FIXING JOB DEMANDS AS HINDRANCES OR CHALLENGES BY THE MODERATING EFFECT OF PERSONALITY TRAITS: LOOKING INTO THE LENS OF TRAIT THEORY.

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ABSTRACT: *The intention of the study among 100 nurses in Pakistan's hospitals was to decide the moderating role of personality traits (i.e. extraversion vs. introversion and neuroticism vs. emotional stability) for defining job demands as hindrances or challenges in job demand resource model. It was hypothesized that moderating effect of some personal resources will define some job demands (i.e. time pressure, workload) as hindrances which will lead to exhaustion (i.e. burnout) and some job demands (cognitive ability) will become challenges which will lead to vigor (i.e. work engagement). SPSS 20 was used to analyze the hypotheses. Test analysis showed that cognitive ability became job challenge when extravert and emotional stability moderated between cognitive ability and vigor. On the contrary, time pressure was proved as job hindrance when introvert and neuroticism moderated between time pressure and exhaustion.*

Key words: burnout, exhaustion, vigor, work engagement, extraversion, introversion, neuroticism, emotional stability, time pressure, workload and cognitive ability.

INTRODUCTION

The job demand and resources model (JD-R Model) is developed to assimilate and elaborate previously developed job characteristics models i.e. Demand control model [1] and [2] Effort Reward Imbalance model. JD-R Model is an extensive job characteristics model, its purpose is to clarify employees' ill health (i.e. burnout) and well-being (i.e. engagement) [3, 4]. It classifies the health impairing facets in the work setting (e.g., workload, emotional demands) as job demands and the inspiring job characteristics as job resources (e.g., task autonomy, positive feedback).

According to JDR model job characteristics can be organized into two particular categories i.e. job demands and job resources. **Job Demands** are physical, social, organizational aspects of the job or employees personal capacities [3, 5] that involve physical or mental effort of the individual and are linked with certain psychological costs that is exhaustion cynicism (e.g. burnout) and includes characteristics like workload, time pressure, cognitive ability difficult physical environment, role ambiguity, work home interference. **Job Resources** are those aspects that are useful in achieving work goals and can also overcome the job demands and are also helpful to stimulate personal growth and development (e.g., task autonomy, positive feedback). Some studies by Bakker, Demerouti [6] and Mauno, Kinnunen [7], related to job demand and resources model have shown that some specific job demands (i.e. workload, cognitive demands) are positively related to positive outcomes such as engagement. It indicates that some times job demands are hindrances that leads to **exhaustion** (i.e. burnout is usually defined as a "*syndrome of exhaustion, cynicism, and reduced professional efficacy*") and some are challenges that leads to vigor (i.e. work engagement which is defined as a "*positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption*" [8] such as workload so, as per our understanding, it's a haphazard concept.

This study aims to provide cause and explanation for these unexpected outcomes as explained by Xanthopoulou, Bakker [9] and Van den Broeck, De Cuyper [10], it may be due to the Individual differences i.e. personality types, personality or personal resources such as faith and confidence. Now according to the trait theory (also called dispositional theory) which can be defined as "*in psychology, it is habitual patterns of behavior, thought and emotion*" [11]. Traits are relatively stable over time and differ across individuals (e.g. some people are outgoing whereas others are shy), and influence behavior, traits are something a person either has or does not have, but in many other theories traits are dimensions such as extraversion (Warmth, Assertiveness), introversion (i.e. Introverts are typically more reserved or reflective.), neuroticism (i.e. Anxiety, Angry,) and emotional stability (i.e. relatively calm and resilient and secure), with each person rating somewhere along this spectrum". In present study we are going to use these four personality types i.e. neuroticism emotional stability, extraversion and introversion as a moderator.

As initially proposed in JD-R model we claim that job demand resources model is not homogeneous so Job demands can be categorize into two subcategories [12, 13] namely; health-impairing job demands that thwart or hinder the ideal functioning of an individual and are threatening obstacles, exhaust or drain individual or employees' energy, when provoked with these job demands employee feel negative emotions lack of control and in result lean towards emotion-focused copying style, they would interfere with employees' well-being and their work goal engagement so these job demands are called "job hindrances" and they include work characteristics such as role ambiguity, job insecurity, and interpersonal conflicts [14-16], on the other hand some job demands may be energy/strength- draining/exhausting and also thought-provoking this final feature can be credited as job resources. Though job demands comprises of potential gains and also require energy and demand employees' curiosity, competence they also provoked individual problem-focused copying style, helps to achieve the work goals and also produce the chances for individuals for their growth and development all these job characteristics are called "job challenges" and [14, 15, 17] it include workload (i.e. "the relative capacity to respond" [18]. "*Workload is a*

multidimensional and complex construct, that is affected by external task demands, environmental, organizational and psychological factors, and perceptive and cognitive abilities" [19], cognitive demand (i.e. general cognitive ability or g refers to "*individual differences in information processing capacity or the ability to learn*" [20-22] also time pressure (i.e. according to dictionary "*The psychological stress that results from having to get things done in less time than is needed or desired").*

Now a days Job demand and resources model is involve in every field of job like nurses field etc. managers in the organization require employees who consider these job demands as a challenging not hindering and also require employees who are emotionally stable and positive, calm, feel secure, excitement seeking and can handle the job ideally so personality judgment is important [23] to hire employees in any field specially nurses (i.e. if a nurse is neurotic, how he/she perceives the job demands and if the nurse is extravert, how he/she can perceives the job demands)as their role is more important which include health care provider to health educator, diagnostic assistant, post care supporter, Health advisor, Physician's Assistant, Operation Theatre Assistant etc. there should not be any risk involve as from patient point of view.

PROBLEM STATEMENT

The Subjected Study is being conducted for the following meticulous statement, to find under what situation and conditions some job demands becomes hindrances which lead to exhaustion and some becomes challenges which lead to vigor by keeping the job resources same we assume that situation and condition can be personality types.

OBJECTIVE OF THE STUDY

To see the impact of job demands on exhaustion/burnout

To see the impact of job demands on employee engagement/vigor

To see the impact of job demands on employee engagement when different personality types are placed as a moderator

To see the impact of job demands on burnout when different personality types are placed as a moderator.

LITERATURE REVIEW

JOB DEMANDS AS JOB HINDRANCES AND JOB CHALLENGES

As according to the Folkman and Lazarus [13] some job demands becomes difficult for the employees and on provoking to these negative emotions employees losses control over the job and develop negative emotions and these negative emotions hinder employees' to achieve the work goals on the other hand job demands may be considered as a strength-draining or motivating that leads to work engagement (i.e. due to job resources) [14, 15]. LePine, Podsakoff [15] and Podsakoff, LePine [12] explained that job hindrances are negatively related to job satisfaction, performance and work engagement job challenges are positively related to employee engagement (i.e. vigor). Selye [24] explained that the hindrances are negative feelings of stress called as "distress" which stimulates the negative emotions and challenges are positive feeling of stress called "eustress" in which employees consider the job demands as a challenge and motivates the employee. LePine, LePine [25] explained the different relationships of job challenges and job hindrances according to the Expectancy Value Theory**; "***employees when provoking to job demands, to achieve the desire outcome they assess the job demands, their personal capacities and chances of success*" According to this; they feel they are capable to handle the job demands with challenge which would leads to growth and development and also work goal achievement for example; employees, by considering job demand as a challenge they can overcome the high workload by increasing their personal capacities and by doing the work on time so they can get an opportunity to work on a new project. Job hindrances are negatively related to motivation and leads to exhaustion and job challenges are positively related to motivation and leads to work engagement. However, job hindrances hinder the employee satisfaction but when environment is challenging, employees feel satisfied on getting opportunity. In previous studies workload is considered to be positive to satisfaction [26]. According to Cavanaugh, Boswell [14] job challenges are those stressful demands that have potential to stimulate and motivate employees it includes time pressure, workload and cognitive demand. Considering the job demands as hindrances or challenges depends on how employees appraises job demands [27].

RELATIONSHIP OF JOB DEMANDS WITH BURNOUT AND WORK ENGAGEMENT

Job demands and resources model explains the relationship of job demands and resources with work engagement (I.e. vigor) and burnout (i.e. exhaustion) [3, 28]. Due to high job demands employees' try to increase their effort in order to meet the work goal so feel worn out and perceive the job demands as strength-draining therefore, job demands are positively related to burnout. Several studies explain that some job demands are positively related to exhaustion (i.e. burnout) [29-31]. Demerouti, Bakker [30] and Bakker and Demerouti [3] classifies work-setting features such as workload and emotional demands as health-impairing characteristics however in some studies some job demands are positively related to work engagement/vigor e.g. **work oad** and **cognitive ability** (i.e., the amount of sustained mental effort a job requires) [6, 7, 26, 29, 32, 33]. In previous studies by LePine, Podsakoff [15] and Podsakoff, LePine [12] two job demands workload and time pressure are considered as challenges they also discussed that both workload and time pressure are positively related to work engagement. In recent experimental study by Broeck, Vansteenkiste [34] which was conducted in Belgium and the Netherlands, examined that job demands that are considered to be as challenges (i.e. workload time pressure), stimulates motivation in employees but job demands that are considered to be as hindering (i.e. role ambiguity, role conflict), prevent employees to achieve the desired goals. Eventually, a study in Japan stated that job demands such as high workload and time pressure both exhibits the positive relation towards work-engagement (i.e. vigor) [35]. Time pressure (i.e., the extent to which employees feel they have insufficient time to develop creative ideas at work). Teng, Shyu [36] described that time pressure is positively related to burnout and negatively related to work engagement. Employees when find limited time to complete the desired task they feel stress and develop negative emotions for example nurses roles are important as they do

many task so if the find limited time to do their desired task, there will be consequences related to patients i.e. their ability to discover the patient needs and to perform the clinical task reduce which will leads to error [37]. According to Roe and Zijlstra [38] research on time pressure, they considered time pressure as a job challenge which can be defined as, individual/employees uses their cognitive and physical ability to get the work done on time as desired. LePine, Podsakoff [15] defined the time pressure as a stress stimulator because employee uses his/her high personal capacity to achieve goals within the time required, to get appreciation or to motivate. Therefore, time pressure is positively related to exhaustion (i.e. burnout) and might also be positively related to work-engagement (i.e. vigor).

Crawford, LePine [39] explained the relationship of job demand and resources model with work engagement and exhaustions by updating the theory that in previous studies job demands are positively relate to stress and job resources are negatively related to exhaustion whereas in several studies constantly positive relationship have been seen between job resources but relationship between work engagement and job demands depends on the nature of job demands so the employees who perceive the job demands as a hindrances are negatively related to vigor whereas employees who perceive the job demands as a challenge are positively related to vigor.

H 1a: *Job demands are positively related to (burnout/exhaustion) and are negatively related to (burnout /exhaustion)*

H 1b: *Job demands are positively related to (vigor/exhaustion) and are negatively related to (vigor/exhaustion)*

INCORPORATING PERSONALITY INTO THE JD-R MODEL

Big five personality dimensions or types become point of attention for researchers in last two decades along with its positive and negative affect affectivity [40-44]. Major studies related to stress and coping have focused their interest to personality traits such as extraversion (i.e. positive emotions) and neuroticism (i.e. negative emotions) [45]. Personality may have impact on individual that is, he/she may fail to cope the situation due to stress or mental disturbance [46].

According to Xanthopoulou, Bakker [9] and Van den Broeck, De Cuyper [10], employees or individual perceive the job demands as hindrances or challenges may be, because of, every person have different personality (according to trait theory) or perception, which is also the gab of our study (i.e. if a person is extravert or introvert how he/she perceives the job demands and if a person is neurotic or emotionally stable then how he/she perceive the job demands). A person who is **neurotic** experiences the negative emotions (i.e. anxiety, angry hostility, depression, self-consciousness ,impulsiveness, vulnerability on the other hand **emotionally stable** person (opposite of neuroticism) experience the positive emotions; they are considered to be sociable, friendly, calm and feel secure [47]. A person who is **extravert** experiences; gregariousness, assertiveness, activity on the other hand **introvert** (opposite of extraversion) person experience more positive emotions than emotional stable person [48].

Extraversion and neuroticism both, to some extent, are related to the job satisfaction psychological distress (i.e. work related aspects) [49, 50]. A neurotic person is unable to handle the stress or to deal with the stress in the working environment because of his/her negative emotions and emotional instability however a highly extravert person tend to be confident, outgoing and have positive emotions [48] we purpose that neuroticism is negatively related to work- related aspects and extraversion is positively related to positive outcomes.

Neuroticism through influencing the workplace discernment, inspire the work-related stress directly and indirectly. In former case, this effect was perceived, due to the high unpleasant motivation and stress but in latter case a person who is neurotic (i.e. negative emotions) he/she perceive the work setting as hindering or aggressive [43]. Individual who is more neurotic exhibit negative emotions and also perceive others negatively [51]. There is a positive relationship between neuroticism and well-being outcomes, supported by Both cross-sectional and longitudinal results, while negative relation is supported due to the relation between neuroticism and work setting discernment explained by Hart, Wearing [49], he explained that through negative work-place perception, there is a negative pathway from neuroticism to emotional stress. Zellars, Hochwarter [52] find in their research that nurses who are higher in neuroticism are supposed to have emotional or psychological exhaustion due to this reason they perform ineffectively to handle stress situations. Bolger [53] and McCrae [54] explained that a person who is neurotic, try to avoid self-blame, aspiring thinking which increase their stress level. Therefore, we purpose that neuroticism is positively related to job demands and health-impairing aspects so the possible hypothesis are;

H2a: *Neuroticism is positively related to (burnout/exhaustion) and negatively related to (vigor/engagement)*

H2b: *Neuroticism has positive impact on (burnout/exhaustion) and has negative impact on (vigor/engagement)*

H 2c: *Emotional stability is negatively related to (burnout/exhaustion) and positively related to (vigor/engagement)*

H 2d: *Emotional stability has negative impact on (burnout/exhaustion) and has positive impact on (vigor/engagement)*

Extraversion like neuroticism, through influencing the workplace discernment, inspire the work-place setting directly and indirectly therefore a person or individual who is sociable are generally willing to experience the psychological conditions positively and consider the work setting positive more than introverts [55]. Extraversion like neuroticism, through influencing the workplace discernment, inspire the work-place setting directly and indirectly therefore a person or individual who is sociable are generally willing to experience the psychological conditions positively and consider the work setting positive more than introverts [55].

Extraversion directly inspire the work-related wellbeing [50]. Furthermore Hart, Wearing [49] explained that through positive work-place perception, there is a positive pathway from extraversion to work-related wellbeing. John, Donahue

[56] explained that people who are more extravert tend to be enthusiastic and joyful because they try to involve themselves in several activities to lower down their nerve-wracking situations. [57] people who are highly extravert experience less burnout (i.e. exhaustion). According to the research on nurses by Zellars, Hochwarter [52], nurses who are higher in extraversion are supposed to achieve their goals or personal accomplishments in their job because of their social, joyful and energetic behavior, which give them chances to work with individuals who motivates their (nurses) achievements by providing support and feedback therefore we purpose that **extraversion is positively related to organizational commitment or work engagement** so the possible hypothesis are;

H3a: *Extraversion is negatively related to burnout/exhaustion and positively related to vigor/engagement*

H3b: *Extraversion has negative impact on burnout/exhaustion and has positive impact on vigor/engagement*

H3c: *Introversion is positively related to burnout/exhaustio**)** and negatively related to vigor/engagement*

H3d: *Introversion has positive relation with burnout/exhaustion and has negative impact on vigor/engagement*

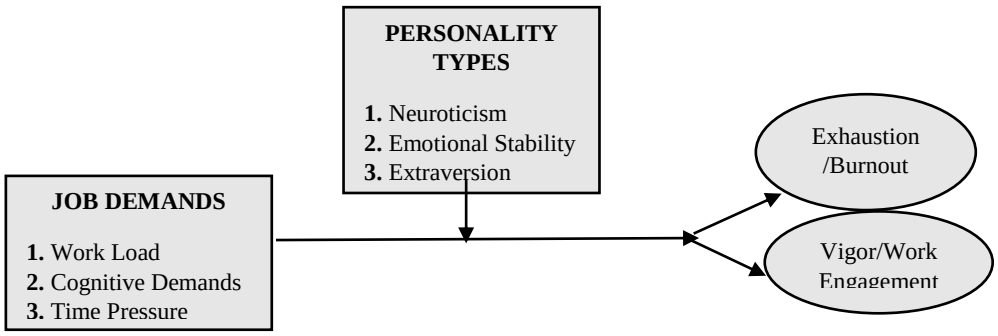
H 4a: *Job demands negatively impact burnout/exhaustion when personality types are placed as a moderator*

H4b: *Job demands have negative impact on burnout/exhaustion when personality types are placed as a moderator*

H4c: *Job demands are positively/negatively related to vigor/engagement when personality types are placed as a moderator*

H4d: *Job demands negatively impact vigor/engagement when personality types are placed as a moderato*

Theoretical Framework



METHODOLOGY

PARTICIPANT AND PROCEDURE

There are 100 participants (nurses) from five different hospitals working in Lahore were selected. 5.1% of the sample was male and 94.9% were female of the sample. The range of ages of participants is also broad, that is, 80.6% of the sample were between 20 to 30 age, 17.3% of the sample were between 30 to 40 age and 2.0% were between 40 to 50 age. Relevant qualification of participants (nurses) in the hospitals were, 14.3% of the sample have done matric or intermediate, 48.0% of the sample have done graduation, 29.0 % of the sample have done masters and 8.2% have done MS or MPhil.

STUDY AND DATA TYPE

It was a cross sectional study which was non-contrived in nature. Primary survey i.e. questionnaire was used to collect the data.

SOTWARE USED

IBM SPSS 20 was used for test analysis and End Note was used for reference management for this study.

TEST ANALYSIS

Descriptive statistics, correlation and regression analysis were used to interpret the data.

MEASURES

WorkLoad was measured by Hoonakker, Carayon [58] ($\alpha = 0.727$). According to Hoonakker, Carayon [58] for health care center, its most valid and reliable questionnaire to conduct research. In past, this questionnaire was introduced and used by Hart and Staveland [59]. Later after 20 years, [60] NASA-TLX were used to provide resources to new users.

Time Pressure was measured by Rothblum, Solomon [61] ($\alpha = 0.764$). on Five Likert scale and were also and used by many researchers in their study [62]. It includes 32 items for example item eighteen was; "*Due to a lot of work, I Say yes when I later wish I had said no*". Point 1 indicates "Strongly Agree" and point 5 indicated "Strongly Disagree".

Cognitive Ability was measured by Wells and Cartwright-Hatton [63] "*The Meta-Cognition Questionnaire 30 (MCQ-30)"* ($\alpha = 0.829$). Several studies used these [64, 65]. It includes 30 items for example item one was "*I do not trust my memory*". It's a Four POINT Likert Scale Questionnaire point 1 indicates "I Do Not Agree" and point 4 indicates "Very Much Agree".

Personality neuroticism, emotional stability, extraversion and introversion a questionnaire "*Big Five Inventory (BFI)"* developed by John and Srivastava [66] and used by many

researchers [67-69]. It consist of five personality dimensions namely; Extraversion, Agreeableness, Conscientiousness, Neuroticism, Openness to experience having 44 questions. For research, item related to neuroticism for example item four was " *I see myself as someone who is depressed and blue*" ($\alpha = 0.842$)., were chosen including reverse score items for example item 9 was "*I see myself as someone who can handle the stress well*" ($\alpha = 0.643$). Items related to extraversion for example item 1 was "*I see myself as someone who is talkative*" ($\alpha = 0.680$)., were chosen including reverse scored items for example item 6 was "*I see myself as someone who is reserved*" ($\alpha = 0.658$).. These items were chosen on Five point Likert Scale. Point 1 indicates "Disagree Strongly" and point 5 indicates "Agree Strongly".

Exhaustion/Burnout was measured by Kristensen, Borritz [70] "*The Copenhagen Burnout inventory*" ($\alpha = 0.854$) also used by many researchers in their researches [71, 72]. According to Kristensen, Borritz [70] there is unclear relationship (i.e. methodological and conceptual problems) between MBI (Maslach Burnout Inventory) and burnout but in CBI (The Copenhagen Burnout Inventory) include core elements of burnout i.e. fatigue and exhaustion. The Copenhagen Burnout inventory includes 16 items for example question number one was "*I often feel tired*". Its Five point Likert Scale questionnaire, Point 1 indicates "Always Or To A Very High Degree" and point 5 indicates "Never/ Almost Never Or To A Very Low Degree".

Vigor/Work Engagement was measure by Schaufeli, Salanova [8] "*UWES Utrecht Work Engagement Scale*" ($\alpha = 0.517$). It comprises of two versions i.e. student version and employee version consist of three factors namely; Vigor, Dedication and Absorption and containing total 24 items. For current research items related to vigor of employee version were used it contains 6 items for example item 1 was "When I get up in the morning, I feel like going to work" also used by many researchers in their studies as by [8, 73-76]. Its on Seven Likert Scale point 0 to point 6. Point 1 indicates "Never" and point 6 indicates "Always (Every Day)".

Table 1.0

Mean, standard deviation and Pearson Correlation

Variable	Mean	Sd	Work Load	Time Pressure	Cognitive Ability	Neuroticism	Emotional Stability	Extraversion	Introversion	Vigor/Work Engagement	Burnout/ Exhaustion
Workload	2.12	0.62	**0.727**								
Time pressure	2.56	0.44	0.500**	**0.764**							
Cognitive ability	2.22	0.42	-0.191	-0.393**	**0.829**						
Neuroticism	2.9	0.48	-0.334**	-0.146	-0.087	**0.842**					
Emotional stability	2.74	0.36	0.381**	0.261**	-0.031	-0.574**	**0.643**				
Extraversion	2.97	0.43	0.269**	0.107	0.318**	-0.511**	0.452**	**0.680**			
Introversion	2.50	0.40	-0.184	-0.150	-0.178	0.598**	-0.396**	-0.619**	**0.658**		
Vigor	3.94	0.79	-0.165	-0.137	0.260**	-0.332**	-0.025	0.292**	-0.497**	**0.517**	
Burnout	2.9	0.60	0.307**	0.484**	-0.407**	-0.477**	0.348**	0.175	-0.379**	0.210*	**0.854**

*p<0.05, r=0.10 small effect, r=0.30 medium effect, r=0.50 large effect

STATISTICAL ANALYSIS

In present research mean, standard deviation was computed for variables then Pearsons Correlation, regression analysis and interaction was also performed

As shown in the Table 1.0 there is a significantly negative correlation between ***workload*** and neuroticism, (r= -0.33, p<.05) but there is significantly positive correlation (with medium effect) between workload and emotional stability, (r= 0.38, p<.05). Workload has significantly positive relationship with extraversion, (r= 0.26, p<.05) and with exhaustion (r= 0.30, p<.05).

Time pressure has significantly positive correlation with emotional stability (r= 0.26, p<.05) and with exhaustion (r= 0.48, p<.05). ***Cognitive Ability*** has significantly positive correlation with extraversion (r= 0.31, p<.05) and with vigor (r= 0.26, p<.05). There is significantly negative correlation between cognitive ability and exhaustion (r= -0.40, p<.05).

Extraversion has significant positive relation with vigor (r= 0.29, p<.05). **Introversion** has significantly negative correlation with vigor (r= -0.49, p<.05) and with exhaustion (r= -0.37, p<.05). **Neuroticism** has significantly negative correlation with vigor (r= -0.33, p<.05) and with exhaustion (r= -0.47, p<.05). ***Emotional Stability*** but has significant positive relation with exhaustion (r= 0.34, p<.05).

RESULTS

Table 1.1 outlines the linear regression models. In **regression model 1**, regression equation was found (F (3, 94) = 2.790, P<.05) with an adjusted R^2 of 0.052. Participants predicted that workload is not a predictor of vigor and also are not significant (β= -0.16, P=0.2).

Table 1.1

Regression *Model 1 (Dependent Variable Vigor) and Model 2 (dependent variable exhaustion)*

	Regression Model 1						**Regression Model 2**					
	Adjusted R^2	Mean Squares	F	df	β	Sig.	Adjusted R^2	Mean Squares	F	df	β	Sig.
	0.052	1.69	2.79	3		0.000	0.274	3.451	13.18	3		0.000
workload					-0.131	0.253					0.089	0.377
Time pressure					0.025	0.839					0.339	0.002
cognitive ability					0.244	0.25					-0.25	0.008

a. Dependent variable Vigor (model 1)

b. Dependent variable Exhaustion (model 2)

c. Predictors: (constant), Workload, Time Pressure, Cognitive Ability

Time pressure and cognitive ability are the predictors of vigor but are not significant (β= 0.025, P=0.83) and (β=0.024, P= 0.25) respectively. In **regression model 2**, regression equation was found (F (3, 94) = 13.18, P<.05) with an adjusted R^2 of 0.274. Participants predicted that workload is a predictor of exhaustion, but is not significant (β=0.089, P= 0.377) and Time pressure is a significant predictor of exhaustion (β=0.33, P<.05) but cognitive ability is significantly not a predictor of exhaustion (β= -0.257, P<.05). Table 1.2 outline the moderating effect of neuroticism on job demands. In model 1, the interaction term was found (F (3, 94) = 6.315, P<.05), with adjusted R^2=0.142. Neuroticism significantly is not moderating the relation between workload and vigor (β= -0.22, P<.05) and between time pressure and vigor (β= -0.260, P<.05). Neuroticism moderates the relationship between cognitive ability and vigor (β= 0.057, P=.555) but not significantly. In model 2, interaction equation was found (F (3, 94) = 22.36, P<.05), with adjusted R^2=0.398. Neuroticism is moderating the relation between workload and exhaustion (β= 0.005, P=.955) and relation of time pressure with exhaustion, but not significantly (β= -0.135, P=.142). Neuroticism, significantly is not moderating the relation of cognitive ability with exhaustion (β= -0.656, P<.05).

Table 1.2

Interaction *(Interaction effect of Neuroticism with Job Demands)*

	Interaction Model 1						**Interaction Model 2**					
	Adjusted R^2	**Mean Squares**	**F**	**df**	**β**	**Sig.**	**Adjusted R^2**	**Mean Squares**	**F**	**df**	**β**	**Sig.**
	0.142	3.487	6.351	3	0.000	0.000	0.398	4.855	22.37	3		0.000
workload					-.223	0.040					0.005	0.955
cognitive ability					0.057	0.555					-0.656	0.000
Time pressure					-0.26	0.019					0.135	0.142

a. Dependent Variable Vigor (model 1)

b. Dependent Variable Exhaustion (model 2)

c. Predictors: Workload and Neuroticism, Cognitive ability and Neuroticism, Time pressure and Neuroticism

Table 1.3 outlines the moderating effect of emotional stability (opposite of neuroticism) with job demands. In model 3 interaction item was found (F (3, 94) = 2.463, P<.05), with adjusted R^2=0.043. Emotional stability is not moderating the relation of workload with vigor (β= -0.209, P=.151). Emotional stability significantly moderating the relation of cognitive ability with vigor (β= 0.212, P<.05). Emotional stability is moderating the relation of time pressure with exhaustion, but not significant (β= 0.008, P=.956).

Table 1.3

Interaction *(Interaction effect of emotional stability with Job Demands)*

	Interaction Model 3						Interaction Model 4					
	Adjusted R^2	Mean Squares	F	df	β	Sig.	Adjusted R^2	Mean Squares	F	df	β	Sig.
	0.043	1.508	2.463	3		0.000	0.300	3.749	14.85	3		0.000
work load					-0.209	0.151					-0.006	0.960
cognitive ability					0.212	0.037					-0.221	0.012
Time pressure					0.008	0.956					0.552	0.000

a. Dependent Variable Vigor (model 1)

b. Dependent Variable Exhaustion (model 2)

c. Predictors: Work load and Neuroticism, Cognitive ability and Neuroticism, Time pressure and Neuroticism

In model 4, interaction equation was found (F (3, 94) = 14.85, P<.001), with adjusted R^2=0.300. There is no moderating effect of emotional stability between relationship of workload with exhaustion (β= -0.006, P=.960). There is significantly no moderating effect of emotional stability between cognitive ability and exhaustion (β= -0.221, P<.05). Emotional stability significantly moderates the relation between time pressure and exhaustion (β= 0.552, P<.001).

Table 1.4 outlines the moderating effect of extraversion with job demands. In model 5 interaction equation was found (F (3, 94) = 5.101, P<.003), with adjusted R^2=0.113. Extraversion is not moderating the relation between workload and vigor (β= -0.247, P=.076). Extraversion is moderating the relation between cognitive ability and vigor (β= 0.357, P<.05). Extraversion is moderating the relation between time pressure and exhaustion (β= 0.165, P=.233), but not significant.

. **Table 1.4**

Interaction *(Interaction effect of Extraversion with Job Demands)*

	Interaction Model 5						Interaction Model 6					
	Adjusted R^2	Mean Squares	F	df	β	Sig.	Adjusted R^2	Mean Squares	F	df	β	Sig.
	0.113	2.96	5.10	3		0.000	0.019	3.693	16.14	3		0.000
Workload					-0.247	0.076					0.054	0.657
cognitive ability					0.357	0.001					-0.356	0.000
Time pressure					0.165	0.233					0.519	0.000

a. Dependent Variable Vigor (model 1)

b. Dependent Variable Exhaustion (model 2)

c. Predictors: Workload and Neuroticism, Cognitive ability and Neuroticism, Time pressure and Neuroticism

In model 6, Relevant interaction equation was (F (3, 94) = 16.14, P<.003), with adjusted R^2=0.319. Extraversion is moderating the relation between workload and exhaustion, but not significantly (β= 0.054, P=.657). Extraversion is significantly not moderating the relation between cognitive ability and exhaustion (β= -.0356, P<.05) but significantly moderating relation between time pressure and exhaustion (β= 0.519, P<.05).

Table 1.5 outlines the interaction effect of introversion on job demands. In model 7, Relevant interaction equation is (F (3, 94) = 11.780, P<.05), with adjusted R^2=0.25. There is no moderating effect of introversion between workload and vigor (β= -0.195, P=.078) and between cognitive ability and vigor (β= -0.064, P=.471). There is significantly no moderating effect of introversion between time pressure and vigor (β= -0.369, P<.05). In model 8, relevant interaction equation is (F (3, 94) = 17.06, P<.05), with adjusted R^2=0.332. There is moderating effect of introversion between workload and exhaustion (β= -0.039, P=.706) and between time pressure and exhaustion (β= 0.137, P=.192) but not significantly. There is significantly no moderation of introversion between cognitive ability and exhaustion (β= -0.594, P<.05).

Table 1.5

Interaction *(Interaction effect of Introversion with Job Demands)*

	Interaction Model 7						Interaction Model 8					
	Adjusted R^2	Mean Squares	F	df	β	Sig.	Adjusted R^2	Mean Squares	F	df	β	Sig.
	0.250	5.652	11.78	3		0.000	0.332	4.110	17.07	3		0.000
work load					-0.195	0.078					0.039	0.706
cognitive ability					-0.064	0.471					-0.594	0.000
Time pressure					-0.369	0.001					0.137	0.192

a. Dependent Variable Vigor (model 1)

b. Dependent Variable Exhaustion (model 2)

c. Predictors: Work load and Neuroticism, Cognitive ability and Neuroticism, Time pressure and Neuroticism

DISCUSSION

The purpose of the study was to determine the role of personal factors in defining job hindrances and job challenges in job demand and resources model that is some job demands become hindrances which lead to exhaustion and some become challenges which leads to vigor. Job demands for study purpose includes work load, time pressure and cognitive ability.

In present study a significant positive correlation between extraversion and vigor and a significant negative correlation between introversion and vigor appeared [77] but significant positive correlation between extraversion and burnout and between introversion and burnout (i.e. exhaustion) did not appear on the other hand significant negative correlation between neuroticism and vigor appeared but significant positive correlation with burnout did not appear as predicted [77]. No significant correlation between emotional stability and vigor appeared but surprisingly significant positive correlation between emotional stability and exhaustion appeared which was not predicted (see Table 1.0).

Some job demands are appeared to be positively related to vigor and negative to exhaustion that is cognitive ability significantly positively related and predictor of vigor and significantly negatively related to exhaustion but is not a predictor of exhaustion (Table 1.1) [10, 39]. Significant positive or negative relation between work load and vigor did not appear, significantly negative relation with exhaustion appeared but work load as a predictor of exhaustion, did not appeared on the other hand some job demands are negatively related to vigor and positively related to exhaustion that is significantly positive relation between time pressure and exhaustion appeared. Moreover, time pressure appeared to be a predictor of exhaustion (Table 1.1).

Moderating effect of personality appeared in the present study that is significantly positive impact of extravert appeared between the relationship of cognitive ability and vigor and significant negative relation between cognitive ability and exhaustion appeared due to impact of extraversion and introversion (Table 1.4 and 1.5) [55]. Due to moderating effect of neuroticism significantly negative relation between cognitive ability and exhaustion appeared but significant relation with vigor did not appeared but due to moderating effect of emotional stability significant positive relation between cognitive ability and vigor as well as significant negative relation between cognitive ability and exhaustion appeared (Table 1.2 and Table 1.3)[55].

Cognitive ability appeared to have positively related to vigor and negatively related to exhaustion which means cognitive ability is job challenging in the present study [7, 10, 26].

On placing neuroticism as a moderator, a significant negative relation between time pressure and vigor but non-significant relation between time pressure and exhaustion appeared (Table 1.2). Opposite result appeared on placing emotional stability as moderator that is significantly positive relation between time pressure and exhaustion but non-significant relation between time pressure and vigor appeared (Table 1.3). A positive and significant relation of time pressure with exhaustion but no significant relation with vigor appeared due to moderating effect of extraversion (Table 1.4) [55]. Opposite results appeared on placing introversion as a moderator between time pressure and vigor and between time pressure and exhaustion that is significant negative relation with vigor but no significant relation with exhaustion appeared (Table 1.5), unexpected results related to time pressure appeared, that is time pressure might be consider as job hindering which leads to exhaustion as moderating of neuroticism and extraversion appeared between time pressure and exhaustion. Due to moderating effect of neuroticism, significant positive relation between work load and vigor and non-significant relation between work load and exhaustion appeared (Table 1.2). No moderating effect of emotional stability did appear between work load and vigor and between work load ad exhaustion (Table 1.3) as well as no moderating effect of extraversion and introversion did appear between work load and vigor and between work load exhaustion (Table 1.4 and Table 1.5). Unexpected results related to work load appeared in the results.

LIMITATIONS

This study has some limitations; (1) The study was cross-sectional in nature therefore no conclusion can be made related to job demands' relation with vigor and exhaustion. (2) Job demands either Job challenges or job hindrances might predict exhaustion or work engagement [31] over time. (3) Results of current study may differ in other professions and sector. (4) Current study includes only two personality type and their opposites (I.e. extraversion vs. introversion and neuroticism vs emotional stability) from big five personality factors, to explore more accurate results remaining types might be helpful to find out further relations. (5) Current

study holds a small sample of 100, large sample might predict more relationships between personality traits and job demands. (6) Primary data was obtained on convenience based sampling. (7) Current study holds only three job demands (i.e. time pressure, cognitive ability, and work load).

CONCLUSION

The current study has shown that personality play important moderating role that is some job demands (i.e. cognitive ability) become challenging that leads to vigor and some job demands (i.e. time pressure) become hindering that leads to exhaustion.

REFERENCE

1. Karasek Jr, R.A., *Job demands, job decision latitude, and mental strain: Implications for job redesign.* Administrative science quarterly, 1979: p. 285-308.
2. Siegrist, J., *Adverse health effects of high-effort/low-reward conditions.* Journal of occupational health psychology, 1996. **1**(1): p. 27.
3. Bakker, A.B. and E. Demerouti, *The job demands-resources model: State of the art.* Journal of managerial psychology, 2007. **22**(3): p. 309-328.
4. Demerouti, E., et al., *The job demands-resources model of burnout.* Journal of Applied psychology, 2001. **86**(3): p. 499.
5. De Jonge, J. and C. Dormann, *Stressors, resources, and strain at work: a longitudinal test of the triple-match principle.* Journal of Applied psychology, 2006. **91**(6): p. 1359.
6. Bakker, A.B., E. Demerouti, and W.B. Schaufeli, *The crossover of burnout and work engagement among working couples.* Human Relations, 2005. **58**(5): p. 661-689.
7. Mauno, S., U. Kinnunen, and M. Ruokolainen, *Job demands and resources as antecedents of work engagement: A longitudinal study.* Journal of Vocational Behavior, 2007. **70**(1): p. 149-171.
8. Schaufeli, W.B., et al., *The measurement of engagement and burnout: A two sample confirmatory factor analytic approach.* Journal of Happiness studies, 2002. **3**(1): p. 71-92.
9. Xanthopoulou, D., et al., *The role of personal resources in the job demands-resources model.* International Journal of stress management, 2007. **14**(2): p. 121.
10. Van den Broeck, A., et al., *Not all job demands are equal: Differentiating job hindrances and job challenges in the Job Demands–Resources model.* European Journal of work and organizational psychology, 2010. **19**(6): p. 735-759.
11. Kassin, S.M., *Essentials of psychology*. 2003: Prentice Hall.
12. Podsakoff, N.P., J.A. LePine, and M.A. LePine, *Differential challenge stressor-hindrance stressor relationships with job attitudes, turnover intentions, turnover, and withdrawal behavior: a meta-analysis.* Journal of Applied psychology, 2007. **92**(2): p. 438.
13. Folkman, S. and R.S. Lazarus, *If it changes it must be a process: study of emotion and coping during three stages of a college examination.* Journal of personality and social psychology, 1985. **48**(1): p. 150.
14. Cavanaugh, M.A., et al., *An empirical examination of self-reported work stress among US managers.* Journal of Applied psychology, 2000. **85**(1): p. 65.
15. LePine, J.A., N.P. Podsakoff, and M.A. LePine, *A meta-analytic test of the challenge stressor–hindrance stressor framework: An explanation for inconsistent relationships among stressors and performance.* Academy of Management Journal, 2005. **48**(5): p. 764-775.
16. McCauley, C.D., et al., *Assessing the developmental components of managerial jobs.* Journal of Applied psychology, 1994. **79**(4): p. 544.
17. Boswell, W.R., J.B. Olson-Buchanan, and M.A. LePine, *Relations between stress and work outcomes: The role of felt challenge, job control, and psychological strain.* Journal of Vocational Behavior, 2004. **64**(1): p. 165-181.
18. Lysaght, R.J., et al., *Operator workload: Comprehensive review and evaluation of operator workload methodologies*. 1989, DTIC Document.
19. Weinger, M.B., S.B. Reddy, and J.M. Slagle, *Multiple measures of anesthesia workload during teaching and nonteaching cases.* Anesthesia & Analgesia, 2004. **98**(5): p. 1419-1425.
20. Hunter, J.E., *Cognitive ability, cognitive aptitudes, job knowledge, and job performance.* Journal of Vocational Behavior, 1986. **29**(3): p. 340-362.
21. Kanfer, R. and P.L. Ackerman, *Motivation and cognitive abilities: An integrative/aptitude-treatment interaction approach to skill acquisition.* Journal of Applied psychology, 1989. **74**(4): p. 657.
22. Ree, M.J. and J.A. Earles, *Predicting training success: Not much more than g.* Personnel psychology, 1991. **44**(2): p. 321-332.
23. Tews, M.J., K. Stafford, and J.B. Tracey, *What matters most? The perceived importance of ability and personality for hiring decisions.* Cornell Hospitality Quarterly, 2011. **52**(2): p. 94-101.
24. Selye, H., *The stress of life.* 1956.
25. LePine, J.A., M.A. LePine, and C.L. Jackson, *Challenge and hindrance stress: relationships with exhaustion, motivation to learn, and learning performance.* Journal of Applied psychology, 2004. **89**(5): p. 883.
26. Van den Broeck, A., et al., *The role of basic need satisfaction in explaining the relationships between job demands, job resources, burnout and engagement.* Work & Stress, 2008. **22**: p. 277-294.
27. Lazarus, R.S. and S. Folkman, *Stress.* Appraisal, and coping, 1984. **725**.
28. Schaufeli, W.B. and A.B. Bakker, *Job demands, job resources, and their relationship with burnout and engagement: A multi-sample study.* Journal of organizational Behavior, 2004. **25**(3): p. 293-315.
29. Bakker, A., E. Demerouti, and W. Schaufeli, *Dual processes at work in a call centre: An application of the job demands–resources model.* European Journal of work and organizational psychology, 2003. **12**(4): p. 393-417.
30. Demerouti, E., et al., *Burnout and engagement at work as a function of demands and control.* Scandinavian journal of work, environment & health, 2001: p. 279-286.

31. Hakanen, J.J., W.B. Schaufeli, and K. Ahola, *The Job Demands-Resources model: A three-year cross-lagged study of burnout, depression, commitment, and work engagement.* Work & Stress, 2008. **22**(3): p. 224-241.
32. Bakker, A.B., H. van Emmerik, and M.C. Euwema, *Crossover of burnout and engagement in work teams.* Work and occupations, 2006. **33**(4): p. 464-489.
33. Hallberg, U.E., G. Johansson, and W.B. Schaufeli, *Type A behavior and work situation: Associations with burnout and work engagement.* Scandinavian Journal of Psychology, 2007. **48**(2): p. 135-142.
34. Broeck, A., et al., *Capturing autonomy, competence, and relatedness at work: Construction and initial validation of the Work-related Basic Need Satisfaction scale.* Journal of Occupational and Organizational Psychology, 2010. **83**(4): p. 981-1002.
35. Inoue, A., et al., *Job demands, job resources, and work engagement of Japanese employees: a prospective cohort study.* International archives of occupational and environmental health, 2013. **86**(4): p. 441-449.
36. Teng, C.-I., et al., *Interactive effects of nurse-experienced time pressure and burnout on patient safety: a cross-sectional survey.* International Journal of Nursing Studies, 2010. **47**(11): p. 1442-1450.
37. Thompson, C., et al., *The effects of time pressure and experience on nurses' risk assessment decisions: a signal detection analysis.* Nursing research, 2008. **57**(5): p. 302-311.
38. Roe, R.A. and F.R. Zijlstra, *Work pressure. Results of a conceptual and empirical analysis.* Innovative theories, tools, and practices in work and organizational psychology, 2000: p. 29-46.
39. Crawford, E.R., J.A. LePine, and B.L. Rich, *Linking job demands and resources to employee engagement and burnout: a theoretical extension and meta-analytic test.* Journal of Applied psychology, 2010. **95**(5): p. 834.
40. Cooper, C.L., *Introduction: a discussion about the role of negative affectivity in job stress research.* Journal of organizational Behavior, 2000. **21**(1): p. 77-77.
41. Judge, T.A., A. Erez, and C.J. Thoresen, *Why negative affectivity (and self-deception) should be included in job stress research: Bathing the baby with the bath water.* Journal of organizational Behavior, 2000. **21**(1): p. 101-111.
42. Payne, R.L., *Comments on" Why negative affectivity should not be controlled in job stress research: Don't throw out the baby with the bath water".* 2000.
43. Spector, P.E., et al., *Why negative affectivity should not be controlled in job stress research: Don't throw out the baby with the bath water.* Journal of organizational Behavior, 2000. **21**(1): p. 79-95.
44. Wright, T.A. and B.M. Staw, *Affect and favorable work outcomes: two longitudinal tests of the happy–productive worker thesis.* Journal of organizational Behavior, 1999. **20**(1): p. 1-23.
45. Watson, D., J.P. David, and J. Suls, *Personality, affectivity, and coping.* Coping: The psychology of what works, 1999: p. 119-140.
46. Schilling, N.B.E.A., *Personality and the Problems oí Everyday Life: The Role of Neuroticlsm in Exposure and Reactivity to Daily Stressors.* Journal of personality, 1991. **59**(3).
47. Costa, P.T. and R.R. McCrae, *Influence of extraversion and neuroticism on subjective well-being: happy and unhappy people.* Journal of personality and social psychology, 1980. **38**(4): p. 668.
48. Costa, P.T. and R.R. McCrae, *Four ways five factors are basic.* Personality and Individual Differences, 1992. **13**(6): p. 653-665.
49. Hart, P.M., A.J. Wearing, and B. Headey, *Police stress and well-being: Integrating personality, coping and daily work experiences.* Journal of Occupational and Organizational Psychology, 1995. **68**(2): p. 133-156.
50. Judge, T.A., D. Heller, and M.K. Mount, *Five-factor model of personality and job satisfaction: a meta-analysis.* Journal of Applied psychology, 2002. **87**(3): p. 530.
51. Watson, D. and L.A. Clark, *Negative affectivity: the disposition to experience aversive emotional states.* Psychological bulletin, 1984. **96**(3): p. 465.
52. Zellars, K.L., et al., *Experiencing job burnout: The roles of positive and negative traits and states.* Journal of Applied Social Psychology, 2004. **34**(5): p. 887-911.
53. Bolger, N., *Coping as a personality process: a prospective study.* Journal of personality and social psychology, 1990. **59**(3): p. 525.
54. McCrae, R.R. and P.T. Costa, *Personality, coping, and coping effectiveness in an adult sample.* Journal of personality, 1986. **54**(2): p. 385-404.
55. Bakker, A.B., et al., *The role of personality in the job demands-resources model: A study of Australian academic staff.* Career Development International, 2010. **15**(7): p. 622-636.
56. John, O.P., E. Donahue, and R. Kentle, *'The ''Big Five.* Factor Taxonomy: Dimensions of Personality in the Natural Language and in Questionnaires.''In Handbook of Personality: Theory and Research, ed. Lawrence A. Pervin and Oliver P. John, 1990: p. 66-100.
57. Iverson, R.D., M. Olekalns, and P.J. Erwin, *Affectivity, organizational stressors, and absenteeism: A causal model of burnout and its consequences.* Journal of Vocational Behavior, 1998. **52**(1): p. 1-23.
58. Hoonakker, P., et al., *Measuring workload of ICU nurses with a questionnaire survey: the NASA task load index (TLX).* IIE transactions on healthcare systems engineering, 2011. **1**(2): p. 131-143.
59. Hart, S.G. and L.E. Staveland, *Development of NASA-TLX (Task Load Index): Results of empirical and theoretical research.* Advances in Psychology, 1988. **52**: p. 139-183.
60. Hart, S.G. *NASA-task load index (NASA-TLX); 20 years later*. in *Proceedings of the human factors and ergonomics society annual meeting*. 2006. Sage Publications.
61. Rothblum, E.D., L.J. Solomon, and J. Murakami, *Affective, cognitive, and behavioral differences between high and low procrastinators.* Journal of Counseling Psychology, 1986. **33**(4): p. 387.

62. LIN, L.-H. and W. CHEN, *A Preliminary Study on Time Pressure and Procrastination in Undergraduate Industrial Design Students.*
63. Wells, A. and S. Cartwright-Hatton, *A short form of the metacognitions questionnaire: properties of the MCQ-30.* Behaviour research and therapy, 2004. **42**(4): p. 385-396.
64. Spada, M.M., C. Mohiyeddini, and A. Wells, *Measuring metacognitions associated with emotional distress: Factor structure and predictive validity of the metacognitions questionnaire 30.* Personality and Individual Differences, 2008. **45**(3): p. 238-242.
65. Yılmaz, A.E., T. Gençöz, and A. Wells, *Psychometric characteristics of the Penn State Worry Questionnaire and Metacognitions Questionnaire-30 and metacognitive predictors of worry and obsessive–compulsive symptoms in a Turkish sample.* Clinical psychology & psychotherapy, 2008. **15**(6): p. 424-439.
66. John, O.P. and S. Srivastava, *The Big Five trait taxonomy: History, measurement, and theoretical perspectives.* Handbook of personality: Theory and research, 1999. **2**(1999): p. 102-138.
67. John, O.P., E.M. Donahue, and R.L. Kentle, *The big five inventory—versions 4a and 54*. 1991, Berkeley, CA: University of California, Berkeley, Institute of Personality and Social Research.
68. Benet-Martínez, V. and O.P. John, *Los Cinco Grandes across cultures and ethnic groups: Multitrait-multimethod analyses of the Big Five in Spanish and English.* Journal of personality and social psychology, 1998. **75**(3): p. 729.
69. Facet, B.F.D., *BIG FIVE INVENTORY (BFI).* differences. **54**: p. 4-45.
70. Kristensen, T.S., et al., *The Copenhagen Burnout Inventory: A new tool for the assessment of burnout.* Work & Stress, 2005. **19**(3): p. 192-207.
71. Milfont, T.L., et al., *Burnout and wellbeing: testing the Copenhagen burnout inventory in New Zealand teachers.* Social Indicators Research, 2008. **89**(1): p. 169-177.
72. Yeh, W.-Y., et al., *Psychometric properties of the Chinese version of Copenhagen burnout inventory among employees in two companies in Taiwan*. International journal of behavioral medicine, 2007. **14**(3): p. 126-133.
73. Gross, R. and B. Holland, *Corporate social responsibility and employee engagement: Making the connection.* White Paper, pg, 2011. **2**.
74. Simmons, A.M., *The relationship of work stressors and perceived organizational support on front line nurse manager work engagement*. 2013: City University of New York.
75. Correia, V.M., *Engagement e suporte social nos enfermeiros de cuidados de saúde primários.* 2012.
76. Schaufeli, W. and A. Bakker, *UWES–Utrecht work engagement scale: test manual.* Unpublished Manuscript: Department of Psychology, Utrecht University, 2003.
77. Kim, H.J., K.H. Shin, and N. Swanger, *Burnout and engagement: A comparative analysis using the Big Five personality dimensions.* International Journal of Hospitality Management, 2009. **28**(1): p. 96-104.