Burnout and engagement:
A comparative analysis using the Big Five personality dimensions

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1. Introduction

Recently, the burnout research has shifted its focus to the positive side, namely job engagement. This development reflects a new trend toward a positive psychology that emphasizes human strengths and optimal functioning rather than malfunctioning and weaknesses (Seligman and Csikszentmihalyi, 2000). Engagement scholars perceive job burnout as an erosion of engagement with the job (Schaufeli et al., 2002).

The concept of job burnout has been around for a long time and its antecedents and consequences have been well documented (Cordes and Dougherty, 1993; Demerouti et al., 2001). The job demand-resource (JD–R) model is the widely known theory used to explain the worker burnout process (Demerouti et al., 2001; Schaufeli and Bakker, 2004). In general, job demands lead to employee burnout by requiring substantial physical and/or psychological efforts. However, job resources such as social support, autonomy, and control coping, help reduce job demands, thereby helping to decrease the feeling of burnout. With the advent of the concept of engagement, a number of researchers adopted the JD–R model in an effort to explore the antecedents of work engagement. Schaufeli and Bakker (2004) report that job resources are the positive predictors of work engagement and job demands are not significantly related to engagement.

Kahn (1990) identifies three psychological conditions related to personal engagement and disengagement: meaningfulness, safety, and availability. Although Kahn uniquely incorporates psychological presence in the complex theoretical model of engagement, these psychological conditions are predominantly connected to the work and social context (e.g., psychological safety means the worker’s feeling about whether or not he/she can show and employ him/herself without fear of negative consequences to self-image, status, or career during interactions with customers or superiors). He acknowledges the possibility that individual characteristics may influence how workers engage or disengage, given their experiences of psychological meaningfulness, safety, and availability.

Research has shown strong relationships between individual differences (e.g., personality characteristics) and burnout (Allen and Mellor, 2002; Day and Bedeian, 1995; De Vries and Van Heck, 2002; Goddard et al., 2004; Mills and Huebner, 1998; Piedmont, 1993; Zellars et al., 2000). If burned-out employees can be characterized by their personality profile, it is reasonable to assume that personality traits can equally predict the level of work engagement by employees. Despite the growing interest about
work engagement, studies on employee engagement are limited, particularly regarding the effect of individual differences. To fill this gap, this study uses Kim et al.’s (2007) research paradigm showing the relationship between burnout and personality factors and adds the emerging concept of engagement into the model. Hotel service providers participated in Kim et al.’s (2007) study; whereas, frontline employees of quick-service restaurants are used in the present study. Specifically, this study is designed to answer the following three questions:

1. Among the Big Five, which personality traits predict engagement?
2. Among the Big Five, which personality traits predict burnout and do the results validate Kim et al.’s (2007) findings?
3. Do the results of personality predictors support the current argument about job engagement as the antithesis of burnout?

2. Literature

2.1. Burnout

Job burnout refers to “prolonged responses to chronic interpersonal stressors on the job” (Maslach, 1998, p. 68). According to her, burnout consists of three sub-con structs: emotional exhaustion, depersonalization, and diminished personal accomplishment. Emotional exhaustion refers to a lack of energy and a feeling that one’s emotional resources are used up due to excessive psychological demands. Depersonalization is characterized by the treatment of others as objects rather than people through cynical, callous, and uncaring attitudes and behaviors. Diminished personal accomplishment denotes a tendency to evaluate oneself negatively due to the failure to produce results.

During the 1980s and middle 1990s, research on burnout often used human service jobs such as teachers, nurses, social workers, and health care professionals. Gradually it became clear that burnout exists outside the human service jobs and the applicability of the original version of the Maslach Burnout Inventory (MBI: Maslach and Jackson, 1986) to other jobs over people-oriented professions was questioned. For example, Evans and Fischer (1993) administered the original MBI to two occupation groups (teachers and computer company workers) and analyzed the factor structure. They found that three factors exist in the former sample, but the depersonalization dimension did not emerge in the latter sample.

To address a broader set of jobs, Schaufeli et al. (1996) developed the MBI-General Survey (MBI-GS) with three burnout dimensions (exhaustion, cynicism, and reduced professional efficacy), matching the three factors of the original MBI (emotional exhaustion, depersonalization, and diminished personal accomplishment). Exhaustion implies fatigue, which does not necessarily make a direct reference to other people as the source of one’s tiredness. Cynicism indicates distancing oneself from one’s work and experiencing a negative attitude toward one’s work in general. Reduced professional efficacy is characterized by low self-efficacy, lack of accomplishment, lack of productivity, and incompetence (Leiter and Maslach, 2001; Schaufeli et al., 2002).

2.2. Engagement

The concept of engagement can be traced back to Kahn (1990). He defines personal engagement as “the harnessing of organization members’ selves to their work roles” (p. 694) and he adds, “in engagement, people employ and express themselves physically, cognitively, and emotionally during role performances” (p. 694). Personal disengagement is defined as “the uncoupling of selves from work roles” (Kahn, 1990, p. 694) and “in disengagement, people withdraw and defend themselves physically, cognitively, or emotionally during role performances” (Kahn, 1990, p. 694). When workers are engaged, they become physically involved in their tasks, cognitively alert, and emphatically connected to others (Kahn, 1990). However, disengaged employees become physically uninvolved in tasks, cognitively unvigilant, and emotionally disconnected from others (Kahn, 1990).

Kahn (1990) provided a conceptual basis for job engagement, but did not develop an operational definition. Maslach and Leiter (1997) expanded Kahn’s (1990) conceptual work. They argued that job engagement is situated at the opposite end of the continuum of job burnout, characterized by energy (rather than exhaustion), involvement (rather than cynicism), and a sense of efficacy (rather than reduced professional efficacy). Therefore, the existing MBI scale can serve as an engagement measure. In their view, low ratings on exhaustion, low scores on cynicism, and high ratings on professional efficacy indicate the state of engagement.

Schaufeli et al. (2002) have taken a different approach to engagement. They asserted that although job engagement is the antithesis of job burnout, engagement is the independent state of mind separate from burnout, thereby requiring a different operational definition. Schaufeli and Bakker (2004) defined job engagement as “a positive, fulfilling, work-related state of mind” (p. 295) and specified three unique dimensions of engagement: vigor, dedication, and absorption. Accordingly, job engagement is not assessed by the MBI scores but by a set of different measures. Vigor is characterized by high levels of energy and mental resilience while working, willingness to invest effort in one’s work, and persistence even in the face of difficulties. Vigor (high activation) is viewed as the opposite concept of exhaustion (low activation) on the pole of activation (Schaufeli et al., 2002). Dedication refers to a sense of significance, enthusiasm, inspiration, pride, and challenge. Dedication (high identification) and cynicism (low identification) are opposite in terms of identification (Schaufeli et al., 2002). Absorption is characterized by being fully concentrated and deeply engaged in one’s work, whereby time passes quickly and one has difficulties with detaching oneself from work. Unlike vigor and dedication that make a direct contrast with the first two burnout components (exhaustion and cynicism), absorption is not the antipode of the last burnout factor of reduced efficacy (Schaufeli and Bakker, 2004). Absorption was discovered during a number of in-depth interviews and not necessarily developed as a contrasting concept of reduced efficacy (Schaufeli et al., 2002).

2.3. New perspectives on burnout and engagement

In recent years, arguments have risen that the third dimension of job burnout (personal accomplishment/professional efficacy) may be a separate aspect of burnout and perhaps is more closely related to engagement. For example, Lee and Ashforth (1996) found that personal accomplishment has a different relationship with two other burnout sub-constructs (emotional exhaustion and depersonalization) and other correlates. Specifically, emotional exhaustion and depersonalization were highly interrelated to each other, but these two factors showed weak relationships with personal accomplishment. Emotional exhaustion and depersonalization shared several correlates (e.g., workload, and supervisor support), but personal accomplishment was weakly associated with those correlates.

Schaufeli et al. (2002) conducted confirmatory factor analyses on the measurements of burnout and engagement. Their analyses revealed that a model with two higher-order factors (burnout and engagement) is not a good fit to data. Instead, the alternative
two-factor model, specifying exhaustion and cynicism (core of burnout) loaded on burnout and vigor, dedication, absorption, and professional efficacy (all three engagement scales plus efficacy) loaded on engagement, was superior to the initial model. The result of their study indicates a possibility of professional efficacy as part of job engagement rather than burnout. This new notion of the so-called extended engagement factor (Schaufeli et al., 2002) is well supported by burnout/engagement experts. Therefore, in the present study, we define the concept of burnout using only two burnout sub-dimensions (exhaustion and cynicism) and engagement using four sub-factors (vigor, dedication, absorption, and professional efficacy).

2.4. Job demands and job resources

The effect of demands and resources on burnout and engagement can be explained through a different psychological process. Job demands are defined as "physical, social, or organizational aspects of the job that require sustained physical and/or mental efforts" (Demerouti et al., 2001, p. 501). Schaufeli and Bakker (2004) explain the effect of job demands on burnout through the energy process. Extreme job demands lead to energy depletion and in the end, to exhaustion. Exhaustion, in a sense, is the outcome of active coping and cynicism is the outcome of passive coping. Cynicism takes place when employees feel enough is enough thereby changing their coping style from an active mode to a passive mode. Numerous studies have demonstrated that job demands (e.g., workload, role stressors, time pressure, physical environment, and customer contact) are positively related to burnout (Brookings et al., 1985; Cordes and Dougherty, 1993; Jackson et al., 1987; Lee and Ashforth, 1996; Leiter and Maslach, 1988; Schaufeli and Bakker, 2004; Von Emster and Harrison, 1998).

On the other hand, resources influence job engagement through the motivational process (Schaufeli and Bakker, 2004). Resources refer to "physical, social, or organizational aspects of the job that may: (1) be functional in achieving work goals; (2) reduce job demands and the associated physiological and/or psychological costs; and (3) stimulate personal growth and development" (Demerouti et al., 2001, p. 501). Hackman and Oldham (1980) also support the motivational process through the Job Characteristics Theory (JCT). JCT suggests that every job has five core job characteristics (skill variety, task identity, task significance, autonomy, and feedback) and the presence of these characteristics invokes so-called critical psychological states and leads to positive outcomes such as job satisfaction and high performance. Schaufeli and Bakker (2004) show that job resources (measured by social support from colleagues, performance feedback, and coaching) lead to an increase in employees’ work engagement. At the same time, previous empirical findings suggest that a lack of resources (e.g., autonomy, co-worker support, skill utilization, and supervisory support) results in job burnout (Cordes and Dougherty, 1993; Lee and Ashforth, 1996; Leiter, 1988, 1991; Maslach, 1998).

2.5. Personality traits, burnout, and engagement

Research has shown personality traits as significant predictors of burnout. A large number of studies have focused on the role of negative affectivity or neuroticism on burnout (Bellani et al., 1996; Burke et al., 1993; Chen and Spector, 1991; Decker and Borgen, 1993; Elliott et al., 1994; Mughal et al., 1996; Noor, 1997; Spector and O’Connell, 1994). Some have reported the relationship between burnout and Type A personality (Ganster, 1986; Kirmeyer, 1988), psychological hardness (Rush et al., 1995), and positive affectivity or extraversion (Iverson et al., 1998; Kahn et al., 2006).

Recently, the Big Five personality model has received considerable attention in the burnout literature (Allen and Mellor, 2002; Day and Bedeian, 1995; De Vries and Van Heck, 2002; Goddard et al., 2004; Mills and Huebner, 1998; Piedmont, 1993; Zellars et al., 2000). The Big Five includes neuroticism, extraversion, agreeableness, conscientiousness, and openness to experience. In the hospitality field, Kim et al.’s (2007) study using the Big Five model is noticeable. Their study results indicate that extraversion is negatively related to exhaustion; agreeableness is negatively related to cynicism; conscientiousness and agreeableness are positively related to professional efficacy (that is, negatively related to reduced professional efficacy); and neuroticism is positively related to exhaustion and cynicism. The authors report that most results concur with previous findings except the agreeableness trait. In general, relationships between agreeableness and job performance and burnout are not found or are weak. The authors justify that the reason why agreeableness (characterized by being warm, kind, and empathetic) displays the sizeable influence on cynicism (negative influence) and professional efficacy (positive influence) is that perhaps the respondents of their study are from hotel service jobs typically requiring caring employees who can be sensitive to guests’ needs.

Although articles on the relationships between personality traits and occupational stress are abundant, to the authors’ knowledge, very little research has been conducted regarding the effect of personality factors on engagement particularly using Big Five. Considering that engagement is the opposite concept of burnout, we can speculate the relationship between engagement and personality characteristics, based on the previous findings about burnout and personality traits. For example, Langelaan et al. (2006) argue it is reasonable to predict that neuroticism showing a positive effect on burnout will be negatively related to engagement and extraversion showing a negative influence on burnout will be positively related to engagement.

Extraversion in Big Five reflects individual traits such as being sociable, gregarious, assertive, talkative, and active. It is known that extraversion predicts performance in sales occupations requiring high levels of energy and social skills (Barrick and Mount, 1991). One critical component of engagement is vigor (high energy). Therefore, it also intuitively makes sense to expect a positive relationship between extraversion and job engagement as both concepts share the characteristic of high energy.

To date, information is lacking about the relationship between work engagement and agreeableness, conscientiousness, and openness to experience. We found only one study (Langelaan et al., 2006) discussing the relationship between engagement and personality traits. However, Langelaan et al. (2006) mainly focus on neuroticism and extraversion and do not include agreeableness, conscientiousness, and openness to experience in their model. The additional personality dimension (in Big Five) that is likely to be associated with engagement is conscientiousness. Conscientiousness reflects an individual’s dependability and vocation, which has been the most important factor in predicting job performance across all occupations (Barrick and Mount, 1991). Individuals with high conscientiousness tend to have a high achievement-striving motivation. The common characteristic of the three sub-factors of engagement (vigor, dedication, and absorption) describes internal drive to achieve a certain goal. Therefore, conscientiousness is expected to affect job engagement through the internal motivational process.

In summary, in this study, the hypotheses regarding burnout and Big Five are mainly based on Kim et al.’s (2007) findings using hotel employees. Note that in the present study, burnout is defined as the combination of exhaustion and neuroticism and engagement as the combination of vigor, dedication, absorption, and...
professional efficacy (original three engagement sub-factors plus efficacy). Hence, it is hypothesized that extraversion and agreeableness are negatively related to burnout and neuroticism is positively related to burnout. Among the Big Five, it is suspected that job engagement is largely related to extraversion and conscientiousness and, to a lesser degree, to neuroticism. Openness to experience (characterized by intelligence, creativity, and breadth of interest) is known as a predictor of training proficiency but not a predictor of job proficiency (Barrick and Mount, 1991); therefore, the openness to experience dimension is not expected to have relationships with either job burnout or engagement. Accordingly, the following hypotheses are proposed in the present study:

Hypothesis 1a. Extraversion is negatively related to burnout.
Hypothesis 1b. Extraversion is positively related to engagement.
Hypothesis 2. Agreeableness is negatively related to burnout.
Hypothesis 3. Conscientiousness is positively related to engagement.
Hypothesis 4a. Neuroticism is positively related to burnout.
Hypothesis 4b. Neuroticism is negatively related to engagement.

3. Method

3.1. Procedure and participants

Fifty-one Subway stores, located in the northwestern United States participated in this study. One of the authors, who personally owns several Subway restaurants, contacted a number of Subway owners in the region. The number of stores operated by the selected owners ranged from 3 to 20, with an average crew size of 10 employees. After receiving approval from the owners, the author attended managers' meetings or individually contacted store managers. The district managers or store managers served as key contact persons. Surveys were given to district managers or personally delivered to the individual store. Participating store managers were responsible for distribution and collection of the questionnaires. All employees in the participating store were invited to take part in the study. In the cover letter for each survey, the purpose of the study was introduced and confidentiality of the information was guaranteed. Participants were instructed to complete the survey, seal it, and hand it over to their store manager. Follow-up e-mails were sent to the store managers about 2 weeks after the surveys were delivered. Out of 510 surveys, 187 usable questionnaires were returned (response rate: 37%).

Of the employee participants, 67% (n = 125) were female and 33% (n = 62) were male. The majority of participants (n = 147, 79%) were single. The respondents’ ages ranged from 16 to 57 years with a mean of 22 years. Twenty-six respondents (14%) had not completed high school; 51 respondents (27%) were high school graduates; slightly more than half of the participants (n = 78, 59%) indicated they had some college education or associate degree; and the remaining respondents (n = 14, 8%) had Bachelor’s or graduate degrees. Overall, the low educational level seemed to reflect the characteristic workforce of the quick-service restaurant segment in the U.S. The length of employment ranged from a minimum of 1 month to a maximum of 13 years, with an average of 1 year and 7 months. The majority of respondents (n = 116, 62%) were co-workers; 37 respondents (n = 37, 20%) were supervisors; and the remaining participants (n = 31, 17%) were either assistant managers or managers.

3.2. Measures

Job burnout was assessed with the Maslach Burnout Inventory-General Survey (MBI-GS; Schaufeli et al., 1996). MBI-GS includes three sub-constructs: exhaustion (five items, Cronbach’s α = .86; e.g., “I feel used up at the end of the workday”), cynicism (five items, Cronbach’s α = .80; e.g., “I doubt the significance of my work”), and professional efficacy (six items, Cronbach’s α = .69; e.g., “In my opinion, I am good at my job”). All items were rated on a five-point Likert-type scale ranging from 1 = strongly disagree to 5 = strongly agree. In this study, professional efficacy is used as an element of work engagement (for justification, see Sections 2.3 and 4.1).

Job engagement was measured with the Utrecht Work Engagement Scale (UWES; Schaufeli et al., 2002). The instrument is composed of three sub-constructs: vigor (six items, Cronbach’s α = .73; e.g., “At my work, I feel bursting with energy”), dedication (five items, Cronbach’s α = .87; e.g., “My job inspires me”), and absorption (six items, Cronbach’s α = .74; e.g., “When I am working, I forget everything else around me”). All statements were rated on a five-point Likert-type scale ranging from 1 = strongly disagree to 5 = strongly agree.

The Big Five personality factors were assessed with the International Personality Item Pool (IPIP: Goldberg, 2001). Cronbach’s alpha values for extraversion, agreeableness, neuroticism, conscientiousness, and openness to experience were .86, .81, .85, .77, and .80, respectively. Each personality dimension includes 10 items (5 worded positively and another 5 worded negatively). The negatively worded items were reverse coded. All responses were made on a five-point scale ranging from 1 = very inaccurate to 5 = very accurate.

Burnout studies typically include quantitative workload as a key demand variable. Restaurants have the service jobs requiring frequent customer contacts; stressful social interactions with customers are often regarded as the major job stressor in the hospitality work setting (Bittner et al., 1990). Therefore, it was deemed appropriate to focus on qualitative (i.e., emotional and social) workload rather than quantitative workload in this study. Customer-related Social Stressors (CSS), developed by Dormann and Zapf (2004), is a unique measure that identifies stressful customer-related events. Among four sub-constructs (disproportionate customer expectation, customer verbal aggression, disliked customers, and ambiguous customer expectations), Dormann and Zapf (2004) report that verbal aggression has the most significant influence on burnout factors. Hence, customer verbal aggression (part of CSS) was selected as a job demand variable representing qualitative workload in this study. The instrument of verbal aggression (Cronbach’s α = .82) includes five items that refer to customer quarrels, customer criticisms, and verbal aggression (e.g., “Customers personally attack us verbally”). Items were rated on a five-point scale ranging from 1 = not at all true to 5 = absolutely true.

Among various job resources, two resource variables (autonomy and skill variety) were selected. In a variety of service work environments including hospitality organizations, the importance of autonomy (Kim et al., 2007; Lashley, 1995; Ross, 1997) and training of various skills (i.e., cross-training) (Brusco et al., 1998; McCune, 1994; Riley and Lockwood, 1997) has been well documented. The measures of skill variety and autonomy were adopted from Hackman and Oldham’s (1975) Job Diagnostic Survey. Autonomy was evaluated with three items (e.g., “I am able to act independently of my supervisor in performing my job functions”) and skill variety had three items (e.g., “While performing my job, I get the opportunity to work on many interesting projects”). All answers were made on a five-point scale.
ranging from 1 = strongly disagree to 5 = strongly agree. Cronbach’s alpha values for autonomy and skill variety were .48 and .83, respectively. Because of the poor reliability score of autonomy, only skill variety was used as a job resource variable in the regression analysis of this study. The authors speculate in a quick-service restaurant such as Subway, autonomy (independence and an opportunity to use initiative) may not be an option to employees because of the simple tasks performed. This operational characteristic may have resulted in low reliability of the scale.

Lastly, respondents were asked to provide some demographic information. Demographic attributes such as sex, age, marital status, education, the length of employment, job position, and total restaurant work experience were measured in the final section of the questionnaire.

4. Results

4.1. Correlation between burnout and engagement

Pairwise correlations among burnout and engagement sub-factors are shown in Table 1. The correlation coefficient values among original engagement factors (vigor, dedication, and absorption) range from .50 to .58, indicating that they are highly related concepts. As for burnout dimensions, exhaustion and cynicism are highly interrelated ($r = .62$), but these two burnout factors (exhaustion and cynicism) display weak relationships with professional efficacy ($r = -.12$ and -.57, respectively). Note that professional efficacy is more significantly related to engagement constructs: vigor ($r = .60$), dedication ($r = .55$) and absorption ($r = .50$). In summary, the correlation results of this study support the new notion that (reduced) professional efficacy should be regarded as an element of engagement (Schaufeli et al., 2002; Schaufeli and Bakker, 2004).

4.2. Demographic characteristics and burnout/engagement

Research has shown significant relationships between demographic attributes and burnout and engagement. For example, using a large, heterogeneous sample ($n = 1025$), Maslach and Jackson (1981) show that females, singles, and more education are associated with higher scores on emotional exhaustion; males, younger people, and lower-educated people score higher on depersonalization; and males and older people have higher ratings on personal accomplishment. Schaufeli and Bakker (2003) demonstrate that work engagement correlates weakly and positively with age (i.e., older employees feel slightly more engaged than younger employees); males score slightly higher on engagement than females; and for professional groups, managers, executives, and entrepreneurs score higher than blue-collar workers, police officers, and home-care staff.

In the present study, a series of ANOVAs were performed to detect the effects of demographic characteristics (sex, age, marital status, education, position, and work experience) on burnout (exhaustion and neuroticism) and the extended engagement factors (vigor, dedication, absorption, and professional efficacy). Out of six demographic variables, only one variable (job position) demonstrated a significant association with engagement ($p < .05$) and none of them was related to burnout. Specifically, managers, assistant managers, and supervisors (supervisory positions) displayed significantly higher ratings than co-workers (non-supervisory positions) on all extended engagement sub-dimensions (vigor, dedication, absorption, and professional efficacy). The effect of job position on engagement is in line with Schaufeli and Bakker’s (2003) and finding (i.e., high ranking officials such as managers and executives are more engaged). Because of the significant ANOVA result, job position is included as one of the control variables in hierarchical regression analyses of this study (see Section 4.3).

Overall, the little effect of demographic characteristics on burnout and engagement may be attributed to the fact that the present sample is small and homogeneous focusing on particular industry employees. Several researchers have demonstrated that the more homogeneous the study population, the fewer gender differences in fatigue appear (De Vries and Van Heck, 2002; Lewis and Wessely, 1992). In addition, most studies reporting a significant relationship between demographic attributes and burnout and engagement have a large sample size (typically, between 500 and 1000).

4.3. Hypotheses testing

As a preliminary test, the correlation values (see Table 1) were reviewed between independent (Big Five) and dependent variables (burnout and engagement). As predicted, burnout had a significant,

Table 1
Descriptive statistics, reliabilities, and correlations

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<tr>
<th>Variables</th>
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<tbody>
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<td>Extraversion</td>
<td>3.50</td>
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<td>Agreeableness</td>
<td>3.97</td>
<td>.56</td>
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<td>Neuroticism</td>
<td>2.48</td>
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<td>Conscientiousness</td>
<td>3.77</td>
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<td>0.04</td>
<td>0.38</td>
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<td>Openness</td>
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<td>0.31</td>
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<td>0.33</td>
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<td>Skill variety</td>
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<td>-0.02</td>
<td>0.12</td>
<td>0.07</td>
<td>0.19</td>
<td>-0.06</td>
<td>(0.83)</td>
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<td>Aggression</td>
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<td>-0.19</td>
<td>0.36</td>
<td>-0.08</td>
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<td>Exhaustion</td>
<td>2.55</td>
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<td>-0.10</td>
<td>0.40</td>
<td>-0.13</td>
<td>-0.09</td>
<td>-0.23</td>
<td>0.24</td>
<td>(0.86)</td>
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<tr>
<td>Cynicism</td>
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<td>0.86</td>
<td>0.21</td>
<td>-0.28</td>
<td>0.38</td>
<td>-0.24</td>
<td>-0.07</td>
<td>-0.38</td>
<td>0.31</td>
<td>0.62</td>
<td>(0.80)</td>
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<tr>
<td>Professional efficacy</td>
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<td>0.54</td>
<td>0.10</td>
<td>0.26</td>
<td>-0.17</td>
<td>0.41</td>
<td>0.11</td>
<td>0.46</td>
<td>-0.08</td>
<td>-0.12</td>
<td>-0.37</td>
<td>(0.69)</td>
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<tr>
<td>Vigor</td>
<td>3.50</td>
<td>0.64</td>
<td>0.14</td>
<td>0.17</td>
<td>-0.32</td>
<td>0.40</td>
<td>0.18</td>
<td>0.35</td>
<td>-0.04</td>
<td>-0.32</td>
<td>-0.34</td>
<td>0.60</td>
<td>(0.73)</td>
<td></td>
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<tr>
<td>Dedication</td>
<td>3.12</td>
<td>0.90</td>
<td>-0.03</td>
<td>0.12</td>
<td>0.02</td>
<td>0.17</td>
<td>-0.07</td>
<td>0.67</td>
<td>-0.03</td>
<td>-0.32</td>
<td>-0.54</td>
<td>0.55</td>
<td>0.50</td>
<td>0.87</td>
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<tr>
<td>Absorption</td>
<td>2.92</td>
<td>0.09</td>
<td>0.15</td>
<td>0.15</td>
<td>-0.02</td>
<td>0.32</td>
<td>-0.04</td>
<td>0.57</td>
<td>-0.04</td>
<td>-0.18</td>
<td>-0.36</td>
<td>0.50</td>
<td>0.49</td>
<td>0.58</td>
<td>(0.74)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Burnout</td>
<td>2.56</td>
<td>0.80</td>
<td>-0.19</td>
<td>-0.23</td>
<td>0.46</td>
<td>-0.20</td>
<td>-0.09</td>
<td>-0.33</td>
<td>0.30</td>
<td>0.90</td>
<td>0.87</td>
<td>-0.25</td>
<td>-0.34</td>
<td>-0.48</td>
<td>-0.28</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Engagement</td>
<td>3.38</td>
<td>0.57</td>
<td>0.04</td>
<td>0.16</td>
<td>-0.13</td>
<td>0.37</td>
<td>0.04</td>
<td>0.66</td>
<td>-0.04</td>
<td>-0.31</td>
<td>-0.52</td>
<td>0.79</td>
<td>0.79</td>
<td>0.85</td>
<td>0.81</td>
<td>-0.44</td>
<td></td>
</tr>
</tbody>
</table>

Internal reliabilities are in parentheses.

*a All study variables are rated on a five-point scale except for burnout and engagement.

*b Burnout is the composite score obtained by averaging exhaustion and cynicism.

*c Engagement is the composite score obtained by averaging vigor, dedication, absorption, and professional efficacy.

*p < 0.05.

**p < 0.01.
positive correlation with neuroticism ($r = .40$, $p < .01$) and significant, negative correlations with extraversion ($r = -.19$, $p < .05$) and agreeableness ($r = -.23$, $p < .01$). In addition, conscientiousness ($r = -.20$, $p < .05$) also showed a significant negative correlation with burnout, which was an unexpected result. Other major differences from the proposed hypotheses came from the relationship between engagement and Big Five. Unlike the hypotheses (predicting positive relationships between engagement and extraversion and conscientiousness and a negative relationship between engagement and neuroticism), only conscientiousness was significantly correlated with engagement ($r = .37$, $p < .01$).

To formally test the hypotheses, hierarchical regression analyses were carried out with burnout and engagement as two outcome variables. Burnout is the composite score obtained by averaging exhaustion and cynicism, and engagement is the composite score obtained by averaging vigor, dedication, absorption, and professional efficacy. It is not uncommon to use the composite score of exhaustion and cynicism to measure the concept of burnout because these two sub-dimensions are highly correlated (Bakker et al., 2003; Brookings et al., 1985; Langelaan et al., 2006). Therefore, it is also reasonable to use the composite score of the four sub-dimensions (vigor, dedication, absorption, and professional efficacy) of work engagement to represent the concept of engagement. In the first step, three control variables entered the regression equation: job position, customer aggression (job demand), and skill variety (job resource). After controlling for the effects of three job-related variables, the Big Five personality dimensions entered the regression as the second set of predictor variables (step 2). The regression results predicting burnout and engagement are shown in Table 2.

For burnout, the control variables (position, skill variety, and customer verbal aggression) explained 21% of the variance. In the first equation, skill variety and customer verbal aggression were significant predictors. Skill variety showed a negative relationship ($\beta = -.39$, $p < .01$) and verbal aggression had a positive relationship ($\beta = .24$, $p < .01$) with burnout. The entry of the Big Five contributed unique variance to the equation ($\Delta R^2 = .14$, $p < .01$).

Among five personality traits, only neuroticism had a significant (positive) beta coefficient ($\beta = .35$, $p < .01$). In the final (second) equation with the control variables and the Big Five, the effect of customer verbal aggression became insignificant; therefore, skill variety ($\beta = -.40$, $p < .01$) and neuroticism were two significant predictors of burnout. This result may suggest that neuroticism serves as a mediator between customer verbal aggression and employee burnout.

To further understand the picture of the results on the relationships among control variables, the Big Five, and burnout, additional regression analyses were conducted treating exhaustion and cynicism as separate dependent variables (Table 3). Even after separation, the results were consistent. In the final equation, the effects of verbal aggression on exhaustion and cynicism disappeared; negative relationships were found between skill variety and exhaustion ($\beta = -.31$, $p < .01$) and cynicism ($\beta = -.43$, $p < .01$); and only neuroticism (out of the Big Five) was a significant determinant of the two burnout sub-dimensions (exhaustion: $\beta = .38$, $p < .01$ and cynicism: $\beta = .24$, $p < .05$).

For engagement, the control variables (position, skill variety, and customer verbal aggression) explained 54% of the variance. In the first equation, position ($\beta = .21$, $p < .01$) and skill variety ($\beta = .66$, $p < .01$) predicted engagement. The entry of the Big Five added 8% of the variance to the regression model ($\Delta R^2 = .08$, $p < .01$). Two personality factors (conscientiousness and neuroticism) were significantly related to engagement in opposite directions. Conscientiousness had a positive beta coefficient ($\beta = .18$, $p < .01$) and neuroticism had a negative beta coefficient ($\beta = -.14$, $p < .05$). In the final (second) equation with the control variables and the Big Five, position ($\beta = .22$, $p < .01$) and skill variety ($\beta = .62$, $p < .01$) remain significant; therefore, there were four predictors of engagement (position, skill variety, conscientiousness and neuroticism) in the model.

As with burnout, in the same manner, additional hierarchical regression analyses were conducted using four sub-dimensions of the extended engagement factor (vigor, dedication, absorption, and professional efficacy) as separate dependent variables (Table 4). The results were fairly comparable to earlier findings.

### Table 2
Regression results predicting job burnout and job engagement

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>Burnout**</th>
<th>Engagement**</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$\beta$</td>
<td>$R^2$</td>
</tr>
<tr>
<td>I: Control variables</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Job position$^a$</td>
<td>0.11</td>
<td>0.09</td>
</tr>
<tr>
<td>Skill variety</td>
<td>-0.39$^-$</td>
<td>-0.40$^-$</td>
</tr>
<tr>
<td>Customer aggression</td>
<td>0.24$^+$</td>
<td>-0.06$^-$</td>
</tr>
<tr>
<td>II: Personality</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extraversion</td>
<td>-0.11$^-$</td>
<td>0.03$^+$</td>
</tr>
<tr>
<td>Agreeableness</td>
<td>-0.10$^-$</td>
<td>0.11</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>-0.03$^-$</td>
<td>0.18$^*$</td>
</tr>
<tr>
<td>Neuroticism</td>
<td>0.35$^*$</td>
<td>-0.14$^-$</td>
</tr>
<tr>
<td>Openness</td>
<td>0.13</td>
<td>-0.08$^-$</td>
</tr>
<tr>
<td>$F$</td>
<td>7.44$^+$</td>
<td>22.66$^-$</td>
</tr>
<tr>
<td>Total $R^2$</td>
<td>0.35</td>
<td>0.62</td>
</tr>
<tr>
<td>Adjusted $R^2$</td>
<td>0.31$^+$</td>
<td>0.60</td>
</tr>
</tbody>
</table>

Note: $\beta =$ standardized beta coefficients without Big Five variables; $\beta =$ final beta (standardized) coefficient after all variables have been entered.

$^a$ Burnout is the composite score obtained by averaging exhaustion and cynicism.

$^b$ Engagement is the composite score obtained by averaging vigor, dedication, absorption, and professional efficacy.

$^c$ For job position, 0 = non supervisory position 1 = supervisory position.

$^d$ $p < .05$.

$^e$ $p < .01$.

### Table 3
Regression results predicting exhaustion and cynicism

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>Exhaustion</th>
<th>Cynicism</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$\beta$</td>
<td>$R^2$</td>
</tr>
<tr>
<td>I: Control variables</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Job position$^a$</td>
<td>0.10$^-$</td>
<td>0.03$^-$</td>
</tr>
<tr>
<td>Skill variety</td>
<td>-0.31$^-$</td>
<td>0.03$^-$</td>
</tr>
<tr>
<td>Customer aggression</td>
<td>0.03$^+$</td>
<td>0.09$^+$</td>
</tr>
<tr>
<td>II: Personality</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extraversion</td>
<td>-0.08$^-$</td>
<td>-0.14$^-$</td>
</tr>
<tr>
<td>Agreeableness</td>
<td>-0.02$^-$</td>
<td>-0.15$^-$</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>0.01$^-$</td>
<td>-0.06$^-$</td>
</tr>
<tr>
<td>Neuroticism</td>
<td>0.38$^*$</td>
<td>0.24$^+$</td>
</tr>
<tr>
<td>Openness</td>
<td>0.05$^+$</td>
<td>0.11$^+$</td>
</tr>
<tr>
<td>$F$</td>
<td>4.69$^+$</td>
<td>8.27$^+$</td>
</tr>
<tr>
<td>Total $R^2$</td>
<td>0.25$^+$</td>
<td>0.37$^+$</td>
</tr>
<tr>
<td>Adjusted $R^2$</td>
<td>0.20$^+$</td>
<td>0.32$^+$</td>
</tr>
</tbody>
</table>

Note: $\beta =$ standardized beta weight.

$^a$ For job position, 0 = non supervisory position 1 = supervisory position.

$^b$ The effects of customer verbal aggression on exhaustion ($\beta = .20$, $p < .05$) and cynicism ($\beta = .23$, $p < .01$) were significant prior to the entry of Big Five personality variables.

$^c$ $p < .05$.

$^d$ $p < .01$. 
5. Discussion

One of the purposes of this study was to validate Kim et al.'s (2007) findings on burnout and Big Five personality dimensions. Kim et al. reported a significant relationship between exhaustion and extraversion and between cynicism and agreeableness. In the present study, the effects of extraversion and agreeableness on burnout did not appear (at the .05 significance level) either in the initial regression analysis (Table 2) or subsequent regression analyses (Table 3). In the study by Kim et al., the neuroticism personality trait displayed the largest beta coefficient with both exhaustion and cynicism, suggesting the strongest effect on burnout among all traits. Although the effects of two positive personality dimensions (extraversion and agreeableness) were not validated, the results of this study (Table 3) are in harmony with Kim et al.'s finding by showing neuroticism as the most influential burnout predictor.

Another purpose of this study was to find the personality traits pertaining to job engagement. It is clear that conscientiousness is the most dominant personality trait influencing engagement (Table 2). The further analyses reinforced the compelling effect of conscientiousness on engagement by demonstrating that conscientiousness is positively related to the majority of engagement sub-dimensions: vigor, absorption, and professional efficacy. Taken all together, it may be concluded that employees high in conscientiousness, characterized by strong responsibility, organizational skills, and steadiness, are more likely to drive their energy into work, complete the job, and ultimately feel a strong sense of professional efficacy.

It was quite surprising to observe no relationship between extraversion and engagement (Table 2). Initially, it was predicted that extraversion would have a positive effect on engagement because of the high energy level that extraverted individuals have. The significant negative relationship was found between neuroticism and engagement (Table 2) as predicted. The further analyses (Table 4) revealed that employees high in neuroticism have a significantly low score on vigor ($\beta = -0.27, p < .01$) and the lack of vigor (energy) contributes to employees' disengagement at work. Overall, the results of the present study appear to downgrade the effect of extraversion and highlight the effect of neuroticism in their relations to burnout and engagement.

Next, although agreeableness was not a significant predictor of engagement (Table 2), in the further analyses (Table 4), this personality trait displayed a significant positive relationship with one of the extended engagement dimensions, i.e., professional efficacy. Kim et al. (2007) argued that for hospitality jobs, agreeableness is as critical as extraversion (generally, the effect of extraversion is better known to burnout scholars in other disciplines) because agreeableness is negatively related to cynicism and positively related to professional efficacy. This study, although weakly, supports Kim et al.'s argument about the significant role of agreeableness in hospitality jobs by reproducing the result that agreeable employees (characterized by being warm, friendly, kind, and empathetic) may feel a stronger sense of efficacy at work.

Lastly, as for job demand and resource variables, skill variety (resource) had a negative relationship with burnout and customer verbal aggression (demand) had a positive relationship with burnout, while skill variety (resource) positively affected...
engagement and verbal aggression (demand) showed no influence on engagement (Table 2). These results confirm the previous findings that burnout is affected by both demands and resources (in opposite directions) whereas engagement is exclusively predicted by available job resources (Schaufeli and Bakker, 2004).

6. Conclusions and future research

The present study makes a noteworthy contribution to the engagement literature by demonstrating the role of individual differences, particularly personality dimensions, in employees’ work engagement. Although burnout and engagement are commonly viewed as opposite constructs located on the same continuum, the results of this study indicate that they may be, rather, two distinctive concepts driven by different personality traits. This study, in a sense, supports the recently developed notion by engagement scholars that burnout and engagement are independent states that are negatively, but not perfectly, related (Langelaan et al., 2006; Schaufeli and Bakker, 2004; Schaufeli et al., 2002).

Overall, the most critical personality trait affecting burnout is neuroticism and the most eminent traits predicting engagement are conscientiousness and neuroticism. The effects of extraversion and agreeableness are very weak in this study despite many feasible theories supporting their relationships with burnout or engagement. Therefore, continued research is recommended to find the concrete relationship between these personality dimensions and burnout and engagement.

Although it is not a central point of this study, it is worth noting the magnitude of the effect of skill variety (job resource) on burnout and engagement (Table 2). In fact, skill variety was the most significant determinant of both burnout and engagement among all independent variables including personality dimensions. Organizations may not have much control over situational factors such as customer verbal aggression, but they do control the skills their employees can learn. According to the results, offering employees multiple opportunities to be involved in various tasks and/or projects is likely to reduce their feeling of burnout and simultaneously increase the level of engagement at work. Considering the participants of this study are quick-service restaurant workers, the results of this study may also indicate that skill variety is particularly important in the work environment where tasks are simple and routine.

This study is unique in that it includes customer-related stressors. Even though it is a common belief that frontline employees’ job stress results from frequent customer contacts, few studies actually include customer contact as a predictor variable of burnout in their analyses. The present study provides the empirical evidence that negative social interactions with customers (such as verbal aggression) are indeed one of the major stressors for contact service workers. In addition, it is speculated that neuroticism is a possible mediator between customer aggression and burnout. Mediators provide the mechanism behind the relationship between predictors and outcomes (Frazier et al., 2004). It is a sign of a maturing discipline when after direct relations are discovered, researchers turn to explanation and theory testing regarding the relations (Hoyle and Kenny, 1999).

Neuroticism and negative affectivity (mood dispositional dimension) are often interchangeably used, as both are highly correlated with the negative affect state (Watson and Clark, 1984). Although this study suggests neuroticism as a mediator, the plausible explanation about why verbal aggression leads to burnout is that the negative customer event creates a negative emotional response (mood).

Hence, future research is recommended to test the theory regarding the mediating role of negative affect between customer stressors and burnout (negative customer event → negative affectivity → exhaustion/cynicism). It is also plausible to have a reverse relationship: individuals high in negative affectivity perceive negative customer events more strongly or frequently thereby feeling higher levels of burnout (Grandey et al., 2004) (negative affectivity → negative customer event → exhaustion/cynicism). This means there may be a reciprocal relationship between negative affectivity and negative customer events.

Lastly, it is possible to advance the theory even further by including other feasible mediators (e.g., emotional labor). For example, the negative customer event such as verbal aggression leads to negative affect; negative affect leads to surface acting (emotional labor); and surface acting leads to exhaustion and cynicism (negative customer event → negative affectivity → surface acting → exhaustion/cynicism).

7. Limitations

As with all empirical research, the limitations of the present study should be addressed. One notable limitation of this study was the small number of respondents (187) from one particular industry. The small sample size (low statistical power) and the lack of occupational heterogeneity limited the ability to generalize the findings of the present study.

Second, the number of job resource and demand variables was limited in the model because the focus of this study was on individual differences (i.e., personality traits) rather than job characteristics. Unfortunately, the effect of autonomy, which is the seemingly important resource variable in most service operations, was not validated because the variable was excluded in the analysis due to low reliability of the measure. The better choice of resource variables might be questions pertaining to empowerment through involvement (e.g., making suggestions and sharing information). These types of activities are likely to happen in the quick-service restaurant work setting rather than employees being independent and making decisions (autonomy).

Third, this study was dependent on self-reported surveys, which means shared method variance is a potential explanation for relationships (Podsakoff et al., 2003). This is one of the common problems often recognized by hospitality and other organizational behavior researchers.

References


