Correlations Between Stress Perception, Exhaustion, and Job Satisfaction in Hospital Nurses

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Abstract. This survey study identifies the correlations between types of perceived stress, exhaustion, and job satisfaction in a sample of 149 hospital nurses. Data were analyzed using the Pearson's correlation analysis, t-test, one-way ANOVA, and Tukey's HSD test. Significant positive correlations were found between stress-sensitive perception and exhaustion, and between stress-resistant perception and job satisfaction. The levels of exhaustion increased with stress-sensitive perception when sociodemographic and job characteristics were controlled. Further research is necessary to examine the effects of individual and organizational factors on stress, exhaustion, and job satisfaction in hospital nurses.

Keywords: types of perceived stress, stress, exhaustion, job satisfaction

1 Introduction

Nurses must deal with the diverse conflicts arising within the hospital, increase in demand for professional knowledge and skill, difficult working environment, various needs of their patients [1], and other inherent components of their jobs, which make their profession one of the most stressful [2]. Overwhelming levels of stress decrease productivity and induce neglect of duties, absenteeism, and exhaustion [3]. Of the various factors that affect stress, depending on the way one perceives stress, the way one communicates with others or performs tasks may differ significantly [4], and if analyzed, the results could enhance professional work performance and contribute towards building partnership. By identifying the relationship between nurses identifying the relationship between exhaustion, and job satisfaction, we expect to manage exhaustion and improve job satisfaction, ultimately leading to high quality nursing care.
2 Method

2.1 Study Design

This study is a descriptive survey that identifies the relationship between types of perceived stress, exhaustion, and job satisfaction among nurses.

2.2 Sampling and Data Collection

From May 4, 2012 to June 17, 2012, 149 nurses from Seoul Gyungi Sojae University Hospital, who agreed to participate, were included in this study. Based on the G Power 3.0 analysis software, using a significance level $\alpha$ of 0.05, effect size 1.00, statistical power of 0.80, this study required at least 89 participants.

2.3 Instruments

Type of perceived stress was calculated using a tool by Seaward[5] that measures stress sensitivity and resistance, with Cronbach’s $\alpha = .92$. Exhaustion was measured using a tool by Pick [6] with Cronbach’s $\alpha = .92$, and job satisfaction was measured using a tool by Park [7] with Cronbach’s $\alpha = .89$.

2.4 Data Analysis

Data were analyzed using the PASW 21.0 version program, along with error, percentage, and average ratings, the Pearson's correlation coefficient, the t-test, the one-way ANOVA, the Tukey’s test, and the multiple linear regression.

3 Results

3.1 Stress Perception Type, Exhaustion, and Job Satisfaction Levels

The average sensitivity to perceived stress was $1.15 \pm 0.23$, type of perception of stress resistance was $1.90 \pm 0.38$ points, exhaustion was $3.02 \pm 0.60$, and job satisfaction was $2.78 \pm 0.42$, respectively.

3.2 Differences in Type of Perceived Stress, Exhaustion, and Job Satisfaction according to Sociodemographic and Job Characteristics

According to demographic characteristics by marital status ($p = 0.022$), there was a significantly higher number of single than married subjects. Based on religious
preferences, exhaustion \((p = 0.047)\) was higher in the non-religious subjects, and job satisfaction \((p = 0.048)\) was higher in the religious subjects. Based on work-related characteristics, those involved in surgery reported higher levels of exhaustion \((p = 0.002)\), and those working in clinics reported higher job satisfaction \((p = 0.007)\). Based on work experience, perception of stress resistance \((p = 0.032)\) was significantly higher in those belonging to the 10-to-15-year experience category.

### 3.3 Analysis of Correlations between Stress Perception Types, Exhaustion, and Job Satisfaction

Stress sensitivity perception was significantly associated with exhaustion \((r = 0.196, p < 0.05)\), whereas stress resistance perception type showed a significant negative correlation with exhaustion \((r = -0.505, p < 0.05)\) and a significant positive correlation with job satisfaction \((r = 0.207, p < 0.05)\).

**Table 1.** Analysis of correlation between type of perceived stress, exhaustion, and job satisfaction.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Stress perception type</th>
<th>Exhaustion</th>
<th>Job satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stress-sensitive</td>
<td>Stress-sensitive</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Stress-resistant</td>
<td>0.131</td>
<td>1</td>
</tr>
<tr>
<td>Exhaustion</td>
<td>0.196**</td>
<td>-0.505**</td>
<td>1</td>
</tr>
<tr>
<td>Job satisfaction</td>
<td>-0.125</td>
<td>0.207**</td>
<td>-0.639**</td>
</tr>
</tbody>
</table>

*** < .01, ** < .05, * < .10

### 3.4 Comparison of causative factors between hospital nurses’ exhaustion and job satisfaction

When taking demographic characteristics and job specific characteristics (experience, level, and area of work) into consideration, exhaustion is significantly raised by 0.630 units with every 1-unit increase in stress sensitivity type, and exhaustion is significantly decreased by 0.773 units with every 1-unit increase in stress resistivity.
Table 2. Comparison of causative factors between hospital nurses’ exhaustion and job satisfaction

<table>
<thead>
<tr>
<th></th>
<th>Model I†</th>
<th>Model II‡</th>
<th>Model III∮</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B (p-value)</td>
<td>B (p-value)</td>
<td>B (p-value)</td>
</tr>
<tr>
<td>Exhaustion</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(intercept)</td>
<td>3.562 (0.000)**</td>
<td>3.262 (0.000)**</td>
<td>2.769 (0.000)**</td>
</tr>
<tr>
<td>Stress-sensitive</td>
<td>0.695 (0.000)**</td>
<td>0.738 (0.000)**</td>
<td>0.630 (0.001)**</td>
</tr>
<tr>
<td>Stress-resistive</td>
<td>-0.858 (0.000)**</td>
<td>-0.827 (0.000)**</td>
<td>-0.773 (0.000)**</td>
</tr>
<tr>
<td>Job satisfaction</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(intercept)</td>
<td>2.746 (0.000)**</td>
<td>3.025 (0.000)**</td>
<td>3.543 (0.000)**</td>
</tr>
<tr>
<td>Stress-sensitive</td>
<td>-0.280 (0.000)**</td>
<td>-0.319 (0.030)*</td>
<td>-0.211 (0.131)</td>
</tr>
<tr>
<td>Stress-resistive</td>
<td>0.249 (0.000)**</td>
<td>0.227 (0.011)*</td>
<td>0.124 (0.162)</td>
</tr>
</tbody>
</table>

*p < .05, **p < .01, B: Non-standardized regression coefficients
†: Regression coefficient without other variables controlled for
‡: Regression coefficient with sociodemographic (age and marital status) controlled for
∮: Regression coefficient with sociodemographic (age and marital status) and job-related (experience year, position and department) characteristics controlled for

4 Conclusion

In this study, a survey was conducted with the sample size of 149 nurses in order to identify correlations between stress perception types, and exhaustion and job satisfaction, using tools developed by Seaward(2009), Eun-hee Guak(1983), and Jeong-hye Park (2002). The mean scores were 1.15±0.23 for stress-sensitive perception, 1.90±0.38 for stress-resistive perception, 3.02±0.60 for exhaustion, and 2.78±0.42 for job satisfaction. A significant negative correlation was found between stress-resistive perception and exhaustion, and significant positive correlations were observed between stress-sensitive perception and exhaustion, and stress-resistive perception and job satisfaction.

References