

Table 3. Mean Levels $\pm$ Standard Errors (SE) of Body Mass Index and Number of Cigarettes Smoked per Day by Job Strain Categories

Job Strain Categories	Body mass index (kg/m ²)	Cigarettes/day
	Mean ^a $\pm$ SE	Mean ^a $\pm$ SE
Low	28.5 $\pm$ 0.2	17.9 $\pm$ 0.9
Active	28.0 $\pm$ 0.2	18.4 $\pm$ 1.1
Passive	28.2 $\pm$ 0.2	18.5 $\pm$ 0.6
High	28.3 $\pm$ 0.1	18.8 $\pm$ 1.0*

* Significant trend after adjustment for age, level of education, physical activity at work, and alcohol consumption ($p < 0.05$) using covariance analysis.

^a Means are adjusted for age, level of education, physical activity at work, and alcohol consumption.

sociated with job strain categories (Table 3). There was no significant difference in BMI according to job strain categories.

Smoking was not linearly associated with quartiles of decision latitude or psychological demands (Table 4). However, smoking was found to be significantly associated with job strain categories (Table 5).

Lack of exercise was not linearly associated with quartiles of decision latitude or psychological demands (Table 4). However, this prevalence tended to be elevated in the lowest quartile of decision latitude (OR, 1.3; 95% CI, 1.0 to 1.7) (Table 4).

Prevalence of lack of exercise was elevated linearly according to job strain categories, although not reach-

ing significance (Table 5). All the above mentioned results were independent of age, level of education, alcohol consumption, and physical activity at work.

DISCUSSION

In this cross-sectional study of 534 white-collar male workers, some of the occupational stress factors such as decision latitude at work and job strain were consistently associated with the number of cigarettes smoked per day. Smoking was associated with job strain categories. Prevalence of lack of exercise tended to increase in the lowest quartile of decision latitude and was elevated linearly by job strain categories.

This study has several strengths. Subjects having conditions that could lead to modification of health behaviors were excluded. Using quartiles of psychological demands and decision latitude allowed the comparison of well-differentiated exposure groups. The potential for information bias was therefore minimized. Statistical analyses were performed with adjustment for a number of potential confounders. Confounders such as age, level of education, alcohol consumption, and physical activity at work were included, which limited confounding bias.

It also needs to be kept in mind that this study may be subject to several limitations. Information bias and selection bias resulting from the cross-sectional design could lead to either over- or under-estimations of

Table 4. Crude and Adjusted Odds Ratio (OR) and 95% Confidence Intervals (CI) of Smoking and Lack of Exercise by Quartiles (Q1-Q4) of Decision Latitude and Psychological Demand

	Smoking		Lack of exercise	
	Crude OR* (95% CI)	Adjusted ^a OR (95% CI)	Crude OR* (95% CI)	Adjusted ^a OR (95% CI)
Decision latitude				
Q1 (Low)	1.1 (0.9-1.5)	0.9 (0.7-1.2)	1.5 (1.2-1.8)	1.3 (1.0-1.7)
Q2	1.0 (0.8-1.2)	0.9 (0.7-1.1)	1.1 (0.9-1.4)	1.1 (0.9-1.3)
Q3	1.0 (0.8-1.2)	1.0 (0.8-1.3)	1.1 (0.9-1.3)	1.1 (0.9-1.3)
Q4 (High)	1.0	1.0	1.0	1.0
Psychological demands				
Q1 (Low)	1.0	1.0	1.0	1.0
Q2	0.8 (0.6-1.1)	1.2 (1.0-1.6)	0.9 (0.8-1.1)	0.9 (0.8-1.2)
Q3	1.0 (0.8-1.3)	0.9 (0.7-1.3)	0.8 (0.7-1.0)	1.0 (0.8-1.3)
Q4 (High)	0.9 (0.7-1.1)	0.9 (0.7-1.2)	1.0 (0.8-1.2)	0.8 (0.7-1.0)

* Analyzed by logistic regression.

^a Adjusted for age, education, physical activity at work, and alcohol consumption.