Investigation of the Effects of the Big Five Personality Model on Job Burnout
(Survey in an Iranian Hospital)

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Abstract—The purpose of this research is to study and understand the impacts of personality aspects on job burnout among the staff in a private hospital. In research analytical model, job burnout is dependent variable and independent variables include extraversion, neuroticism, agreeableness, openness to experience and conscientiousness. Present research is conducted in winter 2009 to spring 2010 in Tehran Atiyeh private hospital. To clarify the relationships among these constructs, structural equation modeling (SEM) was conducted to examine the model fit and five hypotheses. The data was collected through questionnaire in which the goodness of burnout measurement models and personality were studied by second-order confirmatory factorial analysis. The SEM results demonstrate that the extraversion, neuroticism, agreeableness and openness influence over job burnout.

Keywords: Personality, Job Burnout and Big Five Personality Model.

I. INTRODUCTION

Over two centuries have passed since industrial revolution and emergence of transformational technologies. Despite of the facilitations of technological advances, the stress which they impose on human resources in the organizations is among the most challenging disadvantages of them. It is obvious that among effective factors on productivity, human resource plays one of the most important roles. Therefore, continuous improvement in HR productivity and identifying effective factors on HR performance during recent century are the main concerns for management researchers. Job burnout, inter alia, is one of the main effective factors on HR productivity.

Burnout term was coined by Herbert Freudenerberger in 1974 to describe a special kind of job distress (Freudenerberger, 1974). He used the term to describe gradual emotional depletion and missing the motivation and commitment in young volunteer workers with high commitment who work in a clinic (Freudenerberger, 1974; Maslach, & Leiter, 2005). In 1976, Maslach mentioned to the phenomenon of indifference and disrespect of staff toward the organization’s clients after long studies on the problems of social services staff (Maslach, 1976). Job burnout is a negative emotional reaction to job, created through long attendance in high stress workplaces (Maslach, Schaufeli, & Leiter, 2001; Maslach, & Jackson, 1984) In other words, High disharmony between job nature and job holder's nature leads into burnout (Maslach, & Leiter, 2005).

The aspects of burnout include: (1) emotional exhaustion which means energy discharge and consumption of emotional resources. This dimension can be considered as the cornerstone of job burnout. (2) Depersonalization which separates workers from others and causes pessimism to colleagues, customers and organization. This dimension of the job burnout is prevalent among those staff who regularly communicate to other persons (such as teachers, students, customers, patients) to do their jobs. (3) Diminished personal accomplishment by which the person comes to a negative self-assessment (Maslach, & Leiter, 2005; Maslach, & Jackson, 1981; Pines, & Maslach, 1981).

To understand burnout concept and its ingredients better, one can describe opposite states. Job engagement can be considered as burnout opposite concept whose lack leads into burnout; energy, efficacy and job involvement can be
considered as opposite concepts for emotional exhaustion, depersonalization and diminished personal accomplishment respectively. In burnout conditions, energy converts to burnout, job involvement converts to pessimism and profitability to futility (Maslach, & Leiter, 1997).

Burnout is an important variable not only because that it is an index to show individuals' weak performance in workplace but also because that it influences on individual's attitudes, their physical and mental health and finally on their behavior (Cordes, & Dougherty, 1993; Maslach, Schaufeli, & Leiter, 2001; Lee, & Ashforth, 1996; Maslach, 2003; Maslach, & Goldberg, 1998).

II. LITERATURE REVIEW

Personality factors play an important role in burnout occurrence (Maslach, Schaufeli, & Leiter, 2001). Many researches indicate that variables like self-esteem, self-efficacy, locus of control, emotional stability, extraversion, conscientiousness, positive affectivity, negative affectivity, optimism, proactive personality (Bateman, & Crant, 1993) and hardworking impact highly on burnout (Alarcon, Eschleman, & Bowling, 2009). In many studies, role of neuroticism and negative affectivity is investigated (Burke, Brief, & George, 1993; Chen, & Spector, 1991; Decker, & Borgen, 1993; Elliott, Chartrand, & Harkins, 1994; Mughal, Walsh, & Wilding, 1996; Noor, 1997; Spector, & O’Connell, 1994) Some researches are focused on personality type A (Garsten, 1986; Kirmeyer, 1988) psychological hardiness (Rush, Schoel & Barnard, 1995) and positive affectivity or extraversion (Iverson, Olekalns, & Erwin, 1998; Kahn, Schneider, & Jenkins-Henkelman, & Moyle, 2006). In a meta-analysis, Sorensen and Eby (2006) studied effective personality factors on job burnout and considered locus of control variable as predictor variable (Sorensen, & Eby, 2006). In another meta-analysis, Thoresen et al (2003) considered positive and negative affectivity variables as job burnout predictor factors (Thoresen, Kaplan, Barsky, Warren, & deChermont, 2003). In other researches, such variables as core self-evaluation (CSE), and recently the Big Five Personality Model are highly considered.

Over the last two decades, the Big-Five factors have become the most prominent model for describing the structure of personality traits (Rammstedt et al., 2010). The Big Five framework is a hierarchical model of personality traits with five broad factors, which represent personality at the broadest level of abstraction (Gosling et al., 2003). It consisted of neuroticism, extraversion, openness (openness to experience), conscientiousness and agreeableness variables. Each bipolar factor (e.g., Extraversion vs. Introversion) summarizes several more specific Facets (e.g., Sociability), which, in turn, subsume a large number of even more specific traits (e.g., talkative, outgoing) (Gosling et al., 2003).

Extraversion refers to individuals’ tendency to conversableness, sociability and assertiveness. According to probes, it has a negative relationship with job burnout (Alarcon et al., 2009; Costa, & McCrae, 1992). Agreeableness refers to individuals’ tendency to rely on others and concern them. It has a negative relationship with job burnout (Alarcon et al., 2009; Costa, & McCrae, 1992; Bowling et al., 2004). Conscientiousness refers to individuals’ diligence, tendency toward planning and organizing, work ethic, self-regulation and assiduousness. It has a negative relationship with job burnout (Alarcon et al., 2009; Costa, & McCrae, 1992). Neuroticism refers to individuals’ capability to endure such feelings as fear, sin and failure. It has a positive relationship with job burnout (Alarcon et al., 2009; Costa, & McCrae, 1992; Bono, & Judge, 2003). Finally, Openness refers to individuals’ propensity to various experiences and ideas. In previous researches, a significant relationship has not been found between openness and job burnout (Alarcon et al., 2009; Costa, & McCrae, 1992; Piedmont, 1993).

In 2007, Kim et al conducted a research in hotel industry using the Big Five Personality model. The results show that extraversion has a negative relationship with job burnout; agreeableness has a negative relationship with pessimism; conscientiousness and agreeableness have a positive relationship with efficiency; and neuroticism has a positive relationship with job exhaustion and pessimism. The authors said that many findings of the research are homogeneous to previous researches; however, no relationship was determined between agreeableness/job performance and job burnout (Kim, 2007).

Alarcon et al (2009) mentioned that structured studies on the relationship between personality variables and burnout are rare (Alarcon, Eschleman, & Bowling, 2009). Since authors confirm the lack of researches in this area, present study addresses to investigate the effect of personality factors (big five personality model) on job burnout. So, the researchers formulate the research hypothesis as follow:

Extraversion has negative and significant impact on job burnout.
Agreeableness has negative and significant impact on job burnout.
Conscientiousness has negative and significant impact on job burnout.
Neuroticism has positive and significant impact on job burnout.
Openness to experience has negative and significant impact on job burnout.

Research conceptual framework is drawn by reviewing the literature and above mentioned hypothesis. Emotional exhaustion, diminished personal accomplishment and depersonalization are the aspects of job burnout and extraversion, agreeableness, conscientiousness, openness and neuroticism are the personality aspects in the Big Five Model. Figure 1 indicates research model.

III. METHODOLOGY

The purpose of present research is to determine relationship between the variables of the Big Five Personality Model (extraversion, neuroticism, agreeableness, openness and conscientiousness) and job burnout; so, a structural equation model (SEM) is proposed to analyze this relationship. In research analytical model, job burnout is dependent variable and independent variables include extraversion, neuroticism, agreeableness, openness to
experience and conscientiousness. Present research is conducted in winter 2010 to spring 2010 in Tehran Atiyeh private hospital.

A. Scale

There are some scales to measure job burnout of which the most famous ones includes MBI questionnaire. This questionnaire was developed by Maslach in 1980s and then was revised later (Halbesleben, Jonathon, & Buckley, 2004). A newer scale is Oldenburg job burnout inventory (OLBI) designed to mitigate MBI bias; however, its conceptual foundation is based on MBI. Overall, more evidences are needed to determine OLBI validity and it is not yet possible to replace MBI with OLBI (Halbesleben, Jonathon, & Buckley, 2004).

In this research, questionnaire is used to measure variables. It is a 66-item questionnaire with Likert’s 5-point range and respondents’ general (demographical) information. The first 22 items address to study job burnout and it is actually Maslach standard questionnaire (MBI) to measure job burnout. The items in the questionnaire measure three dimensions of job burnout including emotional exhaustion (9 items), diminished personal accomplishment (8 items) and depersonalization (5 items). In the second part, the 44-item questionnaire of Big Five Personality Standard Model (Costa, & McCrae, 1989) is provided which includes 8 items on extraversion, 9 items on agreeableness, 9 items on conscientiousness, 8 items on neuroticism and 10 items on openness. Cronbach’s alpha is utilized to determine the questionnaire’s reliability whose rates for three aspects of job burnout namely emotional exhaustion, diminished personal accomplishment and depersonalization are 81.2%, 80.5% and 71.1% respectively. For other five variables namely extraversion, agreeableness, neuroticism, openness and conscientiousness, these rates are 70.2%, 72.6%, 75.5%, 82.1% and 71.7% respectively which show high reliability of the questionnaire. To determine the validity of various variables in mentioned questionnaire, second-order confirmatory factor analysis was used for exogenous variables and second-order confirmatory factor analysis for endogenous variables.

B. Participants

Participants were 248 workers from the staff of the Tehran Atiyeh Hospital. Among distributed questionnaires, 14.4% and 84.7% of respondents were male and female respectively. Noteworthy, 0.9% of respondents did not determine their sex. In the meantime, 65.3% of respondents were married, 33.1% were single and 1.6% did not determine their marital status. In terms of education, 21.2% were under diploma, diploma and associate of arts, 70.3% were BA, 4.3% were MA and 4.2% did not determine their educational level.

IV. FINDINGS

A. Studying The Measurement Models Of Endogenous And Exogenous Variables

a) The findings of burnout second-order confirmatory factor analysis

As the results of standard estimation show (figure 2), there is a positive correlation (0.44) between burnout and its first aspect namely emotional exhaustion. It means that by one unit increase in emotional exhaustion, one can observe 0.44 units increase in job burnout and the percentage of job burnout explanation (R-Square) via emotional exhaustion would be (0.442) = 0.20. Regarding the second aspect, there is a positive correlation between burnout and depersonalization (0.65). It means that by one unit increase in depersonalization, one can observe 0.65 units increase in job burnout and the percentage of job burnout explanation via depersonalization would be (0.652) = 0.42. Finally, there is a positive correlation between burnout and its third aspect namely diminished personal accomplishment (0.98). It means that by one unit increase in diminished personal accomplishment, one can observe 0.98 units increase in job burnout and the percentage of job burnout explanation via diminished personal accomplishment would be (0.982) = 0.96.

The results of t-value models indicate that all parameters of the model are significant; noteworthy the t-value of emotional exhaustion, depersonalization and diminished personal accomplishment are 3.77, 5.02 and 4.81 respectively. Such significance is due to the fact that the significant t-value of all measurement models routes are >1.96 or <-1.96. Finally, fitness indices indicate proper goodness of job burnout measurement model.

\[
\frac{\chi^2}{df} = \frac{387.82}{209} = 1.85 < 3 \quad \text{Means good fit}
\]

RMSEA = 0.077 < 0.08 Means good

b) The findings of model of the second-order confirmatory factor analysis of the personality (the big five model)

In standard estimation, the correlation coefficients are 0.76 for extraversion, 0.94 for agreeableness, and 0.92 for conscientiousness, -0.69 for neuroticism and 0.66 for openness. Also, the result of t-value of the model is all significant. Noteworthy the t-value for extraversion, agreeableness, neuroticism, openness and conscientiousness are 7.40, 3.70, 8.64, -4.96 and 6.74 respectively. Finally, fitness indices indicate proper goodness of job burnout measurement model.

\[
\frac{\chi^2}{df} = \frac{1612.55}{1019} = 1.58 < 3 \quad \text{Means good fit}
\]

RMSEA = 0.049 < 0.08 Means good

It should be noted that RMSEA is 0.049 and less than 0.08 which shows proper goodness of the model. The
amount of Chi-Square is 1612.55 and freedom degree is 1019. So, the ratio of Chi-Square to freedom degree is 1.58 which is less than 3. Thus, it is concluded that obtained model has proper and sufficient goodness.

B. Evaluating The Results Of Structural Equation Model

The results of structural equation model show negative impact of extraversion on job burnout (-0.08), negative impact of agreeableness on job burnout (-0.15), positive impact of conscientiousness on job burnout (0.02), positive impact of neuroticism on job burnout (0.22) and negative impact of openness on job burnout (-0.11). Based on the findings of present research, it is obvious that third statistical hypothesis on the negative and significant impact by conscientiousness on job burnout of mentioned hospital staff is rejected. According to above findings, conscientiousness has a positive impact on job burnout. In the meantime, the results of t-value model indicate that all five casual paths of Big Five model have significant impact on job burnout because that their t-value are -2.05, -0.89, 0.13, 3.46 and -2.14 respectively. Based on the results of t-value model, it is obvious that more extraversion, leads to less job burnout. Such results are true on agreeableness and openness. It means that people with more agreeableness and openness experience less job burnout. More neuroticism, leads to more job burnout. However, the hypothesis of conscientiousness was not supported. The findings indicate that people with higher conscientiousness experience higher job burnout. Therefore, first, second, fourth and fifth hypothesis are supported. The results of fitness indices indicate proper goodness of structural model.

\[
\chi^2 = \frac{2718.81}{1019} = 2.66 < 3 \quad \text{Means good fit}
\]

\[
\text{RMSEA} = 0.057 < 0.08 \quad \text{Means good fit}
\]

It should be noted that RMSEA is 0.057 less than 0.08. So, it shows proper goodness of the model. The amount of Chi-Square is 2718.81 and freedom degree is 1019. So, the ratio of Chi-Square to freedom degree is 2.66 which is less than 3. Thus, it is concluded that obtained model has proper and sufficient goodness.

C. Evaluating The Status Of Research Variables

Finally, we evaluate the proper status of research variables by using one-sample t-test.

V. Conclusion

The aim of present study is to identify the relationship between the personality aspects of Big Five model and job burnout in the staff of a private Iranian hospital. The findings of the research include:

1) Extraversion has a negative and significant impact on job burnout.
2) Agreeableness has a negative and significant impact on job burnout.
3) Conscientiousness has a positive and significant impact on job burnout.
4) Neuroticism has a positive and significant impact on job burnout.
5) Openness has a negative and significant impact on job burnout.

The results of estimation model show negative impact of extraversion on job burnout (-0.08), negative impact of agreeableness on job burnout (-0.15), positive impact of neuroticism on job burnout (0.22) and negative impact of openness on job burnout (-0.11). Thus, the results on extraversion, agreeableness and neuroticism are in line with previous researches (Alarcon et al., 2009; Costa, & McCrae, 1992; Bowling et al., 2004; Bono, & Judge, 2003) but in terms of openness, it is in contradictory to previous researches (Alarcon et al., 2009; Costa, & McCrae, 1992; Piedmont, 1993).

On the other hand, the results of estimation model show the positive impact of conscientiousness on job burnout (0.02). Hence, third statistical assumption on the negative and significant impact by conscientiousness on job burnout of the mentioned hospital staff is rejected. It is concluded that more conscientiousness leads into more burnout; maybe because high conscientiousness do not allow a person to be indifferent toward his job, so he/she is more exposed to job stress and burnout. Therefore, the results indicate that conscientiousness has a positive impact on job burnout. This finding is in contradictory to previous researches (Alarcon et al., 2009; Costa, & McCrae, 1992).

Here, a question comes to mind: why in contradiction to previous major researches, conscientiousness has a positive correlation with job burnout? For more evaluation, some employees were interviewed and it was surprisingly concluded that in surveyed organization, conscientious people have not properly awarded despite of their more efforts. Maslach and Leiter (2005) identified two groups of factors which dominate the person before burnout. The first group is called situational predictors consist of six antecedents: (1) workload, (2) control, (3) award, (4) social interactions, (5) fairness and (6) values. The second group or individual antecedents include such factors as age, gender, marital status and experience. One can guess that unfair award distribution mitigates the relationship between conscientiousness and job burnout. Researchers can examine this assumption in future studies. So, it is concluded that extravert individuals are less suffer job burnout. Agreeable and open persons also experience less job burnout and neurotic and conscientious individuals have higher job burnout (Maslach, & Leiter, 2005).

Achieved validity and reliability for Maslch's model and Big Five show that this questionnaire is an appropriate tool to measure the extent of job burnout and personality traits among organizational members. The results of testing the assumptions also indicate significant relationship between Big Five Personality model and job burnout. In terms of impact extent, among personality variables, neuroticism has the highest impact (0.22) and conscientiousness has the lowest impact (0.02) on job burnout. By using these findings, managers can prevent the intensification of job burnout through being aware of their employees' personality traits.
As mentioned, the results of previous researches show that factors like workload, control, award, social interactions, fairness and values are correlated with job burnout. By enforcing happiness creating factors and job burnout mitigating factors, managers can control job burnout and prevent its serious consequences which hurt employees mentally and physically. In the meantime, interventional plans are useful in this regard. Used interventional plans in organizations to mitigate job burnout involve a wide range. Such plans can have individual and organizational orientation or a combination of both. One can, points out individual interventional plans such as job competency improvement, individual confronting skills enhancement, social support or relaxation exercises. There are various organizational interventional plans like reengineering, job control increase and involving staff in decision-making. Creating and enhancing job advising plans in organizations are among the most effective mechanisms to mitigate job burnout (Gorter et al., 2001).

It is obvious that the consequences of burnout are too costly for organization and it involves a wide scope composed of productivity mitigation, organizational commitment reduction, increase in staff's turnover and absenteeism, morale and job satisfaction reduction. Therefore, it is vital to endeavor seriously to control such phenomenon in organizations and to devise proper plans to mitigate their consequences.

REFERENCES


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Table 1. The One-Sample t-Test

Figure 1. The conceptual framework of this research

Figure 2. Measurement model of burnout
Figure 3. Measurement model of Big Five

Figure 4. The result of structural model