related to the present health, and the other related to the change in health. The present health variable is based on the following question: "how do you feel about your present health? The respondents who reported that their present health was "not good" or "poor" are given the score of 1, and the score of zero otherwise. There was another question related to self-reported health. This question deals with the change in health condition compared with a year ago. If the respondents felt that their health was "worse," they are given a score of 1 and, the score of zero was given when the respondents said "the same" or "better".

Socio-economic variables include the following: social class, education, income, and asset. Our prime independent variable, social class, is measured by the employment held by the respondent for the longest time, and it is operationalized by the Erikson-Goldthrope-Portocarero (1979) class scheme (see also Ganzeboom, Luijkx, and Treiman 1989; Erikson and Goldthorpe 1992). The class categories are constructed using the questions related to employment status, managerial status, and occupation. The five-category version of the EGP class schema is used. The categories are: (1) the professional-managerial class (I/II), (2) the routine non-manual class (III), (3) the urban self-employed (IVab), (4) the farming class (IVc/VIIb), and (5) the skilled and unskilled manual working class (V/VI and VIIa). The first category (I/II) is used as the base reference group in the logistic regression analyses reported below.

Education is measured by years of schooling. The original responses contained four categories (years of education attached to each category are shown in parentheses): (1) elementary and higher elementary schools in the pre-war system of education and junior high schools in the post-war system (9 years), (2) old middle schools in the pre-war system of education and senior high schools in the post-war system (12 years), (3) vocational schools after senior high school and junior colleges in the post-war system (14 years), and (4) old high schools and universities in the pre-war system of education and four-year universities in the post-war system (16 years). Income is measured by the approximate yen amount. The respondents were asked to choose one of 13 categories representing their household income. The midpoints of each category are used to estimate the household income of the respondent in each category. Because about a fifth of the respondents did not report their household income, we included a dummy variable representing these respondents whose income

was missing.

Three variables which represent daily activities related health are considered in the study. They are smoking, drinking, and walking. If the respondents drink or smoke at the time of survey or in the past, they are given the score of 1 and zero otherwise. The respondents who walk everyday are given a score of 1 and zero otherwise. The question which purports to measure the access of medical information is introduced. The respondents who replied that they were able to obtain sufficient information about the medical institution are given a score of 1 and zero otherwise.

Finally, gender and age of the respondent are included as control variables. The analyses are based on a series of binary logistic regression models which are conducted separately for six different health-related outcomes. For each dependent variable, we consider models which include different set of independent variables. Since our prime independent variable is social class, we first enter social class, gender, and age into the equation (Model 1). We then add other socio-economic variables (education and income) into the equation (Model 2). Except for the analysis of determining chronic condition, we introduce an additional model (Model 3) in which we add the variable measuring chronic medical conditions into the equation as an independent variable. For the analysis of the determinants of subjective perception of health, we consider an additional model (Model 4) which includes visit to doctor as an independent variable.

ANALYSIS

Health-related Outcomes

Table 1 presents the descriptive statistics for the variables used in this paper. The first six rows present the proportion of health-related outcomes. In our sample, respondents with at least one chronic health condition account for 73.2 percent. Chronic diseases include any chronic medical conditions diagnosed by doctors. The most frequent responses (multiple answers possible) include high blood pressure (31.5 percent), heart diseases (16.8 percent), digestive diseases (15.6 percent), and neuralgia (15.0 percent). About three-quarter of the respondents (73.7 percent) visited doctor's office at least once during the last year. About 28 percent of the respondents had visits less than ten days, while 14 percent had visits more than 30 days. In response to the question about physical discomfort, about a quarter (23.7 percent) reported that they feel pain and discomfort. When they were asked whether their regular activities (go shopping) were restricted due to physical conditions, about 11 percent responded positively. Close to 30 percent (29.2%) of the respondents showed depressive symptoms. Finally, respondents were asked to report their health condition: 30 percent reported that their health was "poor" or "not good."[8] Similarly, respondents were asked to report whether their health conditions got "better" or "about the same" or "got worse" compared with a year ago. More than a quarter (27 percent) reported that their health "got worse."[9]

There are significant correlations among these the health-related variables. However, these correlations are not exceptionally high. Among the highest ones are the correlations between self-reported health and activity restriction (r=.397), between self-reported health and physical discomfort (r=.367), and between chronic condition and visit to doctors (r=.486). Other correlations are less than .300. These results suggest that these variables are related but tap different aspects of respondent's health condition.

The distributions of independent variables are also reported in Table 1. Our sample includes more males than females and contains relatively large proportion of older people (two-thirds are those over the age of 70). The distributions of social class and of education are similar to those of other national. The distribution of household

income shows that about a fifth of our sample (18.3 percent) did not report income. Since they constitute a relatively large segment of our sample, we included a variable representing those whose household income was missing.

Determinants of Health-related Outcomes

Table 2 reports the results of logistic regression predicting chronic medical conditions. There are two models shown in the table. Model 1 includes our prime independent variable, social class, along with control variables (gender and age). We find no significant effect of social class. Men are more likely to report chronic conditions, and the occurrence of chronic conditions increases by age. When the bivariate relationship between social class and chronic conditions is examined, there was no significant association either.

Model 2 adds education and income into the equation. Age and gender continue to exert significant effect on chronic conditions, but education and income do not show any significant effects. We do not find any socio-economic differentials in the chances of occurrence of chronic medical conditions. Class, education, and income do not seem to influence the chances of the occurrence of chronic diseases.

Table 3 reports the results of the logistic regression predicting visit to doctor's office. Models 1 and 2 contain the same independent variables as those in Table 2. As shown in these two models, we find a strong and significant effect of age. The older the respondent, the more likely they are to make a visit to doctors. The only significant effect among socio-economic factors pertains to the effect of farmers. Farmers (IVc/VIIb) are less likely to go and see doctors than the professional managerial class (I+II). The effect is persistent even after controlling for gender, age, education, and income. Model 3 in Table 3 introduces chronic diseases, in addition to all the variables in Model 2. The model assesses the effect of socio-economic variables on doctor's visit after controlling for medical conditions. The overall picture does not change even after medical condition is held constant. Age increases the likelihood of office visits. Farmers are less likely to visit doctors than the professional-managerial class. The persistent effect of farmers may be due to the fact that access to doctors is restricted in rural villages.

It is probably important to recognize that income does not show any significant

effect. This suggests that access to medical facility is not affected by the amount of income, at least visits to the doctors. We do not know the quality and nature of treatment people received, but the amount of income does not seem to deter people from going to doctors. This finding is probably due to the establishment of the national health insurance in 1961.

Table 4 shows the results of logistic regression predicting the presence of physical discomfort. Models 1 through 3 contain the exactly the same variables as the models reported in Table 3. Five findings stand out from these four models. First, there is no gender difference in reporting physical discomfort. Although men are more likely to have chronic medical conditions than women, the level of physical discomfort does not seem to vary by gender.

Second, age increases the likelihood of physical pain. However, the age effect is due in part to the fact that older people are more likely to have chronic medical conditions. Once the presence or absence of chronic disease is controlled, age effect is reduced but continues to be significant. Aging comes with the deterioration of physical function and increased physical discomfort, regardless of chronic medical condition. Third, self-employed, farmers, and manual working class are at least one and a half times more likely to report physical discomfort than the professional-managerial class and the routine non-manual class. There is a clear white-collar versus blue-collar divide in the presence of physical discomfort. The division may be derived from the fact that blue-collar workers are subject to more physically demanding work conditions than white-collar workers. Fourth, income exerts significant effect. The higher the income, the less likely one reports physical discomfort. People with greater financial resources may be able to avoid the risk of physical discomfort and pain, by purchasing additional service or equipment. Fifth, those with chronic medical conditions are three times ($e^{1.156} = 3.2$) more likely to report physical discomfort than those without.

Table 5 reports the results of running logistic regression predicting whether the respondents had restriction on their daily activities due to physical conditions. Models 1 through 3 include exactly the same independent variables as those models in Table 4. First, age has a strong positive effect on restriction on daily activities: the older the respondents, the more restriction they face. The age effect is not explained by the fact

that older people are more likely to have chronic diseases than younger people and that chronic condition is positively associated with activity restriction. Second, there is no significant gender difference. Even though men are more likely to have chronic medical condition, they do not seem to experience more activity restriction. Third, the professional-managerial class has the least likelihood of experiencing activity restriction. In contrast, the self-employed and manual working class are those who are most subject to activity restriction. These class differences remain significant even after controlling for education and income.

Fourth, the level of income is negatively associated with the presence of activity restriction: the higher the income level, the less likely the activity restriction. Since this effect persists even after controlling for chronic conditions, the respondents with sufficient income are probably much more effective in using their financial resources to avoid being physically constrained than those with limited resources. Their income probably makes difference in continuing daily activities without much restriction and facilitating geographical mobility. Fifth, the presence of chronic medical conditions affects the chances of activity restriction. The respondents who have chronic diseases are about four times ($e^{1.415} = 4.2$) more likely to have activity restriction than those without chronic conditions.

Table 6 presents the results of the determinants of mental health. The results in many ways parallel those of physical discomfort and activity restriction. First, aging promotes the chances of depression, independently of chronic medical disease. Second, men are less likely to exhibit the symptoms of mental illness than women, and this gender gap persists regardless of socio-economic characteristics and chronic medical condition. Third, the onset of depression is related to social class. The professional-managerial class and the farming class are less likely to suffer from depression than the routine non-manual, self-employed, and the manual working class. These class differences are observed even after controlling for chronic medical condition. Fourth, income is negatively associated with the occurrence of depression. Those with sufficient income may be able to resort to means which reduce the onset of mental illness. Fifth, chronic disease and depression are positively related. Those who have chronic disease are as twice ($e^{0.619} = 1.9$) as likely to have mental depression.

Finally, Table 7 presents the results of logistic regression predicting

self-reported health. There are two kinds of self-reported health. The first (Table 7-1) pertains to the perception of how good or bad the respondent feel about their current health condition. The analysis is based on predicting the response of "poor" or "not good" health. The second (Table 6-2) pertains to the perception of change in health status. The analysis is based on predicting the response of health condition being deteriorated (that is, got worse).

Models 1 through 3 include exactly the same independent variables as those models in Tables 3 through 6. Model 4 adds visit to doctors as an independent variable into the equation. Since major findings are very similar for both the perception of current health and the perception of change in health condition, I summarize them in five points. First, there is no clear gender difference in self-perception of health. Even though men are more likely to be diagnosed with chronic medical conditions than women, men are not more likely to report that their health is not in good condition than women. Second, age is positively associated with perceived ill-health and change in ill-health. The older the respondents, the poorer their self-reported health. This perception is in part explained by the fact that older people are more likely to suffer from chronic diseases, but even among those with the same medical conditions, older elderly tend to report that their health is poorer than younger elderly.

Third, regarding our prime independent variable, social class, we find that there are class differences in self-reported health. The professional-managerial class is the healthiest. Self-employed and the manual working class report the least favorable health perception. These class differentials are present even if we control for chronic conditions and visit to doctors. In other words, even among those who have the same chronic conditions and accessibility to healthcare, respondents' social class still makes difference in their subjective perception of health. Class differentials in perceived health may be reflecting the findings reported in earlier tables that there are class differences in physical discomfort, activity restriction, and depression. Fourth, household income shows a strong and significant effect on self-reported health: the higher the income level, the better the perceived health status. The effect is very strong especially for the perception of current health conditions and is not influenced by the introduction of chronic health conditions and visit to doctor's office. Those with sufficient income probably feel that their financial resources offer better protection at

the time of sudden change in their health and that they feel more secure about their health conditions than those with limited financial assets. Fifth, the presence of chronic disease and visit to doctor's office negatively affect both the perception of current health and the perception of change in health condition.

Daily Activities, Access to Medical Information and Health

The final section of the analysis will examine how daily activities and access to medical information are related to class, income, and education. Here we consider three activities, smoking, drinking, and walking, in addition to accessibility to the medical information. It has been reported by medical profession that these activities and access to medical knowledge are related to the onset of chronic medical conditions, such as diabetics. Table 8 shows whether there are socio-economic differentials in smoking, drinking, and walking behaviors and access to medical information.

Major findings are summarized as follow. First, with regard to smoking, men are 24 times ($e^{3.2} = 24$) more likely to smoke than women; the older the respondent, the less likely one smokes; Farmers are less likely to smoke than other classes; and the higher the education, the less likely smoking behavior.

Second, with regard to drinking alcohol, men are 9 times ($e^{2.2} = 9.0$) more likely to drink than women; the older the respondent, the less likely one drinks; the professional managerial class is more likely to drink than the self-employed, farmers and manual working class; the higher the income, the more likely one drinks. If drinking leads to bad health, it does not make sense to find that the professional-managerial class and those with higher income are more likely to drink, because we already found that the professional-managerial class and those with higher income are less likely to suffer from physical discomfort, activity restriction, and mental disorder. It turns out that there is a positive association between drinking and good health. The relationship between daily activities including drinking and health will be discussed in detail below.

Third, with regard to routine exercise (walking), the older the respondent, the less likely they exercise; the farming class exercises most frequently while the urban self-employed exercise least; the higher the education, the less likely people exercise; the higher the income, the more likely people exercise. Fourth, with regard to access

to medical information, it is clear that the professional-managerial class stands out in having exceptional good access to medical information. In addition, those with better education and income have relatively good access to information. There seems to be no age and gender difference in access to medical information.

Finally, we examine how daily activities and access to medical information are associated with various health-related outcomes. Table 9 summarizes the associations after controlling for gender, age, class, education, and income. Significant positive associations are indicated by plus signs (one plus for 5% level and two pluses for 1% level of significance), and significant negative associations are indicated by minus signs (one minus sign for 5% level and two for 1% level of significance). Smoking is significantly associated with the likelihood of onsets of chronic medical conditions and physical discomfort. The result is consistent with those of epidemiological studies. However, because smoking is not related to other health-related outcomes and chronic conditions are not affected by socio-economic factors, smoking cannot act as a mediating factor between socio-economic factors (class and income) and health outcomes.

Associations involving drinking, on the other hand, are more complicated than those of smoking. Drinking reduces (not increases) the chances of activity restriction and perceived poor health, while it is not related to other health outcomes. If we take the result literally, drinking contributes to good health. Epidemiological studies usually report negative association between the amount of drinking and good health: the more the consumption of alcohol, the worse the health conditions. Our study does not measure drinking by the amount of drinking but rather by the presence of drinking, either now (at the time of survey) or in the past. The respondents who were drinking at the time of survey are those who did not experience activity restriction and believe that they are healthy. In other words, we should not interpret the result as indicating that drinking leads to healthy outcomes. Rather, the result implies that those who are healthy enjoy alcoholic beverages.

Similar interpretation applies to the associations involving exercises. Walking is significantly associated with all health outcomes. The results may imply that walking leads to the reduced chances of having chronic disease, visiting doctors, experiencing physical discomfort, activity restriction, and depression, as well as better

perceived health. However, it is possible that those who can exercise are those who are healthy to begin with. It is impossible to establish the causal direction from our data. Daily walking may be the result of health, not the cause. In other words, it is not possible to conclude from these results that walking acts as a mediating variable between socio-economic factor and health outcomes.

Finally, when we examine the associations involving access to medical information, we find that it is related to physical discomfort, depression, subjective perception of current health, and perception of change in health status. Respondents who reported to have sufficient medical information are less likely to experience physical discomfort and depression and to have good subjective health perception. Since it is very unlikely to think that health outcomes are the causes of access to medical information, accessibility to information may act as an important mechanism linking socio-economic factors (class and income) and health outcomes. We speculate that favorable health conditions of the professional-managerial class and those with high income are in part explained by their superior access to medical information.

DISCUSSION

This paper examined the relationship between socio-economic factors and health-related outcomes. We identified six different health-related outcomes and examined the effects of various socio-economic variables separately for each outcome. The first major conclusion from the analyses pertains to the finding that the effects of socio-economic factors depend on the different health-related outcomes. The presence of chronic medical conditions and visit to doctor's office are largely independent of socio-economic factors. Age is the major determinant predicting these outcomes. The other four outcomes, the presence of physical discomfort, activity restriction, depression, and the self-reported health, are affected by socio-economic factors. The lack of the effects of socio-economic factors on chronic diseases is contrary to our original hypothesis. The emergence of chronic diseases is largely driven by genetic and constitutional factors that may be independent of socio-economic differences. The differences in working conditions by social class affect the presence of physical

discomfort and fatigue and activity restriction, but probably do not directly influence chronic medical conditions, except for occupationally driven symptoms and diseases.

Studies conducted in the West consistently reported class differentials in mortality rates and infection rates. Why did our study in Japan fail to report socio-economic differences in the onset of chronic diseases? We need to conduct further studies to come up with definitive conclusions, but there are a few possibilities. The first possibility is the diet. Traditionally, Japanese diet relied fish as the main source of protein, and it was believed to be related to lower rates of heart disease, colon cancer, and breast cancer (Marmot and Smith 1989). This kind of diet was probably wide-spread among the members of the society regardless of class and income, during the 1970s when the longevity was rapidly increased. Another possibility is the Japanese health system, including the national health insurance that was enacted in 1961. Along with the national health insurance, the former Ministry of Health and Welfare established public health centers all over Japan. These centers have contributed to reducing infectious diseases, especially tuberculosis, and infant mortality rates. Among the 191 national members of WHO (World Health Organization), Japan's health system is ranked at the top (World Health Organization 2002), and the system was probably successful in providing universal health coverage, regardless of class and income. However, more recently, there has been a problem of non-payment of the premium for the national health insurance system. The rate has been increasing steadily, reaching at 8.7 percent in 2000 (National Federation of Health Insurance Societies 2002). Therefore, there is a possibility that socio-economic differences will emerge in the future.

When we move our attention beyond chronic medical conditions and consider more comprehensive health-related outcomes (physical discomfort, activity restriction, depression, and subjective perception of health), differentials by social class and income are clearly apparent. The professional-managerial class is the most advantaged in these health-related outcomes, while the urban self-employed and the manual working class are the least advantaged. The exposure to unfavorable and physically demanding working conditions of the manual working class is likely to increase the risk of physical pain and fatigue and eventually lower general health conditions and perceptions. The petty bourgeoisie also tend to have lower rate of health conditions than the professional-

managerial class, and this difference is probably derived from the longer working hours of the petty bourgeoisie. All these findings suggest that the positions in the labor market have profound influence on the workers' health. Income also exerts significant influence on all health-related outcomes, except for chronic medical condition and visit to doctor's office. People with greater financial assets are probably able to derive various resources that help them avoid being physically constrained at home and feel more secured even when their health conditions worsen. It is important to note that these differentials in health by class and income persist even after controlling for chronic medical conditions. In other words, class and income differentials are found among both chronically ill and those who do not suffer from chronic diseases. In summary, socio-economic inequality of health is documented when we use a more comprehensive measure of health-related outcomes that take into account the quality of life related to health.

The second major finding of this study relates to the predictive power of different socio-economic factors. Social class, our primary independent variable, and income are the two most important factors in predicting health-related outcomes. In contrast, education has virtually no effect on predicting people's health conditions and perception. What makes difference in people's health is not how much schooling they had. Instead, work positions in the labor market and financial resources affect people's physical well-beings. The lack of the effect of education is striking, so we need to think about possible explanations. First, the respondents are aged 65 or more, so it has been more than 40 years since they had their education. Moreover, many of them had their schooling under the old pre-war educational system. Such a long time lag is likely to weaken the direct effect of education on present health outcomes. Second, as shown in Table 1, 60 percent of respondents had minimum level of education. We were not able to distinguish the level of schooling among those in this category. The result is that there is not much spread in the educational distribution, and the effect of education is likely to be attenuated.

The third major finding of this study pertains to the role of daily activities and access to medical information in explaining the linkage between socio-economic positions and health outcomes. Smoking, drinking, and daily exercise do not seem to act as a mediating factor between socio-economic positions and health outcomes. In

particular, drinking and daily walking are better understood not as a mediating factor, but as a consequence of health conditions. Respondents who have relatively good heath are able to enjoy drinking and exercising, rather than drinking and walking lead to good health. In contrast, access to medical information probably acts as a mediating factor. Respondents who reported to have sufficient medical information are less likely to experience physical discomfort and depression and to have good subjective health perception. We speculate that favorable health conditions of the professional-managerial class and those with high income are in part explained by their superior access to medical information.

Finally, with regard to our two control variables, age and gender, there are two conclusions. First, any study of health must take into account age. Aging process is closely related to health conditions of the individuals, and there is usually a positive linear effect of age on poor health. Our results clearly support this point. In all our six health-related outcomes, age is a powerful determinant. It should be noted, however, that part of the effect of age goes through chronic conditions. Older people are nonetheless more likely to visit doctors and have ill-heath perception than younger people, regardless of their chronic diseases. This is because older people are more likely to suffer from health-related problems than younger people, even though they do not have any chronic diseases. Second, gender differences are found in some health-related outcomes. Although men and women do not differ in their chances of having chronic medical conditions, men are less likely to visit doctor's office, less likely to have depression, and less likely to report that their health got worse. Therefore, men seem to be healthier, at least on these aspects of health-related outcomes.

Before I draw to a close, I would like to briefly discuss one of the negative findings in the survey. Among the socioeconomic factors covered, it was notable that the number of years of education experienced by respondents showed absolutely no significant influence on health-related variables. In the case of respondents aged 65 and over, the period when they received their education was generally more than 40 years in the past, and many of them were products of the old pre-war education system. The passing of so much time would naturally be expected to reduce the direct effect of education on health issues. Moreover, as we saw in table 1, some 60% of the 65+ group were only educated to junior high school level ('ordinary primary schools' in the old

system), and we were unable to take account of differences [in educational level] among respondents who had graduated from the same class of school. There was also a degree of bias in the sample regarding academic credentials, which prevented us from adequately measuring the ability of education to create differentials. This may have been another factor preventing us from fully detecting the impact of educational factors.

The differentials in quality of life relating to health in old age may be viewed as a 'hidden differential' in contemporary Japan. The labor market is the source of status differentials, and even after one has retired from it, the nature of the work one was engaged in prior to retirement continues to exert a permanent effect on one's life, even extending to the domain of health – the most fundamental condition of human life.

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NOTES

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[1] Earlier version of this paper was presented at the meeting of the International Sociological Association's Research Committee on Social Stratification (RC28), at Radboud University Nijmegen, the Netherlands, on May 11-14, 2006.

2 Nihon Keizai Shinbun, 3 July 2005, morning edition. The survey was carried out from mid-May to early June 2005 by the paper's research affiliate, Nikkei Risaachi. It covered 1,000 men and 1,000 women, all of them living within a 30-kilometer radius of Tokyo, Osaka or Nagoya. The response rate was 67.3%.

[3] Healthy life expectancy is computed from life expectancy, but includes an adjustment for time spent in poor health. Healthy life expectancy measures the equivalent number of years in full health that a newborn child is expected to live based on the present level of mortality rates and the distribution of health states in the population (World Health Organization 2004).

[4] People who are receiving pubic assistance (low income families) are exempt from the payment of premium for the national health insurance.

[5] This study used data from the Nihon University Japanese Longitudinal Study of Aging (NUJLSOA). The survey was conducted by the Nihon University Center for Information Networking as one of their research projects. I am grateful to the Nihon University Center for Information Networking and the researchers who conducted the survey for giving me the permission to use the data set. In particular, I thank Professor Yasuhiko Saito for his kind assistance and comments on the earlier version of this paper.

[6] Our analysis is based on the weighted sample (n=4997). The sample size in each analysis is smaller than this total usable sample because there were missing cases in some of the variables included in the analysis.

[7] There were 12 items measuring the CES-D scale, and the reliability (Cronbach's alpha) among the items is .877.

[8] The entire distribution of self-reported health question is as follows: poor (2 percent), not good (12.6 percent), fair (33 percent), good (33.5 percent), and very good (18.8 percent). The three-category version (bad, fair, and good) was also experimented, but there was very little difference between "fair" and "good" groups. Therefore, the paper employs the dichotomous version of the self-reported health variable.

[9] The entire distribution of self-reported change in health conditions is as follow: got better (6 percent), about the same (67 percent), and got worse (27 percent).

Table 1 Descriptive Statistics

Health-related variables	
Chronic health condition	0.733
Visit to doctor's office	0.736
Physical discomfort	0.238
Activity restriction (shopping)	0.103
Depression present	0.292
Self-reported health (poor, not good)	0.299
Change in Self-reported health (got worse)	0.267
Independent variables	
Gender	
Male	0.513
Female	0.487
Age	
65 - 69	0.342
70 - 74	0.280
75 - 79	0.209
80 +	0.169
Age medium	72.000
Social Class	
Professional-managerial	0.138
Routine non-manual	0.184
Self-employed	0.213
Farm	0.185
Manual	0.280
Education	
Junior high school level	0.598
Senior high school level	0.301
Junior college/technical college	0.031
University/graduate school	0.070
Average years of schooling	10.551
Household Income	
Below 1 million yen	0.135
1 million to less than 1.5 miilion yen	0.094
1.5 million to less than 2 milliion yen	0.117
2 million to less than 3 milliion yen	0.188
3 million to less than 4 milliion yen	0.125
4 million to less than 5 milliion yen	0.069
5 million yen or more	0.089
Income missing	0.183
Medium income in million yen	2.500
Daily Activities	
Smoking	0.454
Drinking	0.499
Walking	0.598
Access to Medical Information (% good)	0.443

Table 2. Logistic Regression Predicting Chronic Health Conditions

Independent variables	Model 1		Model 2	
Male	0.184	*	0.197	*
Age	0.047	**	0.046	**
Class (Prof-managerial)				
Routine non-manual	0.161		0.111	
Self-employed	0.066		-0.015	
Farm	0.006		-0.087	
Manual	0.017		-0.101	
Education (years)			-0.023	
Income (in 10 millon yen)			-0.003	
Income missing			-0.150	
Intercept	-2.455	**	-2.031	**
-2 Log Likelihood	4601.190		4460.911	
Sample size	3998		3875	

Notes: ** p<.01, * p<.05
The category in parentheses for the class variable is the base reference.

Table 3. Logistic Regression Predicting Visit to Doctor's Office

Independent variables	Model 1		Model 2		Model 3	
Male	-0.095		-0.079		-0.230	**
Age	0.051	**	0.050	**	0.036	**
Class (Prof-managerial)						
Routine non-manual	-0.054		-0.096		-0.198	
Self-employed	-0.004		-0.072		-0.082	
Farm	-0.326	*	-0.380	*	-0.432	*
Manual	-0.090		-0.161		-0.141	
Education (years)			-0.014		-0.003	
Income (in 10 millon yen)			-0.002		-0.001	
Income missing			0.018		0.128	
Chronic conditions					2.317	**
Intercept	-2.653	**	-2.437	**	-1.832	**
-2 Log Likelihood	4542.992		4415.868		3602.572	
Sample size	3973		3853		3853	

Notes: ** p<.01, * p<.05
The category in parentheses for the class variable is the base reference.

Table 4. Logistic Regression Predicting Physical Discomfort

Independent variables	Model 1		Model 2		Model 3	
Male	−0.086		−0.051		−0.079	
Age	0.038	**	0.034	**	0.028	**
Class (Prof-managerial)						
Routine non-manual	0.234		0.182		0.172	
Self-employed	0.680	**	0.603	**	0.617	**
Farm	0.406	**	0.300	+	0.326	+
Manual	0.468	**	0.343	*	0.377	*
Education (years)			0.004		0.009	
Income (in 10 millon yen)			−0.009	**	−0.008	**
Income missing			−0.039		−0.018	
Chronic conditions					1.156	**
Intercept	−4.041	**	−0.703	**	−3.504	**
−2 Log Likelihood	4267.167		4102.691		3971.768	
Sample size	3936		3819		3819	

Notes: ** p<.01, * p<.05, + p<.10
The category in parentheses for the class variable is the base reference.

Table 5. Logistic Regression Predicting Activity Restriction

Independent variables	Model 1		Model 2		Model 3	
Male	−0.188		−0.114		−0.125	
Age	0.124	**	0.118	**	0.114	**
Class (Prof-managerial)						
Routine non-manual	0.500	*	0.438	+	0.424	+
Self-employed	0.698	**	0.588	*	0.588	*
Farm	0.509	*	0.300		0.299	
Manual	0.703	**	0.527	*	0.549	*
Education (years)			−0.017		−0.014	
Income (in 10 millon yen)			−0.009	*	−0.009	*
Income missing			0.159		0.167	
Chronic conditions					1.415	**
Intercept	−11.550	**	−10.654	**	−10.903	**
−2 Log Likelihood	2461.624		2377.074		2298.248	
Sample size	3986		3864		3864	

Notes: ** p<.01, * p<.05, + p<.10
The category in parentheses for the class variable is the base reference.

Table 6. Logistic Regression Predicting Depression

Independent variables	Model 1		Model 2		Model 3	
Male	−0.216	**	−0.171	*	−0.189	*
Age	0.036	**	0.031	**	0.027	**
Class (Prof-managerial)						
Routine non-manual	0.479	**	0.383	*	0.390	**
Self-employed	0.373	**	0.291	+	0.307	*
Farm	0.110		−0.065		−0.046	
Manual	0.458	**	0.308	*	0.334	*
Education (years)			−0.013		−0.009	
Income (in 10 millon yen)			−0.007	**	−0.007	**
Income missing			−0.054		−0.039	
Chronic conditions					0.619	**
Intercept	−3.558	**	−2.922	**	−2.780	**
−2 Log Likelihood	4246.880		4130.018		4082.549	
Sample size	3487		3392		3392	

Notes: ** p<.01, * p<.05, + p<.10
The category in parentheses for the class variable is the base reference.