ORIGINAL ARTICLE

Wellbeing, Sense of Coherence, and Emotional Labor among Healthcare Professionals

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ABSTRACT

This study aimed to determine whether the demands of emotional labor and its effects vary across disciplines of healthcare professionals, and to identify characteristics of healthcare workers with good psychological wellbeing. A self-administered cross-sectional survey was conducted involving 155 multidisciplinary healthcare workers at a rehabilitation hospital in Japan. The occupational differences in emotional labor and wellbeing (General Health Questionnaire: GHQ-12) among multidisciplinary healthcare workers were examined using ANOVA with Tukey post hoc comparison. Correlation analysis was performed to assess the relationships between demographic characteristics, emotional labor, sense of coherence (SOC), and wellbeing of participants. To identify factors predicting wellbeing, we generated two classification and regression trees (CART), with GHQ score (continuum variable) and a cutoff score of GHQ ≤ 3 as dependent variables. The SOC score was significantly associated with the GHQ score.

There were no significant occupational differences in the wellbeing and emotional labor of healthcare workers. Participants’ age was negatively associated with duration, intensity, and variety of emotions required. None of the aspects of emotional labor were significantly associated with SOC or wellbeing. In the CART analysis, participants with a SOC score > 50 had the highest probability of maintaining good mental health (GHQ ≤ 3). The study concluded that emotional labor demands and their effect are prevalent across multiple professions. Strengthening SOC is vital in ensuring the good psychological status of healthcare professionals.

<Key-words>
Emotional labor, Sense of coherence, Wellbeing, Healthcare professionals

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I. Introduction

Due to demographic and epidemiological changes, several countries are experiencing and predicting a shortage of healthcare workers.\(^1\)-\(^3\) Recent statistics indicate that among all industries, the health and social care industry has the largest number of workers with mental health issues.\(^4\) Occupational stress and burnout are common issues among healthcare workers, including physicians,\(^5\)-\(^6\) nurses,\(^7\)-\(^9\) social workers,\(^10\) and physiotherapists.\(^11\)-\(^12\) Under these circumstances, healthcare workers are expected to address the diverse needs of patients/families who are experiencing discomfort, pain, and anxiety about their future. To establish therapeutic relationships, healthcare workers must recognize and validate the negative emotions of patients/families while managing their true feelings.\(^8\),\(^13\) This emotional demand is referred to as emotional labor, a concept introduced by Hochshild.\(^14\)

Emotional labor is multifaceted and has both positive and negative effects on the wellbeing of healthcare professionals.\(^15\)-\(^17\) Many studies have examined the dimension of emotional regulation, such as surface acting and deep acting. Surface acting requires healthcare workers to regulate their emotional expression and suppress their genuine feelings, whereas, in deep acting, they control their thoughts and emotions according to their professional roles. Previous studies have revealed that surface acting is harmful to the wellbeing of healthcare workers, resulting in burnout. Conversely, deep acting has been indicated to enhance the wellbeing of healthcare workers.\(^16\),\(^18\),\(^19\) Grandey and Gabriel\(^15\) suggested that the effects of surface acting and deep acting “can be neutralized and reversed under certain conditions,” and identifying the moderators “can provide important insights about the theoretical processes of emotional labor” (p. 342).

Sense of coherence (SOC) is a concept based on the salutogenic model, which refers to the ability to perceive a stressful situation as understandable (sense of comprehensibility), manageable (sense of manageability), and meaningful (sense of meaningfulness).\(^20\) Studies have revealed that SOC can moderate the impact of job stress, prevent burnout, and contribute to mental health maintenance.\(^21\),\(^22\) Therefore, we hypothesized that SOC could be a moderator of the stress caused by emotional labor. Iwatani et al.\(^23\) discovered that lower SOC might affect nurses’ ability to cope with emotional labor; however, the moderating role of SOC against emotional labor is yet to be clarified.

Brotheridge and Grandey\(^18\) discovered that the demands and characteristics of emotional labor differ by occupation type. They also highlighted the need to explore the relationships between demographic factors (age, gender, and race) and emotional labor. To the best of our knowledge, no study has examined the occupational differences in emotional labor among multidisciplinary healthcare workers. Thus, we evaluated the emotional labor of multidisciplinary workers in healthcare to determine whether emotional labor demands and their effects vary across disciplines. We also examined
whether SOC moderated the effect of emotional labor on the wellbeing of healthcare workers. Furthermore, we attempted to identify the characteristics of healthcare workers with good psychological wellbeing.

II. Material and Methods

1. Participants and procedures

All healthcare workers (nurses, care workers, rehabilitation therapists, and social workers) in a rehabilitation hospital in Japan completed a self-administered survey. The hospital administrators distributed questionnaires to 155 healthcare workers. The study was conducted in December 2014.

The institutional review board of the hospital approved this study. A questionnaire along with a cover letter containing a consent form and instructions were distributed to the participants. The participants provided written informed consent attesting to their participation. To maintain confidentiality, participants returned the completed questionnaire in a sealed envelope.

2. Measure

1) Demographic and professional information

The participants provided information about age, gender, professional discipline (i.e., 1 = nurse, 2 = care worker, 3 = rehabilitation therapist, 4 = social worker), and duration of experience working in the current profession (months). We also asked if they were in a managerial position at the hospital (1 = No, 2 = Yes).

2) Emotional labor

In this study, emotional labor is defined as the emotional management required by health care workers to perform their tasks and interact with patients/families. Since the concept of emotional labor has not been universally defined and implemented, this study adopted Grandey and Gabriel’s three-component model of emotional labor, which categorizes emotional labor dimensions into emotional requirements (job-based requirements for emotional displays when interacting with others), emotional regulation (modification of feelings or expression), and emotional performance (observable expressions congruent with requirements). We used an additive scale constituting the Emotional Labor Scales (ELS) and Emotion Work Requirements Scale (EWRS). The ELS comprises of six dimensions of emotional labor that fall under the emotional requirement and emotional regulation categories of the three-component model. Within emotional requirements, we assessed the duration (item 1), frequency (items 2, 5, 7), intensity (items 3, 9), and variety (items 6, 11, 13) of emotional labor. Surface acting (items
8, 12, 14) and deep acting (items 4, 10, 15) were evaluated as emotional regulation. For duration, the participants reported the average number of minutes interacted with patients/families in a day. Responses to other items were made on a 5-point Likert scale (1 = never, 5 = always). Higher ELS scores indicate that participants are engaged more in each aspect of emotional labor in their interactions with patients/families. For emotional performance, we used the EWRS to measure how frequently participants are required to display positive emotions (items 16–19) or to hide negative emotions (items 20–22) when interacting with patients/families. Responses were made on a 5-point scale (1 = not at all, 5 = always required). Higher EWRS scores indicate the participants’ perception of a greater demand to perform emotional labor in the interaction with patients/families.

3) SOC

The 13-item SOC scale (SOC-13) developed by Antonovsky and translated into Japanese by Yamazaki was used to assess participants’ SOC.24 The SOC-13 comprises three domains: comprehensibility (items 2, 6, 8, 9, 11), manageability (items 3, 5, 10, 13), and meaningfulness (items 1, 4, 7, 12). Items are rated on a 7-point Likert scale (1 = not at all, 7 = extremely). The average scores for each domain were computed after reverse-coding was applied to items 1, 2, 3, 7, and 10. The validity of this scale has been examined, and its Cronbach’s alpha ranges from 0.72 to 0.89.25 A higher SOC score indicates that the participant has greater ability to cope with stress and to maintain health.

4) Wellbeing

We used the Japanese version of the General Health Questionnaire (GHQ-12) to evaluate participants’ psychological wellbeing. This scale’s internal consistency has been examined, and it has been reported to be internally reliable.26 Responses corresponding to the presence of psychological distress and social dysfunction are rated on a 4-point scale (“not at all,” “same as usual,” “slightly more than usual,” or “much more than usual”). In this study, a binary scoring method was adopted, in which the two least symptomatic answers are scored as 0 and the two most symptomatic answers are scored as 1 (i.e., 0-0-1-1), with scores ranging from 0 to 12. Higher scores indicate more psychiatric morbidity.

3. Statistical analyses

We presented continuous variables as mean and standard deviation or median and interquartile range and categorical variables as numbers and percentages. The occupational differences in emotional labor and wellbeing among multidisciplinary healthcare workers were analyzed using ANOVA with Tukey post hoc comparison. We assessed the correlations between study variables using Pearson’s correlation coefficient. The α value for all statistical tests was set at 0.05 (two-tailed). To determine the characteristics associated with the wellbeing (GHQ-12) of participants, we generated the
classification and regression trees (CART). CART is a recursive partitioning. It identifies an optimally efficient variable, which would maximize both the sensitivity and specificity in predicting outcomes. Then, it repeats the algorithm and identifies combinations of those variables subsequently. For primary CART analysis, we set the GHQ-12 score (continuum variable) as the dependent variable. We conducted the secondary CART analysis to identify the characteristics associated with higher wellbeing, using a cutoff score of GHQ ≤3 as the dependent variable. Each independent variable was examined, and a split was made to maximize the sensitivity and specificity of the classification. We used the statistical software, IBM SPSS Statistics for Windows, Version 25.0. (Armonk, NY: IBM Corp.) for all analyses in this study.

III. Results

1. Characteristics of participants and occupational differences in emotional labor

Of the 155 questionnaires distributed, 142 (91.6%) were returned. After excluding 16 questionnaires due to significant missing data, 126 questionnaires (81.3%) were analyzed. Table 1 shows the descriptive statistics of study variables. Participants’ mean age was 30.5 ± 8.08 years. Among the participants, 74 (58.7%) were women, and 52 (41.3%) were men. The average length of career in the profession was 92.2 months (7 years and 8.2 months). In terms of profession, 39 participants were nurses (31.0%), 24 were care workers (19.0%), 58 were rehabilitation therapists (46.0%), and five were social workers (4.0%). ANOVA revealed no significant differences in any dimension of emotional labor and wellbeing among the professions. Thus, the sample was considered homogeneous in subsequent analyses.

The median duration of participants’ interaction with patient/family per day was 360 minutes (six hours). The duration ranged from 5 to 480 min. 71 participants (58.6%) interacted with the patient/family for more than 300 minutes (five hours), while 14 participants (11.6%) spent <30 min daily with the patient/family. The mean scores of frequency, intensity, and variation on ELS were 7.96 ± 1.08, 4.35 ± 1.31, and 6.98 ± 1.88, respectively (Table 1). These results indicated that participants were engaged in emotional labor moderately, and participants used similar basic emotional expressions in performing emotional labor. The mean score of surface acting was 8.45 ± 1.85, whereas that of deep acting was 6.30 ± 1.82 (Table 1). The results showed that surface acting was performed slightly more by the participants than deep acting. The mean score of displaying positive emotions was 15.01 ± 2.15, whereas that of hiding negative emotions was 11.35 ± 2.10. Such results indicated that participants perceived that their jobs required them to display positive emotions and hide negative emotions equally often. The mean SOC-13 score was 54.44 ± 9.55. The mean GHQ-12 score was 3.2 ± 2.69. Seventy-five participants (59.5%) scored ≤3, indicating good mental health status.
Table 1 shows descriptive statistics of study variables (n = 126).

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<tr>
<th>Variable</th>
<th>n</th>
<th>%</th>
<th>SD</th>
<th>range</th>
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<td>Care worker</td>
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<td>Rehabilitation therapist</td>
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<td>46.0</td>
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<td>Social worker</td>
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<td>300–480 min</td>
<td>71</td>
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<td>Frequency</td>
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<tr>
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<td>1.82</td>
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<tr>
<td>Hide negative emotions</td>
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<td></td>
<td>6 - 15</td>
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</table>

2. Correlations between study variables

Table 2 shows correlations between study variables. Except for gender, demographic characteristics had weak or very weak associations with some dimensions of emotional labor. Age was negatively associated with duration ($r = -0.260, p < 0.01$), intensity ($r = -0.219, p < 0.05$), and variety ($r = -0.198, p < 0.05$) of emotional labor. Professional experience also negatively correlated with duration ($r = -0.289, p < 0.01$). Participants’ age ($r = 0.199, p < 0.05$) and professional experience ($r = 0.223, p < 0.05$) also had weak associations with SOC.

None of the dimensions of emotional labor was significantly associated with SOC or GHQ-12 scores. Among the dimensions of emotional labor, duration had a weak...
association with intensity \( (r = 0.232, p < 0.05) \). Frequency was associated with intensity \( (r = 0.270, p < 0.01) \), variety \( (r = 0.280, p < 0.01) \), surface acting \( (r = 0.327, p < 0.01) \), deep acting \( (r = 0.406, p < 0.01) \), and display of positive emotions \( (r = 0.314, p < 0.01) \). Intensity had a strong association with variety \( (r = 0.722, p < 0.01) \) and a weak association with deep acting \( (r = 0.404, p < 0.01) \). Variety had a significant association with deep acting \( (r = 0.594, p < 0.01) \). Surface acting was associated with deep acting \( (r = 0.307, p < 0.01) \), display of positive emotions \( (r = 0.307, p < 0.01) \), hiding of negative emotions \( (r = 0.388, p < 0.01) \). Display of positive emotions also significantly correlated with hiding of negative emotions \( (r = 0.533, p < 0.01) \). Only SOC was significantly associated with GHQ score \( (r = -0.437, p < 0.01) \). 

### Table 2: Correlations between study variables \( (n = 126) \)

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<th>1</th>
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<tr>
<td>Professional experience</td>
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<tr>
<td>Duration</td>
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<tr>
<td>Frequency</td>
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<tr>
<td>Intensity</td>
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<td>-.16</td>
<td>.232**</td>
<td>.270**</td>
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<td></td>
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<tr>
<td>Variety</td>
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<td>-.03</td>
<td>-.012</td>
<td>.407**</td>
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<td>-.153</td>
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<td>.138</td>
<td>.135</td>
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**p < 0.01, two-tailed, *p < 0.05, two-tailed

### 3. CART analysis

Figure 1 shows the primary CART analysis results. In the CART analysis, we entered the number of participants and the mean and standard deviation of GHQ-12 scores for each group. The first split occurred with a SOC score of 47. Participants with a SOC score > 47 were divided into two groups: SOC > 58 group (Subgroup 1) and SOC ≤ 58 group (Subgroup 2). Participants with a SOC score ≤ 47 were also divided in terms of professional experience (months): > 93 months (Subgroup 5) and ≤ 93 months. Those with ≤ 93 months of professional experience were further divided into male (Subgroup 3) and female (Subgroup 4) categories.
Professional experience refers to the length of a participant's career in a discipline.

The secondary CART analysis identified the characteristics of healthcare workers with good psychological wellbeing (Figure 2). Of the 126 participants, 59.5% scored ≤ 3 on the GHQ. The first split occurred with a SOC score of 50. Participants with a SOC score > 50 (Subgroup 1) showed the highest probability (73%) of having good mental health status. The SOC ≤ 50 group was further divided into male (Subgroup 2) and female (Subgroup 3) categories. The probabilities of scoring GHQ ≤ 3 were 42.9% and 10.0% for Subgroups 2 and 3, respectively. Comparing to Subgroup 1, Subgroup 2 tended to be lower wellbeing, but not significantly different (odds ratio [95% confidence intervals]: 0.38 [0.12-1.20]). On the other hand, Subgroup 3 was significantly lower wellbeing (0.06 [0.01-0.26]).
<Figure 2> Subgroups related to GHQ (score 3 or less)

IV. DISCUSSION

To the best of our knowledge, this is the first study to determine whether there are variations in emotional labor among multidisciplinary healthcare workers in Japan. The results indicated that the degree of emotional labor was similar across professions. None of the dimensions of emotional labor were associated with SOC or the wellbeing of healthcare workers. Thus, we could not clarify the psychological impact of emotional labor and the moderating function of SOC. Ashforth and Humphrey\textsuperscript{27} discussed that consistency between emotional labor and social identity may result in improved wellbeing. Our findings suggest that emotional labor is rooted in professional norms related to interactions with patients/families and remains consistent regardless of the professional background of healthcare workers.

The association between demographic characteristics (i.e., age and gender) and emotional regulation (i.e., surface acting and deep acting) in this study is inconsistent with the findings of previous studies.\textsuperscript{28,29} We discovered a negative association between age and emotional requirements (i.e., duration, intensity, and variety). Younger workers were more likely to interact longer with patients/families and express intense and diverse emotions. Similarly, less experienced workers reported a longer duration of emotional labor. These findings imply that younger or less experienced healthcare workers are more vulnerable to psychological stress due to emotional labor. As stated above, the effect of emotional regulation “can be neutralized and reversed under certain conditions”.\textsuperscript{15} We discovered that surface acting was associated with the frequency of emotional labor alone,
whereas deep acting was associated with frequency, intensity, and variety of emotional labor. Thus, a genuine emotional commitment to patients/families may be a protective factor against the effects of emotional regulation on the psychological burden.

The findings of this study support previous studies, which suggested that high SOC is associated with having positive perceptions of stressors and improved wellbeing.\(^{21,23,30,31}\) CART analysis revealed that SOC is the strongest predictor for wellbeing among healthcare workers. It also showed that a SOC score of 50 could be an indicator of a healthcare worker's potential ability to maintain good psychological health.

This is a single-center study, so the generalizability of the findings is limited. Although these sample sizes represent the actual distribution of healthcare workers in Japanese rehabilitation hospitals, the disproportionate sample sizes for multidisciplinary health professionals in this study could be a limitation. The number of social workers was smaller than those of other health professionals. In addition, the study did not include doctors, due to inability of recruitment. The level of emotional labor could be varied depending on a type of professions. Those limitations might have affected the findings regarding occupational differences. Future studies should recruit participants, including doctors, from multiple hospitals to confirm that practicing emotional regulation when interacting with patients/families is a shared task among multidisciplinary healthcare workers. Hochschild’s concept of emotional labor has been applied to collegial emotional labor in interprofessional relationships.\(^{32}\) The ability to work with professionals from other disciplines is an essential skill; however, it can be a major stressor for healthcare workers. Thus, further research is needed to explore emotional labor employed to maintain relationships and manage conflict with colleagues.

We also acknowledge that some events, including the COVID-19 pandemic have affected the emotional labor and wellbeing of health care workers since the data collection for this study. Research on emotional labor and wellbeing after a pandemic would help understand changes in their relationships with patients/families in a restricted environment.

Therefore, we conclude that in interacting with patients/families, emotional labor is not directly associated with healthcare workers’ wellbeing because it is consistent with their professional identity. This study found that SOC could predict the psychological health status of healthcare workers and is suggestive of a screening cutoff point. Despite the limitations of this study, its findings could be useful in developing intervention programs that consider stress tolerance.

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