

Supplementary data (online only)

Title

Tobacco price increase and smoking behavior changes in various subgroups: A nationwide longitudinal 7-year follow-up study among a middle-aged Japanese population

Authors

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Supplementary methods

Covariates

Baseline characteristics of each discrete-time cohort were defined as follows. Age was categorized as 50-54, 55-59 and 60-65 years-old. Education was classified into four categories: junior high school, high school, technical school or junior college, or university (4-years) or more. As education was taken from the second survey, missing value for these categories included a no-response in the second survey. Marital status was categorized as married, divorced/widowed, or never married. For equivalent household income, the cut-offs for the household income quintiles were 110, 179, 248 and 353 thousand yen per month at baseline discrete-time cohort. Self-rated health was classified into four categories as excellent, good, poor and very poor.

Although subjects with a missing value for any covariates were excluded from the regression analyses, a missing value category for income was used as a dummy variable because of their relatively large sample size.

Analysis to account for non-response

The questionnaire was mailed only to individuals who had participated in the previous wave or the one prior to that, who then mailed the questionnaire back [1]. No new respondents were added after the first wave. Subjects who did not respond to two consecutive surveys were dropped out from

the subsequent follow-up survey. As considerable differences between responders and non-responders in baseline characteristics were observed (data not shown), a logistic regression model was constituted to account for non-response at each wave [2], using potential confounding factors including a non-response variable (at least one non-response during 2nd to 7th survey). For example, because participants who responded to the 3rd survey but not the 4th survey were recruited for the 5th survey according to the study design [1], the non-response variable was regarded as a key predictor of non-participation in the subsequent survey [3]. This is in line with the method described by Schafer et al., i.e. at each session we asked participants, “How likely are you to drop out of this study before the next session?” Collecting this additional covariate and including it in the analyses may effectively make the assumption of “missing at random” appropriate in the study [4]. As a result, the non-responses were explained by covariates in the logistic models (data not shown). The c-statistics did not indicate poor fit of the models, and the logistic models created inverse probability weights to account for the non-responses in each discrete-time cohort ($IPW_{1st-2nd}$, $IPW_{2nd-3rd}$, $IPW_{3rd-4th}$, ..., $IPW_{7th-8th}$). Finally, we multiplied the IPWs to constitute a final weight for each subject of baseline discrete-time cohort: i.e. a final weight for subjects in the baseline cohort in the third survey, namely $IPW_{final_3rd-4th}$, were calculated by multiplying $IPW_{1st-2nd}$, $IPW_{2nd-3rd}$ and $IPW_{3rd-4th}$. After we confirmed that there were no extremely large outliers in each IPW, we made final weights for all discrete-time cohorts and applied each final weight to each baseline discrete-time cohort to fully account for the attrition at follow-up. To treat each wave equally, a standardized weight for each wave was used to keep the total subject number at each baseline cohort constant ($n=30,773$). This adjustment enabled us to interpret the prevalence of current smoking, accounting for attrition. Weighted number and weighted odds ratios are shown in the main results after excluding participants with no smoking information at each survey. The unweighted available-data analyses are shown as supplementary analyses (tables S1 and S3).

Since no probabilities of smoking behavioral changes between consecutive waves were large (<10%) in our data, the AORs obtained from the logistic GEE can approximate the ratio of the discrete-time behavioral change rates during 1-year intervals between the surveys.

Analysis using an interaction term

To confirm the interaction effect between the 2010 tobacco price increase (period 2009-2010) and each subgroup, we conducted GEE using an interaction term. If an interaction term is significant, this means that there is a significant association during 2009-2010 among a certain subgroup population.

All models for cessation indicated no significant interaction term between the period 2009-2010 and each subgroup. As for relapse, three interaction terms of “2009-2010/technical school or junior college education”, “2009-2010/other unemployment” and “2009-2010/very poor self-rated health” categories showed the significant AORs (95% CI) between subgroups of 0.45 (0.23, 0.87), 0.27 (0.09, 0.85) and 0.07 (0.01, 0.53) for relapse, respectively, when an interaction term was used in the model. Other interaction terms were not significant for relapse.

Supplemental References

1. Ministry of Health, Labour and Welfare. Longitudinal Survey of Newborns in the 21st Century, Tokyo, Japan; 2013.
2. Little R. J., D'Agostino R., Cohen M. L., Dickersin K., Emerson S. S., Farrar J. T. et al. The prevention and treatment of missing data in clinical trials, *N Engl J Med* 2012; **367**: 1355-1360.
3. Tabuchi T., Fujiwara T. Are secondhand smoke-related diseases of children associated with parental smoking cessation? Determinants of parental smoking cessation in a population-based cohort study, *Prev Med* 2015; **73C**: 81-87.
4. Schafer J. L., Graham J. W. Missing data: Our view of the state of the art, *Psychological Methods* 2002; **7**: 147-177.

Table S1. Distribution and changes in smoking status (percentages in parentheses for non-missing respondents and data): unweighted available-data analysis

Years	2005	2006	2007	2008	2009	2010	2011	2012	Baseline total (2005-2011)
Attained age of panel samples	50-59	51-60	52-61	53-62	54-63	55-64	56-65	57-66	50-65
Smoking status									
Never smoker	14,750 (47.9)	13,950 (48.0)	13,429 (48.1)	13,077 (48.0)	12,160 (48.7)	11,576 (49.1)	11,110 (49.4)	11,104 (49.3)	90,052 (48.4)
Quitter†	6745 (21.9)	6842 (23.5)	6850 (24.5)	7072 (26.0)	6766 (27.1)	7128 (30.2)	6827 (30.3)	7018 (31.2)	48,230 (25.9)
Current smoker‡	9278 (30.2)	8273 (28.5)	7667 (27.4)	7090 (26.0)	6050 (24.2)	4886 (20.7)	4566 (20.3)	4381 (19.5)	47,810 (25.7)
Number of cigarettes smoked									
1-10	1282 (13.8)	1256 (15.2)	1151 (15.0)	1160 (16.4)	1050 (17.4)	1118 (22.9)	1003 (22.0)	949 (21.7)	8020 (16.8)
11-20	4078 (44.0)	3690 (44.6)	3503 (45.7)	3263 (46.0)	2812 (46.5)	2512 (51.4)	2394 (52.4)	2299 (52.5)	22,252 (46.5)
21-30	2808 (30.3)	2379 (28.8)	2212 (28.9)	1978 (27.9)	1665 (27.5)	981 (20.1)	886 (19.4)	867 (19.8)	12,909 (27.0)
31-	1110 (12.0)	948 (11.5)	801 (10.5)	689 (9.7)	523 (8.6)	275 (5.6)	283 (6.2)	266 (6.1)	4629 (9.7)
Time frame for changes		2005-2006*	2006-2007	2007-2008	2008-2009	2009-2010*	2010-2011	2011-2012	Average changes
Changes									
Relapsed smoking (quitter† to current)		290 (4.3)	298 (4.4)	236 (3.5)	259 (3.7)	141 (2.1)	319 (4.5)	162 (2.4)	1705 (3.5)
Stopped smoking (current‡ to quitter)		777 (8.4)	570 (6.9)	631 (8.2)	523 (7.4)	900 (14.9)	396 (8.1)	353 (7.7)	4150 (8.7)

†Responders who had stopped smoking at the time of each survey were used as denominator in the analyses for changes.

‡Responders who currently smoked at the time of each survey were used as denominator in the analyses for changes.

*Time period when tobacco price increase occurred; i.e., July 2006 and October 2010.

Table S2. Baseline characteristics and smoking status of study subjects (sum of all discrete-time cohorts). Weighted results.

Baseline characteristics	Total subjects (n=215,411)	Current smoker rate*	Quitter rate*
	No. (%)	%	%
Sex			
Male	106,156 (49.3)	43.3	42.1
Female	109,255 (50.7)	12.2	11.0
Age			
50-54 years-old	41,016 (19.0)	31.3	23.0
55-59 years-old	107,182 (49.8)	28.5	25.6
60-65 years-old	67,213 (31.2)	23.6	29.3
Education			
Junior high school	40,638 (18.9)	36.1	24.5
High school	103,310 (48.0)	26.8	24.3
Technical school or junior college	33,599 (15.6)	18.7	20.2
University (4-years) or more	33,644 (15.6)	27.3	40.9
Missing	4221 (2.0)	33.9	24.6
Marital status			
Married	180,986 (84.0)	26.1	27.1
Divorced/widowed	21,823 (10.1)	32.6	21.1
Never married	11,612 (5.4)	38.9	24.4
Missing	990 (0.5)	49.1	21.6
Equivalent household income			
1st quintile (Lowest)	37,671 (17.5)	30.2	22.2
2nd quintile	34,750 (16.1)	27.8	24.9
3rd quintile	33,756 (15.7)	28.5	26.3
4th quintile	32,887 (15.3)	27.1	29.0
5th quintile (Highest)	33,984 (15.8)	25.3	30.1
Did not answer/ missing	42,363 (19.7)	26.2	25.9
Housing tenure			
Does not own housing	31,029 (14.4)	42.3	24.1
Owns housing	183,629 (85.2)	24.9	26.7
Missing	753 (0.3)	55.0	20.1
Employment status			
Working	151,057 (70.1)	30.2	29.0
Retired/Home-maker/Other	32,599 (15.1)	14.5	16.5
Recently unemployed (within one year)	5766 (2.7)	29.0	27.4
Other unemployed (including unknown date)	15,434 (7.2)	25.0	19.4
Missing	10,555 (4.9)	32.8	28.0
Self-rated health			
Excellent	78,190 (36.3)	25.2	26.8
Good	92,039 (42.7)	27.3	25.1
Poor	32,573 (15.1)	31.1	27.6
Very poor	10,808 (5.0)	34.3	29.1
Missing	1802 (0.8)	29.5	26.5
Alcohol consumption			
Everyday drinker	50,569 (23.5)	45.9	37.6
1-6 times per week drinker	42,895 (19.9)	28.3	34.7
1-3 times per month drinker	12,740 (5.9)	22.1	24.3
Seldom drinker	43,643 (20.3)	19.8	19.0
Never drinker	62,911 (29.2)	18.0	16.9
Frequency-unknown drinker/missing	2654 (1.2)	43.4	28.0

*P for difference calculated by chi-square test is "<0.001" for all categories in this table.

Table S3. Baseline characteristics and smoking status of study subjects (sum of all discrete-time cohorts). Unweighted results.

Baseline characteristics	Total subjects (n=186,092)	Current smoker rate*	Quitter rate*
	No. (%)	%	%
Sex			
Male	89,700 (48.2)	41.7	42.7
Female	96,392 (51.8)	10.8	10.3
Age			
50-54 years-old	38,423 (20.6)	30.3	23.0
55-59 years-old	92,864 (49.9)	26.5	25.5
60-65 years-old	54,805 (29.5)	21.2	28.8
Education			
Junior high school	32,645 (17.5)	32.5	24.3
High school	91,296 (49.1)	25.7	23.9
Technical school or junior college	29,660 (15.9)	16.9	19.9
University (4-years) or more	29,557 (15.9)	26.7	40.3
Missing	2934 (1.6)	30.9	23.7
Marital status			
Married	159,738 (85.8)	24.8	26.6
Divorced/widowed	16,835 (9.0)	29.0	20.4
Never married	9020 (4.8)	35.1	24.4
Missing	499 (0.3)	36.1	25.5
Equivalent household income			
1st quintile (Lowest)	30,317 (16.3)	26.5	21.8
2nd quintile	30,545 (16.4)	26.1	24.5
3rd quintile	30,259 (16.3)	27.2	26.1
4th quintile	29,771 (16.0)	26.0	28.5
5th quintile (Highest)	30,684 (16.5)	24.5	29.5
Do not answer/ missing	34,516 (18.5)	24.1	25.4
Housing tenure			
Does not own housing	22,911 (12.3)	38.2	24.3
Owns housing	163,003 (87.6)	23.9	26.2
Missing	178 (0.1)	38.8	21.4
Employment status			
Working	135,125 (72.6)	28.9	28.6
Retired/Home-maker/Other	27,201 (14.6)	12.4	15.4
Recently unemployed (within one year)	4673 (2.5)	25.7	26.7
Other unemployed (including unknown date)	12,258 (6.6)	20.3	18.4
Missing	6835 (3.7)	25.6	27.8
Self-rated health			
Excellent	69,968 (37.6)	24.1	26.3
Good	80,816 (43.4)	25.8	24.8
Poor	26,585 (14.3)	28.8	27.1
Very poor	7287 (3.9)	28.2	30.8
Missing	1436 (0.8)	26.0	27.2
Alcohol consumption			
Everyday drinker	43,343 (23.3)	44.3	38.1
1-6 times per week drinker	37,417 (20.1)	26.3	34.6
1-3 times per month drinker	11,405 (6.1)	20.7	23.7
Seldom drinker	38,466 (20.7)	18.3	18.4
Never drinker	53,358 (28.7)	15.9	15.8
Frequency-unknown drinker/missing	2103 (1.1)	40.4	28.5

*P for difference calculated by chi-square test is "<0.001" for all category in this table.

Table S4. Odds ratio for cessation. Discrete-time cohorts of unweighted available-data; GEE analyses.

Characteristics	smokers no.	no. who quit	%	Adjusted odds ratio* (95%CI)	P for trend
Duration					0.568
2005-2006†	8898	742	8.3	1.26 (1.11, 1.42)	
2006-2007	7910	553	7.0	1.00 (0.89, 1.14)	
2007-2008	7102	592	8.3	1.18 (1.05, 1.34)	
2008-2009	6381	462	7.2	1 (reference)	
2009-2010†	5410	798	14.8	2.13 (1.90, 2.39)	
2010-2011	4362	366	8.4	1.04 (0.91, 1.19)	
2011-2012	3973	306	7.7	0.93 (0.81, 1.07)	
Sex					
Male	34569	2809	8.1	1 (reference)	
Female	9467	1010	10.7	1.07 (0.97, 1.18)	
Number of cigarettes smoked per day					<0.001
1-10	7314	1175	16.1	3.05 (2.62, 3.55)	
11-20	20432	1623	7.9	1.45 (1.25, 1.67)	
21-30	11955	777	6.5	1.16 (1.00, 1.35)	
31-	4335	244	5.6	1 (reference)	
Age					<0.001
50-54 years-old	10973	821	7.5	1 (reference)	
55-59 years-old	22698	1917	8.5	1.12 (1.02, 1.22)	
60-65 years-old	10365	1081	10.4	1.35 (1.20, 1.53)	
Education					0.277
Junior high school	9702	791	8.2	1 (reference)	
High school	22067	1907	8.6	1.06 (0.96, 1.16)	
Technical school or junior college	4745	449	9.5	1.05 (0.91, 1.20)	
University (4-years) or more	7522	672	8.9	1.08 (0.96, 1.22)	
Marital status					
Married	36753	3344	9.1	1.44 (1.21, 1.72)	
Divorced/widowed	4426	307	6.9	1.06 (0.86, 1.31)	
Never married	2857	168	5.9	1 (reference)	
Equivalent household income					0.002
1st quintile (Lowest)	7091	611	8.6	1 (reference)	
2nd quintile	7316	606	8.3	1.00 (0.89, 1.13)	
3rd quintile	7665	637	8.3	1.04 (0.92, 1.18)	
4th quintile	7317	611	8.4	1.08 (0.95, 1.22)	
5th quintile (Highest)	7122	681	9.6	1.23 (1.08, 1.39)	
Do not answer/ missing	7525	673	8.9	1.02 (0.91, 1.15)	
Housing tenure					
Does not own housing	7948	547	6.9	1 (reference)	
Owns housing	36088	3272	9.1	1.26 (1.14, 1.39)	
Working condition					
Working	37400	3124	8.4	1 (reference)	
Retired/Home-maker/Other	3190	355	11.1	1.18 (1.04, 1.34)	
Recently unemployed (within one year)	1126	140	12.4	1.38 (1.15, 1.65)	
Other unemployed (including unknown date)	2320	200	8.6	0.99 (0.85, 1.17)	
Self-rated health					0.306
Excellent	15792	1377	8.7	1 (reference)	
Good	19378	1688	8.7	1.03 (0.96, 1.11)	
Poor	7005	556	7.9	0.96 (0.86, 1.06)	
Very poor	1861	198	10.6	1.24 (1.05, 1.46)	
Alcohol consumption					
Everyday drinker	18060	1421	7.9	1 (reference)	
1-6 times per week drinker	9266	824	8.9	1.08 (0.98, 1.18)	

1-3 times per month drinker	2178	231	10.6	1.33 (1.15, 1.55)
Seldom drinker	6633	606	9.1	1.11 (1.00, 1.23)
Never drinker	7899	737	9.3	1.13 (1.02, 1.26)

* Adjusted for all listed variables.

† Tobacco price increase occurred at 1 July 2006 and 1 October 2010.

Abbreviations: GEE, generalized estimating equation; CI, confidential interval.

Bold= statistical significance of $p < 0.05$

Table S5. Odds ratio for relapse. Discrete-time cohorts of unweighted available-data; GEE analysis.

Characteristics	ex-smoker no.	no. who relapse	%	Adjusted odds ratio* (95%CI)	P for trend
Duration					0.105
2006-2007	6595	286	4.3	1.10 (0.90, 1.33)	
2007-2008	6441	209	3.2	0.95 (0.77, 1.17)	
2008-2009	6513	232	3.6	1 (reference)	
2009-2010†	6151	124	2.0	0.63 (0.50, 0.80)	
2010-2011	6398	275	4.3	1.02 (0.84, 1.24)	
2011-2012	6080	143	2.4	0.85 (0.68, 1.06)	
Sex					
Men	30309	884	2.9	1 (reference)	
Women	7869	385	4.9	1.29 (1.11, 1.51)	
Recent quit (within one year)					
No	34896	465	1.3	1 (reference)	
Yes	3282	804	24.5	21.32 (18.7, 24.3)	
Age					0.093
50-54 years-old	5476	203	3.7	1 (reference)	
55-59 years-old	18480	626	3.4	1.00 (0.84, 1.20)	
60-65 years-old	14222	440	3.1	0.94 (0.76, 1.16)	
Education					0.472
Junior high school	6245	249	4.0	1 (reference)	
High school	17566	614	3.5	0.99 (0.84, 1.17)	
Technical school or junior college	4744	179	3.8	1.10 (0.89, 1.37)	
University (4-years) or more	9623	227	2.4	0.90 (0.74, 1.11)	
Marital status					
Married	33796	1102	3.3	0.96 (0.73, 1.27)	
Divorced/widowed	2701	109	4.0	0.94 (0.67, 1.32)	
Never married	1681	58	3.5	1 (reference)	
Equivalent household income					0.068
1st quintile (Lowest)	5128	215	4.2	1 (reference)	
2nd quintile	5986	211	3.5	0.96 (0.77, 1.19)	
3rd quintile	6230	209	3.4	0.93 (0.75, 1.16)	
4th quintile	6605	196	3.0	0.89 (0.71, 1.11)	
5th quintile (Highest)	7112	203	2.9	0.85 (0.68, 1.06)	
Do not answer/ missing	7117	235	3.3	0.93 (0.75, 1.14)	
Housing tenure					
Does not own housing	4199	183	4.4	1 (reference)	
Owns housing	33979	1086	3.2	0.85 (0.71, 1.02)	
Working condition					
Working	31405	987	3.1	1 (reference)	
Retired/Home-maker/Other	3773	153	4.1	1.09 (0.89, 1.33)	
Recently unemployed (within one year)	1208	46	3.8	0.90 (0.64, 1.27)	
Other unemployed (including unknown date)	1792	83	4.6	1.21 (0.93, 1.58)	
Self-rated health					0.091
Excellent	14500	435	3.0	1 (reference)	
Good	16151	515	3.2	1.03 (0.90, 1.19)	
Poor	5812	224	3.9	1.09 (0.91, 1.30)	
Very poor	1715	95	5.5	1.26 (0.98, 1.62)	
Alcohol consumption					
Everyday drinker	13132	389	3.0	1 (reference)	
1-6 times per week drinker	10404	295	2.8	1.03 (0.88, 1.22)	
1-3 times per month drinker	2180	70	3.2	1.17 (0.88, 1.55)	

Seldom drinker	5634	229	4.1	1.12 (0.93, 1.34)
Never drinker	6828	286	4.2	1.00 (0.84, 1.20)

* Adjusted for all listed variables.

† Tobacco price increase occurred at 1 July 2006 and 1 October 2010.

Abbreviations: GEE, generalized estimating equation; CI, confidential interval.

Bold= statistical significance of $p < 0.05$

Figure S1. Rates of smoking cessation in various subgroups during 2008-2009 and 2009-2010. GEE results of unweighted available-data analyses.

Characteristic	2008-2009		2009-2010*	
	%	%	Adjusted odds ratio† (95% CI)	
Sex				
Men	6.8	14.2	2.17	(1.88-2.50)
Women	8.9	16.8	2.08	(1.63-2.66)
Number of cigarettes smoked per day				
1-10	13.2	25.8	2.27	(1.79-2.87)
11-20	6.3	14.1	2.39	(1.98-2.88)
21-30	6.1	10.9	1.81	(1.40-2.34)
31-	5.2	8.7	1.51	(0.93-2.44)
Age				
50-54 years-old	6.6	12.2	1.97	(1.38-2.81)
55-59 years-old	6.8	14.2	2.27	(1.91-2.69)
60-65 years-old	8.5	16.1	2.08	(1.69-2.55)
Education				
Junior high school	6.3	15.3	2.60	(1.98-3.41)
High school	6.9	14.3	2.16	(1.81-2.57)
Technical school or junior college	9.3	15.3	1.77	(1.25-2.49)
University (4-years) or more	8.1	15.1	1.97	(1.48-2.63)
Marital status				
Married	7.6	15.5	2.16	(1.90-2.46)
Divorced/widowed	6.2	11.2	1.88	(1.21-2.92)
Never married	4.5	10.7	2.41	(1.32-4.38)
Equivalent household income				
1st quintile (Lowest)	8.1	15.6	1.97	(1.48-2.61)
2nd quintile	6.7	13.9	2.21	(1.59-3.07)
3rd quintile	7.6	14.6	2.05	(1.49-2.83)
4th quintile	6.5	16.4	2.67	(1.87-3.82)
5th quintile (Highest)	8.4	13.0	1.66	(1.19-2.33)
Housing tenure				
Does not own housing	4.7	13.0	3.06	(2.17-4.32)
Owns housing	7.8	15.1	2.03	(1.78-2.32)
Working condition				
Working	6.8	14.1	2.20	(1.92-2.52)
Retired/Home-maker/Other	10.5	18.0	1.88	(1.27-2.78)
Recently unemployed	11.5	17.8	1.63	(0.91-2.92)
Other unemployed	7.5	16.8	2.36	(1.32-4.19)
Self-rated health				
Excellent	7.4	15.5	2.26	(1.85-2.77)
Good	7.5	14.5	2.05	(1.70-2.46)
Poor	6.7	13.4	2.01	(1.45-2.78)
Very poor	6.0	16.3	3.07	(1.64-5.76)
Alcohol consumption				
Everyday drinker	6.2	13.3	2.24	(1.82-2.74)
1-6 times per week drinker	7.9	14.4	1.89	(1.45-2.46)
1-3 times per month drinker	8.7	18.5	2.26	(1.30-3.93)
Seldom drinker	7.1	17.0	2.62	(1.91-3.60)
Never drinker	8.5	15.5	1.96	(1.49-2.56)

* Tobacco price increase occurred at 1 October 2010. 2008-2009 was used as a reference category.

† Adjusted for all listed variables.

Abbreviations: GEE, generalized equation estimation; CI, confidential interval; NA, not applicable.

Figure S2. Rates of smoking relapse in various subgroups during 2008-2009 and 2009-2010. GEE results of unweighted available-data analyses.

Characteristic	2008-2009		2009-2010*	
	%	%	Adjusted odds ratio† (95% CI)	
Sex				
Men	3.1	1.8		0.63(0.47-0.84)
Women	5.2	2.8		0.58(0.37-0.92)
Recent quit (within one year)				
No	1.4	1.1		0.76(0.55-1.06)
Yes	25.8	14.7		0.50(0.36-0.69)
Age				
50-54 years-old	3.4	1.9		0.56(0.25-1.29)
55-59 years-old	3.5	2.4		0.74(0.53-1.02)
60-65 years-old	3.8	1.6		0.52(0.34-0.78)
Education				
Junior high school	4.6	2.4		0.68(0.40-1.17)
High school	3.7	2.1		0.65(0.46-0.92)
Technical school or junior college	3.6	1.6		0.33(0.15-0.69)
University (4-years) or more	2.5	1.8		0.69(0.40-1.20)
Marital status				
Married	3.5	1.9		0.62(0.47-0.80)
Divorced/widowed	4.5	3.7		0.94(0.41-2.14)
Never married	4.4	0.8		0.25(0.04-1.48)
Equivalent household income				
1st quintile (Lowest)	4.9	2.2		0.56(0.31-0.99)
2nd quintile	4.0	2.2		0.74(0.41-1.34)
3rd quintile	2.5	1.9		0.72(0.36-1.44)
4th quintile	2.7	2.2		0.81(0.42-1.55)
5th quintile (Highest)	2.5	1.8		0.85(0.42-1.73)
Housing tenure				
Does not own housing	5.5	2.9		0.73(0.39-1.37)
Owns housing	3.3	1.9		0.61(0.47-0.80)
Working condition				
Working	3.2	2.0		0.71(0.54-0.93)
Retired/Home-maker/Other	5.8	2.7		0.49(0.25-0.95)
Recently unemployed	6.4	1.9		0.20(0.06-0.71)
Other unemployed	5.0	1.4		0.27(0.07-0.97)
Self-rated health				
Excellent	3.2	2.0		0.71(0.48-1.06)
Good	3.3	2.1		0.70(0.48-1.01)
Poor	3.9	2.2		0.61(0.34-1.10)
Very poor	7.7	0.4		0.06(0.01-0.47)
Alcohol consumption				
Everyday drinker	2.9	1.8		0.74(0.47-1.15)
1-6 times per week drinker	2.7	1.9		0.66(0.41-1.08)
1-3 times per month drinker	3.5	2.8		0.98(0.37-2.59)
Seldom drinker	4.0	1.7		0.49(0.25-0.96)
Never drinker	5.7	2.7		0.54(0.33-0.89)

* Tobacco price increase occurred at 1 October 2010. 2008-2009 was used as a reference category.

† Adjusted for all listed variables.

Abbreviations: GEE, generalized equation estimation; CI, confidential interval.