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## RESEARCH ARTICLE

# THE ASSOCIATION BETWEEN BURNOUT SYNDROME AND PERSONALITY IN JAPANESE NURSING STUDENTS

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### ABSTRACT

Burnout is characterized by emotional exhaustion, depersonalization, and low occupational performance and may occur among health professionals. This study evaluated burnout among nursing students at Kyoto Prefectural University of Medicine, Japan. We analyzed associations between burnout and aspects of personality using a questionnaire design. A total of 205 students completed the Maslach Burnout Inventory (MBI) and a questionnaire measure of the Wada's Big Five personality traits that assessed Extraversion, Neuroticism, Openness to Experience, Agreeableness, and Conscientiousness. There was a significant positive correlation between burnout and scores on Neuroticism and significant negative correlations between burnout and scores on Extraversion, Agreeableness, and Conscientiousness. There was a greater tendency for burnout in higher-grade students.

These results contribute to the identification of personality factors associated with burnout and therefore highlight the need for more detailed investigation of this problem.

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### INTRODUCTION

Burnout has been defined as a specific form of occupational and chronic stress in professional staff working in the helping professions (Maslach & Jackson, 1981). It is the result of emotionally loaded relations between caregivers and the people they care for (Maslach & Schaufeli, 1993). Burnout is a psychological syndrome of chronic exhaustion, cynicism, and inefficacy, and is experienced as a prolonged response to chronic stressors in the workplace (Maslach et al., 1996). The rate of burnout in nursing is high; burnout affects approximately 25% of all nurses (Landau, 1992; Saint-Arnaud et al., 1992). Some studies have reported that burnout is related to the amount of time that nurses spend with patients (Cronin-Stubbs & Brophy, 1985), to the intensity of patients' emotional demands (Lewinson et al., 1981), and to patients' poor prognoses (Hare et al., 1981).

Nursing students experience academic demands such as tests, theoretical and practical course work, research activities, aspects of professional practice, and contact with health professionals and patients. Consequently, nursing students face several stressors (Costa & Polak, 2009). It is important to study burnout among nursing students because this condition is

related to academic performance, which can influence the quality of care in nurses' future professional life. Some research indicates that nursing students' intention to leave the profession is affected by burnout (Rudman & Gustavsson, 2012). Zellars et al. (2000) demonstrated a relationship between personality factors and burnout in nurses. Personality factors are not likely to appreciably change throughout nurses' professional life; therefore, we investigated the relationship between personality characteristics and burnout in nursing students, with the goal of obtaining information that might help to prevent this problem. This study also aimed to investigate the nursing student's burnout between the grades. There are only a few studies reported so far in Japan, this study should promote understanding of student burned-out and contribute to the literature by informing the design of prevention programmes for nursing student's burnout.

### METHODS

#### Design and Participants

This was a cross-sectional survey study using a self-completed questionnaire. All students enrolled at the School of Nursing, Kyoto Prefectural University of Medicine, Japan were invited

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to take part in the survey. Two hundred and five participants (47 first-year students, 48 second-year students, 68 third-year students, and 42 fourth-year students) completed the survey. This sample represented over 60.3% of the University population. The investigation was carried out between 1 July and 30 November, 2014.

**Data collection and analyses**

The questionnaire consisted of the modified Maslach Burnout Inventory (MBI) (Maslach& Jackson,1981) and the Wada’s Big Five personality scale (Wada, 1996). The MBI consists of three factors (Emotional Exhaustion, Depersonalization, and Personal Accomplishment). We verified this with a four-step analysis using the principal factor method and varimax rotation. We calculated participants’ total scores on each factor. Wada (1996) constructed and tested the Japanese version of the Big Five Scales of personality trait terms. Based on the adjective checklist items, the 5-factor solution corresponding to the Big Five personality dimensions was obtained, and the Wada’s Big Five Scales of personality trait was developed. Five different quality scores of a Big Five personality scale were calculated, Extraversion, Neuroticism, Openness to Experience, Agreeableness, and Conscientiousness. The Wilcoxon test was used to analyze differences in MBI and personality factor scores for nurses at each grade. The Spearman correlation coefficient was used to analyze correlations between MBI scores and personality factor scores.  $p < .05$  was considered statistically significant.

**Ethical considerations**

This study received ethical approval from the Institutional Review Board of Kyoto Prefectural University of Medicine (Approval No.: ERB-E-272). The students received an information sheet that explained the study’s purpose and methods, were given oral assurances that participation was voluntary, and informed that their personal information would be kept confidential during and after the study. All participants provided written, informed consent.

**RESULTS**

**Comparison of Big Five and MBI scale scores according to grade**

Big Five personality factor scale scores are shown in Table 1. There were no significant differences in factor scores according to nursing student grade. The results of the MBI burnout scale are shown in Table 2. There was a significant difference in Depersonalization scores between second- and third-year nursing students ( $p < .01$ ), with higher scores found for third year students. There was also a significant difference in Emotional Exhaustion between first- and fourth-year nursing students ( $p < .01$ ) and between second- and fourth-year students ( $p < .01$ ), with higher scores found for fourth-year students. There were no significant differences in Personal Accomplishment scores among students at different grades.

**The relationship between MBI scores and Big Five personality factor scores**

The relationships between MBI scores and Big Five personality factor scores were investigated using Spearman correlations; the results are shown in Table 3. Emotional Exhaustion was positively correlated with Neuroticism ( $p < .01$ ) and negatively correlated with Agreeableness ( $p < .01$ ), Conscientiousness ( $p < .01$ ), and Extraversion ( $p < .05$ ). Depersonalization was positively correlated with Neuroticism ( $p < .01$ ) and negatively correlated with Extraversion ( $p < .01$ ), Conscientiousness ( $p < .01$ ), and Agreeableness( $p < .01$ ). Personal Accomplishment was positively correlated with Extraversion ( $p < .01$ ), Openness to Experience ( $p < .01$ ), and Agreeableness ( $p < .05$ ) and negatively correlated with Neuroticism ( $p < .01$ ).

**Table 1** Big five scale according to grade

	Grade	Number	Mean±Standard deviation
Extraversion	1	47	54.47±10.67
	2	48	50.81±9.78
	3	68	51.38±10.91
	4	41	53.80±12.03
Neuroticism	1	46	54.67±9.77
	2	47	55.43±9.23
	3	68	54.43±12.35
	4	40	53.53±11.70
Openness to experience	1	47	47.32±8.43
	2	46	45.37±8.97
	3	68	46.28±9.66
	4	40	48.98±8.55
Conscientiousness	1	44	44.34±6.63
	2	47	45.98±8.13
	3	67	43.73±8.26
	4	40	42.48±11.63
Agreeableness	1	46	53.13±9.60
	2	48	52.94±8.55
	3	68	53.37±10.79
	4	41	50.59±9.24

**Table 2** MBI scale according to grade.

	Grade	Number	Mean± Standard deviation	P value
Depersonalization	1	44	2.11±0.99	*: 2 <sup>nd</sup> grade v.s. 3 <sup>rd</sup> grade
	2	46	1.87±1.10	
	3	68	2.49±1.19	
	4	42	2.52±1.45	
Personal accomplishment	1	45	2.73±1.17	*: 1 <sup>st</sup> grade v.s. 4 <sup>th</sup> grade
	2	48	3.13±1.14	
	3	68	2.96±1.27	
	4	42	2.55±1.36	
Emotional exhaustion	1	46	1.74±0.88	*: 2 <sup>nd</sup> grade v.s. 4 <sup>th</sup> grade
	2	47	1.57±0.87	
	3	68	2.04±1.05	
	4	42	2.60±1.46	

\*:  $p < 0.01$

**Table 3**The relationship with a MBI burnout scale and Big Five personality scale Investigated by Spearman coefficient

	Depersonalization	Personal accomplishment	Emotional exhaustion
Extraversion	-.257**	.376**	-.153*
Neuroticism	.186**	-.200**	.216**
Openness to experience	-.080	.277**	-.118
Conscientiousness	-.301**	.088	-.306**
Agreeableness	-.358**	.141*	-.303**

\*: $p < 0.05$ , \*\*:  $p < 0.01$

## DISCUSSION

Some researchers have emphasized the effects of personality resources on the burnout process (Bakker *et al.*, 2006; Baramée & Blegen, 2003; Harrisson *et al.*, 2002; Houkes *et al.*, 2003; Schmitz *et al.*, 2000). Exhaustion is related to an individual's experience of stress, which is related to a decline in emotional and physical resources (Tomaschewski-Barlem *et al.*, 2014). Cynicism refers to detachment from work in reaction to emotional overload and exhaustion (Maslach *et al.*, 1996). Cynicism pertains to the loss of enthusiasm and passion for one's own work (Leiter & Maslach, 2005). Personal accomplishment, or perceived professional efficacy, refers to feelings of effectiveness and achievement, and productivity at work (Leiter *et al.*, 2005). Previous research on burnout has confirmed the sequential link from exhaustion to cynicism (Maslach *et al.*, 2001). Specifically, researchers have found that exhaustion occurs first, leading to the development of cynicism, which in turn leads to inefficacy (Gascon *et al.*, 2013). Research indicates that people with high Neuroticism and low Extraversion experience greater burnout (Shimizutani *et al.*, 2008).

Nursing students experience stressors including difficulty in balancing home and college demands, time pressures, financial concerns, feelings of distance from the faculty and staff in the clinical setting, stress associated with feeling unprepared for clinical practice, feelings of incompetence in clinical skills, and longer hours of study and associated lack of free time (Beck, 1995; Brown & Edelmann 2000; Hammil, 1995; Jones & Johnson, 1997; Lauder & Cuthberston, 1998; Poorman *et al.*, 2002).

Several studies have focused on burnout in nursing students. A phenomenological study by Beck (1995) revealed nine themes related to burnout: engulfing demands, time pressure, no outlet, physically debilitating, emotionally overwhelming, lack of concentration, decreased motivation, impeding relationships, and coping attempts. Deary *et al.* (2003) showed that Neuroticism was initially associated with the emotional exhaustion aspect of burnout and that Conscientiousness was associated with a greater sense of work-related achievement. Personality factors at course entry contributed immensely to the prediction of burnout and program completion. A 3-year, longitudinal study of 1702 nursing students (Rudman & Gustavsson, 2012), found an increase in study burnout across the 3 years, with a significant increase in levels of both exhaustion and disengagement. Development of burnout predicted lower levels of learner engagement and occupational preparedness in the final year. At follow-up 1 year after graduation, earlier development of burnout was related to lower mastery of occupational tasks and less research utilization in clinical practice. Michalec *et al.* (2013) reported that nursing students at all grade cohorts had experienced moderate or average levels of burnout and compassion fatigue, and no significant differences were found between the grade cohorts. Fourth-year students reported significantly higher levels of personal accomplishment in their clinical exposure, promoting role actualization, which might have a protective function. However, students expressed concern regarding the inevitable onset of burnout at some point during their

professional careers. In our study, there was a significant difference in Emotional Exhaustion between first- and fourth-year nursing students ( $p < .01$ ) and between second- and fourth-year students ( $p < .01$ ), with higher scores found for fourth-year students. De Silva *et al.* (2014) observed that 64% of nursing students experienced high levels of emotional exhaustion, 36% experienced high levels of cynicism, 88% experienced low levels of professional efficacy, and 24% experienced burnout.

Hardiness provides resistance to stress and can protect students against burnout (Garrosa *et al.*, 2008; de Silva *et al.*, 2014). Identifying the process of burnout among nursing students is an essential step in preventing this problem and reducing the likelihood that burnout will become more severe. There is widespread agreement that preventing burnout is a better strategy than waiting to treat it after it becomes a problem (Maslach, 2011). Interventions to reduce the risk of burnout might be more effective if they can enhance hardy personality traits rather than decreasing stressors (Garrosa *et al.*, 2008; de Silva *et al.*, 2014), although guidance in effective stress management may be essential.

The limitations of this study were that it included a relatively small number of participants and that the context was confined to a particular geographic location. Burnout is a process and longitudinal data will be necessary to establish causality among the relationships studied. However, this study offers some valuable insights into burnout among nursing students.

## CONCLUSIONS

The MBI was used to measure burnout and personality was measured with a questionnaire assessing Extraversion, Neuroticism, Openness to Experience, Agreeableness, and Conscientiousness. There was a significant difference in Emotional Exhaustion between first- and fourth-year nursing students ( $p < .01$ ) and between second- and fourth-year students ( $p < .01$ ), with higher scores found for fourth-year students. A tendency to burnout was positively correlated with Neuroticism and negatively correlated with Extraversion, Agreeableness, and Conscientiousness. Students at higher grades showed a greater tendency to burnout. By reducing emotional exhaustion, latent consequences of burnout, could be prevented. The results contribute to the identification of personality factors associated with burnout. Academic guidance programmes should be carried out for the prevention of nursing student's burnout.

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