

Mediating Role of Perceived Control in the Impact of Personal Qualities on Job Stress among Hospital Staff

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Abstract

Background and Objectives: Studies of the relationship between personal qualities and job consequences usually find poor and inconsistent correlations; the reason may lie in the ignorance of some modifying factors mediating such relationship. The perceived control has attracted much attention as a candidate factor. This study aimed to examine the mediating role of perceived control in the impact of agreeableness and neuroticism on job stress in hospital staff.

Methods: A conceptual model was developed, in which neuroticism and agreeableness were considered as the independent variables, perceived control as the mediating variable, and job stress as the dependent variable. The research population included all staff of Imam Reza Hospital in Uromia (Iran); of whom, 248 were selected using random sampling. Using Morgan Table, the final sample size of 248 was achieved. Neuroticism and agreeableness were assessed through NEO's big-five-factor inventories. Perceived control was evaluated using Tetrick and Larocco questionnaire [41]. Job stress was measured by the scale developed by House and Rizzo. The conceptual model was fitted to the data using the structural equation modeling technique.

Findings: Agreeableness showed a significant positive correlation with job stress and a significant negative correlation with perceived control.

Conclusions: The findings suggest that causal impact of personality traits on job stress is mediated through the perceived control.

Keywords: Personal qualities, Agreeableness, Neuroticism, Job stress, Perceived control, Hospital staff, Health-care, Human resources management

Background and Objectives

One effective factor in people's performance in organizations is stress, endangering the health and hygiene of many individuals [1]; thus, in recent decades, stress and its effects on organizations have changed into a main discussion topic in organizational behavior [35]. Although humans reach their needs and ideals, their feelings may be affected by many environmental or organizational factors. In this way, job type is a stressor that can create chronic mental pressure [26]. Most professionals of hospitals get stressed in their jobs and undergo decrease of service levels. Communication and specific conditions of hospitals are the main stressors among the hospital

boards [18,20,22]. Consequences of stressors in the work place and costs of illnesses have attracted the managers' attention to these issues [30]. Since, the health system staff plays important role in the quality of care offered to patients, job stress is very important in the health section [28]. According to the National Institute of Occupational Safety & Health (NOSH), one faces stress when there is a mismatch between his/her job requirements and his/her vocational abilities or ideals [19]. Kendal et al. introduced stress as a natural and predictable experience in life or work trend. It refers to a set of general reactions towards unpredicted internal and external factors [24]

Amplitude of theoretical and practical literature shows the interaction of specific work places and personality qualities [38]. Bruckner and Landsbergis suggested that different job environments and job types can affect states and symptoms of neuroticism and self-esteem [5,29]. What matters among the staff board is their personal judgments on the ways

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of interaction with patients and confrontation with the stressors in nursing. Personality includes a set of features with relative stability in a person, differentiating him/her from others [12]. It also includes a number of features whose effects on the bodies and minds of people are not equal. Some personal features are closely correlated with the physical and mental health and welfare of people that affect their behaviors in the work places [8]. Thus the fact that these features affect the values, attitudes, feelings, and behaviors of a person seems to be reasonable [32]. One comprehensive theory in this regard is 5-factor theory of Costa and McCrae. They described personality in the continuum of 5 main factors [7]. This pattern seems a fundamental finding for identifying basic differences in the personalities of people [21]. Two factors of agreeableness and neuroticism have great importance in the studies of organizational behavior and job stress. Neuroticism refers to a person's tendency to experiencing anxiety, tension, seeking passion, hostility, depression, and low self-esteem; while, agreeableness is one's tendency to forgiveness, kindness, generosity, empathy, mankind love, and trust [40]. Researchers have found that neuroticism has a negative effect on stress perception [30]. In stressful conditions and environments, people with high neuroticism tend to show low performance. They experience more stressful events, and show more aggressive reactions to stressful events [39]. Ghasemzadeh et al. found a negative correlation between agreeableness and job stress [14]. Generally, some studies suggest a significant correlation between personal qualities and job consequences [2,9,35]. The correlation between these variables has been reported as weak and inconsistent [26]. One reason for this weak correlation can be the lack of attention to the role of mediating and modifying variables in the relationship between personal qualities and job consequences [3]. One variable attracting researchers is the concept of perceived control. Based on the studies, type and intensity of people's reaction to stresses do not have a direct correlation with stressors; rather they are correlated with the way of individuals' perception from the events and environmental control [10]. People's perception about potential stressful events depends on their personal qualities, life conditions, life experiences [20], perceived control [19], and the lack of nurses' control over the work place [6, 42, 23, 15]. As Smith, Kamin, Stein and Makadok suggest, multiple vocational demands from a person and limiting his/her decision-making domain are the main stressors at work [16]. Based on the famous Control-Demand

Theory of Karazak, jobs with high mental demands and low decision-making have high stress [14]. Perceived control refers to one's belief about the extent of his/her ability in affecting events or situations [24]. Nowadays, researchers prefer to use perceived control rather than real control [13]. Perceived control is a situational structure. Specifically, perceived control relates to one's perception from the work place rather than a personal quality such as control resource [36]. About the studies on the relationship between job stress and personal quality in hospital, works of Farhadi (2014), Ghasemzadeh (2013), Gholamnejad (2009), Hashemi (2008), Samari (2004), Hassani (2013), Shahsavarani (2011), and Ja'fari (2013) can be mentioned. Based on the knowledge of the author, there is no study on the effect of neuroticism and agreeableness on job stress with considering the mediating role of perceived control, especially in hospitals. Thus, more studies are needed in this regard. This matters when the personal features of hospital staff and identifying its relation with job stress are considered. Regarding the inevitability of some stressors in the medical system, and the necessity of preventing from their mental effect and stress behavior, using precautions such as perceived control for reducing stress is one of the managers' duties in the healthcare system [1]. Therefore, this study aims to examine the mediating role of perceived control in the relationship between personality traits (neuroticism and agreeableness) and job stress of hospital staff.

Conceptual model

Conceptual model of the relationship between personality traits (neuroticism and agreeableness) and job stress of hospital staff together with the mediating role of perceived control is shown in Fig.1.

Methods

This study is correlation study. It is based on structural equation modeling using LISREL 8.5 software. In analytic-research model, neuroticism and agreeableness are independent variables, perceived control is mediating variable, and job stress is dependent variable. Statistical population included all staff of Imam-Reza Hospital (Uromieh, Iran) such as nurses, general doctors, specialists, and administrative staff (n=700). Using Morgan's Table, the sample size of 248 was achieved. Using cluster random sampling, a sample from each part of the statistical population was selected. To gather data, the following four standard questionnaires were used:

Table 1 Descriptive statistics

Index	Perceived control	Neuroticism	Agreeableness	Job stress
Mean	3.11	1.60	3	3.16
SD	0/90	0/70	0/56	0/78

Job stress questionnaire: Job stress was measured using a 6-question scale prepared by House and Rizzo (1972) with 5-point Likert scale (1=quite disagree, 5=quite agree) (Breux et al., 2008).

Perceived control questionnaire: Perceived control was measured using Tetrick and Larocco questionnaire (Tetrick & Larocco, 1987). This scale included 6 questions with 5-point Likert scale (1=Not at all, 5=Very much).

Neuroticism and agreeableness questionnaire: Data of neuroticism and agreeableness were provided via NEO-PI-R test (with 60 questions) by Costa and McCrae and their 5-factor theory [11]. Garoosi (2001) reported the reliability of this measure with the Chronbach's Alpha of 0.56-0.87 for its main factors. He calculated the validity of this tool by factor analysis method. Thus, validity and consistency of this scale have been confirmed in previous studies [19]. This study uses Persian 60-question version of NEO-PI-R [11]. Agreeableness and neuroticism have 12 questions. In this test, for each statement of this questionnaire, there is a 5-rank scale with values of 0-4 (0 = much agreed, 4 = much disagreed).

Chronbach's Alpha was used to estimate the reliability coefficient and for calculating the internal consistency of elements in questionnaires. Chronbach's Alpha of agreeableness, neuroticism, perceived control, and job stress was achieved as 0.70, 0.70, 0.85, and 0.70, respectively. Thus, all questionnaires had high consistency. Exploratory factor analysis using principle components with Varimax rotation was utilized to examine validity of the questionnaire. KMO's

coefficient value was 0.74 and Chi-squared of Bartlett was 1189.5 that were significant at 0.01. Total variance was 62%. Structural equation modeling was employed to evaluate the relationship between latent variables in the conceptual model.

Results and Discussion

The findings of this study showed that 35% of the studied staff are male and 65% are female. Most of them (57%) have BA. 70% are below 40 and 20% are above 41 years, with the mean age of 35 years (10% did not answer the questions). Table 1 shows the mean and standard deviation of teachers' scores in each research variable.

Correlations between the research variables are shown in Table 2. Accordingly, correlation coefficients between the research variables are significant. Maximum significant correlation relates to perceived control and job stress, and minimum correlation relates to job stress and agreeableness. Analyzing the correlation between endogenous and exogenous variables showed that any increase in the scores of agreeableness and perceived control decreases job stress. Also any increase in the scores of neuroticism and any decrease of perceived control enhances the job stress of hospital staff. Finally, any increase in perceived control decreases the scores of job stress.

To identify the casual relations and the effects of agreeableness and neuroticism on their probable consequences, path analysis method was conducted by using structural equation modeling. The findings confirmed the results of path analysis in the struc-

Table 2 Correlation between research variables

Variable	Agreeableness	Neuroticism	Perceived control	Job stress
Agreeableness	1			
Neuroticism	-.35**	1		
Perceived control	.26**	.13*	1	
Job stress	-.12*	.24**	-.35**	1

* < 0.05, ** < 0.01

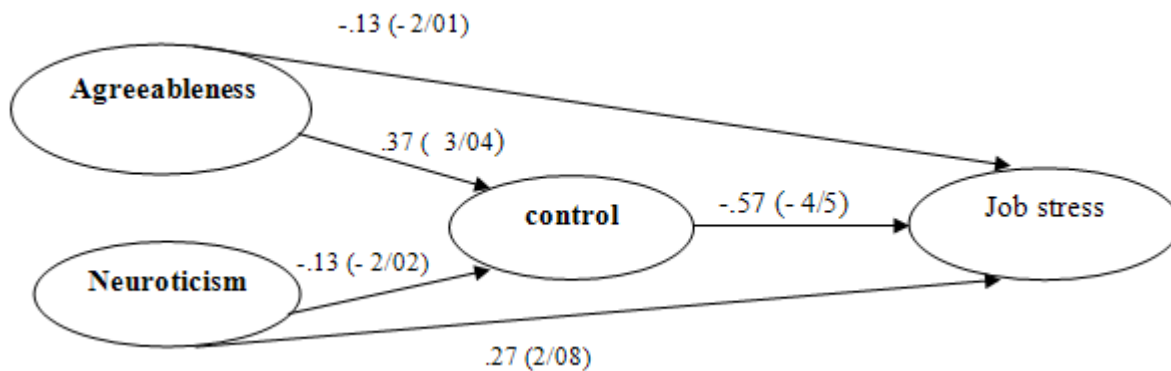


Figure 1 Conceptual model of the relationship between the perceived control, personal qualities, and job stress.

tural equation modeling for hypotheses, as seen in the software outputs from standard estimations (Fig. 2). The values of fitness indices indicate good fitness of the model. Maximum effect relates to the perceived control's effect on job stress with the coefficient of -0.57 . The next effect relates to the agreeableness' effect on perceived control with the coefficient of 0.37 . In Table 2, all effects of the model on job stress are significant. Hypotheses analysis was conducted at 0.05% confidence level, and all coefficients were significant. Table 3 shows the findings of testing the mediating role of perceived control using path analysis and structural equation modeling. Agreeableness feature has direct, positive and significant effect on perceived control with the coefficient of 0.37 . Also perceived control has direct, negative and significant effect on job stress with the coefficient of -0.57 . Thus, the mediating role of perceived control on the correlation of agreeableness and job stress is confirmed in the model. Confirming the mediating role of perceived

control, agreeableness has indirect, negative and significant effect on stress with the coefficient of -0.21 . Agreeableness has significant and casual effect on job stress with the coefficient of -0.13 . With the mediating role of perceived control, agreeableness has indirect and negative effect on job stress with the coefficient of -0.21 . This shows that with the mediating role of perceived control, the coefficient of casual effect changes from -0.13 to -0.21 . In other words, people with agreeableness feature in the conditions of perceived control show low job stress.

Neuroticism feature has direct, negative and significant effect on perceived control with the coefficient of -0.13 . Also perceived control has direct, negative and significant effect on job stress with the coefficient of -0.57 . Thus, the mediating role of perceived control on the correlation of neuroticism and job stress is confirmed in the model. Confirming the mediating role of perceived control, neuroticism has indirect, positive and significant effect on job stress with the coef-

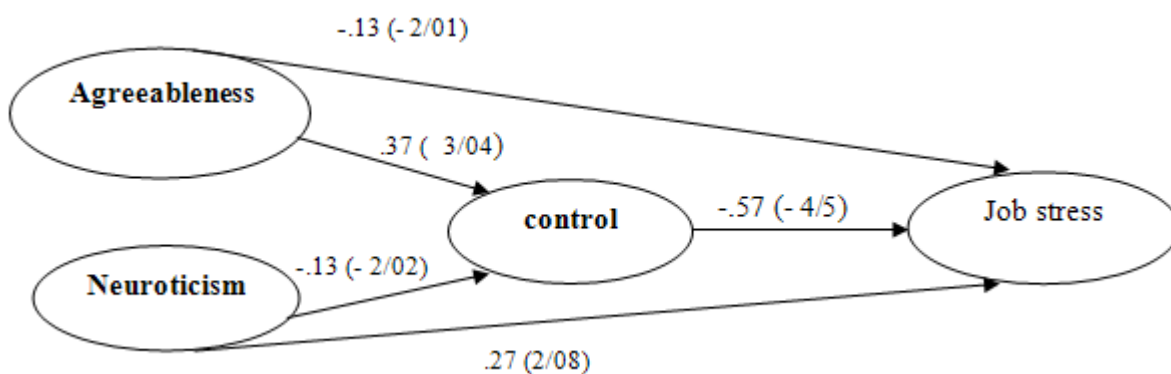


Figure 2 Correlations between the perceived control, personal qualities, and job stress.

efficient of 0.7. Neuroticism has significant effect on job stress with the coefficient of 0.27. With the mediating role of perceived control, neuroticism has indirect and positive effect on job stress with the coefficient of 0.7. This shows that with the mediating role of perceived control, the coefficient of casual effect changes from 0.27 to 0.7. In other words, people with neuroticism feature in the conditions of perceived control show low job stress.

Conclusions

In this study, we examined the mediating role of perceived control in the relationship between agreeableness and neuroticism and job stress. The results of Five-factor Personality Theory showed negative and significant correlation of agreeableness and job stress but positive and significant correlation of neuroticism and job stress. Since some effects of perceived control on job consequences are considered, some scholars have examined this issue in their studies. However, this paper is the first that investigates the mediating role of perceived control in the relationship between agreeableness and neuroticism and job stress. The mean of job stress in this study was reported to be above normal. This result consists with the findings of Farhadi (2014) [10], regarding the stressful nature of treatment field. The results of this study confirmed the mediating role of perceived control in the relationship between agreeableness and neuroticism and job stress. This finding is in agreement with the findings of Ghasemzadeh (2013) [13]. In a similar study, Hasani et al. reported negative correlation between conscience and job stress [19]. Samari and Lalifaz found a significant correlation between the types A and B personal features and job stress [37]. Thus, positive and significant correlation between neuroticism and job stress is consistent with the findings of Shahsavarani et al. (2013) [38], and Ja'fari et al (2013) [19]. Neuroticism and job stress are significantly correlated. People with high neuroticism scores bear much stress, in general, and if they do not have access to proper confrontation source with these issues, they experience higher personal distress. Also individuals with high neuroticism show more reactions to stressful conditions. In an explanation for this result, it must be mentioned that stress is reflection of all people including nurses to unpredictable events. Since all nurses do not understand an event equally, stressfulness of an event is different for them. People with neuroticism suffer from shyness, high tendency to experiencing anxiety, unreasonable thoughts, depression, low self-esteem, and low control over their behaviors. These features affect their communication with patients and companions. Also annoying environmental factors (e.g. over work, and

patients' death) results in behavioral disorders in these individuals such as being unpredictable and uncontrollable, increasing mistakes, and not giving good services along with stress. This finding agrees with the results of Hassani et al. (2013) [18].

According to the achieved results, offering proper educational programs for improving the health level of work in hospital, and creating a proper work place with high personal control can provide planning for confronting with probable issues in future. Desirable communication with the hospital staff and creating a good environment for doing professional tasks can reduce their job stress. Despite confirming the effects of personal features on job stress, the way of calculating the reliability of used tools for measuring personal features and job stress is important. Although five-factor model of personality is a big step in personality studies at workplace, it is only one approach, and its operational definitions can change from one culture to another. Thus, this study introduces perceived control as a mediating factor in this regard. However, future studies can consider other mediating factors in the relationship between neuroticism and agreeableness, and job stress.

Competing Interests

The authors declare no competing interests.

Acknowledgements

We thank the sincere cooperation of all officials and staff of Imam-Reza Hospital who paved the way for conducting this study.

References

1. Aghilinejad M, Attarchi MS, Golabadi M, Chehregosha H. Comparing stress level of woman nurses of different units of Iran university hospitals in autumn 2009. *Ann Mil Health Sci Res* 2010, 8(1):44-48.
2. Barrick MR, Mount MK. The big five personality dimensions and job performance: a meta-analysis. *Personnel Psychology* 1991, 44(1):1-26.
3. Blickle G, Meurs JA, Zettler I, Solga J, Noethen D, Kramer J, Ferris GR. Personality, political skill, and job performance. *Journal of Vocational Behavior* 2008, 72(3):377-87.
4. Breaux DM, Perrewé PL, Hall AT, Frink DD, Hochwarter WA. Time to try a little tenderness? The detrimental effects of accountability when coupled with abusive supervision. *J Leadership & organizational studi* 2008, 15(2):111-22.
5. Bruckner A. Personality factors, self-esteem and work place. *Journal of Applied Rehabilitation Counseling* 1998, 28:35.
6. Chang EM, Hancock KM, Johnson A, Daly J, Jackson D. Role stress in nurses: review of related factors and strategies for moving forward. *Nurs Health Sci* 2005, 7(1):57-65.
7. PT CJ, RR M. The five-factor model of personal-ity and

- its relevance to personality disorders. *J Pers Disord* 2001, 6(4):17.
8. Basic behavioral science research for mental health. A national investment. Emotion and motivation. National Advisory Mental Health Council. *Am Psychol* 1995, 50(10):838-45.
 9. Eje'ei J, Khodapanahi M, Fathi-Ashtiani A, Sabeti A, Ghana-bari S, PS SM. Interaction between personality and meta-motivational styles in job performance. *Journal of Behavioral Sciences* 2010, 3(4):301-10.
 10. Farhadi M, Hemmati Maslakpak M, KHalkhali H. Job stressors in critical care nurses. *Journal of Urmia Nursing And Mid-wifery Faculty* 2014, 11(11):0-0.
 11. Farsi M. New approaches to personality assessment :Application of factor analysis in personality research 2001.
 12. Ganster DC, Rosen CC. Work stress and employee health: A multidisciplinary review. *J Manag* 2013, 39(5):1085-122.
 13. Ghasemzadeh A, Abbaszadeh M, Hassani M, hashemi T. Structural modeling of personality traits on stress and job performance considering the mediating effects of individual accountability. *Iran Occupational Health*, 10(2):54-64.
 14. Gholamnehad H, Niknema P. Reason of job stress of nurses. *Journal of Health & Hygiene* 2009, 6(1):7-22.
 15. Glowinkowski I, Cooper S. Factors intrinsic to the job. *J Vocat Behav* 1986, 45(79-84).
 16. Haq Z, Iqbal Z, Rahman A. International Journal of Mental Health Systems. *Int J Ment Health Syst* 2008, 2:15.
 17. Hashemi M, Garshad A. Assessment of job stress in nursing personal in selected educational hospitals of North Khorasan University of Medical Sciences 2008. *2* 2012, 4(1):95-102.
 18. Hassani M, Ghasemzadeh A, Kazemzadeh M. Role of Conscientiousness and Perceived Control on Job Satisfaction and Stress of Employees. *jhealth* 2013, 4(1):47-56.
 19. Jafari A, Amiri Majd M, Esfandiary Z. Relationship between personality characteristics and coping strategies with job stress in nurses. *Quarterly Journal of Nersing Management* 2013, 1(4):36-44.
 20. Judge TA, Higgins CA, Thoresen CJ, Barrick MR. The big five personality traits, general mental ability, and career success across the life span. *Pers Psychol* 1999, 52(3):621-52.
 21. Kabirzadeh A, Mohsenisaravi B, Asghari Z, Bagherianfarahabadi E, Bagerzadehladari R. Rate of general health, job stress and factors in medical records workers. *Health Information Management* 2008, 4(2):215~ 22.
 22. Kalvemark S, Hoglund AT, Hansson MG, Westerholm P, Arnetz B. Living with conflicts-ethical dilemmas and moral distress in the health care system. *Soc Sci Med* 2004, 58(6):1075-84.
 23. Karasek Jr RA. Job demands, job decision latitude, and mental strain: Implications for job redesign. *Administrative science quarterly* 1979:285-308.
 24. Measurement of occupational stress among Australian workers 2003
 25. Khakpour A, Yamani M, Pardakhtchi M. Study of relationship between five factor model personality and job performance. *J Appl Psychol* 1991, 2:579-864.
 26. Khodaveisi M, Mohamadi N, Omidi A. Assessment of job stress in nurses working in Hamedan hospitals *J Nurs Mid-wifery of Hamedan* 2005, 13(24):40-2.
 27. Kushnir T, Cohen AH, Kitai E. Continuing medical education and primary physicians' job stress, burnout and dissatisfaction. *Med Educ* 2000, 34(6):430-6.
 28. Landsbergis PA. The changing organization of work and the safety and health of working people: a commentary. *J Occup Environ Med* 2003, 45(1):61-72.
 29. Lau B, Hem E, Berg AM, Ekeberg Ø, Torgersen S. Personality types, coping, and stress in the Norwegian police service. *Pers Individ Dif* 2006, 41(5):971-82.
 30. Lim J, Bogossian F, Ahern K. Stress and coping in Australian nurses: a systematic review. *Int Nurs Rev* 2010, 57(1):22-31.
 31. 31. Olver JM, Mooradian TA. Personality traits and personal values: a conceptual and empirical integration. *Pers Individ Dif* 2003, 35(1):109-25.
 32. Randall R. Job Stress: Tehran Industrial Management Organization 2006
 33. Rezaeian A. Management of psychological stress: management of advanced organizational behavior.
 34. Rezaeian A, Naeiji M. Effects of affectivity and personality on job satisfaction. *Journal of Management* 2009, 33:49- 66.
 35. Rotter JB. Generalized expectancies for internal versus external control of reinforcement. *Psychological monographs: General and applied* 1966, 80(1):1.
 36. sabet A. Coping with stress skills.
 37. Samari A, Lalifaz A. Study of relationship between person-ality traits and job stress in work environment. *Journal of Fundamentals of Mental Health* 2004, 21:19-28.
 38. Shahsavarani A, Rasolzadeh K, Ashayeri H, Sattari K. The role of neuroticism on stress. *Journal of Psychology* 2011, 5(20):268-97.
 39. Shokri o, Daneshvar Pour z, Askari a. Gender differences in academic performance: The Role of Personality Traits. *Journal of Behavioral Sciences* 2008, 2(2):7-8.
 40. Tetrick LE, LaRocco JM. Understanding, prediction, and control as moderators of the relationships between perceived stress, satisfaction, and psychological well-being. *J Appl Psychol* 1987, 72(4):538-43.