

Big-Five Personality Traits, Job Satisfaction, and Turnover Intention: A Heuristic Model for Hospital Nurses in Japan

Igor Milovanovic

Abstract— Japanese population is rapidly ageing. Thus, there is an increased demand for nurses in Japan. However, one of the common problems in nursing is a relatively high rate of occupational withdrawal, or turnover. Past studies on personality, work attitudes, and work behaviors, although being profoundly conducted across occupations and cultures, neglected the effects of personal dispositions on turnover. Therefore, the purpose of this study is to integrate the available knowledge into one conceptual framework, by focusing on the five-factor model of personality traits, or the Big-Five, job satisfaction as one of the main work attitudes, and turnover intention, as a direct predecessor of employee withdrawal behavior. Specifically, we attempted to explain plausible direct effects the Big-Five personality traits might have on turnover intention, as well as the mediating role of job satisfaction. A tentative model is proposed and the research implications are discussed.

Keywords— Big-Five, job satisfaction, personality traits, turnover intention.

1 INTRODUCTION

TURNOVER is a research topic extensively studied in the past, representing one of the most significant causes of morale decrease and productivity decline [1]. It represents an important issue for health care employees, largely comprised of nursing professionals. High nurse turnover has a negative impact on an organization's capacity to meet patients' needs and provide an enviable level of care [2], [3], [4].

Nursing in Japan is considered to be an extremely stressful occupation [5], [6], with nursing professionals reporting high levels of turnover intentions [7]. In their comparison study [8], Poghosyan et al. found that among nurses from certain developed countries (US, Canada, UK, Germany, New Zealand, and Japan), Japanese nurses report the highest levels of burnout experience. Thus, a high turnover rate among nurses appears, contributing to a constant nurse shortage [7], [9]. Moreover, a rapidly ageing population combined with a steady decline in fertility result in an increased demands for a qualified nursing staff in Japan. Therefore, there is an urgent need to retain currently employed nurses in their profession.

Even though turnover has been studied by organizational researchers for decades, its definitions are often inconsistent and inaccurate, making it difficult to generalize or compare across studies [10]. Likewise, the determinants of turnover are different and numerous as well. In short, turnover can be defined as a voluntary action of quitting a current job or a workplace. It

has been proved that turnover intention is the most significant direct predictor of actual turnover [11]. Furthermore, job dissatisfaction, as an opposite to job satisfaction, has been often identified as a main reason why nurses quit their jobs [12].

In spite of voluminous body of research on turnover, surprisingly little is done to examine the causes of nurse turnover [11]. Scholars have traditionally focused on turnover by analyzing the work environment, although personality, especially the five-factor model (FFM) with five major dimensions of personality, also known as the Big-Five, was found to have influence over turnover intentions and behaviors [13], [14]. However, there is no clear consensus about which factors best predict the actual turnover, nor what are the links among personality traits, job satisfaction, and turnover. It seems that the mechanism in which personality, job satisfaction, and turnover mutually correlate has not been fully understood so far. Although some studies examine the effect of job satisfaction on turnover, as well as the influence of dispositional traits over job satisfaction, there is almost none or a rather few research done that include personality, job satisfaction, and turnover [14]. The author claims that "despite the presence of dispositional traits in most theoretical models of turnover, nearly all of the models that have been empirically tested treat job satisfaction as an exogenous variable and do not include dispositions as antecedents" (p. 311).

Thus, the aim of this study is to develop a tentative model which incorporates Big-Five personality traits, job satisfaction, and turnover intention for hospital nurses in Japan. We assume the nature of the relationship between disposition and job satisfaction, based on evidence that personality affects job satisfaction, e.g. [15], [16]. Additionally, we will try to explain the relationship between personality and turnover intention. Moreover, since job satisfaction was found to be directly linked with intent to stay/leave, e.g. [17], [18], the effects of job satisfaction on turnover intention and their nature are discussed in detail. Our theoretical model, therefore, establishes

• Igor Milovanovic is currently a PhD Candidate in Social Systems and Management Doctoral Program, Graduate School of Systems and Information Engineering, University of Tsukuba, Tennoudai 1-1-1, 305-8573 Tsukuba, Ibaraki, Japan.
E-mail: igormilovanovic@rocketmail.com

causal linkages between key personality features (Big-Five) and job attitudes (job satisfaction) that, in turn, lead to turnover intention. More specifically, we make basic assumptions about: (a) the effects of personality traits on turnover intention, (b) the effects of personality traits on job satisfaction, and (c) the effect of job satisfaction on turnover intention, among Japanese hospital nurses.

2 LITERATURE REVIEW

2.1 Nursing

Nursing is an extremely stressful occupation [19], leading to a high rate of personal burnout [20], [21], [22], [23]. Nurses are often affected by various stressors, including: excessive workload, unpredictability, conflict with patients and physicians, as well as constant exposure to patient deaths [24]. Consequently, because of high levels of stress and burnout, nursing occupation is generally characterized by negative outcomes, such as illnesses, absenteeism, and job dissatisfaction [25], leading to decreased job performance, high turnover and nurse shortages [26]. Job dissatisfaction, low job performance, and high turnover rate, in turn, negatively affect the overall quality of care that patients receive [27], [28]. High nurse turnover results in higher costs, reducing hospitals' efforts to function efficiently and improve patients' care [10]. In their study with home care patients aged 65 and over [29], Zimmerman et al. found that higher turnover of registered nurses increase the patients' risk of infection and risk of hospitalization by almost 30% and more than 80%, respectively. However, there is a scant evidence that patients experience physical and emotional sufferings due to the high rate of nurse turnover [10].

Health care professionals in Japan report significant levels of burnout experience [30] and high turnover intentions [7], with nursing considered to be a highly stressful occupation [5]. Both physicians and nurses at hospitals feel that their social standing has deteriorated and their work stress has increased, comparing to the past [6]. Poghosyan et al.'s study [8] found that nurses in Japan experience higher levels of burnout than nurses in some other developed countries, namely US, Canada, UK, Germany, and New Zealand. To make things worse, with the declining fertility in Japan, it is becoming more and more difficult to recruit a sufficient number of nurses [9]. Moreover, a quite rapid ageing of the Japanese population has even further increased the demands for the nursing professionals [7].

2.2 Turnover vs. Turnover Intention

Turnover can be generally described as an action of voluntarily quitting a current job, a work position or an organization. In this manner, the nursing turnover is a process in which nursing staff leave or transfer within a healthcare environment. Alexander et al. [11] postulate that turnover represents a multistage process which links individual attributes (age, gender, tenure, marital status, level of education, and type of training), job attitudes, the decision to quit, and the behavior of actual quitting. Job satisfaction - the extent to which somebody likes his/her job, and intent to stay/leave - the extent to which somebody plan to continue or quit membership with

his/her employer, are widely regarded as key factors in determining the turnover process for nurses [31], [32], [33]. Price and Mueller [34] consider turnover as a product of job satisfaction and organizational commitment, influenced by intra-organizational factors, demographics, and environmental factors outside of the organization. In their literature review [4], Tai, Bame, and Robinson identified age, tenure, job satisfaction, organizational commitment, external job opportunities, and supervisor's behavior to be the best predictors of turnover.

Some scholars, however, claim that previous studies were mainly focused upon turnover intention, as a measure of an employee's intention to leave, rather than measuring the actual turnover [35]. Similarly, Takase [36] argues that turnover intention has often been used in scientific research as a useful replacement measure of the actual turnover. Thus, it is necessary to make a clear distinction between turnover and turnover intention, since the turnover intention alone represents a precursor of the actual turnover. According to the Ajzen and Fishbein's attitude-behavior theory [37], a person's intention represents a function of his/her attitude toward performing a behavior; "A single behavior is determined by the intention to perform the behavior in question" (p. 888). In this manner, withdrawal behavior is determined by withdrawal or turnover intention. Takase [36] describes turnover intention as a multistage process that includes an affective, a cognitive, and a behavioral component. The affective component consists of emotional responses to negative aspects of organizations or occupations, and it is usually considered as a starting point of turnover intention; the cognitive component involves decision to leave or quit, seen as an intention or a desire; and the behavioral component refers to the actual withdrawal behavior that is oriented towards future opportunities [36].

And while job satisfaction/dissatisfaction and intent to stay/leave are most consistently reported as determinants of turnover [10], the results of studies elucidating factors that affect turnover intention are rather mixed and inconsistent. For instance, some studies confirm that job satisfaction is directly linked with intent to stay/leave [17], [18]. On the other hand, Lum et al. [12] found that job satisfaction has an indirect effect while organizational commitment has a direct effect on turnover intention. Moreover, few researchers suggest only weak relationships between job satisfaction, turnover intention, and actual turnover. For instance, Baron and Kenny [38] found that positive affectivity, promotional chances, job routinization, and pay, although previously being highly associated with turnover intention, became statistically insignificant when job satisfaction was included into regression equations. In their longitudinal study which included Taiwanese hospital nurses [39], Chen et al. found that only workload predicted the actual turnover, whereas job satisfaction, among some other factors, was found to be highly associated with turnover intention. Furthermore, they suggested that neither job satisfaction nor turnover intention could be reliable determinants of actual turnover. Therefore, it is necessary to further examine the complexity of the relationships among job satisfaction, turnover intention, and actual turnover.

2.3 Job Satisfaction

There is no universally accepted definition of job satisfaction [40]. Job satisfaction is a positive emotional state, resulting from the appraisal of one's job or job experiences [41]. Argyle [42] deems job satisfaction as one of the three most important predictors of overall well-being, beside marriage and family satisfaction. It has been considered as a global feeling about the job or as a related constellation of attitudes about various job aspects [43]. Simply said, job satisfaction can be described as a positive feeling that an individual has about his or her own job.

The determinants of job satisfaction are various and different in nature. Clark [44] quoted good health and promotion opportunities to be positively associated with job satisfaction, while long working hours, commuting time, and, surprisingly, level of education negatively affect job satisfaction. This is a quite interesting finding, regarding the fact that better education brings the opportunities for better jobs. The British household survey showed different strength in correlations between various dimensions of job satisfaction and survey participants, with regards to their gender; men ranked promotion prospects, pay, and job security, while women appreciated good relations with peers, working hours, and the work itself more [44]. Job satisfaction is a valid predictor of future quits [45]. It is highlighted as a contributing factor to turnover intention and turnover, being a complex area with many elements affecting its measurement [46]. Thus, we can claim that voluminous body of past research treats job satisfaction as an independent variable that affects behavior such as nurse retention and turnover, or as a dependant variable, being a result of job features, work settings, or personal characteristics.

2.4 Personality

Human behavior occupies a considerable deal of attention from many scholars worldwide for a long time [47], [48], [49]. Traditionally, the majority of studies have investigated the differences in a person's character, or personality [50], [51], [52], [53]. Personality can be described as a variety of specific individual differences, with each individual being characterized by a set of unique dispositional features, or personality traits [54].

There is a general agreement among scholars that the personality can be best described by five major personality dimensions, or the Big-Five personality traits: openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism [49], [54], [55], [56], [57], [58], [59]. Numerous studies and meta-analytic reviews were conducted in order to investigate the validity of personality traits through a variety of occupations. As a result, the five-factor model (FFM) is found to be quite stable over time and across different cultures [50], [54], [57], [59], [60], [61], [62].

Openness to experience (or intellect) represents a receptive orientation towards a variety of experiences and new ideas [56]. It usually implies being imaginative, cultured, curious, original, broad-minded, intelligent, and artistically sensitive [60]. Openness to experience underlines traits such as imagination, curiosity, and creativity [63]. Likewise, Saucier [64] describes people who are open to experience as being creative,

imaginative, philosophical, intellectual, complex, and deep.

Conscientiousness highlights strong tendencies towards persistence, sense of duty, industriousness, organizing, planning and self-discipline [56]. Conscientious people are careful, thorough, responsible, organized, planful, hard-working, achievement-oriented, and persevering [60]. Goldberg [63] argues that conscientiousness includes traits such as organization, thoroughness, and reliability. Conscientious people are described as being organized, efficient, systematic, and practical [64].

Extraversion represents the disposition towards cheerfulness, sociability, and an extensive activity [56]. Barrick and Mount [60] described extraverted people as sociable, gregarious, assertive, talkative, and active. Goldberg [63] claims that extraversion is related to traits such as talkativeness, assertiveness, and activity. Moreover, Saucier [64] defines extraverts as being talkative, extraverted, bold, and energetic.

Agreeableness represents a clear inclination towards interpersonal trust, and consideration of others [56]. Barrick and Mount [60] argue that agreeableness entails being courteous, flexible, trusting, good-natured, cooperative, forgiving, soft-hearted, and tolerant. According to Goldberg [63], agreeableness includes kindness, trust, and warmth. Agreeable people are often described as sympathetic, warm, kind, and cooperative [64].

Neuroticism (the opposite of emotional stability) represents a tendency to experience distressing emotions, such as fear, guilt, and frustration [56]. Barrick and Mount [60] view persons who score high on neuroticism as being anxious, depressed, angry, embarrassed, emotional, worried, and insecure. Goldberg [63] postulates that neuroticism includes such traits as nervousness, moodiness, and temperamentality. Similarly, neurotic people are considered to be moody, jealous, temperamental, envious, touchy, and fretful [64].

3 HYPOTHESIZED MODEL

Job satisfaction and turnover intention are the most reported determinants of turnover. The intention to leave has been clearly recognized as an immediate direct precursor of turnover behavior [10], [65]. A significant positive correlation between turnover intention and actual turnover was reported among hospital employees in South Carolina [66]. Likewise, Alexander et al. [11] found intention to quit to be the most important predictor of actual turnover for nursing staff working in neuropsychiatric hospitals across the US.

Many previous studies explored the effects of the Big-Five on job performance, e.g. [60], [67], [68], [69], [70], [71], [72]. Conscientiousness and emotional stability are found to be valid predictors of job performance across almost all work settings, whereas agreeableness, extraversion, and openness are found to be relevant only for some occupations. These findings are quite reasonable; it is logical to assume that if people are hard-working, reliable, responsible (major facets of conscientiousness) and emotionally stable in various situations, their performance would be generally high.

However, we would like to propose a model in which dispositional features of personality make some nurses more

prone to think about quitting, and eventually opt for the withdrawal behavior. Specifically, we want to explain the effects of the Big-Five personality traits on the turnover intention. Although there is an extensive pool of knowledge related to the Big-Five, empirical studies examining personality and turnover intention are limited, with the results often being inconsistent and rather mixed. For instance, Salgado [13] found emotional stability, conscientiousness, and agreeableness to be negative predictors of turnover; conscientiousness and agreeableness negatively predicted deviant behaviors; and none of the Big-Five traits, however, were valid predictors of absenteeism and accident rate. Zimmerman [14] further claims that none of the past studies examined the effects of personality on employees' intentions to quit. Therefore, we find it purposeful to propose a model with turnover intention as an outcome or criterion variable.

In his meta-analysis, Zimmerman [14] found that neuroticism, or emotional instability tend to strengthen the level of turnover intention, whereas conscientiousness and agreeableness tend to decrease the rate of actual turnover. Le Pine and Van Dyne [73] argue that individuals scoring high in neuroticism tend to be uptight, uncooperative, having fewer interactions with co-workers, and often expressing negative attitudes towards them. Emotionally instable people tend to have negative perceptions of themselves and their surrounding environment. Thus, those employees who have negative views of their work are more likely to leave [74]. In this regard, highly neurotic people tend to express their withdrawal intentions more often than those who are low on this trait. On the other hand, Witt et al. [75] argue that conscientious workers are predisposed to be organized, exacting, disciplined, diligent, dependable, methodical, and purposeful. Hence, they are more likely to thoroughly and correctly perform tasks, to stay focused on work tasks, to take initiative in solving problems, to comply with policies, and to remain committed to the job. Highly conscientious individuals are more likely to believe they have a moral obligation to stay with an organization [14].

H 1: Neuroticism *positively* affects turnover intention.

H 2: Conscientiousness *negatively* affects turnover intention.

A majority of theoretical evidence suggests that agreeableness and extraversion have negative effects on withdrawal. It is plausible that both agreeableness and extraversion are important to perform tasks in occupation that requires extensive social interactions, such as nursing. Agreeableness entails being likeable, cooperative, and good-natured [71]. Due to their adaptability and compliance, as well as their tendency to establish positive and satisfying relationships with people around themselves, highly agreeable individuals tend to stay at their current jobs [14]. Similarly, extraverts have strong ties with their co-workers. They tend to perceive both themselves and their work environment more positively, feeling better about their work, and being motivated to stay in their organizations [74].

H 3: Agreeableness *negatively* affects turnover intention.

H 4: Extraversion *negatively* affects turnover intention.

Maertz and Griffeth [74] suggest that people high on openness to experience tend to appreciate job change, making them more willing to leave an organization. Zimmerman [14] argues that individuals scoring high on this trait are often ready to leave in their quest for potential chances outside of an organization; "individuals higher in Openness are more likely to leave the organization to explore other opportunities, regardless of how they feel about their job" (p. 317).

H 5: Openness *positively* affects turnover intention.

Nevertheless, there is some evidence that personality affects job satisfaction [15]. For instance, emotional stability, as an opposite of neuroticism, and extraversion are both listed as positive predictors of job satisfaction [76], [77]. Judge et al. [16] found neuroticism to be the strongest negative predictor of job satisfaction. Judge and colleagues argue that neurotic people often put themselves into situations that foster negative affectivity, resulting in diminished levels of job satisfaction.

H 6: Neuroticism *negatively* affects job satisfaction.

Conscientiousness has been recognized as a universal predictor of job satisfaction among the Big-Five traits [72], [78]. DeNeve and Cooper [79] found conscientiousness to be positively related to life satisfaction and well-being. Likewise, Judge et al. [16] reported the estimated true score correlation with job satisfaction for conscientiousness to be .26.

H 7: Conscientiousness *positively* affects job satisfaction.

Concerning the fact that nursing is an occupation that requires good teamwork with co-workers and extensive interactions with patients, agreeableness and extraversion may be rather significant in understanding job satisfaction. Agreeableness entails getting along with other people, by making pleasant and satisfying relationships. Agreeable individuals tend to achieve interpersonal intimacy that leads to greater levels of both job and life satisfaction. Likewise, extroverts tend to experience positive emotions in social situations, having more friends comparing to introverts, and enjoying more in interpersonal interactions. Moreover, Judge et al. [16] reported the true score correlations with job satisfaction to be .25 and .17 for extraversion and agreeableness, respectively.

H 8: Extraversion *positively* affects job satisfaction.

H 9: Agreeableness *positively* affects job satisfaction.

Even though people are often ready to pursue their future career outside of their current organizations, exploring the potential external prospects, those who score high on openness tend not to express their affective reactions related to their jobs, making the effects of openness on job satisfaction

unclear [79]. Judge et al. [16] found that, while extraversion, conscientiousness, and neuroticism were significant predictors of job satisfaction, openness to experience showed a weak, an indistinguishable from zero, and a highly variable correlation with job satisfaction. Sutin et al. [80] also confirmed openness not to be associated with job satisfaction. Nevertheless, openness was found to be a significant (5% level) negative predictor of job satisfaction among university employees [81]. Similarly, openness was significantly negatively associated with job satisfaction for both managerial and non-managerial positions in the US utility company [82].

H 10: Openness *negatively* affects job satisfaction.

Finally, it is commonly considered that job satisfaction does not influence turnover directly [65]. Instead, it affects the intention to quit, which in turn leads to turnover [14]. Satisfaction is seen as the positive affective response to a job itself [83]. Tett and Meyer [84] described job satisfaction as an affective attachment to one's job. They found that a strong negative correlation between job satisfaction and turnover is being mediated through the intention to quit. Accordingly, the indirect effect of job satisfaction on turnover through the turnover intention was reported to be much stronger (-.58) than the direct effect of job satisfaction on turnover (-.25). Similarly, a significant negative relationship between job satisfaction and turnover intention was confirmed [85]. It is logical to assume that if someone is highly satisfied with his/her own job, he/she does not intend to quit the job or leave the current organization. In the study that includes three hospitals in southern Taiwan, Tzeng [86] found overall job satisfaction to be a significant predictor of turnover intention for the nurses. Therefore, we contend that the effect of job satisfaction on turnover intention will be negative in nature.

H 11: Job satisfaction *negatively* affects turnover intention.

On the basis of the afore-mentioned hypothesis, our hypothesized model is graphically depicted in Fig. 1 (the direct effects of Big-Five personality traits on turnover intention are marked in bold).

4 SUMMARY AND CONCLUSION

We strongly believe in personality, especially the Big-Five dispositional traits to be valid predictors of both turnover intention and job satisfaction among hospital nurses in Japan. Specifically, our position is that those nurses who are highly responsible, well-organized, and hard-working in their daily work activities, besides being cheerful, sociable, energetic, warm, kind, and cooperative in interpersonal relationships tend to express higher levels of both job satisfaction and intention to leave. On the contrary, we expect that those nurses who score high on experiences such as anxiety, depression, anger, and nervousness, in addition to being imaginative, broad-minded, philosophical, creative, and curious, tend to be less satisfied with their job, and, therefore, develop withdrawal or turnover intentions more easily. Our hope is that the

hypothetical model developed in this study will be a significant contribution to the existing literature, further enhancing our understanding of the nature of complex processes that lead to nurse turnover. Yet, we find it necessary to emphasize that our model still falls short of perfection in predicting the trait-attitude-intention relationship, mainly because it does not include other plausible determinants of withdrawal behavior, such as job characteristics, work environment, organization settings, demographics, etc., as some other scholars' studies before us did, e.g. [87]. That was out of the scope of this study. Instead, we solely focused on Big-Five personality traits as possible antecedents of both turnover intention and job satisfaction among Japanese hospital nurses. However, we would like to embolden our fellow researchers to empirically test our model across different cultures, diverse situations, and various contexts, try to improve, and eventually modify it, if necessary. Moreover, we believe that our theoretical proposal, combined with comprehensive empirical results, will become more than a useful guideline for managers, human resource practitioners, and policy makers throughout healthcare organizations, in relation to the nurse turnover. Minimizing the turnover rate among nurses and retaining them in their occupation will tackle the global problem of a chronic nurse shortage, especially in societies with high demand for nurses and rapidly ageing population such as Japan.

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Fig. 1. Big-Five personality traits, job satisfaction, and turnover intention for hospital nurses in Japan.

REFERENCES

- [1] S.M. Abbasi and K.W. Hollman, "Turnover: The Real Bottom Line," *Public Personnel Management*, vol. 29, no. 3, pp. 333-342, Fall 2000.
- [2] A.M. Gray and V.L. Phillips, "The Costs Of Nursing Turnover: Evidence From The British National Health Service," *Health Policy*, vol. 38, no. 2, pp. 117-128, Nov. 1996.
- [3] M.A. Shields and M. Ward, "Improving Nurse Retention In The National Health Service In England: The Impact Of Job Satisfaction On Intentions To Quit," *Journal of Health Economics*, vol. 20, no. 5, pp. 677-701, Sep. 2001.
- [4] T.W. Tai, S.I. Bame, and C.D. Robinson, "Review Of Nursing Turnover Research, 1977-1996," *Social Science & Medicine*, vol. 47, no. 12, pp. 1905-1924, Dec. 1998.
- [5] Y. Kawano, "Association Of Job-Related Stress Factors With Psychological And Somatic Symptoms Among Japanese Hospital Nurses: Effect Of Departmental Environment In Acute Care Hospitals," *Journal of Occupational Health*, vol. 50, no. 1, pp. 79-85, Feb. 2008.
- [6] S. Koike, H. Yasunaga, S. Matsumoto, H. Ide, T. Kodama, and T. Imamura, "Estimation Of Physician Supply By Specialty And The Distribution Impact Of Increasing Female Physicians In Japan," *BMC Health Services Research*, vol. 9, no. 180, Oct. 2009.
- [7] Y. Kudo, T. Satoh, H. Sinji, T. Miki, M. Watanabe, K. Wada, K. Hosoi, K. Hagita, Y. Saito, and Y. Aizawa, "Factors Associated With Turnover Intention Among Nurses In Small And Medium-Sized Medical Institutions," *Environmental Health and Preventive Medicine*, vol. 11, no. 3, pp. 128-135, May 2006.
- [8] L. Poghosyan, S.P. Clarke, M. Finlayson, and L.H. Aiken, "Nurse Burnout And Quality Of Care: Cross-National Investigation In Six Countries," *Research in Nursing & Health*, vol. 33, no. 4, pp. 288-298, Aug. 2010.
- [9] T. Fujimoto, S. Kotani, and R. Suzuki, "Work-Family Conflict Of Nurses In Japan," *Journal of Clinical Nursing*, vol. 17, no. 24, pp. 3286-3295, Dec. 2008.
- [10] L.J. Hayes, L. O'Brien-Pallas, C. Duffield, J. Shamian, J. Buchan, F. Hughes, H.K. Spence Laschinger, N. North, and P.W. Stone, "Nurse Turnover: A Literature Review," *International Journal of Nursing Studies*, vol. 43, no. 2, pp. 237-263, Feb. 2006.
- [11] J.A. Alexander, R. Lichtenstein, H.J. Oh, and E. Ullman, "A Causal Model Of Voluntary Turnover Among Nursing Personnel In Long-Term Psychiatric Settings," *Research in Nursing & Health*, vol. 21, no. 5, pp. 415-427, Oct. 1998.
- [12] L. Lum, J. Kervin, K. Clark, F. Reid, and W. Sirola, "Explaining Nursing Turnover Intent: Job Satisfaction, Pay Satisfaction, Or Organizational Commitment?," *Journal of Organizational Behavior*, vol. 19, no. 3, pp. 305-320, May 1998.
- [13] J.F. Salgado, "The Big Five Personality Dimensions And Counterproductive Behaviors," *International Journal of Selection and Assessment*, vol. 10, no. 1-2, pp. 117-125, Mar. 2002.
- [14] R.D. Zimmerman, "Understanding The Impact Of Personality Traits On Individuals' Turnover Decisions: A Meta-Analytic Path Model," *Personnel Psychology*, vol. 61, no. 2, pp. 309-348, Summer 2008.
- [15] A. Furnham, K.V. Petrides, C.J. Jackson, and T. Cotter, "Do Personality Factors Predict Job Satisfaction?," *Personality and Individual Differences*, vol. 33, no. 8, pp. 1325-1342, Dec. 2002.
- [16] T.A. Judge, D. Heller, and M.K. Mount, "Five-Factor Model Of Personality And Job Satisfaction: A Meta-Analysis," *Journal of Applied Psychology*, vol. 87, no. 3, pp. 530-541, Jun. 2002.
- [17] K. Collins, M.L. Jones, A. McDonnell, S. Read, R. Jones, and A. Cameron, "Do New Roles Contribute To Job Satisfaction And Retention Of Staff In Nursing And Professions Allied To Medicine?," *Journal of Nursing Management*, vol. 8, no. 1, pp. 3-12, Jan. 2000.
- [18] H. Ito, S.V. Eisen, L.I. Sederer, O. Yamada, and H. Tachimori, "Factors Affecting Psychiatric Nurses' Intention To Leave Their Current Job," *Psychiatric Services*, vol. 52, no. 2, pp. 232-234, Feb. 2001.
- [19] J.V. Sawatzky, "Stress In Critical Care Nurses: Actual And Perceived," *Heart & Lung: The Journal of Acute and Critical Care*, vol. 25, no. 5, pp. 409-417, Sep.-Oct. 1996.
- [20] R. Bourbonnais, M. Comeau, M. Vézina, and G. Dion, "Job Strain, Psychological Distress, And Burnout In Nurses," *American Journal of Industrial Medicine*, vol. 34, no. 1, pp. 20-28, Jul. 1998.
- [21] J.S. Felton, "Burnout As A Clinical Entity – Its Importance In Health Care Workers," *Occupational Medicine*, vol. 48, no. 4, pp. 237-250, May 1998.
- [22] C.J. Kilfedder, K.G. Power, and T.J. Wells, "Burnout In Psychiatric Nursing," *Journal of Advanced Nursing*, vol. 34, no. 3, pp. 383-396, May 2001.
- [23] R.T. Penson, F.L. Dignan, G.P. Canellos, C.L. Picard, and T.J. Lynch, "Burnout: Caring For The Caregivers," *The Oncologist*, vol. 5, no. 5, pp. 425-434, Oct. 2000.
- [24] P. Gray-Toft and J.G. Anderson, "The Nursing Stress Scale: Development Of An Instrument," *Journal of Behavioral Assessment*, vol. 3, no. 1, pp. 11-23, Mar. 1981.
- [25] S. Kahill, "Symptoms Of Professional Burnout: A Review Of The Empirical Evidence," *Canadian Psychology/Psychologie Canadienne*, vol. 29, no. 3, pp. 284-297, Jul. 1988.
- [26] P.I. Buerhaus, K. Donelan, B.T. Ulrich, L. Norman, C. DesRoches, and R. Dittus, "Impact Of The Nurse Shortage On Hospital Patient Care: Comparative Perspectives," *Health Affairs*, vol. 26, no. 3, pp. 853-862, May 2007.
- [27] L.H. Aiken, S.P. Clarke, D.M. Sloane, J. Sochalski, and J.H. Silber, "Hospital Nurse Staffing And Patient Mortality, Nurse Burnout And Job Dissatisfaction," *Journal of the American Medical Association (JAMA)*, vol. 288, no. 16, pp. 1987-1993, Oct. 2002.
- [28] S. Gunnarsdóttir, S.P. Clarke, A.M. Rafferty, and D. Nutbeam, "Front-Line Management, Staffing And Nurse-Doctor Relationships As Predictors Of Nurse And Patient Outcomes. A Survey Of Icelandic Hospital Nurses," *International Journal of Nursing Studies*, vol. 46, no. 7, pp. 920-927, Jul. 2009.
- [29] S. Zimmerman, A.L. Gruber-Baldini, J.R. Hebel, P.D. Sloane, and J. Magaziner, "Nursing Home Facility Risk Factors For Infection And Hospitalization: Importance Of Registered Nurse Turnover, Administration, And Social Factors," *Journal of the American Geriatrics Society (JAGS)*, vol. 50, no. 12, pp. 1987-1995, Dec. 2002.
- [30] K. Fujiwara, E. Tsukishima, A. Tsutsumi, N. Kawakami, and R. Kishi, "Interpersonal Conflict, Social Support, And Burnout Among Home Care Workers In Japan," *Journal of Occupational Health*, vol. 45, no. 5, pp. 313-320, Oct. 2003.
- [31] R.G. Borda and I.J. Norman, "Factors Influencing Turnover And Absence Of Nurses : A Research Review," *International Journal of Nursing Studies*, vol. 34, no. 6, pp. 385-394, Dec. 1997.
- [32] S. Gaertner, "Structural Determinants Of Job Satisfaction And Organizational Commitment In Turnover Models," *Human Resource Management Review*, vol. 9, no. 4, pp. 479-493, Winter 1999.
- [33] J.T. Yin and K.A. Yang, "Nursing Turnover In Taiwan: A Meta-Analysis Of Related Factors," *International Journal of Nursing Studies*, vol. 39, no. 6, pp. 573-581, Aug. 2002.

- [34] J.L. Price and C.W. Mueller, "A Causal Model Of Turnover For Nurses," *The Academy of Management Journal*, vol. 24, no. 3, pp. 543-565, Sep. 1981.
- [35] A. Cohen, "Relationships Among Five Forms Of Commitment: An Empirical Assessment," *Journal of Organizational Behavior*, vol. 20, no. 3, pp. 285-308, May 1999.
- [36] M. Takase, "A Concept Analysis Of Turnover Intention: Implications For Nursing Management," *Collegian*, vol. 17, no. 1, pp. 3-12, Mar. 2010.
- [37] I. Ajzen and M. Fishbein, "Attitude-Behavior Relations: A Theoretical Analysis And Review Of Empirical Research," *Psychological Bulletin*, vol. 84, no. 5, pp. 888-918, Sep. 1977.
- [38] R.M. Baron and D.A. Kenny, "The Moderator-Mediator Variable Distinction In Social Psychological Research: Conceptual, Strategic, And Statistical Considerations," *Journal of Personality and Social Psychology*, vol. 51, no. 6, pp. 1173-1182, Dec. 1986.
- [39] H. Chen, C. Chu, Y. Wang, and L. Lin, "Turnover Factors Revisited: A Longitudinal Study Of Taiwan-Based Staff Nurses," *International Journal of Nursing Studies*, vol. 45, no. 2, pp. 277-285, Feb. 2008.
- [40] H.A. Miller, S. Mire, and B. Kim, "Predictors Of Job Satisfaction Among Police Officers: Does Personality Matter?," *Journal of Criminal Justice*, vol. 37, no. 5, pp. 419-426, Sep.-Oct. 2009.
- [41] E.A. Locke, "The Nature And Causes Of Job Satisfaction," *Handbook of Industrial and Organizational Psychology (1st Edition)*, M.D. Dunnette, ed., Chicago, IL: Rand McNally, pp. 1297-1349, 1976.
- [42] M. Argyle, "Do Happy Workers Work Harder? The Effect Of Job Satisfaction On Work Performance," *How harmful is happiness? Consequences of enjoying life or not*, R. Veenhoven, ed., Rotterdam, Netherlands: Universitaire Pers Rotterdam, pp. 94-105, 1989.
- [43] H. Lu, A.E. While, and K.L. Barriball, "Job Satisfaction Among Nurses: A Literature Review," *International Journal of Nursing Studies*, vol. 42, no. 2, pp. 211-227, Feb. 2005.
- [44] A.E. Clark, "Job Satisfaction And Gender: Why Are Women So Happy At Work?," *Labour Economics*, vol. 4, no. 4, pp. 341-372, Dec. 1997.
- [45] R.B. Freeman, "Job Satisfaction As An Economic Variable," *Papers and Proceedings of the Ninetieth Annual Meeting of the American Economic Association*, *The American Economic Review*, vol. 68, no. 2, pp. 135-141, May 1978.
- [46] B. Coomber and K.L. Barriball, "Impact Of Job Satisfaction Components On Intent To Leave And Turnover For Hospital-Based Nurses: A Review Of The Research Literature," *International Journal of Nursing Studies*, vol. 44, no. 2, pp. 297-314, Feb. 2007.
- [47] R.B. Cattell, "The Description Of Personality: Basic Traits Resolved Into Clusters," *The Journal of Abnormal and Social Psychology*, vol. 38, no. 4, pp. 476-506, Oct. 1943.
- [48] D.W. Fiske, "Consistency Of The Factorial Structures Of Personality Ratings From Different Sources," *The Journal of Abnormal and Social Psychology*, vol. 44, no. 3, pp. 329-344, Jul. 1949.
- [49] W.T. Norman, "Toward An Adequate Taxonomy Of Personality Attributes: Replicated Factor Structure In Peer Nomination Personality Ratings," *The Journal of Abnormal and Social Psychology*, vol. 66, no. 6, pp. 574-583, Jun. 1963.
- [50] P.T. Costa and R.R. McCrae, "From Catalog To Classification: Murray's Needs And The Five-Factor Model," *Journal of Personality and Social Psychology*, vol. 55, no. 2, pp. 258-265, Aug. 1988.
- [51] P.T. Costa and R.R. McCrae, "Four Ways Five Factors Are Basic," *Personality and Individual Differences*, vol. 13, no. 6, pp. 653-665, Jun. 1992.
- [52] F. De Fruyt and I. Mervielde, "The Five-Factor Model Of Personality And Holland's Riasec Interest Types," *Personality and Individual Differences*, vol. 23, no. 1, pp. 87-103, Jul. 1997.
- [53] J.M. Digman, "Personality Structure: Emergence Of The Five-Factor Model," *Annual Review of Psychology*, vol. 41, pp. 417-440, 1990.
- [54] L.R. Goldberg, "An Alternative "Description Of Personality": The Big-Five Factor Structure," *Journal of Personality and Social Psychology*, vol. 59, no. 6, pp. 1216-1229, Dec. 1990.
- [55] A.B. Bakker, K.I. Van Der Zee, K.A. Lewig, and M.F. Dollard, "The Relationship Between The Big Five Personality Factors And Burnout: A Study Among Volunteer Counselors," *The Journal of Social Psychology*, vol. 146, no. 1, pp. 31-50, Feb. 2006.
- [56] J. De Vries and G.L. Van Heck, "Fatigue: Relationships With Basic Personality And Temperament Dimensions," *Personality and Individual Differences*, vol. 33, no. 8, pp. 1311-1324, Dec. 2002.
- [57] J.M. Digman, "Higher-Order Factors Of The Big Five," *Journal of Personality and Social Psychology*, vol. 73, no. 6, pp. 1246-1256, Dec. 1997.
- [58] J.M. Digman and J. Inouye, "Further Specification Of The Five Robust Factors Of Personality," *Journal of Personality and Social Psychology*, vol. 50, no. 1, pp. 116-123, Jan. 1986.
- [59] D.G. Winter, O.P. John, A.J. Stewart, E.C. Kohnen, and L.E. Duncan, "Traits And Motives: Toward An Integration Of Two Traditions In Personality Research," *Psychological Review*, vol. 105, no. 2, pp. 230-250, Apr. 1998.
- [60] M.R. Barrick and M.K. Mount, "The Big Five Personality Dimensions And Job Performance: A Meta-Analysis," *Personnel Psychology*, vol. 44, no. 1, pp. 1-26, Mar. 1991.
- [61] F. De Fruyt, I. Mervielde, and K. Van Leeuwen, "The Consistency Of Personality Type Classification Across Samples And Five-Factor Measures," *European Journal of Personality*, vol. 16, no. S1, pp. S57-S72, Mar. 2002.
- [62] R.R. McCrae and P.T. Costa, "Validation Of The Five-Factor Model Of Personality Across Instruments And Observers," *Journal of Personality and Social Psychology*, vol. 52, no. 1, pp. 81-90, Jan. 1987.
- [63] L.R. Goldberg, "The Structure Of Phenotypic Personality Traits," *American Psychologist*, vol. 48, no. 1, pp. 26-34, Jan. 1993.
- [64] G. Saucier, "Mini-Markers: A Brief Version Of Goldberg's Unipolar Big-Five Markers," *Journal of Personality Assessment*, vol. 63, no. 3, pp. 506-516, Dec. 1994.
- [65] W.H. Mobley, "Intermediate Linkages In The Relationship Between Job Satisfaction And Employee Turnover," *Journal of Applied Psychology*, vol. 62, no. 2, pp. 237-240, Apr. 1977.
- [66] W.H. Mobley, S.O. Horner, and A.T. Hollingsworth, "An Evaluation Of Precursors Of Hospital Employee Turnover," *Journal of Applied Psychology*, vol. 63, no. 4, pp. 408-414, Aug. 1978.
- [67] M.R. Barrick, M.K. Mount, and T.A. Judge, "Personality And Performance At The Beginning Of The New Millennium: What Do We Know And Where Do We Go Next?," *International Journal of Selection and Assessment*, vol. 9, no. 1-2, pp. 9-30, Mar. 2001.
- [68] G. Blickle, J.A. Meurs, I. Zettler, J. Solga, D. Noethen, J. Kramer, and G.R. Ferris, "Personality, Political Skill, And Job Performance," *Journal of Vocational Behavior*, vol. 72, no. 3, pp. 377-387, Jun. 2008.
- [69] A. Furnham and C. Fudge, "The Five Factor Model Of Personality And Sales Performance," *Journal of Individual Differences*, vol. 29, no. 1, pp. 11-16, Jan. 2008.
- [70] L.M. Hough, N.K. Eaton, M.D. Dunnette, J.D. Camp, and R.A.

- McCloy, "Criterion-Related Validities Of Personality Constructs And The Effect Of Response Distortion On Those Validities," *Journal of Applied Psychology*, vol. 75, no. 5, pp. 581-595, Oct. 1990.
- [71] G.M. Hurtz and J.J. Donovan, "Personality And Job Performance: The Big Five Revisited," *Journal of Applied Psychology*, vol. 85, no. 6, pp. 869-879, Dec. 2000.
- [72] J.F. Salgado, "The Five Factor Model Of Personality And Job Performance In The European Community," *Journal of Applied Psychology*, vol. 82, no. 1, pp. 30-43, Feb. 1997.
- [73] J.A. LePine and L. Van Dyne, "Voice And Cooperative Behavior As Contrasting Forms Of Contextual Performance: Evidence Of Differential Relationships With Big Five Personality Characteristics And Cognitive Ability," *Journal of Applied Psychology*, vol. 86, no. 2, pp. 326-336, Apr. 2001.
- [74] C.P. Maertz and R.W. Griffeth, "Eight Motivational Forces And Voluntary Turnover: A Theoretical Synthesis With Implications For Research," *Journal of Management*, vol. 30, no. 5, pp. 667-683, Oct. 2004.
- [75] L.A. Witt, L.A. Burke, M.R. Barrick, and M.K. Mount, "The Interactive Effects Of Conscientiousness And Agreeableness On Job Performance," *Journal of Applied Psychology*, vol. 87, no. 1, pp. 164-169, Feb. 2002.
- [76] A.P. Brief, A.H. Butcher, L. Roberson, "Cookies, Disposition, And Job Attitudes: The Effects Of Positive Mood-Inducing Events And Negative Affectivity On Job Satisfaction In A Field Experiment," *Organizational Behavior and Human Decision Processes*, vol. 62, no. 1, pp. 55-62, Apr. 1995.
- [77] D.M. Tokar and L.M. Subich, "Relative Contributions Of Congruence And Personality Dimensions To Job Satisfaction," *Journal of Vocational Behavior*, vol. 50, no. 3, pp. 482-491, Jun. 1997.
- [78] T.A. Judge, C.A. Higgins, C.J. Thoresen, and M.R. Barrick, "The Big Five Personality Traits, General Mental Ability, And Career Success Across The Life Span," *Personnel Psychology*, vol. 52, no. 3, pp. 621-652, Sep. 1999.
- [79] K.M. DeNeve and H. Cooper, "The Happy Personality: A Meta-Analysis Of 137 Personality Traits And Subjective Well-Being," *Psychological Bulletin*, vol. 124, no. 2, pp. 197-229, Sep. 1998.
- [80] A.R. Sutin, P.T. Costa, R. Miech, and W.W. Eaton, "Personality And Career Success: Concurrent And Longitudinal Relations," *European Journal of Personality*, vol. 23, no. 2, pp. 71-84, Mar. 2009.
- [81] T.A. Judge, D. Heller, and R. Klinger, "The Dispositional Sources Of Job Satisfaction: A Comparative Test," *Applied Psychology: An International Review*, vol. 57, no. 3, pp. 361-372, Jul. 2008.
- [82] J.W. Lounsbury, L.W. Gibson, R.P. Steel, E.D. Sundstrom, and J.L. Loveland, "An Investigation Of Intelligence And Personality In Relation To Career Satisfaction," *Personality and Individual Differences*, vol. 37, no. 1, pp. 181-189, Jul. 2004.
- [83] W.H. Mobley, R.W. Griffeth, H.H. Hand, and B.M. Meglino, "Review And Conceptual Analysis Of The Employee Turnover Process," *Psychological Bulletin*, vol. 86, no. 3, pp. 493-522, May 1979.
- [84] R.P. Tett and J.P. Meyer, "Job Satisfaction, Organizational Commitment, Turnover Intention, And Turnover: Path Analyses Based On Meta-Analytic Findings," *Personnel Psychology*, vol. 46, no. 2, pp. 259-293, Jun. 1993.
- [85] P.W. Hom, F. Caranikas-Walker, G.E. Prussia, and R.W. Griffeth, "A Meta-Analytical Structural Equations Analysis Of A Model Of Employee Turnover," *Journal of Applied Psychology*, vol. 77, no. 6, pp. 890-909, Dec. 1992.
- [86] H. Tzeng, "The Influence Of Nurses' Working Motivation And Job Satisfaction On Intention To Quit: An Empirical Investigation In Taiwan," *International Journal of Nursing Studies*, vol. 39, no. 8, pp. 867-878, Nov. 2002.
- [87] A.O. Agho, C.W. Mueller, and J.L. Price, "Determinants Of Employee Job Satisfaction: An Empirical Test Of A Causal Model," *Human Relations*, vol. 46, no. 8, pp. 1007-1027, Aug. 1993.