[278200] Oral health-related quality of life and mortality: prospective cohort study of Japanese dentists

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【Aims】
- To date, there are few studies on oral health-related quality of life (OHQOL) and mortality, while data in the literature showed health-related that quality of life measure was one of the predictors of mortality.
- This study aimed to assess whether OHQOL could predict total mortality in men and women.

【Methods】
- The baseline data from the Longitudinal Evaluation of Multi-phasic, Odontological, and Nutritional Associations in Dentists (LEMONADE) study was analyzed. A baseline survey was conducted from 2001 to 2006 among dentists of the Japanese Dental Association. A total of 10,114 Japanese dentists (mean age ± standard deviation [SD], 52.4±12.1 years) were included in the analysis.
- A self-administered questionnaire requested that respondents provide lifestyle data. The questionnaire included the General Oral Health Assessment Index (GOHAI) for measuring OHQOL. Lower GOHAI scores than the Japanese norm (GOHAI score=53.1) was defined as having poor OHQOL.
- Using Cox proportional-hazard models, hazard ratios (HRs) and 95% confidence intervals (CIs) were calculated after adjusting for age and other potential confounding factors.

Tab1. Baseline characteristics among 10,114 subjects

		Men	Women	P-value
No. (%)		9,211 (91.1)	903 (8.9)	
Age at recruitment	Mean (SD)	52.4±12.0	52.6±13.2	0.003
Smoking status	Never	3,005 (32.8)	708 (79.1)	<0.001
	Former	3,447 (37.7)	79 (8.8)	
	Current	2,699 (29.5)	108 (12.1)	
Drinking status	Never	1,994 (21.8)	452 (50.3)	<0.001
	Former	322 (3.5)	29 (3.2)	
	Current	6,831 (74.7)	417 (46.4)	
Sleeping time, hour	Mean (SD)	6.9±0.9	6.6±0.9	<0.001
History of systemic diseases (stroke, myocardial infarction, or cancer), (%)		713 (7.7)	66 (7.3)	0.553
Oral diabetes medications, (%)		386 (4.2)	8 (0.9)	<0.001
Use of insulin for diabetes, (%)		67 (0.7)	3 (0.3)	0.209
General Health Questionnaire (GHQ) scores		2.4±2.7	2.4±2.7	0.335
GOHAI scores less than the norm, (%)		2,612 (28.4)	232 (25.7)	0.096
Number of teeth lost		3.2±5.9	3.7±6.5	0.010

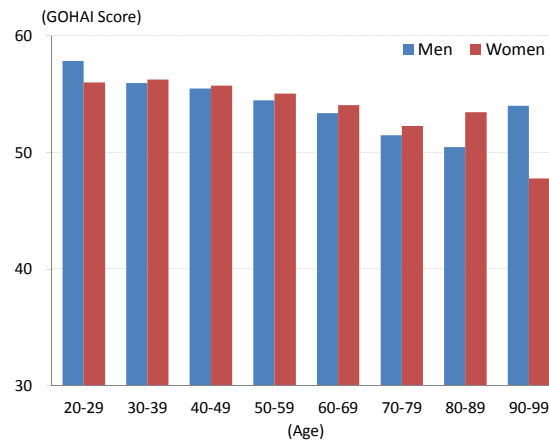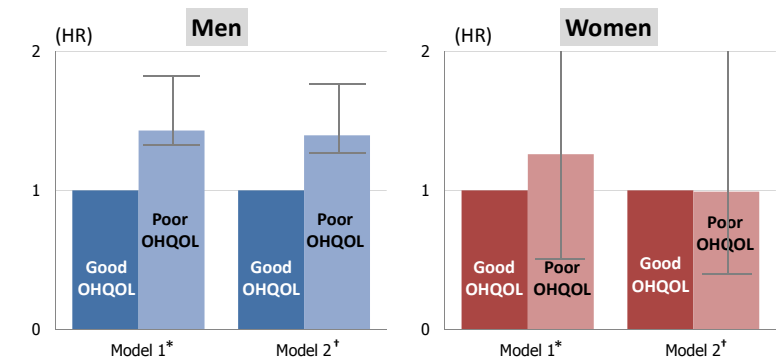### Fig1. Mean GOHAI scores in age groups, stratified by sex

Fig2. HRs for total mortality risk associated with poor OHQOL for men and women

* Mean adjusted for age, smoking status, drinking status, history of systemic diseases, sleeping time, and GHQ scores
† Mean adjusted for the covariates in Model 1 and the number of teeth lost

【Results】
- The mean GOHAI scores were 54.5 (SD = 6.3) among men, 55.0 (SD = 5.7) among women. The GOHAI scores were inversely associated with age in men and women (trend $P < 0.001$).
- The mean follow-up period was 7.7 years. We identified a total of 427 (4.6%) deaths in men and 33 (3.7%) deaths in women, during follow-up.
- Men with poor OHQOL at baseline showed increased total mortality risk. The multivariate HRs for total mortality for men and women with lower GOHAI scores than the Japanese norm versus others were: 1.43 (95% CI, 1.16–1.76) and 1.26 (95% CI, 0.56–2.84) for total mortality.
- The risk for total mortality was attenuated after further adjustment for the number of teeth lost (HR for women, 0.99; 95% CI, 0.42-2.32), however, the difference remained significant in men (HR, 1.40; 95% CI, 1.13-1.73).

【References: LEMONADE Study   http://www.med.nagoya-u.ac.jp/yobo/lemonade/lemonade/article.html 】
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LEMONADE Study

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Conclusion
Our findings suggest that OHQOL is independently associated with total mortality in men. Oral health status may give effect on not only physical but psychological or social factors in general health.