences between these groups may be the key to understanding the relationship between burnout and engagement as college students employed in customer service professions may not identify with the job as much as full-time non-college students.

Limitations

There are several limitations to the current study. First, none of the models proposed had adequate fit. The subsequent models that were produced after the ill fit of the other models may be capitalizing on chance. To ensure that the study has not capitalized on chance a future study should perform a confirmatory factor analysis with a larger sample. The current study’s sample may also not generalize to a non-student population.
References


DATE: December 15, 2006

TO: Gene Alarcon, P.I., Grad. Student
   Psychology
   Jean Edwards, Ph.D., Fac. Adv.
   Psychology

FROM: Robyn Wilks, CIM, Coordinator
     WSU Institutional Review Board

SUBJECT: SC# 3264
   'Individual Differences in Workplace Characteristics'

This memo is to verify the receipt and acceptance of your response to the conditions placed on the above referenced human subjects protocol/amendment.

These conditions were lifted on: December 15, 2006

This study/amendment now has full approval and you are free to begin the research project. If this is a VA proposal, you must still receive a letter of approval from the Research and Development Committee prior to beginning the research project. This implies the following:

1. That this approval is for one year from the approval date shown on the Action Form and if it extends beyond this period a request for an extension is required. (Also see expiration date on the Action Form)

2. That a progress report must be submitted before an extension of the approved one-year period can be granted.

3. That any change in the protocol must be approved by the IRB; otherwise approval is terminated.

If you have any questions concerning the condition(s), please contact me at 775-2425.

Thank you!
Enclosure
Title: 'Individual Differences in Workplace Characteristics'

Principal Investigator: Gene Alarcon, P.I., Grad Student
Jean Edwards, Ph.D., Fac. Adv.

Department: Psychology

Expedited Category: #7

The Institutional Review Board Screening Committee has approved the use of human subjects on this proposed project with conditions previously noted. The conditions have now been removed.

REMINDER: FDA regulations require prompt reporting to the IRB of any changes in research activity, changes in approved research during the approval period may not be initiated without IRB review (submission of an amendment), and prompt reporting of any unanticipated problems (adverse events).

NOTE: This approval has been assigned an "SC" number in our system, which means it has been approved by the Screening Committee for a protocol involving no more than minimal risk.

Signed Coordinator, WSU-IRB
Screening Committee Date: November 17, 2006
IRB Meeting Date: December 18, 2006

This approval is effective only through: November 17, 2007
To continue the activities approved under this protocol you should receive the appropriate form(s) from Research and Sponsored Programs (RSP) two to three months prior to the required due date. If you do not receive this notification, please contact RSP at 775-2425.
Appendix B

Permission Agreement to Include Sample Items in a Research Publication

In response to your request of December 11, 2006, upon concurrent receipt by CPP, Inc., of this signed Permission Agreement and payment of the Permission Fee, permission is hereby granted to you to include sample items, selected and provided by CPP, Inc. from the Maslach Burnout Inventory-General Survey in your Research entitled "Burnout and Engagement: A Confirmatory factor Analysis". These sample items may remain in your research paper for microfilming and individual copies may be distributed upon demand. This Permission Agreement shall automatically terminate upon violation of this Permission Agreement including, but not limited to, failure to pay the Permission Fee of $75.00 reproduction fee of SWAIVED = TOTAL DUE $75.00 or by failure to sign and return this Permission Agreement within 45 days from January 2, 2007.

The permission granted hereunder is limited to this one-time use only.
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CPP, Inc. 1055 Joaquin Road, Suite 200, Mountain View, CA 94043 Tel: 650.969.8901 Fax: 650.969.8608 www.cpp.com
6.1 Test users should evaluate the available written documentation on the validity and reliability of tests for the specific use intended.

6.3 When a test is to be used for a purpose for which it has not been validated, or for which there is no supported claim for validity, the user is responsible for providing evidence of validity.

6.5 Test users should be alert to probable unintended consequences of test use and should attempt to avoid actions that have unintended negative consequences.

CPP shall not be responsible for the use or misuse of the materials or services licensed under this permission contract. The customer/user assumes all responsibility for use or misuse of the same. Unless expressly agreed to in writing by CPP, all materials and services are licensed without warranty, express or implied, including the implied warranties of merchantability and fitness for a particular purpose. Refund of contract fees at CPP's sole option is the sole and exclusive remedy and is in lieu of actual, consequential, or incidental damages for use or misuse of CPP materials and services and in no event shall CPP liability exceed the contract fees of license of said materials and services.

(e) **Gene Alarcon**, agrees that the (MBI-GS) as modified under this Agreement is a derivative work of the (MBI-GS) and hereby assigns all right, title, and interest in any such derivative work created under this Permission Agreement in perpetuity to CPP, Inc. or as directed by CPP, immediately upon completion and without further consideration.

CPP, INC.

By ____________________________
Authorized Representative

Date 11/21/07

I AGREE TO THE ABOVE CONDITIONS

By ____________________________
Gene Alarcon

Date 11/21/07
Appendix C

CONSENT TO PARTICIPATE IN RESEARCH

Title: Individual Differences and Stress in the Workplace

Agreement to participate: By completing these questionnaires you acknowledge that this study has been explained to you and you have been given the opportunity to have all your questions regarding this study answered.

Purpose of the Study: You are invited to participate in the Individual Differences and Stress in the Workplace research study. Your participation in this study may help our research team gain further insight into the relationships among individual differences and stress in the workplace. Participation is completely voluntary. Although we hope you will choose to continue participation for the duration of the study, you are free to discontinue your participation at any time. There will be no negative consequences if you choose to discontinue.

Procedures: This study should last about one hour and you will receive 2 credits, 1 for each ½ hour participation. During this period of time, you will be given a packet of surveys that you will be asked to fill out. Please use a number two pencil and fill in your answers completely.

Benefits and risks: This research will be a questionnaire and poses no direct risks to participants. Completion of survey materials will take roughly 1 hour per person. There are no known benefits of the research to participants. If at any time over the course of the study you feel concerned or have questions, please contact Gene Alarcon or one of the other researchers. Our telephone numbers are listed above.

Explanation of the research: The research you are participating in is about individual differences in workplace characteristics. Once the study is complete, however, you will be told about the research. Group results of our study may be obtained by contacting Gene Alarcon PI or Jean Edwards, PhD faculty advisor at the end of next quarter. We will not disclose any individual results.

Confidentiality: Information collected from you during the study will be confidential. We will not use your name on any questionnaires collected. You will be assigned a random 3-digit number to serve as a unique identifier for you as a participant in the study. Any presentation or publication that arises from this study will only report group results, not individual results.

Principal investigators: The principal researchers in this project are Gene Alarcon, Graduate Student in the Department of Psychology, Wright State University (937-775-2391) and Jean M. Edwards, Ph.D., Associate Professor in the Department of Psychology, Wright State University (937-775-2391).

Voluntary Consent: You are free to refuse to participate in this study or to withdraw at any time. Your decision to participate or to not participate will have no adverse effects. Your signature below means that you have freely agreed to participate in this research study. If you have general questions about giving consent or your rights as a research participant in this research study, you can call the Wright State University Institutional Review Board at 937-775-4462.

Participant Signature __________________________ Date __________

Researcher Signature __________________________
Appendix D

The purpose of this survey is to discover how various persons in the human services or helping professions view their jobs and the people with whom they work closely.

Below there are 33 statements of job-related feelings. Please read each statement carefully and decide if you ever feel this way about your job. If you have never had this feeling bubble in "0" to the left of the statement. If you have had this feeling, indicate how often you feel it by writing the number (from 1 to 6) that best describes how frequently you feel that way.

**HOW OFTEN:**

<p>| | | | | | |</p>
<table>
<thead>
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<td>0</td>
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<td>1</td>
<td>A few times a year</td>
<td>2</td>
<td>Once a month or less</td>
</tr>
<tr>
<td>3</td>
<td>A few times a month</td>
<td>4</td>
<td>Once a week</td>
<td>5</td>
<td>A few times a week</td>
</tr>
<tr>
<td>6</td>
<td>Every Day</td>
<td></td>
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</table>

1. At my job I feel strong and vigorous.
2. I am immersed in my work.
3. It is difficult to detach myself from my job.
4. I am proud of the work that I do.
5. When I get up in the morning, I feel like going to work.
6. I feel happy when I am working intensely.
7. At my job, I am very resilient, mentally.
8. My job inspires me.
9. I get carried away when I am working.
10. Time flies when I am working.
11. When I am working, I forget everything else around me.
12. At work I always persevere, even when things do not go well.
13. I find the work that I do full of meaning and purpose.
15. To me, my job is challenging.
Appendix E

Please use the following rating scale to indicate the extent to which you agree with the following statements in regards to your job.

1 = Never
2 = Rarely
3 = Sometimes
4 = Often
5 = Always

1. I reassure people who are distressed or upset.
2. I remain calm even when I am astonished.
3. I express feelings of sympathy (e.g., saying you "understand," you are sorry to hear about something).
4. I express friendly emotions (e.g., smiling, giving compliments, making small talk).
5. I hide my anger or disapproval about something someone has done.
6. I hide my disgust over something someone has done.
7. I hide my fear of someone who appears threatening.
# Appendix F

## General Demographics

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<td>1. Age</td>
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<tr>
<td>2. Sex</td>
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<tr>
<td>3. Class Rank</td>
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<tr>
<td></td>
<td>Freshman</td>
<td>Sophomore</td>
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4. How many hours do you work on average each week?

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5. How long have you been employed at your current job?

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<th>Years</th>
<th>Months</th>
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6. How long have you been employed in your current profession?

<table>
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<th>Years</th>
<th>Months</th>
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</table>

7. Which best describes your job?

- Retail Sales
- Food Service
- Helping Professions (i.e. nursing home, invalid care)
- Customer Service
- Secretarial
- Other

For Office Use Only

-   }

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Appendix G

Debriefing

Thank you for your participation in the Individual Differences and Stress in the Workplace study. The purpose of this study was to better understand the relationship between burnout and engagement. In addition, the research is attempting to explore how known predictors of burnout are related to engagement. Below is a more in depth discussion of the literature behind this research.

Research has indicated that burnout and engagement may be symptoms of the same three latent constructs: energy, identification, and efficacy. The study you participated in attempts to determine if burnout and engagement are measuring the same three latent constructs and establish what the latent constructs are. The study has limited the subject pool to individuals that have a high degree of emotional labor because of the issues of measurement with the burnout scales.

Research indicates that burnout is related to negative outcomes such as lowered job satisfaction and higher turnover intentions. The relationship between engagement and job satisfaction and turnover intentions has not been explored to date. Similarly, personality variables have demonstrated a consistent relationship with burnout, whereas no research to date has investigated personality correlates of engagement.

Six areas of worklife (workload, values, community, control, reward, and fairness) have been found to predict burnout. The theory behind the association is that burnout occurs as a mismatch of these areas of worklife. It has been posited that engagement will be the result of a match of these areas in the workplace.

In order to assess the relationship between burnout and engagement the current study was created. Thank you again for your participation in this research.
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<td>.22*</td>
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Note: *p<.05
Table 2

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Figure 1

High D.  
Low R  

EE  
D/C  
RP

New Stressors and Lower Resources

Figure 2

Low D.  
High R  

VI  
DE  
AB

More Resources

D = Demand, R = Resources, EE = Emotional Exhaustion, D/C = Depersonalization/cynicism, RP = Reduced Personal Accomplishment, VI = Vigor, DE = Dedication, AB = Absorption
Model 3

Energy Latent

Identification Latent

Efficacy Latent

Model 4

negative

positive

emotional
cynicism

vigor

dedication

personal

absorption

emotional
cynicism

vigor

dedication

personal

absorption

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