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Smoking patterns and predictors of smoking cessation in elderly populations in Lebanon

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SUMMARY

OBJECTIVE—To investigate smoking patterns in an elderly, low-income population and to identify predictors of smoking cessation, in addition to analyzing the importance of smoking in relation to other risk factors for hospitalization.

DESIGN—The data were part of an urban health study conducted among 740 individuals aged ≥60 years in three suburban communities of low socio-economic status in Beirut, one of them a refugee camp. A detailed interview schedule was administered that included comprehensive social and health information.

RESULTS—The overall prevalence of current smokers was 28.1%. Almost half of the group were ever smokers, of whom 44% had quit smoking when they experienced negative health effects. Having at least one chronic illness and having a functional disability significantly increased the odds of smoking cessation. In addition, being a former smoker increased the likelihood of hospital admission.

CONCLUSIONS—This study is of particular importance, as it has implications for similar low-income and refugee communities in the region and elsewhere. There is a need for more concerted efforts by public health officials to target elderly individuals as a group for smoking cessation interventions, particularly now that mortality and health benefits have been well documented.

OBJECTIF: Investiguer les types de tabagisme dans une population âgée à faibles revenus et identifier les facteurs prédictifs de l'arrêt du tabagisme, tout en analysant l'importance du tabagisme par rapport aux autres facteurs de risque d'hospitalisation.

SCHÉMA: Les données constituent une fraction de l'étude de santé urbaine menée chez 740 personnes âgées de ≥60 ans à Beyrouth dans trois collectivités suburbaines à faible statut socio-économique dont une des trois se situe dans un camp de réfugiés. Un schéma détaillé d'interview a été utilisé comportant des informations complètes sur le plan social et celui de la santé.

RÉSULTATS: La prévalence globale des fumeurs actuels est de 28,1%. Près de la moitié des personnes âgées ont fumé à un moment quelconque dans leur vie et parmi celles-ci, 44% ont cessé de fumer. Les personnes âgées ont cessé de fumer lorsqu'elles en ont perçu les effets négatifs sur la santé. Le fait d'avoir au moins une maladie chronique et de souffrir d'une incapacité fonctionnelle ont augmenté d'une façon significative les chances d'arrêt du tabagisme. De plus, le fait d'être un ancien fumeur a augmenté le risque d'admission hospitalière.

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CONCLUSIONS: Cette étude est d'une importance particulière car ses implications s'élargissent à des collectivités à faibles revenus similaires et chez les réfugiés dans la région ainsi qu'ailleurs. Il est nécessaire que les responsables de la santé publique fassent un effort plus concerté pour cibler les personnes âgées comme groupe en vue d'interventions d'arrêt du tabagisme, d'autant plus que les avantages en matière de mortalité et de santé ont aujourd'hui été bien documentés.

OBJETIVOS: Investigar los tipos de hábito tabáquico en una población de personas ancianas, de bajos ingresos y determinar los factores pronósticos del abandono del hábito. Asimismo, se analizó la importancia del tabaquismo en relación con otros factores de riesgo de hospitalización.

DISEÑO: Los datos formaban parte de un estudio de salud urbana de 740 personas de ≥60 años de edad, en tres comunidades suburbanas de bajo estrato socioeconómico en Beirut, una de las cuales era un campo de refugiados. Se administró una entrevista estructurada que aportaba amplia información social y sanitaria.

RESULTADOS: La prevalencia global de fumadores fue de 28,1%. Casi la mitad de las personas ancianas había sido fumadora en algún momento y 44% habían abandonado el tabaquismo. Estas personas abandonaron el hábito tabáquico cuando tuvieron repercusiones negativas sobre su salud. La presencia de por lo menos una enfermedad crónica y de discapacidad funcional aumentó en forma significativa las probabilidades de abandono del tabaquismo. Además, el antecedente de tabaquismo aumentó el riesgo de hospitalización.

CONCLUSIÓN: El presente estudio reviste una importancia particular, pues sus implicaciones son amplias para comunidades similares de escasos ingresos y de refugiados en esta y otras regiones. Pone en evidencia la necesidad de iniciativas más coordinadas por parte de los funcionarios de salud pública, destinadas a enfocar las campañas de abandono del tabaquismo en la población de edad mayor ; aún más hoy, cuando se ha demostrado la utilidad del abandono en términos de disminución de la mortalidad y consecuencias positivas para la salud.

Keywords

smoking cessation; elderly; health

THE WORLD HEALTH ORGANIZATION (WHO) estimates that by the year 2020, 10 million people will die from tobacco-related diseases annually, with most deaths occurring in the developing world.1 Data on smoking are lacking in developing countries, particularly for elderly population groups, as many physicians have had a permissive attitude towards smoking among the elderly.2–4

In a recent publication, Jha et al. reported worldwide prevalence rates of smoking among persons aged ≥60 years of 40% for males and 12% for females.5 The elderly represent 12% of the smoking population. The fact that smoking rates are similar among persons aged 50–59 years indicates that few quit after the age of 50, despite evidence that shows that quitting in the elderly is possible at the same rate as younger smokers when the appropriate tools are made available.6 In addition, smoking cessation even at an older age is associated with a reduction in mortality.7 Smoking cessation at age 60 is associated with a gain in life expectancy of about 3 years.8 Life expectancy in countries in epidemiological transition, such as Lebanon, is increasing,9 with 8% of the Lebanese population now aged ≥65 years.10 The increased likelihood of physical dependency, disability and need for hospitalization associated with chronic diseases, particularly those related to tobacco, therefore increases the burden on the health care system.

Cigarette smoking has deleterious effects not only on health, but also on the economic situation of those who smoke. Tobacco expenditure worsens poverty and living standards among the poor. In Bangladesh, the money spent on tobacco could ensure an adequate diet

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for an estimated 10.5 million people,11 while in China, current smokers spend about 17% of their household income on cigarettes.12

The aims of the present study were to investigate smoking patterns in an elderly, low-income population in Lebanon and to identify predictors of smoking cessation. In addition, to illustrate the deleterious effects of smoking on health in the elderly, we examined the relationship between smoking and health outcome using hospitalization data.

STUDY POPULATION AND METHODS

Data source

The Center for Research and Population Health at the American University of Beirut conducted a large cross-sectional study of 3300 households (the Urban Health Study, UHS) in three poor communities in metropolitan Beirut: two Lebanese (Hay-El-Sullum and Nabaa) and one Palestinian (Burj-El-Brajneh refugee camp). Hay El Sullum is situated in the southern suburbs and is inhabited mainly by poor Shiites who left the rural areas for better employment opportunities in the city. Burj-El-Brajneh camp is a refugee camp inhabited by Palestinians who came to Lebanon in 1948 and their descendants; it is located in the southern suburbs of Beirut. Nabaa is a poor mixed-religion area of East Beirut created mainly by Christian displacement from Mount Lebanon during the Lebanese wars.

Stratified, two-stage sampling with probability proportional to size was used to select 3300 households. Data collection for the UHS was done in two phases: the first phase was from May to July 2002, where a ‘household questionnaire’ was administered, using a key informant, to obtain the list of all members in a household, and data on socio-demographics (age, sex, education and occupation), environmental conditions (availability of water, electricity and the physical condition of the household), insurance, work history, chronic diseases and living arrangements. Using the household roster (the list of household members, specifying their age and sex), 971 individuals aged ≥60 years were identified to be interviewed in person between December 2002 and March 2003. Of the 971, 853 were available at the time of the data collection, and a total of 740 were interviewed, giving a total response rate of 86.75%. The highest response rate was in the Palestinian camp (94%).

The study was approved by the Institutional Review Board, which did not require the authors to obtain written consent. However, verbal consent was obtained from each participant prior to the interview.

Study variables

Smoking was assessed by asking a series of questions on cigarettes and narghile (water-pipe) smoking. These included current smoking status (smoker, ex-smoker or never smoker), number of packs of cigarettes/narghile smoked per day, age at which smoking started, the number of years since quitting, and the reasons behind smoking cessation. Occasional cigarette smokers were not included with current smokers, as their frequency was low and no additional information was collected on smoking. Occasional narghile smokers were added to regular smokers. This is due to the fact that the regular pattern of narghile smoking is during weekends and occasionally in the middle of the week, so occasional narghile smokers may well be ‘regular’ smokers. Several variables were then computed for cigarette smoking, such as years of smoking and pack-years (packs per day multiplied by the number of years a person smoked). Pack-years was used to assess smoking intensity.

We included the following variables in our analyses: age, sex, literacy, perceived income sufficiency (yes/no), working status, presence of chronic disease (yes/no), disability, defined

as difficulties performing activities of daily life at home, subjective health evaluation and depression. Depression was measured using the geriatric depression Scale (GDS); a score of >10 was an indicator of definite depression.13 Distress was measured using the 12-item general health questionnaire (GHQ-12), with a conservative cut-off point of ≥5 to indicate distress.14,15 Hospital admission in the past 2 years was used as a proxy measure for health outcome.

Statistical analyses

All analyses were performed using the Statistical Package for Social Sciences version 10 (SPSS Inc, Chicago, IL, USA). χ^2 and *t*-tests were performed to check for significant differences between the communities studied. We used stepwise logistic regression to determine the effect of smoking and smoking cessation on hospitalization while controlling for other variables. We applied sampling weights to adjust for unequal probabilities of selection into the sample and non-response at the primary sampling unit level. The data reported here reflect weighted estimates of the population in the three communities. Failure to use sampling weights in a survey such as this may lead to serious biases in the estimates.

RESULTS

Socio-demographic characteristics and health status in the three populations

The mean age of the sample was 68.4 ± 6.6 years. The oldest participants were aged 96 years in Nabaa and Burj and 88 years in Hay-El-Sullum, with 17.5% of the participants still working. There was no statistically significant difference between the three communities with respect to these variables. Perceived income sufficiency and literacy rate were significantly lower for the Shiite community compared to the two other communities.

The inhabitants of the camp were more likely to have chronic disease (81.3%), disability (53.5%) and definite depression (30.7%) than the two other communities (Table 1). They were also less likely to report good health status (25.3%), and less likely to be admitted to hospital (28.6%) than the Hay-El-Sullum and Nabaa groups (Table 1).

Smoking behavior

The prevalence of current cigarette smoking among the elderly participants was 28.1%; 41.6% of men and 17.3% of women were current smokers. The point prevalence of smoking among those aged 60–64 years was 38%, compared to 30% in those aged 65–69 and 16% in those aged ≥70 years. Smoking rates were significantly higher in the camp, with 34.3% reporting current smoking, compared to 25.1% in Nabaa and 20.4% in Hay-El-Sullum. The proportion of ex-smokers was also highest in the camp. Health-related reasons were the main reason for quitting smoking in one third of the cases. Other reasons (67.2%) were: the advice of a health professional (13.2%), personal decision (44.5%) and cost or other (9.5%). The mean age at smoking cessation was 56.7 ± 13.5 years, while the mean time since stopping smoking was 13.0 ± 12.7 years. There was no statistically significantly difference in either variable between the communities (Table 2).

Among ever smokers, the mean number of pack-years was 52.2 ± 46.1. Despite the fact that inhabitants of the camp began to smoke at an older age and smoked for fewer years, the number of pack years was equivalent among the three communities. In addition, 15% of the elderly were ever narghile smokers (11.3% current and 4.9% ex-smokers), with the highest percentage of current smoking reported in Nabaa. A higher percent of ex-narghile smokers was reported in the Palestinian camp (8.6%). Among the few who reported being ex-narghile smokers, 20% said they stopped for a health-related reason. Participans started

narghile much later than cigarettes (39.9 and 21.9 years, respectively), with the Nabaa group having started at a younger age (31.8 years).

Smoking cessation

Table 3 shows correlates for quitting smoking. Smoking cessation among the elderly was strongly associated with having chronic disease and suffering from disability (adjusted odds ratio [OR] 4.29 and 1.79, respectively). All socio-demographic variables studied, the presence of definite depression, the number of pack-years, and age at smoking initiation were not significantly correlated with smoking cessation (Table 3).

Factors associated with hospital admission

The importance of smoking in relation to other risk factors for hospitalization was studied (Table 4). Former smokers were at significantly increased odds of hospital admission (OR 2.06) than current smokers, controlling for socio demographic and other health-related variables. The only other variable significantly associated with hospitalization was the presence of a chronic disease (aOR 3.16). Among those who had quit smoking, the mean number of years since quitting was 10.6 ± 12.3 for those who had been hospitalized in the last 2 years and 15 ± 12.7 for those who had not ($P = 0.027$). For all other socio-demographic, health and smoking-related variables there were no differences between both groups (data not shown).

DISCUSSION

This is the first study to report on smoking patterns in an elderly population in the Middle East, with emphasis on smoking cessation and its predictors. In a region where most of the population is young, research on elderly groups is scarce and tends to be disease-rather than behavior-oriented. Our findings show a high prevalence of smoking among the elderly, and a low cessation rate.

Our study has some limitations. First, the cross-sectional design does not allow us to determine causation. Elderly smokers who died are not reported here. However, the study has several strengths that enable us to reach our conclusions. Our methodology of sampling ensured a representative sample of the three poor urban communities. The heterogeneity of the communities makes our data generalizeable to poor elderly populations in Lebanon and the region, due to common heritage and practices. Moreover, data from the camp may be extrapolated to other Palestinian camps across Lebanon and the Middle East.

The prevalence rates of smoking in this study are higher than those reported earlier among Beirut residents (40% males and 16% females).16 A study from Saudi Arabia reported a smoking prevalence of 8% in an elderly population aged >60 years.17 In Jordan, the smoking rates among the elderly were found to be 32.5% for males and 9.6% for females (M Al Nsour, Jordanian Ministry of Health, personal communication, 20 May 2005). The prevalence of smoking in Lebanon is therefore more comparable with the global prevalence5 of cigarette smoking in the elderly than with its immediate region.

The highest prevalence of smoking was reported in the refugee camp. In addition to living in a state of instability and poor living conditions (e.g., lack of adequate water and sewer systems, insufficient space between houses, hazardous exposure to electric wires in the streets), older persons in the camp have the worst health indicators, in particular depression. There is ample evidence in the literature that current smokers have the highest prevalence of clinically significant depression.18

Our findings are similar to those reported by Lando et al., who found that the predictors of both short- and long-term abstinence from smoking after hospital admission were smoking-related illness and age, with older people more likely to quit.19

In the study by Kaplan et al., being an ex-smoker before the age of 65 predicted mortality and hospital utilization in both sexes.20 However, our results confirm that those who quit earlier are less likely to be hospitalized.

These data show that the elderly poor in a developing country do not quit smoking until they have serious health problems. It is therefore important to develop and implement programs to reduce smoking in developing countries as early as possible in life. There is an urgent need to target the elderly for smoking cessation interventions, particularly now that mortality and health benefits have been well documented.8

Multiple smoking cessation interventions have been shown to be of benefit to elderly smokers. All methods have quit rates similar to those of younger smokers, ranging between 23% and 32% at one year. These methods include the four ‘As’ (ask, advise, assist and arrange follow-up),21 counseling and physician advice,22 buddy support programs,23 self-help materials and telephone counseling,24 the nicotine patch,25 and, in a selected group of elderly, bupropion sustained release.6

Many elderly individuals do not have a primary care physician and do not visit a clinic regularly for care (43%, data not shown) and most cannot afford nicotine replacement therapy or other pharmacological means to help them quit smoking. The best way to reduce this high number of elderly smokers would be to increase the price of cigarettes.26 In Lebanon, tobacco costs about $1.30 US per packet for imported cigarettes and less than $0.50 for local brands. This is about 1% to 2.8% of the per capita gross domestic product, placing Lebanon among those countries where cigarettes are most affordable compared to published data on other industrialized and developing countries.26 The money generated from a tax increase could be used to increase access to cessation counseling services and pharmacological therapy to reduce nicotine dependence,27 as well as to treat the health problems resulting from nicotine addiction.

These high rates of smoking among the elderly in Lebanon, coupled with increased costs in medical care and an ageing population, will seriously impact the health of the country. Although Lebanon has signed and ratified the Framework Convention for Tobacco Control, 28 policies for tobacco control are almost non-existent. The high prevalence of smoking among Palestinian refugees deserves attention from the United Nations Relief and Work Agencies (UNRWA), the main health care provider for Palestinian refugees. The UNRWA spends about $9.30 per refugee annually for preventive and curative services,29 but coronary by-pass surgery for patients aged >60 years is not covered. The UNRWA’s network of primary clinics can be used for health education and smoking cessation programs.

It is also time to develop and implement tobacco cessation programs in Lebanon targeted at older age groups to promote healthy ageing, especially in view of the epidemiological transition towards more chronic diseases and the increase in life expectancy in our region.

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Table 1

Distribution of the elderly by socio-demographic and health related variables in three urban communities in Beirut

Characteristics	Total %	Hay el Sullum *n* (%)	Nabaa *n* (%)	Burj *n* (%)	*P* value
Socio-demographic					
Sex					
Male	44.6	43 (43)	158 (43.9)	140 (46.1)	0.804
Female	55.4	57 (57)	202 (56.1)	164 (53.9)	
Age, years, mean ± SD	68.4 ± 6.6	67.4 ± 5.9	68.9 ± 6.6	67.9 ± 6.6	0.059
Work status					
Not working	82.5	85 (85.9)	302 (83.9)	243 (79.9)	0.266
Working	17.3	14 (14.1)	58 (16.1)	61 (20.1)	
Income *					
Enough	53.7	22 (22.2)	188 (52.5)	141 (46.4)	0.000
Not enough	46	77 (77.8)	170 (47.5)	163 (53.6)	
Literacy					
Any formal schooling	41.6	23 (23)	175 (48.6)	120 (39.5)	0.000
No formal schooling	58.4	77 (77)	185 (51.4)	184 (60.5)	
Health-related					
Chronic disease					
Yes	73.4	72 (72)	242 (67.8)	247 (81.3)	0.000
No	26.2	28 (28)	115 (32.2)	57 (18.8)	
Disability					
Yes	34.1	23 (23.2)	75 (20.9)	162 (53.5)	0.000
No	65.9	76 (76.8)	284 (79.1)	141 (46.5)	
Definite depression					
No	74.6	83 (88.3)	281 (78.5)	205 (69.3)	0.000
Yes	23.5	11 (11.7)	77 (21.5)	91 (30.7)	
GHQ					
<5	51.3	51 (52)	183 (51.5)	158 (52.7)	0.960
>5	47.4	47 (48)	172 (48.5)	142 (47.3)	
Health evaluation					

Characteristics	Total %	Hay el Sullum *n* (%)	Nabaa *n* (%)	Burj *n* (%)	*P* value
Bad	32.8	42 (42.4)	76 (21.2)	132 (43.4)	0.000
Average	33.1	24 (24.2)	134 (37.3)	95 (31.3)	
Good	34.0	33 (33.3)	149 (41.5)	77 (25.3)	
Admitted to hospital					
No	65.5	47 (47)	236 (65.7)	217 (71.4)	0.000
Yes	34.5	53 (53)	123 (34.3)	87 (28.6)	

* Perceived sufficiency to meet basic needs.

SD = standard deviation; GHQ = General Health Questionnaire.

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Table 2

Distribution of the elderly by selected smoking variables in three urban communities in Beirut

Smoking variables	Total %	Hay el Sullum *n* (%)	Nabaa *n* (%)	Burj *n* (%)	*P* value
Cigarette smoking					
Current smoker	28.2	20 (20.4)	90 (25.1)	104 (34.3)	0.000
Occasional smoker	7.0	3 (3.1)	46 (12.8)	4 (4.3)	
Ex-smoker	21.7	20 (20.4)	67 (18.7)	78 (25.7)	
Never smoked	43.2	55 (56.1)	156 (43.5)	117 (38.6)	
Reason for quitting					
Health-related	32.7	12 (63.2)	29 (44.6)	31 (43.7)	0.295
Non-health-related	67.3	7 (36.8)	36 (55.4)	40 (56.3)	
Among ever smokers, mean ± SD					
Pack year	52.2 ± 46.1	59.9 ± 48	51.2 ± 40.2	52.2 ± 50.3	0.564
Year smoking	40.1 ± 14.6	39.6 ± 14.2	42.7 ± 10.7	37.9 ± 14.6	0.010
Age at starting	21.9 ± 10.1	20.9 ± 9.8	20.0 ± 7.3	23.8 ± 11.9	0.002
Age at stopping	56.7 ± 13.5	56.6 ± 13.4	57.4 ± 10.9	56.1 ± 15.6	0.858
Years since stopping	13.0 ± 12.7	11.3 ± 13.4	12.5 ± 11.4	13.0 ± 13.6	0.861
Narghile smoking *					
Current	11.3	6 (6.1)	60 (16.8)	20 (6.6)	0.149
Ex-smoker	4.9	5 (5.1)	6 (1.7)	26 (8.6)	
Never smoked	83.8	88 (88.9)	292 (81.6)	257 (84.8)	
Reason for quitting					
Health-related	21.6	2 (40.0)	1 (16.7)	5 (19.2)	N/A
Non-health-related	78.4	3 (60.0)	5 (83.3)	21 (80.8)	
Among ever smokers					
Age at start, mean ± SD	39.9 ± 17.2	41.1 ± 19.2	31.8 ± 13.3	42.3 ± 17.5	0.199
Years since stopping, mean ± SD	10.4 ± 10.4	3.0 ± 1.7	8.9 ± 10.6	12.1 ± 10.9	0.213

* To test for significance differences among the three communities, current and ex-smokers were merged into ever smokers.

SD = standard deviation; N/A = not available.

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Table 3

Unadjusted and adjusted OR of smoking cessation among the elderly by selected socio-demographic, health and smoking characteristics (among ever smokers)

Characteristics	Current (*n* = 214) *n* (%)	Ex-smokers (*n* = 165) *n* (%)	Unadjusted OR	Adjusted OR(95%CI)
Socio-demographic				
Age, years, mean ± SD	66.25 ± 5.47	69.35 ± 7.22	1.082	0.996 (0.987–1.006)
Sex				
Male	141 (56.6)	108 (43.4)	0.980	1.216 (0.726–2.042)
Female	73 (56.1)	57 (43.9)		1.00
Income*				
Enough	113 (56.8)	86 (43.2)	1.043	1.00
Not enough	100 (55.8)	79 (44.2)		0.904 (0.588–1.391)
Literacy				
Any formal schooling	116 (59.2)	80 (40.8)	0.791	0.815 (0.507–1.310)
No formal schooling	98 (53.5)	85 (46.5)		1.000
Health-related				
Chronic disease				
Yes	183 (53.5)	159 (46.5)	4.975	4.291 (1.663–11.11)
No	31 (86.1)	5 (13.9)		1.000
Disability				
Yes	51 (42.8)	68 (57.2)	2.233	1.795 (1.107–2.912)
No	162 (62.5)	97 (37.5)		1.000
Definite depression				
Yes	47 (55.3)	38 (44.7)	0.922	1.000
No	167 (57.6)	123 (42.4)		0.942 (0.565–1.569)
Smoking-related, mean ± SD				
Pack years	51.99 ± 53.79	52.46 ± 39.40	1.000	1.000 (0.995–1.005)
Age at start	22.2 ± 9.79	21.59 ± 10.61	0.540	0.994 (0.974–1.014)

*Perceived sufficiency to meet basic needs.

OR = odds ratio; CI = confidence interval; SD = standard deviation.

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Table 4

Unadjusted and adjusted ORs of admission to hospital by selected socio-demographic, health and smoking characteristics

Characteristics	Admitted to hospital		Unadjusted OR	Adjusted OR (95%CI)
	Yes (*n* = 125) *n* (%)	No (*n* = 253) *n* (%)		
Socio-demographic				
Age, years, mean ± SD	68.14 ± 6.71	67.33 ± 6.34	1.019	0.997 (0.961–1.035)
Sex				
Male	85 (34.0)	165 (66.0)	1.118	1.214 (0.721–2.045)
Female	41 (31.5)	89 (68.5)		1.000
Income *				
Not enough	64 (35.7)	115 (64.3)	1.275	1.205 (0.750–1.936)
Enough	61 (30.6)	138 (69.4)		1.000
Insurane				
Yes	93 (34.4)	177 (65.6)	1.276	1.215 (0.722–2.043)
No	32 (29.3)	77 (70.7)		1.000
Health-related				
Chronic disease				
Yes	97 (35.1)	179 (64.9)	4.032	3.164 (1.094–9.174)
No	28 (28.0)	72 (72.0)		1.000
Disability				
Yes	5 (23.8)	16 (76.2)	1.543	1.065 (0.628–1.806)
No	120 (33.6)	237 (66.4)		1.000
Definite depression				
No	84 (28.9)	206 (71.1)		1.000
Yes	37 (43.5)	48 (56.5)	1.893	1.886 (1.089–3.267)
Smoking-related				
Smoking status				
Current smoker	52 (24.4)	161 (75.6)		1.000
Ex-smoker	73 (44.2)	92 (55.8)	2.427	2.057 (1.283–3.300)
Pack years	58.1 ± 50.6	49.4 ± 43.6	1.004	1.005 (1.000–1.010)

* Perceived sufficiency to meet basic needs.

OR = odds ratio; CI = confidence interval; SD = standard deviation.

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