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The purpose of this study was to clarify the relationship between the psychological adjustment laryngectomized patients and changes in their working situation.

Recruit: A total of 27 participated in the study.

Surveys (four times): Before surgery (face-to face), three months, six months, and a year after discharge (by mail).

Independent variables: Occupation before surgery, Currently working, and the reason for retirement if they were retired.

Analysis: A repeated measures GLM method

Psychological adjustment was rated using a top score of 100 points.

Attributional style, which was part of the original scale, was found to work differently from other subscales (Dodds et al., 1993).

Consequently, it was proposed to be excluded by Suzukamo et al. (2006) and was thus excluded from the NAS-J-L.

The higher the points in each subscale, the higher the psychological adjustment.

This scale has established reliability (Cronbach's alpha coefficients: 0.69–0.91), validity of the structural concept, and criterion-related validity.

Table 4.1. The Results of main effect and interaction by multiple regression analysis

Figure 1 Anxiety/depression (age and occupation) interaction

Time Point	64 years \leq employee	64 years \leq unemployed	65 years \geq employee	65 years \geq unemployed
before surgery	~78	~75	~95	~85
three months after surgery	~78	~72	~98	~92
six months after surgery	~75	~68	~95	~95
a year after surgery	~82	~60	~82	~92

Table 4.2. The Results of main effect and interaction by multiple regression analysis

Table 4.3. The Results of main effect and interaction by multiple regression analysis

Figure 2 is a line graph titled "Fig.2 Attitude(age and occupation) interaction". The Y-axis represents "Attitude" with a scale from 30 to 70. The X-axis represents time points: "before surgery", "three months after discharge", "six months after discharge", and "a year after discharge". There are four data series representing different combinations of age and occupation:

- 64 years \leq employee (blue line):** Starts at approximately 48, drops to 38 at three months, rises to 45 at six months, and reaches 48 at a year.
- 64 years \leq unemployed (red line):** Starts at approximately 65, drops to 48 at three months, rises to 45 at six months, and reaches 45 at a year.
- 65 years \geq employee (green line):** Starts at approximately 70, drops to 62 at three months, 55 at six months, and reaches 48 at a year.
- 65 years \geq unemployed (purple line):** Starts at approximately 52, rises to 58 at three months, 58 at six months, and reaches 50 at a year.

The graph shows that for all groups, attitude generally improved or stabilized over time, with the most significant changes occurring in the first three months after discharge.

The difference in occupational status over time was not significant.

Some of retirees have depression or cancer recurrence. In addition,

anxiety/depression, attitude and positive affirmation were low in working younger patients (less than 64 years). In attitude and positive affirmation, working older (more 65 years) decrease to a year after discharge.

Locus of control was lower in working patients living in two-people households. Patients living alone decrease in Locus of control.

For working patients living in two-person households, there is the possibility of a sense of loss in being able to hold a social role. Also, results suggested that compared with retiring older patients, working older patients experience more problems.