香港吸煙與健康委員會
HONG KONG COUNCIL ON SMOKING AND HEALTH

Public Support for Strengthening the Health Warnings on Cigarette Packaging Tobacco Control Policy-related Survey 2015

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1. Introduction

Smoking is one of the most preventable leading causes of serious diseases, death and economic loss in Hong Kong. However, many people are unaware of the health risks of smoking. According to the Framework Convention on Tobacco Control (FCTC) Article 11 of World Health Organization (WHO), pictorial health warnings are one of the most effective measures to warn about the risks of smoking and reduce smoking[1].

The Smoking (Public Health) Ordinance (Cap. 371) in Hong Kong restricts the sale and promotion of tobacco products. In February 1983, the Ordinance was amended, requiring all packaging of tobacco products to display a health warning in both Chinese and English wordings. In January 1994, the single health warning was replaced by four stronger and more precise messages that smoking can kill, causes cancer, causes heart disease, and harms smokers and others. In 2000, three more messages specifying that smoking causes lung cancer, respiratory diseases and harms to children, were added. Each cigarette packet was required to be printed with one message covering one-third of the packet. In October 2007, six versions of pictorial health warnings, portraying the previous warning messages and adding pictures of aging skin of a female smoker, and a bent cigarette warning about the risk of impotence, were used. These warnings must cover at least 50% of the packaging surface. In December 2012, Australia became the first in the world to introduce plain packaging to reduce the attractiveness of tobacco products, increase the effectiveness of health warnings and limit the misleading information of labelling and packaging. Trademark graphics and logos are prohibited on cigarette packs, other than brand names displayed in a standard font size, colour and position on the package. The packaging should not contain other colours and should include only the content and consumer information, such as toxic constituents, and health warnings required by law. The quitline number should also be displayed at a prominent position. While France, UK and Ireland have also passed the legislation for plain packaging, and many other countries have expanded the size of health warnings and used more threatening images, the health warnings in Hong Kong have not been changed for 9 years.

In May 2015, the Food and Health Bureau proposed to the Panel on Health Services of the Legislative Council on the renewal of the health warnings on cigarette packaging, which included (1) enlarging the size of new pictorial health warnings to at least 85% of both the packet front and back area, (2) increasing the number of forms of pictorial health warning from 6 to 12, (3) printing the health warning message “Tobacco kills up to half of its users” and the quitline (1833183), and (4) listing the tar and nicotine yields on a side adjacent to a typical flip-top lid of a cigarette packet.

In order to gauge public support for tobacco control measures, the Hong Kong Council on Smoking and Health (COSH) collaborated with the School of Public Health of The University of Hong Kong (HKU) to conduct the Tobacco Control Policy-related Survey (hereafter referred to as “the survey”). In the present report, we present the survey findings about the effect of the existing health warnings on cigarette packaging, and the public support towards the strengthening of the health warnings.

2. Methods

2.1 Study design and participants

Computer-assisted telephone interviews based on an anonymous and structured questionnaire were sub-contracted to a survey agent (Public Opinion Programme, The University of Hong Kong) to conduct the survey from April to October 2015, by trained telephone interviewers. Respondents aged 15 years or above speaking Cantonese or Putonghua were recruited. They were divided into 3 groups: (a) current smokers who, at the time of the survey, consumed cigarettes daily or occasionally; (b) ex-smokers, who consumed cigarettes previously but did not smoke at the time of the survey; and (c) never smokers, who had never consumed cigarettes in their life time. Initial calls took place during 6:30pm to 10:30pm on weekdays and weekends in order to cover respondents with diversified working hours from different occupations. Each randomly selected telephone number was called back for 5 times, with calls made at different times and days of the week, before it was considered as “non-contact”. All respondents provided oral consent before the interview began, and could withdraw from the study at any time without providing any reasons.

2.2 Sampling method and respondent selection

Respondents were randomly selected according to their residential telephone numbers from residential telephone directories. Another set of numbers were generated by a computer programme using the "plus/minus one/two" method and included in the sampling frame to capture unlisted numbers. When a telephone contact was successfully established with a target household, one eligible person was selected from all eligible family members who were at home at the time of interview, using the "next birthday" procedure. Only one eligible person from the household was interviewed even though more than one eligible member in the same household might be available at the time of interview.

2.3 Questionnaire development

The questionnaire used in the 2015 survey was modified from that in the 2014 survey. Similar to the 2013 and 2014 surveys, the questions were of two categories: (a) core questions; and (b) random questions. The core questions, including sex, age, education level, monthly household income and employment status, were posed to all respondents. The random question sets were designed for random subsample in the respondents, and could be aimed at specific smoker sub-groups. Questions on health warnings of cigarette packaging were included in one of the random question sets. In the 5,252 respondents in the survey, the computer randomly assigned 2,337 respondents (932 never smokers, 844 ex-smokers and 561 current smokers) to answer this question set.

2.4 Weighting and statistical analyses

The whole sample was weighted to compensate for the oversampling of ex- and current smokers and to make the sample more representative of the Hong Kong population. According to the projected population in 2015 in Hong Kong and the most updated smoking prevalence in 2015[2], a weight matrix was produced using sex, age and smoking status and used for the weighting.

Univariate analysis of variables of interest was conducted by smoking status. The chi-square test was used to examine differences by smoking status. All statistical tests were based on complete cases. Statistical significance level was defined as $p<0.05$. Statistical analysis was conducted using STATA (Version 13, TX: StataCorp LP).

3. Results

3.1 Characteristics of the sample

Table 1 shows the characteristics of the randomly-selected subsample in the current study. Never smokers and current smokers were younger than ex-smokers ($p<0.01$). More never smokers (41.6%) attained post-secondary education or above than ex- (25.8%) and current smokers (24.8%) ($p<0.01$). In contrast, more ex-smokers (20.9%) attained primary education at best than never (11.7%) and current smokers (13.0%) ($p<0.01$). Employment was higher in current smokers (69.8%) than never (54.5%) and ex-smokers (50.2%) ($p<0.01$). More ex-smokers (42.1%) had retired than never smokers (16.1%) and current smokers (18.3%) ($p<0.01$).

Table 1 Demographic characteristics of the weighted random subsample

Characteristics	Never smokers	Ex-smokers	Current smokers	Total	p-value
Sex (%)	n=932	n=844	n=561	n=2,337	<0.01
Male	38.4	83.8	82.4	45.4	
Female	61.6	16.2	17.6	54.6	
Age (%)	n=813	n=780	n=511	n=2,104	<0.01
15-19	11.6	0.5	1.2	9.9	
20-29	10.7	2.2	9.9	10.2	
30-39	17.7	11.0	21.3	17.7	
40-49	17.3	16.5	23.5	17.9	
50-59	19.2	21.4	22.6	19.6	
60+	23.6	48.4	21.5	24.7	
Education level (%)	n=926	n=837	n=558	n=2,321	<0.01
Primary or below	11.7	20.9	13.0	12.5	
Secondary	46.7	53.3	62.2	48.8	
Post-secondary or above	41.6	25.8	24.8	38.7	
Employment status (%)	n=927	n=840	n=558	n=2,325	<0.01
Employed	54.5	50.2	69.8	55.4	
Student	12.2	0.6	1.5	10.8	
Home maker	15.3	4.9	7.4	14.0	
Unemployed	1.8	2.2	3.0	2.0	
Retired	16.1	42.1	18.3	17.9	

Sample sizes (n) refer to the actual number of respondents; Percentages were weighted by age, sex and smoking status to the 2015 Hong Kong population. p-values were obtained from Chi-square test.

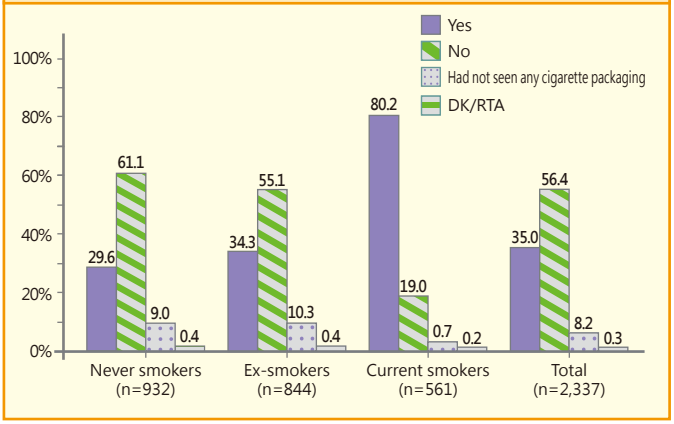
3.2 Effect of the existing health warnings

Of all respondents (n=2,337), about one-third (35.0%) had noticed the health warnings on cigarette packaging in the past 30 days, with a greater proportion in current smokers (80.2%) than never (29.6%) and ex-smokers (34.3%) (p<0.01) (Figure 1). 61.1% of never and 55.1% of ex-smokers had not noticed the warnings, and 9.0% of never and 10.3% of ex-smokers had even not seen cigarette packaging in past 30 days.

Only a quarter of all respondents (25.7%) noticed the warnings and thought about the risks of smoking in the past 30 days, but the proportion was significantly higher in current smokers (35.8%) than never (24.6%) and ex-smokers (23.3%) (p<0.01) (Figure 2).

Figure 1

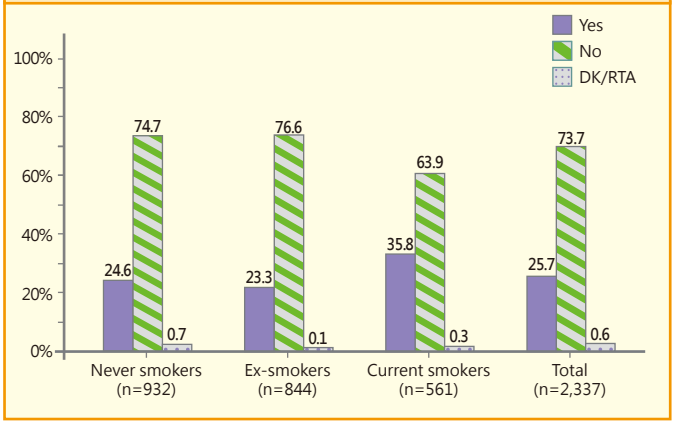
In the past 30 days, whether had noticed health warnings on cigarette packaging by smoking status



Sample sizes (n) refer to the actual number of respondents; Percentages were weighted by age, sex and smoking status to the 2015 Hong Kong population.

Figure 2

In the past 30 days, whether had noticed the health warnings on cigarette packaging and thought about the risks of smoking, by smoking status



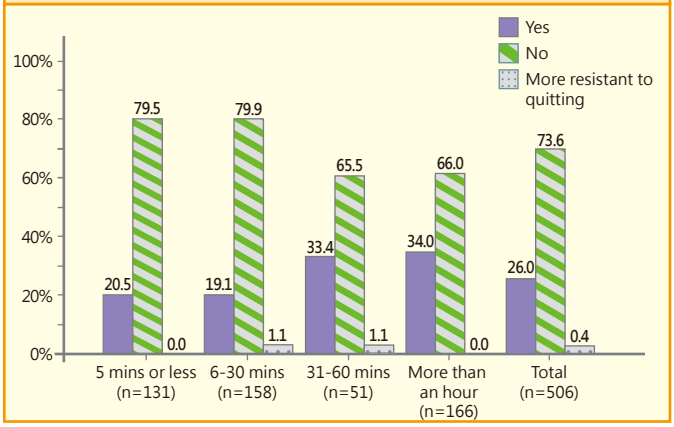
Sample sizes (n) refer to the actual number of respondents; Percentages were weighted by age, sex and smoking status to the 2015 Hong Kong population. "Yes" includes respondents who had noticed the health warnings and thought about the smoking risks; "No" includes those who did not notice the warnings, and those noticed the warnings but did not think about the risks of smoking.

Of all current smokers, about one-fourth (25.6%) had considered quitting because of the health warnings. Very few (1.0%) reported that the warnings had made them more resistant to quitting. Similar results (26.0% and 0.4% respectively) were found when the respondents did not answer the question of nicotine dependence (time to consume the first cigarette) were excluded (Figure 3a). But current smokers with high nicotine dependence (denoted by consuming the first cigarette within 30 minutes of waking) were significantly less likely to think about quitting when noticing the health warnings (19.1%-20.5%) than smokers with low nicotine dependence (33.4-34.0%) (p=0.04).

Nearly half the current smokers (46.5%) who were ready to quit (denoted by having a plan to quit within 30 days) thought about quitting when noticing the health warnings, compared with 22.0% of those smokers who were not ready to quit (denoted by no plans to quit or having a plan to quit after 30 days) (p<0.01) (Figure 3b).

Figure 3a

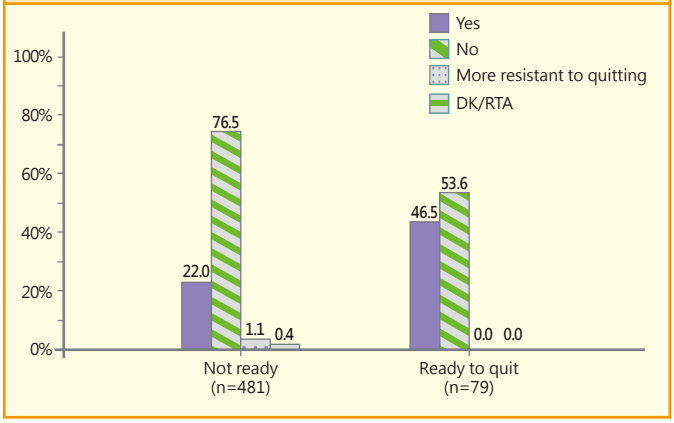
In the past 30 days, whether the health warnings on cigarette packaging had led current smokers to think about quitting, by time of consuming the first cigarette



Sample sizes (n) refer to the actual number of respondents; Percentages were weighted by age and sex of current smokers in Hong Kong 2015. 55 respondents who did not know or refused to answer the question of nicotine dependence were excluded.

Figure 3b

In the past 30days, whether the health warnings on cigarette packaging had led current smokers to think about quitting, by quit intention

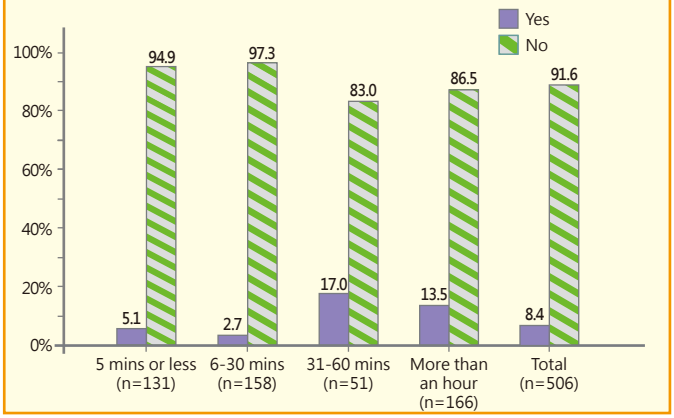


Sample sizes (n) refer to the actual number of respondents; Percentages were weighted by age and sex of current smokers in Hong Kong 2015.

Furthermore, 8.5% of current smokers (8.4% when respondents who did not respond to the nicotine dependence question were excluded, Figure 4a) had experienced stopping smoking because of the warnings when they were about to light a cigarette in the past 30 days. Smokers who had low nicotine dependence (13.5%-17.0%) were more likely than those who had high nicotine dependence (2.7%-5.1%) to have such experience (p<0.01). Smokers who were ready to quit were more likely to have this experience (18.7%) than those who were not ready to quit (6.7%) (p<0.01) (Figure 4b).

Figure 4a

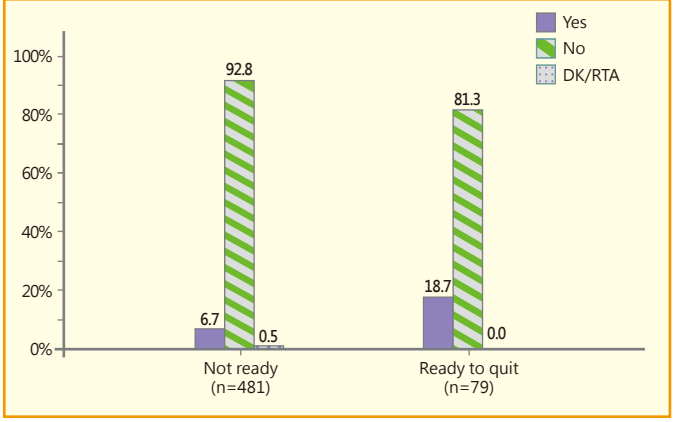
In the past 30 days, whether had stopped smoking because of the health warnings when about to light a cigarette in current smokers, by time of consuming the first cigarette



Sample sizes (n) refer to the actual number of respondents; Percentages were weighted by age and sex of current smokers in Hong Kong 2015. 55 respondents who did not know or refused to answer the question of nicotine dependence were excluded.

Figure 4b

In the past 30 days, whether had stopped smoking because of the health warnings when about to light a cigarette in current smokers, by quit intention



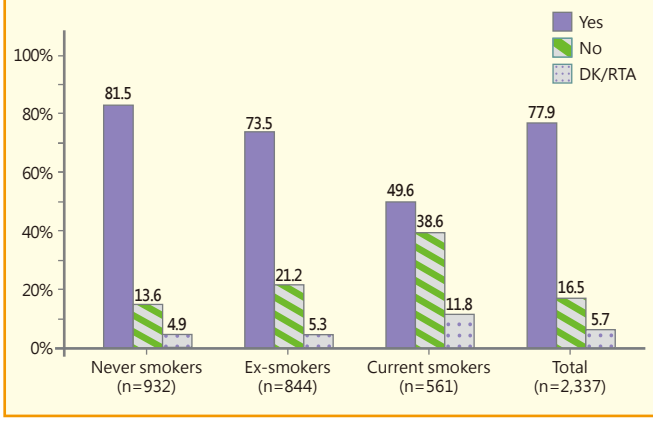
Sample sizes (n) refer to the actual number of respondents; Percentages were weighted by age and sex of current smokers in Hong Kong 2015.

3.3 Support for renewal of the health warnings

Over three-quarters of all respondents (77.9%) supported that the health warnings about the smoking-induced diseases on cigarette packaging should be made more clearly and more threatening, but the proportion was much lower in current smokers (49.6%) than never (81.5%) and ex-smokers (73.5%) (p<0.01) (Figure 5).

Figure 5

Whether supported to show the health warnings about the smoking-induced diseases on cigarette packaging more clearly and more threatening by smoking status

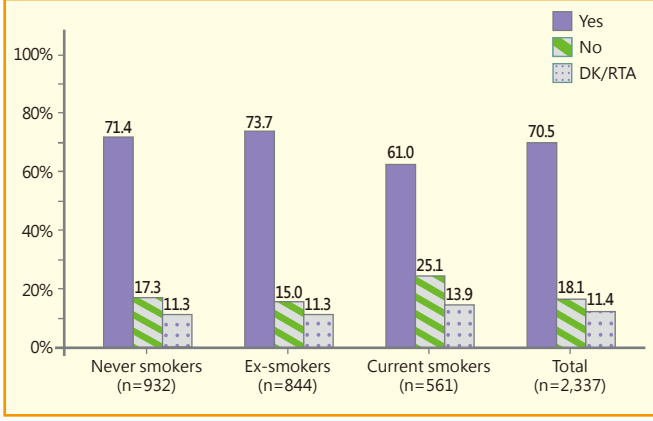


Sample sizes (n) refer to the actual number of respondents; Percentages were weighted by age, sex and smoking status to the 2015 Hong Kong population.

About 70% of all respondents (70.5%) supported to rotate the health warnings regularly, with 71.4% in never smokers, 73.7% in ex-smokers and 61.0% in current smokers (p<0.01) (Figure 6).

Figure 6

Whether supported to rotate the health warnings regularly by smoking status

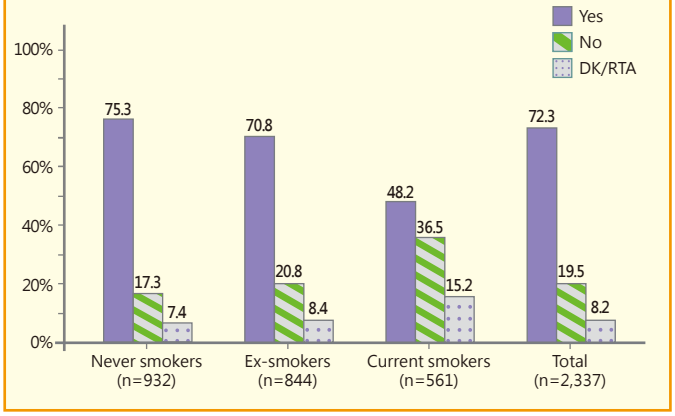


Sample sizes (n) refer to the actual number of respondents; Percentages were weighted by age, sex and smoking status to the 2015 Hong Kong population.

In addition, about 70% of all respondents (72.3%) supported to enlarge the pictorial warnings to 75% of cigarette packaging, but again the proportion was lower in current smokers (48.2%) than never (75.3%) and ex-smokers (70.8%) (p<0.01) (Figure 7).

Figure 7

Whether supported to enlarge the health warnings to 75% of cigarette packaging by smoking status

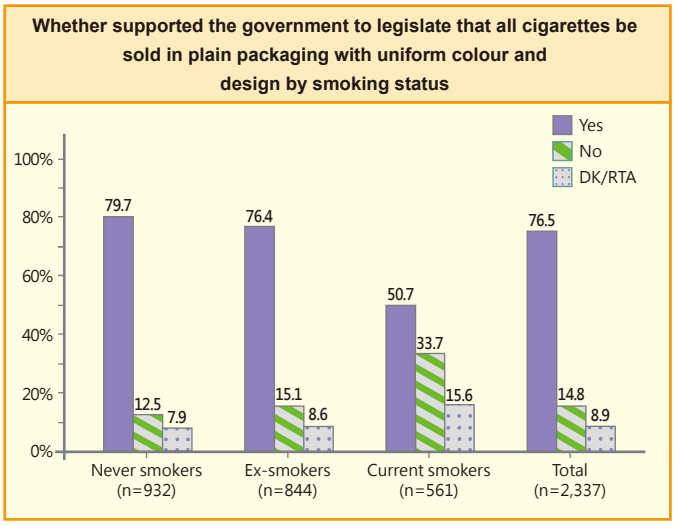


Sample sizes (n) refer to the actual number of respondents; Percentages were weighted by age, sex and smoking status to the 2015 Hong Kong population.

About three-quarters of all respondents (76.5%) supported the government to legislate that cigarettes to be sold in plain packaging with uniform colour and design, with higher proportion in never (79.7%) and ex-smokers (76.4%) than current smokers (50.7%) (p<0.01) (Figure 8).

Figure 8

Whether supported the government to legislate that all cigarettes be sold in plain packaging with uniform colour and design by smoking status



Sample sizes (n) refer to the actual number of respondents; Percentages were weighted by age, sex and smoking status to the 2015 Hong Kong population.

4. Discussion

This survey found that the current health warnings on cigarette packaging had a small effect with only 35.8% of current smokers thought about the risks of smoking, 25.6% considered quitting, and 8.5% stopped smoking upon noticing the warnings. These proportions were lower than those observed in the 2014 survey with the corresponding proportions of 46.6%, 32.6% and 12.1%. These findings suggested that the effects of the existing health warnings on initiating quit intention and quit attempt in the smokers with high nicotine dependence or those not ready to quit were diminishing. On the contrary, stronger public support for renewing the health warnings on cigarette packaging was found, such as displaying more threatening messages about the health risks of smoking (77.9% in 2015, 62.4% in 2014), and regular rotation of the health warnings (70.5% in 2015, 62.6% in 2014). About three-quarters of all respondents (72.3%; no data in 2014) supported to increase the coverage of the health warnings up to 75%, and 76.5% of all respondents (42.9% in 2014) opted for plain packaging of cigarettes. About half of the current smokers supported these measures, though their support was lower than never and ex-smokers.

Only about one-third of all respondents noticed the current health warnings on cigarette packaging, and only one-fourth thought about the smoking health risks upon noticing the warnings. Also, the warnings on cigarette packaging are not strong enough to motivate more smokers to quit. The diminishing effectiveness of the current health warnings for public education and motivation of quitting might be attributed to the small size (currently 50% coverage of the packaging), the weak and non-alarming images of the warnings, and that the warnings have been unchanged for nearly 9 years. Previous studies in Australia and Uruguay have confirmed that plain packaging and larger health warnings are effective in increasing salience towards the warnings, awareness of the risks of smoking and forgoing of cigarettes[3,4]. Furthermore, larger pictorial health warnings can discourage smoking initiation in young people[5] and elicit more quit intention and attempts in smokers[4]. The alarms and warning effects can be increased by regular rotation of the messages and graphics[6], and designing contents with more relevance to smokers[7]. Also, the inclusion of the absolute risk of one out of two smokers will be killed by smoking will be more easily understood than relative risks (that smokers have higher risks than non-smokers)[8]. All these renewals should be adopted to yield for more prominent and alarming effect of the health warnings.

Public support towards the strengthening of the current health warnings is strong. More than 70% of the respondents showed support towards more threatening health warnings, regular rotation of the images, enlargement of the health warnings, and plain packaging. The degree of support for plain packaging is similar to another survey in the countries of European Union[9]. Although smokers showed lower support than non-smokers, at least about half of them supported to enlarge the warnings. The strong support towards the strengthening of existing health warnings should empower the government and convince many legislators to move forward boldly, for the sake of public health.

5. Limitation

This study had several limitations. First, the term “current smoker” refers to both daily and occasional smokers and “ex-smoker” refers to ex-daily and ex-occasional smokers. Yet for the purposes of this survey, it was not necessary to distinguish between daily and occasional use. Second, all information was collected by telephone survey which did not allow face-to-face interaction with and verification of smoking status by the interviewer. However, this method can ensure anonymity and so might collect more truthful data. Third, this study did not assess the support for the latest policy on the health warnings proposed by the Food and Health Bureau, which warranted further exploration. Finally, this was a cross-sectional survey. A cohort study or panel survey with longitudinal data would be better in determining causality between policies and impacts, and measuring changes within the same individuals over time.

6. Conclusion

Our study found that the current health warnings on cigarette packaging were not strong enough for public education and enhancement of smoking cessation. Enlargement of the warnings on the packaging, more threatening messages about the risk of smoking, regular rotation of the health warnings, and plain packaging are strongly supported and recommended. With strong evidence for the effectiveness of these measures and strong public support, the government should proceed with the strengthening of health warning on cigarette packaging quickly and should not yield to oppositions from the minority.

7. Acknowledgements

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