

The Relationship of Lifestyle Factors, Personal Character, and Mental Health Status of Employees of a Major Japanese Electrical Manufacturer

Kunio NAKAYAMA*¹, Kyohei YAMAGUCHI*¹,
Soichiro MARUYAMA*² and Kanehisa MORIMOTO*²

*¹ *Matsushita Science Center of Industrial Hygiene, Osaka*

*² *Department of Social and Environmental Medicine, Course of Social Medicine, Osaka University Graduate School of Medicine, Osaka*

Summary

To examine the relationship lifestyle factors, personal character, mental health status, and job strain a self-administered questionnaire survey was conducted among employees of a leading electrical manufacturing company in Japan. A total of 2,327 workers (Male=1,668, Female=659) responded to the survey. We analyzed the relationships of health practices based on such factors as: Free child (FC) from the Egogram, the Working-life satisfaction, and the General Health Questionnaire-28 through Path-analysis techniques.

The following results were obtained: The mental health status was significantly affected by such factors as health practices, Working-life satisfaction, personal character (FC), life satisfaction, and age. Health practices and personal character (FC) showed a direct relationship to the mental health status and an indirect relationship to the Working-life satisfaction and life satisfaction. The variances accounting for mental health status were 41.8% in male workers and 43.8% in female workers.

Path-analysis data suggested that mental health status was affected about 40 % by lifestyle, personal character, Working-life satisfaction, and life satisfaction. It was suggested that there might be important factors affecting mental health status but which are unknown to us by as much as 60 % in the present day. These findings suggested the necessity of further investigation of the relationship among lifestyle factors, mental health status, and job strain among employees of a reputable company in the present day.

Key words: lifestyle; personal character; mental health status;
Working-life satisfaction; path analysis summary

Introduction

Lifestyle factors are known to be influential at the onset and in the prognosis of lifestyle-related diseases including cancer, cardiovascular disease, cerebrovascular disease, and diabetes mellitus¹⁾. Breslow et al.^{2,3)} demonstrated that in a general population sample, seven health practices (not smoking, limiting the amount of alcohol consumption, sleeping 7 to 8 hours per night, eating breakfast regularly, not snacking, maintaining a desirable weight, and getting regular exercise) were associated

with physical health status and mortality. Based on the study by Breslow et al.^{2,3)}, and considering the Japanese cultural background, Morimoto et al.¹⁾ revised the list of seven health practices to a list of eight health practices for Japanese respondents. These eight health practices recommended by Morimoto¹⁾ (not smoking, limiting the amount of alcohol consumption, eating breakfast, sleeping 7 to 8 hours per night, working less than 9 hours per day, physical exercise more than once a week, good nutritional balance, and moderate mental stress) was shown in Table 1. We previously demonstrated the relationship between these eight health practices and sister chromatid exchange^{4,5)}, natural killer cell activities⁶⁾, IgE⁷⁾, mental health status⁸⁾, working hours⁹⁾, Working-life satisfaction¹⁰⁾, smoking status¹¹⁾, and shiftwork¹²⁾.

The purpose of this study was to clarify the interactive effects among lifestyle factors, personal character, mental health status,

Received Feb. 17 2000/Accepted Jul. 7 2000

Reprint requests: Kanehisa MORIMOTO,

Department of Social and Environmental Medicine, Course of Social Medicine, Osaka University Graduate School of Medicine F1 2-2, Yamada-oka, Suita 565-0871 Osaka Japan

TEL: +81(6)6879-3920 FAX: +81(6)6879-3929

and job strain among employees of a leading electric manufacturing company in Japan using Path analysis techniques.

Materials and methods

Materials

A self-administered questionnaire survey was conducted among 2,350 employees at one of the top electric manufacturing companies in Japan located in a suburb of Osaka and Wakayama prefecture between June and July 1993. A total of 2,327 workers responded to the survey. The age of the respondents ranged from 18 to 58 years, with the mean (\pm standard deviations) age of male and female workers 36.6 ± 11.2 (N=1668) and 33.4 ± 12.5 (N=659) years respectively.

Methods

The questionnaire handed to employees during an annual physical examination at the work place was performed between June and July, 1993. They were asked to complete the questionnaire and asked to return it after the physical examination. The questionnaire consisted of demographic variables, personal health practices, life satisfaction, personal character, mental health status, and job strain. The demographic variables consisted of gender, age, marital status, job position, and type of job. In this investigation, we used the Health Practice Index¹⁾ for assessing personal health practices, the Egogram for assessing traits of personal character, the 28-item version of the General Health Questionnaire (GHQ-28)¹³⁾ for assessing mental health status, and the Working-life-satisfaction¹⁰⁾ for assessing job strain.

Measurement of personal health practice

Items concerning personal health practices were related to eight health practices recommended by Morimoto¹⁾ as shown in Table 1. Each item had multiple answers (3 to 5), and the answers were dichotomized into the categories of "good" or "not good" health practice as shown in Table 1. Answers in the "good" category received 1 point, and those in the "not good" category received 0 point. Scores from the eight items were totaled to provide an index of cumulative personal health practices, that is The Health Practice Index (HPI; 0 ~ 8 points). The more favorable the personal health practices, the higher the Health Practice Index score became.

Measurement of the Life satisfaction

The questionnaire asked about the usual satisfaction of daily life. The original form of the question was "Are you satisfied with your daily living?". The subjects selected from "No", "Little", "Much", and "Very much". Answers of the "No" and "Little" category received 0 point, and those of the "Much" and "Very much" category received 1 point¹⁾.

Measurement of mental health status

The grade of mental health status was measured by the 28-item version of the General Health Questionnaire (GHQ-28)¹³⁾ which effectively measures mental health status. The GHQ-28 consisted of twenty-eight questions overall. Items were scored using Likert-type scoring of 1-2-3-4 for response categories, and these were converted into 2-point scores of 0-0-1-1. The sum of all 28 questions on the GHQ-28 indicated the points of the total GHQ-28 (0 ~ 28 points). The worse the personal mental health

status, the higher the scores on the GHQ-28 became. But in this analysis, another scale became higher in accordance with the level of lifestyle improving. Therefore, we converted the GHQ-28 (0 ~ 28 points) into the Inverted-GHQ-28 (Inv.-GHQ-28) (28 ~ 0 points). 0 point of GHQ-28 converted into 1 point of the Inv.-GHQ-28, and 1 point of GHQ-28 converted into 0 point of the Inv.-GHQ-28 in each question. The better the personal mental health status, the higher the scores of the Inv.-GHQ-28 became.

Measurement of job satisfaction

To assess personal satisfaction of one's job, we used the Working-life satisfaction recommended by Maruyama et al.¹⁰⁾. The Working-life satisfaction consisted of six questions. Items were scored using Likert-type scoring of 1-2-3-4 for response categories, and these were converted into 4-point scores of 0-1-2-3. The sum of points for six categories gave the points of the Working-life satisfaction (0 ~ 18 points). The better the personal satisfaction for one's job, the higher the points of the Working-life satisfaction became.

Measurement of personal character

In this study, we used the Egogram in Transactional Analysis to evaluate the traits of personal character. The Egogram consisted of ten questions overall. Items were scored using a Likert-type scoring of 1-2-3-4 for response categories, and these were converted into 4-point scores of 1-2-3-4. The Egogram indicated 5 factors of personal character such as, Critical parent (CP), Nurturing parent (NP), Adult (AD), Free child (FC), and Adapted child (AC). Points for each factor were ranged from 2 to 8 points. The more typical the personal character for each factor, the higher the points of the Egogram in each factor became.

Model and analytical procedures

In this investigation, we hypothesized a causal model as presented in Fig. 1 taking into consideration previous studies^{14, 15)} and considering the relationships between factors of this investigation. The model has three causal stages. (1) Age to determine the Health Practice Index and personal character. (2) Age, the Health Practice Index, and personal character to determine the Working-life satisfaction and life satisfaction. (3) All of the four factors to determine the Inverted-GHQ-28.

Data analyse were conducted using the Dr. SPSS (Statistical Package for Social Science) 8.0J for Windows computer programs. The primary statistical technique used in this study was the Path analysis. The SPSS multiple regression analysis that estimates the direct and indirect relationships among the variables. The following procedure was used in the Path analysis of this model. Standardized regression equations were established for each dependent variable in the saturated model. This

Table 1 Eight health practices recommended by Morimoto

ITEMS	GOOD PRACTICES (1 POINT)	POOR PRACTICES (0 POINTS)
<i>Exercise</i>	Once a week or more	Less than once a week
<i>Alcohol consumption</i>	Sometimes or never	Almost every day
<i>Smoking status</i>	Not smoking	Smoking
<i>Sleeping hours</i>	7 ~ 8 hours/night	Others
<i>Nutritional balance</i>	Balanced	Not balanced
<i>Eating breakfast</i>	Every day	Sometimes or never
<i>Working hours</i>	9 hours or under / day	10 hours or over / day
<i>Subjective stress</i>	Moderate	Too much or too little

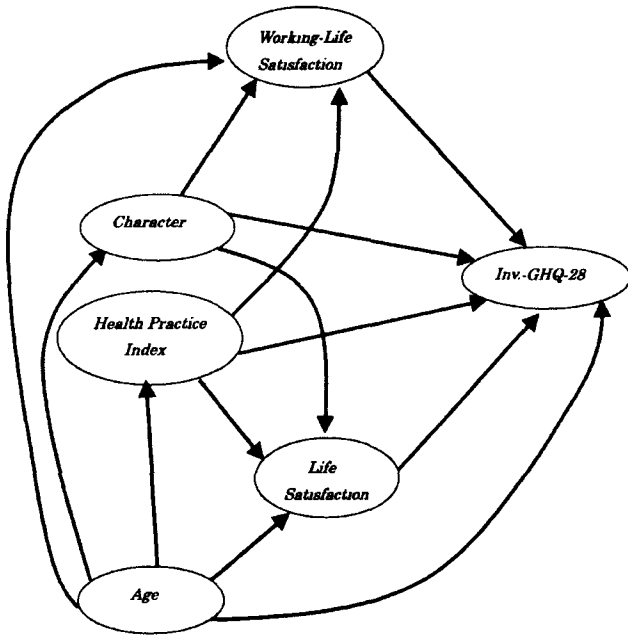


Fig. 1 Path model.

computer program provides path coefficients (β , or the standard partial regression coefficient) and squared multiple correlation (R^2). Path coefficients with a magnitude of $|\pm 0.05|$ or greater were included.

Results

In this investigation, we selected the most effective factors from among five factors of personal character (Critical parent, Nurturing parent, Adult, Free child, and Adapted child) for further analysis. Free child (FC) had the most important correlation to the Health Practice Index, the Inv.-GHQ-28, the Working-life satisfaction, and life satisfaction among the five factors of the Egogram as indicated in Table 2. Therefore, we especially selected the factor of the Free child (FC) from the five factors of the Egogram in this analysis. In this study, further investigation was executed selecting the factor of the Free child (FC) from among the five factors of the Egogram.

Table 3 shows the mean and standard deviations of age, personal character (FC), the Inv.-GHQ-28, the Health Practice

Index, and the Working-life satisfaction and the distribution of life satisfaction by sex. Pearson's correlation coefficients were calculated between age, character (FC), the Inv.-GHQ-28, the Health Practice Index, life satisfaction, and the Working-life satisfaction as shown in Table 4. Through use of the Path analytic method, the paths, path coefficients, and the squared multiple correlation (R^2) in the model are presented in Fig. 2-a and Fig. 2-b.

- The findings indicated the following in the male population.
- (a) The Inv.-GHQ-28 was significantly affected by the Working-life satisfaction ($\beta = 0.470$), personal character (FC) ($\beta = 0.100$), life satisfaction ($\beta = 0.155$), the Health Practice Index ($\beta = 0.079$), and age ($\beta = 0.124$).
 - (b) The Working-life satisfaction was significantly affected by personal character (FC) ($\beta = 0.364$), the Health Practice Index ($\beta = 0.159$), and age ($\beta = 0.082$).
 - (c) Personal character (FC) was significantly affected by age ($\beta = 0.153$).
 - (d) Life satisfaction was significantly affected by personal character (FC) ($\beta = 0.183$), the Health Practice Index ($\beta = 0.129$), and age ($\beta = 0.220$).
 - (e) The Health Practice Index was not affected by age.
 - (f) The direct effect of the Health Practice Index and personal character (FC) on the Inv.-GHQ-28 (0.079 and 0.100, respectively) were smaller than the indirect effect (0.020 and 0.163, respectively).
 - (g) The direct effect of the Health Practice Index on the Inv.-GHQ-28 (0.079) was greater than the indirect effect (0.020), although the direct effect of personal character (FC) on the Inv.-GHQ-28 (0.100) was smaller than the indirect effect (0.171).
 - (h) The variances accounting for the Inv.-GHQ-28 were 41.8%, the variances accounting for the Working-life satisfaction were 16.5%, the variances accounting for personal character (FC) were 2.3%, and the variances accounting for life satisfaction were 10.5%, individually.

The findings indicated the following for the female population.

- (a) The Inv.-GHQ-28 was significantly affected by the Working-life satisfaction ($\beta = 0.423$), personal character (FC) ($\beta = 0.106$), life satisfaction ($\beta = 0.162$), the Health Practice Index ($\beta = 0.177$), and age ($\beta = 0.183$).

Table 2 Matrix of Pearson's correlation coefficients among personal character and age, Health practice index, Working-life satisfaction, Inv.-GHQ-28, and life satisfaction

< Male >						(N=1668)
	Age	Health Practice Index	Working-Life Satisfaction	Inv.-GHQ-28	Life Satisfaction	
Critical parent	0.029	-0.011	0.210**	0.159**	0.082**	
Nurturing parent	0.163**	-0.058*	0.249**	0.201**	0.157**	
Adult	0.127**	-0.056*	0.243**	0.192**	0.098**	
Free child	0.154**	-0.073**	0.365**	0.318**	0.207**	
Adapted child	-0.028	-0.013	-0.166**	-0.316**	-0.110**	
< Female >						(N=659)
	Age	Health Practice Index	Working-Life Satisfaction	Inv.-GHQ-28	Life Satisfaction	
Critical parent	-0.154**	-0.008	0.156**	0.029	0.032	
Nurturing parent	0.027	0.040	0.241**	0.197**	0.129**	
Adult	-0.052	0.027	0.187**	0.126**	0.090*	
Free child	-0.038	-0.009	0.287**	0.230**	0.131**	
Adapted child	0.024	0.012	-0.080*	-0.255**	-0.055	

*P<0.05 **P<0.01

- (b) The Working-life satisfaction was significantly affected by personal character (FC) ($\beta = 0.284$) and the Health Practice Index ($\beta = 0.217$).
- (c) Personal character (FC) was not affected by age.
- (d) Life satisfaction was significantly affected by personal character (FC) ($\beta = 0.143$), the Health Practice Index ($\beta = 0.163$), and age ($\beta = 0.198$).

- (e) The Health Practice Index was significantly affected by age ($\beta = 0.109$).
- (f) The direct effect of the Health Practice Index on the Inv.-GHQ-28 (0.177) was greater than the indirect effect (0.026), although the direct effect of personal character (FC) on the Inv.-GHQ-28 (0.106) was smaller than the indirect effect (0.120).
- (g) The variances accounting for the Inv.-GHQ-28 were 43.8%, the variances accounting for the Working-life satisfaction were 12.6%, the variances accounting for the Health Practice Index were 1.2%, and the variances accounting for life satisfaction were 8.1%, individually.

Table 3 Mean and standard deviations of variables and distribution of Life Satisfaction

Variables	Male (N=1668)	Female (N=659)
Age	36.6 ± 11.2	33.4 ± 12.5
Personal Character (FC)	5.3 ± 1.2	5.1 ± 1.2
Health Practice Index	3.7 ± 1.5	5.0 ± 1.2
Working-Life Satisfaction	10.3 ± 3.1	10.0 ± 3.3
Inv.-GHQ-28	23.0 ± 3.6	22.8 ± 3.6
Life Satisfaction	0point: 1189 1point: 479	0point: 451 1point: 208

Discussion

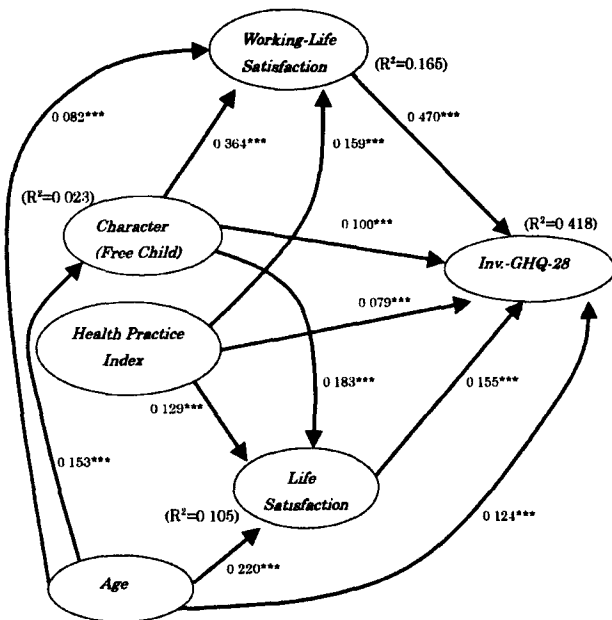
Many previous investigations reported the relationship between lifestyle factors and mental health status. Maruyama et al.¹⁵ reported that persons with a healthy lifestyle perceived a

Table 4 Matrix of Pearson's correlation coefficients among age, personal character (FC), the Health Practice Index, the Working-life satisfaction, life satisfaction, and Inv.-GHQ-28.

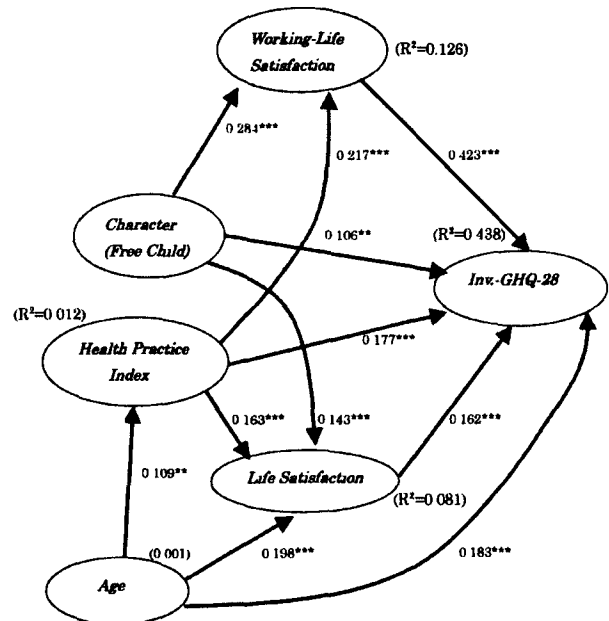
Variable	Age	Personal Character (FC)	Health Practice Index	Working-Life Satisfaction	Life Satisfaction	Inv.-GHQ-28
Age		0.153**	-0.023	0.134**	0.245**	0.238**
Personal Character(FC)	-0.034		-0.073**	0.365**	0.208**	0.317**
Health Practice Index	0.109**	-0.012		0.131**	0.111**	0.316**
Working-Life Satisfaction	0.056	0.218**	0.214**		0.425**	0.569**
Life Satisfaction	0.211**	0.135**	0.183**	0.420**		0.427**
Inv.-GHQ-28	0.256**	0.238**	0.148**	0.598**	0.412**	

*P<0.05 **P<0.01 ***P<0.001 Female \ Male

Male



Female



The Paths and path coefficients with a magnitude of ± 0.05 or greater are shown. Path coefficients are standard regression beta weights. R^2 are squared multiple correlations.

*P<0.05, **P<0.01, ***P<0.001

The Paths and path coefficients with a magnitude of ± 0.05 or greater are shown. Path coefficients are standard regression beta weights. R^2 are squared multiple correlations.

*P<0.05, **P<0.01, ***P<0.001

Fig. 2-a Path diagram for the effect of age, lifestyle factors, the Working-life-satisfaction, and character on the Inv.-GHQ-28.

Fig. 2-b Path diagram for the effect of age, lifestyle factors, the Working-life-satisfaction, and character on the Inv.-GHQ-28.

lower subjective stress level. Kawakami et al.¹⁶⁾ reported that health practices might decrease one's depressive mood. Ezoe et al.⁸⁾ reported good health practices might be individually and, as a whole, associated with better mental health status in factory workers. And Amikc et al.¹⁷⁾ demonstrated the association of job satisfaction and psychosomatic symptoms. Amikc et al.¹⁸⁾ also demonstrated that the psychological work environment was an important determinant of health status among working women. Paulsen et al.¹⁹⁾ reported that anxiety and depression had direct inverse effect on sleep. Nevertheless, Simonsick²⁰⁾ demonstrated no association between health habits and mental health in young men.

In this investigation also, we found that those with a desirable lifestyle showed good mental health status among both male and female workers. These results supported many previous findings.

The relationship between job strain and mental health status has been reported. Stahl et al.²¹⁾ reported that attempts to reduce workplace stress can significantly relieve both the psychological and physiological consequences. Wilkins²²⁾ reported that job strain was associated with psychological distress among men. Bourbonnais et al.²³⁾ demonstrated an association between job strain and psychological distress. Rahman et al.²⁴⁾ reported that the less satisfied workers experience more stress and describe their jobs less favorably than the highly satisfied worker. And Maruyama et al.¹⁰⁾ reported that the Working-life satisfaction tended to be higher as scores for primary symptoms/problems for the assessment of personal mental health status were lower.

In this study also, we found that workers with high Working-life satisfaction points showed good mental health status among both males and females. Our results were consistent with theirs^{10, 21-24)}.

There have been many studies about the relationship between traits of personal character and mental health status. Ezoe et al.²⁵⁾ demonstrated a relationship between the Egogram and the GHQ-28. They found that perfectionist and nervous traits were found to be strongly associated with perceived stress. A perfectionist was a factor of the critical parent (CP) and nervous traits was a factor of the adapted child (AC) in the Egogram. Dearborn et al.²⁶⁾ reported that dissatisfaction and stress were related to more frequent symptom complaints in the Type As. Aldwin et al.²⁷⁾ reported that stress was confounded with

personality. And Maruyama et al.¹⁾ reported that a factor for the adapted child (AC) was strongly associated with the Zung Self-Rating Depression Scale (CES-D) in the male population, but was not associated in the female population

We found that a score for the factor of the free child (FC) in the Egogram positively associated with mental health status. On the other hand this finding did not support the previous studies. It may due to a difference of the respondents of this investigation or the specificity of the scales used in this study.

Age affected the Health Practice Index among female workers, but did not affect the Index among male workers. And age showed positive relationships to personal character (FC) and the Working-life satisfaction in male workers, but showed little relationship in the female workers. Generally, the score of the Health Practice Index and the Working-life satisfaction became higher in accordance with age^{1, 13)}. But in this study, we did not recognize significant relationships in the Health Practice Index to age in male workers nor of the Working-life satisfaction to age in the female workers. These findings were different from previous studies. They might have been affected by specific traits of the subjects in this investigation.

In this investigation, through the Path analytic method we found that the Health Practice Index and personal character (PC) showed direct relationships to mental health status and indirect relationships to the Working-life satisfaction and life satisfaction among both the male and female workers.

We found that the variances accounting for mental health status were about 40 % in male and female workers. It is suggested that the mental health status among male and female workers was affected by lifestyle, personal character, the Working-life satisfaction, and life satisfaction by about 40 %. In other words, about 60 % were derived from other factors. The possibility was suggested that there might be important factors that affected mental health status but which were unknown to us by as much as 60 % in present day. These findings suggested the necessity of further investigations of the relationship among lifestyle factors, mental health status, and job strain among employees of the first class Company in the present day. Therefore the investigation for mental health status in regard to lifestyle factors and job strain should be conducted more precisely in the future.

References

- 1) Morimoto K. ed. Lifestyle and health-health theory and demonstrable research. Tokyo: Igakusyoin, 1991. (in Japanese)
- 2) Belloc NB, Breslow L. Relationship of physical health status and health practices. *Prev Med* 1972; 1: 409-21.
- 3) Breslow L, Enstrom JE. Persistence of health habits and their relationship to mortality. *Prev Med* 1980; 9: 469-83.
- 4) Morimoto K. Life-style and genetic factors that determine the susceptibility to the production of chromosome damage. In: Obe G, Natarajan AT, eds. Chromosomal aberrations: basic and applied aspects. Berlin: Springer-Verlag, 1990: 287-301.
- 5) Morimoto K, Takesita T, Takeuchi T, et al. Chromosome alterations in peripheral lymphocytes as indices of lifestyle and genotoxicity. *Int Arch Occup Environ Health* 1993; 65: S37-S41.
- 6) Kusaka Y, Kondou H, Morimoto K. Healthy lifestyles are associated with higher natural killer cell activity. *Prev Med* 1992; 21: 602-15.
- 7) Shirakawa T, Morimoto K. Lifestyle effect on total IgE. *Allergy* 1991; 46: 561-9.
- 8) Ezoe S, Morimoto K. Behavioral lifestyle and mental health status of Japanese factory workers. *Prev Med* 1994; 23: 98-105.
- 9) Maruyama S, Morimoto K. Effects of long workhours on life-style, stress and quality of life among intermediate Japanese managers. *Scand J Work Environ Health* 1996; 22 (5): 353-9.
- 10) Maruyama S, Sato H, Morimoto K. Relationship between the Working-life satisfaction, health practices and primary symptoms/problems. *Jpn J Hyg* 1991; 45: 1082-94. (in

- Japanese)
- 11) Nakayama K, Yamaguchi K, Maruyama S, Morimoto K. Association of smoking with other lifestyle factors and mental health status of Japanese factory workers. *Environ Health and Prev Med* 1997; 2: 11-5
 - 12) Nakayama K, Yamaguchi K, Maruyama S, Morimoto K. Effects of shiftwork on lifestyle and mental health status of employees of a major Japanese electrical manufacturer. *Environ Health and Prev Med* 1997; 2: 16-20
 - 13) Goldberg DP, Hillier VF. A scaled version of the General Health Questionnaire. *Psychol Med* 1979; 9: 139-45.
 - 14) Suzukamo Y, Kumano H, Yamauchi Y. Relationships among Type A behavior pattern, job stress and life style. *Jpn J Psychosom Med* 1997; 37: 327-36.
 - 15) Maruyama S, Morimoto K. The effects of lifestyle and type A behavior on the life-stress process. *Environ Health and Prev Med* 1997; 2: 28-34
 - 16) Kawakami N, Haratani T, Kaneko T, Koizumi A. Relationship between health practices and depressive mood among industrial workers. *Jap J Ind Health* 1987; 29: 55-63. (in Japanese)
 - 17) Amick BC 3rd, Kawachi I, Coakley EH, Lerner D, Levins S, Colditz GA. Relationship of job strain and iso-strain to health status in a cohort of women in the United States. *Scand J Work Environ Health* 1998; 24 (1): 54-61.
 - 18) Amick BC 3rd, Celentano DD. Structural determinants of the psychosocial work environment : introducing technology in the work stress framework. *Ergonomics* 1991; 34 (5): 625-46.
 - 19) Paulsen VM, Shaver JL. Stress, support, psychological states and sleep. *Soc Sci Med* 1991; 32 (11): 1237-43.
 - 20) Simonsick EM. Personal health habits and mental health in a national probability sample. *Am J Prev Med* 1991; 7 (6): 425-37.
 - 21) Stahl SM, Hauger RL. Stress : an overview of the literature with emphasis on job-related strain and intervention. *Adv Ther* 1994; 11 (3): 110-9
 - 22) Wilkins K, Beaudet MP. Work stress and health. *Health Rep* 1998, 10 (3): 47-62
 - 23) Bourbonnaris R, Brisson C, Moisan J, Vezina M. Job strain and psychological distress in white-collar workers. *Scand J Work Environ Health* 1996; 22 (2): 139-45.
 - 24) Rahman M, Sen AK. Effect of job satisfaction on stress, performance and health in self-paced repetitive work. *Int Arch Occup Environ Health* 1987; 59: 115-21.
 - 25) Ezoe S, Morimoto K. Quantitative assessment of stressors and stress reaction : a review. *Jap J Ind Health* 1994; 36: 397-405.
 - 26) Dearborn MJ, Hastings JE. Type A personality as a mediator of stress and strain in employed women. *J Human Stress* 1987; 13(2): 53-60.
 - 27) Aldwin CM, Levenson MR, Spiro A 3d, Bosse R. Does emotionality predict stress? Finding from the normative aging study. *J Pers Soc Psychol* 1989; 56 (4): 618-24.