

The Relationship between Temperament and Character Traits and Burnout among Nurses

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Abstract

Aim: A repeatedly asked question is why, under the same working conditions, one individual burns out, whereas another shows no symptoms at all. We sought to address this among nurses, who are considered to be particularly susceptible to the danger of burnout due to the nature of their work.

Methods: This study was carried out with 108 randomly selected nurses working at Derince Training and Research Hospital. The Maslach burnout inventory and temperament character inventory were applied.

Results: Novelty seeking (NS) and harm avoidance (HA) scores showed a positive correlation with high burnout level; a negative correlation was shown with persistence (P), self-directedness (SD), and cooperation (C). According to the regression analysis performed in order to assess whether personality characteristics are predictive of burnout levels, Novelty Seeking and HA were positive predictors, while C was a negative predictor of total burnout levels.

Conclusion: This study showed that there is a relationship between the temperament and character traits and burnout. While analyzing the structure of healthcare provider systems, individual specific evaluations and development of personality traits that are protective against individual burnout should be put on the agenda.

Keywords: Burnout; Personality; Character; Temperament; Cloninger

Introduction

Burnout syndrome was first defined at the beginning of 1970s in occupations providing services to people, particularly those of healthcare, and has become an extensively studied concept in the last 20–30 years [1,2]. According to Maslach, burnout is a “syndrome occurring by reflection of the physical exhaust, long term fatigue, helplessness and infelicity feelings to work performed, life and to the other people with negative manners” [3]. Nurses’ burnout has received extensive and continuous research attention over the years, and among healthcare workers, nursing is thought to be the most stressful profession [4-6]. Nurses are considered to be particularly susceptible to the danger of burnout due to the very stressful nature of their work, which has a negative impact on their mental and physical health, efficacy, and productivity [7,8]. Multidimensional comprehension and interpretation of burnout syndrome of healthcare workers will help in revealing multidimensional correction–intervention options [9]. Up to the present, studies focusing on environmental [10,11], working environment [6,12] and clinical conditions have been carried out regarding burnout syndrome [13].

The question repeatedly asked is why, under the same working conditions, one individual burns out, whereas another shows no symptoms at all. It seems fair to assume that other causes such as personality dimensions and the way of perceiving stress play important roles [14,15]. The specific strategies may ultimately account for why one individual becomes ill and another does not when exposed to identical stressors [16].

Previous studies have been conducted to analyze relationship between personality and burnout and it has been shown that personality characteristics are related to burnout syndrome [1,17-20]. A multidimensional model has been developed by Cloninger [9,21]. This is a biologically based theory of personality, where three dimensions

of personality were initially posited, namely novelty seeking, harm avoidance, and reward dependence. Cloninger associated high novelty seeking (exploration, excitability impulsiveness, extravagance, disorderliness) with low dopamine levels and cluster B personality disorders. High harm avoidance (anticipatory worry, fear of uncertainty, shyness with strangers, fatigability, and asthenia) was associated with low serotonin levels and cluster C personality disorders. Finally, low reward dependence (sentimentality, attachment, dependence) was associated with low norepinephrine and cluster A personality disorders. The three dimensions were assessed by his Tridimensional Personality Questionnaire. These dimensions are moderately heritable and fairly stable throughout the lifespan [21,22].

Cloninger later revised the model by referring to the three personality dimensions as “temperament.” He also added a fourth dimension of temperament (persistence) and three character dimensions for each temperament factor. The dimensions of character are as follows: self-directedness (responsibility, purposefulness, resourcefulness, self-acceptance, congruent second nature), cooperativeness (social acceptance, empathy, helpfulness, compassion, integrated conscience), and self-transcendence (self-forgetfulness, transpersonal identity, spiritual acceptance). These character dimensions are weakly heritable and are influenced by learning and the family environment. Rather

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than being stable throughout life, with learning, education, and psychotherapies they may show a developmental progression. The temperament and character dimensions of the revised model are measured by Cloninger’s Temperament Character Inventory (TCI) [21,22].

Cloninger’s biopsychosocial model interprets personality in a multidimensional way; studies carried out using this model have asserted that personality characteristics are associated with positive and negative feelings, adaptive–maladaptive coping attitudes, and many clinical conditions such as depression, anxiety, and panic disorder [23]. In addition, detailed studies investigating the relationship between personality and burnout have been conducted [24,25]. On the other hand, the number of studies on the relationship between burnout and this multidimensional personality model is limited.

The present study investigates the relationship between burnout and personality using the current biopsychosocial model through the assessment of temperament and character properties of nurses, who represent one of the most important segments of healthcare workers.

Methods

This study is a cross-sectional study that was carried out with the nurses working at the Kocaeli Derince Training and Research Hospital (KDEAH).

Sample selection

There are 43 medical departments in the KDEAH, employing over 350 nurses (over 230 during the day and the rest on the nightshift). It was hard to reach to all of the nurses because of work turnover and shifts. At least half of the nurses employed in each department were encouraged to participate in the study, and almost all of the departments were included in the study. Nurses were selected randomly from those who were at work when the study visits took place. We recruited over 130 nurses for the study. Seven nurses were excluded due to having psychiatric disorder (two bipolar affective disorder, five depressive disorder; self-confirmed data, declaration of being actively in treatment by a psychiatrist). In total, 116 nurses without psychiatric diagnoses agreed to participate to the study, but eight of the questionnaires filled out by the nurses were excluded due to missing or incomplete data. As a result, data obtained from 108 healthy nurses participating voluntarily were included to the study. Approval was obtained from the local ethics committee. A socio-demographic data form, the Maslach Burnout Inventory and the TCI were administered to the participants.

Maslach burnout inventory

This inventory was developed by Maslach and Jackson [3] adapted it into Turkish and performed the validity-reliability study. The Turkish adaptation consists of three subscales and 22 items. In the Turkish version of the scale, the items consist of questions answered on a 5-point Likert-type scale from of 0=Never to 4=Always; the original version used a 7-point scale. The subscales are “emotional burnout” (9 items), “depersonalization” (5 items) and “low personal accomplishment” (8 items). The emotional burnout subscale results in a score of 0-36, depersonalization involves a score of 0-20, and low personal accomplishment provides a score 0-32; the total possible score is between 0 and 88 points. The personal accomplishment scores are coded reversely; in this study, the reverse coding took place after the scores were transferred to the SPSS program (lack of personal accomplishment). Total score was obtained by the sum of three subscales.

Temperament and character inventory (TCI)

The personality assessment was carried out using the TCI [21]. This is a 240-item questionnaire that evaluates seven dimensions of personality, including four temperament and three character dimensions. These are as follows: Novelty Seeking (NS), Harm Avoidance (HA), Reward Dependence (RD), Persistence (P) as temperament traits; and Self-Directedness (SD), Cooperativeness (C), and Self-Transcendence (ST) as character traits. The temperament traits are automatic responses to emotional stimuli that are evident in infancy and remain constant throughout life. Meanwhile, the character traits mature through social learning and develop from infancy through adulthood in a stepwise fashion. The validity and reliability of the test in Turkish were confirmed by Kose et al. [26].

Statistical analysis

We used SPSS 17.0 for statistical evaluations, and used the Student’s t test to compare means of linear variables. Also we employed correlation analysis and linear regression analysis to analyze the relationship between linear parameters.

Results

This study was carried out with 108 nurses as participants. Eighty-eight of the nurses participating in the study were women (81.5%), 20 (18.5%) were men, and the age average was 33.74 ± 5.43 (range: 22–50). The scores of the nurses according to the evaluated burnout characteristics are given in Table 1. There was no correlation between age and burnout ($p > 0.05$), but gender and burnout exhibited a significant relationship. Female nurses had higher burnout scores than male nurses ($t: 3,61; p < 0.05$).

The relationship between burnout characteristics and personality characteristics of the nurses was evaluated through a correlation analysis. Accordingly, while high novelty seeking and harm avoidance scores showed a positive correlation with high burnout level, there was a negative correlation between persistence, self-directedness, and cooperation and burnout levels (Table 2).

| | Mean ± Standard Deviation | Min–max scores of the study group | Min–max scores of the inventory |
|---------------------------------|---------------------------|-----------------------------------|---------------------------------|
| Emotional exhaustion | 16.78 ± 8.24 | 0–36 | 0–36 |
| Depersonalization | 6.10 ± 4.23 | 0–18 | 0–20 |
| Lack of personal accomplishment | 10.32 ± 5.45 | 0–25 | 0–32 |
| Total burnout scores | 33.21 ± 14.80 | 0–73 | 0–88 |

Table 1: Nurses’ burnout scores.

| | NS* | HA* | RD* | P* | | SD* | C* | ST* |
|-------------------------|-------|-------|-------|--------|----------|-------|-------|--------|
| Emotional exhaustion | 0.14 | 0.43 | 0.03 | -0.148 | <i>r</i> | -0.36 | -0.29 | 0.06 |
| | 0.145 | 0.000 | 0.768 | 0.123 | <i>p</i> | 0.000 | 0.002 | 0.531 |
| Depersonalization | 0.21 | 0.39 | -0.06 | -0.27 | <i>r</i> | -0.30 | -0.36 | -0.05 |
| | 0.027 | 0.000 | 0.530 | 0.005 | <i>p</i> | 0.002 | 0.000 | 0.612 |
| Personal accomplishment | 0.17 | 0.31 | -0.06 | -0.19 | <i>r</i> | -0.35 | -0.32 | -0.001 |
| | 0.070 | 0.001 | 0.514 | 0.053 | <i>p</i> | 0.000 | 0.001 | 0.988 |
| Total burnout scores | 0.20 | 0.46 | -0.03 | -0.23 | <i>r</i> | -0.41 | -0.38 | 0.02 |
| | 0.035 | 0.000 | 0.798 | 0.017 | <i>p</i> | 0.000 | 0.000 | 0.843 |

*NS: Novelty Seeking, HA: Harm Avoidance, RD: Reward Dependence, P: Persistence, SD: Self-Directedness, C: Cooperativeness, ST: Self-Transcendence

Table 2: Correlations between Temperament-Character scores and burnout scores.

According to the regression analysis performed in order to assess whether personality characteristics are predictive of burnout level. Age and gender are included to the model as well as temperament and character traits as variables to determine the predictors. Male gender was negative predictor for burnout ($\beta = -0.25, t = -3.29, p = 0.001$). Novelty seeking ($\beta = 0.20, t = 2.27, p = 0.025$) and harm avoidance ($\beta = 0.36, t = 3.82, p = 0.000$) were positive predictors, while cooperativeness ($\beta = -0.25, t = -2.20, p = 0.030$) was a negative predictor of total burnout levels (Table 3). A schema of the relationship between temperament and character traits and burnout scores is given in Figure 1.

Gender was found to have a relationship with burnout scores, so a variance analysis was conducted to detail the relationship between personality and burnout, with gender accepted as a covariant. In this model, novelty seeking as a temperament trait and cooperativeness as a character trait still had a significant relationship with total burnout scores (respectively, $p = 0.037, F = 1.77, R^2 = 0.37$ and $p = 0.001, F = 2.63, R^2 = 0.49$), while harm avoidance had a nearly significant relationship ($p = 0.064, F = 1.56, R^2 = 0.44$).

Discussion

The relationship between temperament and character traits and

burnout syndrome was evaluated in this study. The burnout scores of the study sample were similar to those of other research conducted in Turkey with a nurse population and showed a moderate level (15–18 points for emotional exhaustion, 5–8 for depersonalization; 10–16 lack of accomplishment (calculated as reverse coded) [27,28].

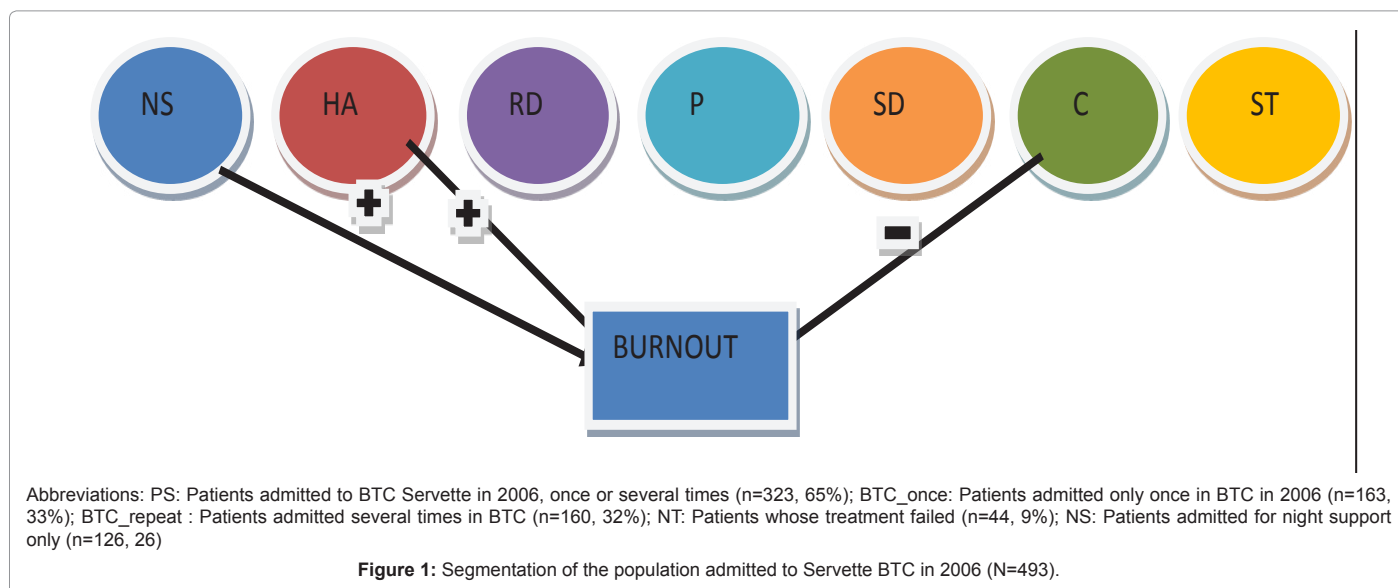
The results of this study showed that personality dimensions might be important for the development of burnout. It was found that there is a high correlation between Novelty Seeking and higher burnout scores. Previous studies have shown higher Novelty Seeking scores to be related with personality disorders and attention deficit and hyperactivity disorder [29]. Novelty seeking includes excitability, impulsiveness, extravagance, and disorderliness. People with high Novelty seeking scores show intolerance to routine; they make decisions quickly, become moody when they have incomplete information, and do not like frustrating rules [22]. These properties may serve to enhance disappointment in a routine where the same works is carried out repeatedly over long working hours, where there are detailed and important rules and difficult working conditions, as in nursing [30].

In this study, Harm Avoidance was correlated with and positively predicted higher burnout scores. Harm avoidance has been shown to be related to depression and maladaptive behavior, leading to depression and anxiety disorders [22]. Burnout syndrome has a similar

| | NS* | HA* | RD* | P* | SD* | C* | ST* | age | gender | |
|---------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|--------|---------|
| Emotional exhaustion | 0.20 | 0.33 | 0.19 | -0.03 | -0.09 | -0.17 | 0.00 | 0.02 | -0.30 | β |
| | 2.20 | 3.19 | 0.84 | -0.36 | -0.77 | -1.34 | 0.018 | 0.26 | -3.61 | t |
| | 0.146 | 0.002 | 0.401 | 0.721 | 0.446 | 0.183 | 0.986 | 0.799 | 0.000 | p |
| Depersonalization | 0.18 | 0.35 | 0.12 | -0.16 | 0.06 | -0.31 | -0.04 | -0.12 | -0.16 | β |
| | 1.86 | 3.35 | 1.13 | -1.78 | 0.52 | -2.47 | -0.37 | -1.36 | -1.88 | t |
| | 0.066 | 0.001 | 0.262 | 0.079 | 0.605 | 0.015 | 0.715 | 0.176 | 0.063 | p |
| Lack of personal accomplishment | 0.12 | 0.22 | 0.08 | -0.06 | -0.13 | -0.20 | -0.01 | -0.26 | -0.12 | β |
| | 1.14 | 2.06 | 0.73 | -0.61 | -1.11 | -1.50 | 0.08 | -2.88 | -1.30 | t |
| | 0.256 | 0.042 | 0.470 | 0.547 | 0.270 | 0.138 | 0.937 | 0.005 | 0.196 | p |
| Total burnout Scores | 0.20 | 0.36 | 0.12 | -0.09 | -0.08 | -0.25 | -0.01 | -0.12 | -0.26 | β |
| | 2.27 | 3.82 | 1.16 | -1.02 | -0.77 | -2.20 | -0.14 | -1.49 | -3.30 | t |
| | 0.025 | 0.000 | 0.248 | 0.309 | 0.446 | 0.030 | 0.892 | 1.141 | 0.001 | p |

Independent variables: *NS: Novelty Seeking, HA: Harm Avoidance, RD: Reward Dependence, P: Persistence, SD: Self-Directedness, C: Cooperativeness, ST: Self-Transcendence, age, gender

Table 3: Linear regression analysis for the predictors of burnout scores.



symptomatology and a high correlation with depressive disorders; thus, harm avoidance seems to be a predisposing dimension for burnout. In a previous study conducted with physicians by Pejuskovic et al. [20], harm avoidance was shown to be the most important personality dimension for burnout syndrome [20]. Harm avoidance as a personality trait includes the subscales of anticipatory worry and pessimism, fear of uncertainty, shyness with strangers, fatigability, and asthenia. Individuals high in harm avoidance tend to be cautious, careful, fearful, tense, apprehensive, nervous, timid, doubtful, discouraged, passive, and negativistic or pessimistic even in situations that do not normally worry other people [22]. In this study, higher scores of harm avoidance were shown to be a predictor for burnout syndrome. Thus, this personality trait seems to be one of the answers to the question of why some people but not others in the same conditions develop burnout syndrome.

In this research, linear regression analysis showed that female gender is an independent predictor for burnout. In this and previous research, women have been found to have higher harm avoidance scores [22]. Women are shown to be at risk of burnout [31], and harm avoidance may play role in this susceptibility.

Persistence was shown to be protective against negative emotions and inversely correlated with hostility and anger [32]. Individuals high in persistence tend to be industrious, hardworking, persistent, and stable, despite frustration and fatigue. They do not give up easily, and in fact, tend to work extra hard when criticized or confronted with mistakes in their work. In this study, persistence was negatively correlated with burnout syndrome. It should be remembered that a highly persistent individual may tend to be a perfectionist and workaholic who pushes him/herself far beyond what is necessary to get by. High persistence is a good adaptive strategy when rewards are intermittent but the contingencies remain stable. However, when contingencies change rapidly, persistence may become maladaptive [22]. Stayanov and Cloninger [33] reported that higher levels of persistence may act as a predisposing dimension for burnout syndrome if it prepares the ground for perfectionism. According to our data, higher persistence levels are negatively correlated with the depersonalization–desensitization subscale and total burnout syndrome scores. However, the strength of the correlation between persistence and burnout syndrome was not powered by regression analysis in this study, and it is expected that a larger sample size might help to address this issue.

Self-directedness is a character trait involving responsibility as opposed to blaming, purposefulness as opposed to lack of goal direction, resourcefulness as opposed to inertia, and a congruent second nature as opposed to bad habits. Highly self-directed persons are described as mature, strong, self-sufficient, responsible, reliable, goal-oriented, constructive, and well-integrated individuals. Low personal performance and negative emotions are shown to be strongly related to low self-directedness, and burnout is characterized by decreased interest, as well as positive emotions from work [33]. In this study, presents results as presupposed in light of the literature, so self-directedness was negatively correlated with burnout.

Burnout is also frequently associated with feelings of social alienation or inadequacy of support, which is in turn based on low TCI Cooperativeness [33]. Cooperativeness is shown to be an adaptive personality dimension that protects people from a negative emotional status. It includes social acceptance as opposed to social intolerance, empathy as opposed to social disinterest, helpfulness as opposed to unhelpfulness, compassion as opposed to revengefulness, and pure-

hearted principles as opposed to self-serving advantage [22]. In this study, cooperativeness was shown to act as a negative predictor for burnout syndrome; higher scores of cooperativeness seem to protect individuals from burnout.

In their report, Stayanov and Cloninger [33] stated that ‘In terms of prevention and mental health promotion, we expect that high persistence is a potent risk factor for development of burnout except when both Harm Avoidance and self-directedness are low. We also expect that when persistence is average or low, all three TCI character traits (i.e. self-directedness, cooperativeness, and self-transcendence) are protective (resilience) factors’. This study presents the relationship between the scores of personality and burnout in the perspective of interaction of personality-burnout. We found that novelty seeking and harm avoidance were positive predictors of burnout, while cooperativeness was a negative predictor. Self-directedness was negatively correlated with burnout, but it was not a predictor. This study also presented a negative correlation between persistence and burnout scores. A future study may investigate the interactions between personality traits between each other and their relation to burnout thus the relationship between personality and burnout may be understood in a multidimensional manner. The role of mild and high persistence may be discussed in future research.

Limitations of this study included its small sample size and descriptive design. Further studies with larger samples may explain which personality dimensions predispose individuals to or protect them against burnout syndrome. Such results could aid in the design of a personalized health-promoting system.

Conclusion

This study showed that there is a relationship between burnout and the personality characteristics defined by Cloninger. According to this study, novelty seeking and harm avoidance have a positive correlation with burnout, while persistence, self-directedness, and cooperativeness have a negative correlation. Thus, burnout is not related only to working conditions, but also to individual characteristics. While analyzing the structure of the healthcare provider systems, individual specific evaluations and the development of character traits that are protective against burnout should be put on the agenda.

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