Causal Relationship Between Six Factors of Psychological Adjustment of Laryngectomized Patients: Its Chronological Changes from Before Discharge from Hospital to Twelve Months After It

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### Purpose
The purpose of this study was to clarify the causal relationship between factors on psychological adjustment of laryngectomized patients from before discharge from hospital to twelve months after it.

### Methods

**Subjects**: 130 hospitalized pharyngeal and laryngeal cancer patients who underwent laryngectomy

**Times**: Before surgery, three months, six months, and twelve months after discharge from hospital.

**Scale**: The Nottingham psychological adjustment scale for laryngectomized patients (NAS-J-L), Six subscales ⇒ 1) anxiety and depression, 2) self-esteem, 3) self-efficacy, 4) acceptance of disability (positive affirmation), 5) attitude towards disabled persons who lost voice (attitude), and 6) locus of control

A Likert scale of four or five points

**Contents**: Basic attributes, age, sex, family composition, and occupation.

**Analysis**: Factor analysis ⇒ The six subscales of one factor

An unidentified indeterminate model: Toyota's full path model, Fig. 1

### Results
Subjects' average age before discharge from hospital, sex, and family composition were 63.6 ± 8.1, 115 males (88.5%) and 15 females (11.5%), and one person (19, 21.5%), two persons (66, 50.8%), and more than two persons (36, 27.7%), respectively. Diagnosis and disease classification were shown Table 1. The number of subjects who worked at the time of before discharge from hospital and three, six, twelve months after it were 60 (39.2%), 55 (42.3%), 54 (41.5%), and 51 (39.2), respectively.

### Discussion

**Fig. 1** Full path model

The self-esteem was dominant from before discharge from hospital to three months after it. The outcome was positive affirmation, suggesting that the psychological state of laryngectomized patients during this period was characterized as a "critical transition period" that shaped their self-esteem. Self-esteem can be paraphrased as emotion grasping the existential value of self as a human being. Laryngectomized patients may have spiritual pain particularly during the period from before discharge from hospital to three months after it.

### Conclusion

The self-esteem was dominant from before discharge from hospital to three months after it, but the outcome was positive affirmation, suggesting that the psychological state of laryngectomized patients during this period was characterized as a "critical transition period" that shaped their self-esteem. Self-esteem can be paraphrased as emotion grasping the existential value of self as a human being. Laryngectomized patients may have spiritual pain particularly during the period from before discharge from hospital to three months after it.