



# The Routledge Handbook of Public Health and the Community

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# COVID-19, SOCIAL ANXIETY, AND ECONOMIC-POLITICAL CRISIS IN HONG KONG

A public opinion survey's perspective

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#### Introduction

In his best-selling book *Homo Deus: A Brief History of Tomorrow*, Yuval N. Harari (2016) pinpoints the hard fact that famine, plague and war go hand in hand with humankind. Although repeated efforts have been made to rein in these three kinds of disaster, it was not until after the Second World War that they seemed to be under control. The COVID-19 pandemic, however has drawn worldwide attention to the stunning magnitude of its disruption to people's lives, not only causing a large number of casualties and almost collapsing public health systems around the globe, but also causing tremendous political, financial, economic, social, educational and psychological fallout (Hang et al., 2020; Nicola et al., 2020). Any mishandling could have disastrous outcomes for proper and fit governance.

At this critical juncture, although biomedical and public health research to stop the spread of this virus is badly needed, research on public concern about people's anxiety, and the risk of that public anxiety poses to governance, is equally important. However, compared to the former, the latter is under-studied and attracts less public awareness. This paper aims to address the understudied issue of public anxiety caused by COVID-19 by bringing it to closer and better examination, so as to generate evidence-based material for public policy. To this end, public opinion survey data is used to illustrate the multi-dimensional nature of social anxiety and the economic-political crisis that perplexes all walks of life in Hong Kong.

# Infectious diseases, social anxiety, and economic-political crisis

The rapid spread of COVID-19 has raised public fear about close contact with other people, taking public transport, going to work and even joining activities that involve small groups of people. This leads to the overwhelmingly large-scale city or national level lockdowns around the globe that have been put in place. Putting aside the biomedical and public health issues, various socio-economic problems are also inevitably triggered by the virus such as lockdowns. On the one hand, one may worry that he/she may contract the disease, and is driven to take

various preventive measures, such as wearing a face mask in public, washing hands more frequently, avoiding meeting friends and relatives or reducing going out for lunch/dinner and shopping. On the other hand, one may be concerned about access to and stockpiling sufficient personal protection equipment (PPE) like medical masks, disinfectant and daily cleaning materials. Even worse, as prolonged large-scale lockdowns and social-distancing policies have almost brought most economic activity to a complete standstill, the unemployment rate has surged. This means public concern about economic issues, such as losing one's job and the reduction of household income, also become significant. All of these problems could inevitably turn into an economic-political crisis, which would put government administration to a serious test.

Specifically, when the virus first broke out in late January 2020, although the number of confirmed infected cases was few, Hong Kong could remember the painful experience of the 2003 SARS virus outbreak, so largely, the general public quickly became panicked and seriously concerned. Wearing a face mask has been proven to be one of the key ways for reducing the risk of contracting the disease, and keeping good personal hygiene and having a clean-living environment are also considered effective ways to slow the spread of virus and protect oneself, these measures though meant that whether a household had sufficient PPE became a great concern for many people. Shortages of PPE and drastic price increases of PPE had stirred public concern and criticism of the government's response to handling the outbreak.

As the spread of the virus accelerated and went global from March to May 2020, and many industries were hit, job losses ensued in tandem and local and global GDP figures plummeted. As such, public concern gradually shifted from contracting the virus and a lack of PPE to the possible or actual loss of jobs and the consequent decline in income. Although, while in certain periods the epidemic seemed to have receded, it unexpectedly broke out again later. As a result, the Hong Kong government had to maintain stringent anti-pandemic measures which inevitably affected everyday freedoms, work, and normal daily life. For instance, students have to stay home and attend classes online while a great number of people have to work from home. The mandatory and long confinement of family members to home might cause family tension or worsen family relationships. This problem is particularly acute as the living space in Hong Kong homes is very small. This explains why the Centers for Disease Control and Prevention (2020) in the United States asserted that COVID-19 might make people feel stressed, humiliated or rejected from others, or cause sleeping trouble.

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In a highly politicised society, the government's work in handling the COVID-19 pandemic may mostly provoke criticism. A typical dilemma that has emerged for governments is balancing health and economic security. That is, if a government takes very stringent health measures, such as city lockdowns, social gathering bans or the compulsory wearing of face masks, then the spread of the virus might be suppressed. However, under such health measures the economy could be tremendously weakened, possibly having long-term effects. Company bankruptcies and job losses could definitely shoot up under COVID-19 suppression conditions. If a government then resorts to a less stringent health policy, people's daily life would be less affected while economic activities could continue, but then the spread of the virus would not be stopped. Therefore, when the economy is preserved there may be more loss of life, tremendous pressure on the public health system, and a longer time to finally end the battle. Admittedly, it has not been easy for governments to strike the correct balance. Any mishandling might lead to havoc, which could turn into a political crisis, and may even topple a government.

As such, it is clear that while the pandemic started out exclusively as a medical or epidemiological problem, it has evolved to become a widespread social issue that threatens to become an economic-political crisis for many governments and societies. Due to the evolving nature of the consequences of COVID-19, ideology, political stance and political orientation have turned

out to be critical factors influencing judgements of any government's effort or performance in fighting the pandemic. Based on empirical survey data obtained from a series of telephone poll, this paper illustrates how the social anxiety of the public about COVID-19 has and continues to evolve in the Hong Kong public.

### Methodology and survey data

Before the detailed discussion is presented, explicated first are research methodology and survey data. Data analysed in this paper come from a series of monthly territory-wide telephone surveys conducted from March to August 2020 (except for July because of a temporary closure of the telephone laboratory due to the serious third wave of COVID-19 in Hong Kong) by the Hong Kong Institute of Asia-Pacific Studies of The Chinese University of Hong Kong.

The main reason for conducting a rolling series of surveys instead of one survey is to sample public opinion throughout the long duration of the pandemic. While the pandemic still continues, it is spread, intensity, and development has already fluctuated greatly. The daily number of confirmed infected cases in Hong Kong clearly illustrate this fluctuation (Figure 15.1). In some months, the outbreak seemed under control, but when social-distancing measures were relaxed, it erupted again. Thus, there is urgent need for the government to respond and tighten measures afterward. In light of this complicated development, a monthly series of surveys were conducted to better chart the change of public feeling as the virus and government response shifted.

For each survey, two steps were involved in obtaining the responses. First, a fixed set of landline telephone numbers was randomly selected from the latest Hong Kong Residential

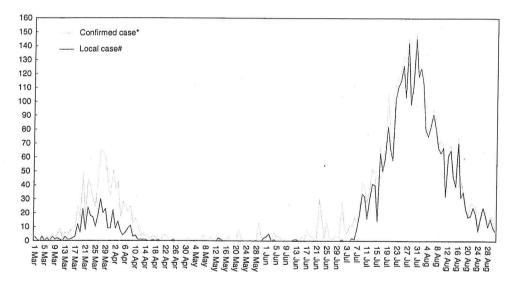


Figure 15.1 Daily number of confirmed cases in Hong Kong from March to August, 2020 Notes

<sup>\*</sup> Confirmed cases including one probable case.

<sup>#</sup> Local cases including "possibly local case", "local case", "epidemiologically linked with imported case", "epidemiologically linked with possibly local case", and "epidemiologically linked with local case".

Source: The Government of the Hong Kong Special Administrative Region (2020).

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Table 15.1 Basic information about the series of survey

Date of survey conducted	No of cases obtained	Response rates	Sampling error at 95% confidence level***
20-26 August	717*	35.9%/37.6%**	±3.66
22–29 June	707	35.0%	±3.69
20-28 May	732	36.6%	±3.62
17-23 April	722	39.9%	±3.65
19-23 March	518	39.8%	±4.30

#### Notes

- \* The August survey used a dual-frame (landline and mobile phone numbers) sampling design. That meant both landline and mobile phone numbers are included. The composition of the number of cases interviewed were 364 cases from landline, and 353 cases from mobile phone.
- \*\* Landline phone numbers' response rate is 35.9% while mobile phone numbers' response rate is 37.6%.
- \*\*\* Percentage point.

Telephone Directory and Numbering Plan for Telecommunications Services. Second, after successfully reaching the selected residence, a family member aged 18 or above who could speak Cantonese or Putonghua was selected for an interview, in accordance with the 'next birthday' rule. For every valid telephone number, a minimum of three contacts at different times is attempted before the number is classified as 'unanswered'.

The survey was conducted in the evening, from the middle to near the end of each month. For each survey, the target number of people to be successfully interviewed was over 700. Only one month (March) failed to reach this number as the telephone laboratory was forced to close temporarily because the outbreak in Hong Kong became serious at that time. The overall response rate of the surveys was over 35%, while the sampling error of each survey was estimated at plus or minus 3.62 to 4.30% points at the 95% confidence level (Table 15.1).

# Spread of COVID-19 and sense of worry

When COVID-19 was confirmed to have broken out in Wuhan, and some confirmed cases were found in Hong Kong, public fear surged. Many people were worried about contracting the deadly virus. In the March survey, when respondents were asked if they worried about being infected with the COVID-19 virus, 20.5% said that they were not worried about it, 45.2% indicated somewhat worried, 20.1% were quite worried and 13.5% were very worried. A miniscule of around 0.8% gave an answer of 'don't know'.

In the April survey, to the same question, the number of people who indicated 'very worried' or 'quite worried' reduced, while 'not worried' increased. The number of those who responded either 'somewhat worried' or 'don't know' remained very similar to March. Even in August, when the so-called 'third wave' of the local outbreak was still very serious, the level of worry did not mark a big increase (Table 15.2). As such, one can clearly see that when the pandemic first broke out, public fear was high. Around one-third of the population was very worried or quite worried about it. In later months, where although the pandemic became a global phenomenon and many Western countries were severely affected, the level of worry among Hong Kong people about the virus did not go up, even when there was the 'third wave' local breakout.

In order to have a better picture about different people's level of worry, we kept the categories of 'not worried' and 'very worried', but took out those who answered 'don't know'.

Table 15.2 Level of worrying about being infected with COVID-19 (%)

	Not worried	Somewhat worried	Quite worried	Very worried	Don't know	(n)
August	29.5	46.8	14.0	8.3	1.4	(717)
June	34.9	45.5	12.0	6.1	1.4	(707)
May	32.5	44.4	15.0	6.7	1.4	(732)
April	24.7	47.2	18.7	8.3	1.1	(721)
March	20.5	45.2	20.1	13.5	0.8	(518)

Of those who indicated 'somewhat worried' and 'quite worried', we collapsed them into one 'worried' group. Then, a cross-tabulation analysis was conducted with the respondents' sociodemographic background details, including their rating of the Chief Executive (CE) and the Hong Kong government. Only those data which passed the statistical significance level will be presented.

Table 15.3 contains the cross-tabulation result. Three key points can be summarised. Firstly, age, education, political orientation, rating of the CE and level of satisfaction with the Hong Kong government show statistically significant differences across the five rounds of surveys. Looking closer, those with a lower education (secondary school or below) showed higher levels of being very worried. Older people showed a higher level of worry in the first 3 months of the surveys, March, April, and May. However, in the later surveys, young people showed higher levels of being very worried. People of all political orientations, and different ratings of the CE and the Hong Kong government, showed subtle changes in their level of worry during the survey period. In March, people with a pro-establishment political orientation showed a higher level of being very worried than those who identified politically as non-establishment, neutral or no preference. However, in later surveys, the proportion of those who indicated very worried was very close among the different political orientations, while those indicating to be somewhat worried and not worried varied widely. For instance, pro-establishment respondents showed a higher level of responding 'not worried', while non-establishment respondents indicated higher levels of responding 'somewhat worried'. Those people with neutral or no political preference indicated a view between the two politicised groups.

Secondly, for people of different genders and personal incomes, some months' surveys indicated statistically significant differences, but some did not. When the so-called first, second and third 'waves' broke out, women were more worried than men. When the pandemic was under control, there was no statistically significant difference between genders. Of respondents earning different incomes, only the May survey showed the low-income group were more worried than other income groups, with a statistically significant difference.

Thirdly, respondents' economic activity status did not show any statistically significant differences. In other words, there was no statistically significant variation among respondents who were employed full time, unemployed, students or housewives or retired (Table 15.3).

In addition to cross-tabulation, we also ran regressions to check each phenomenon. The respondent's level of worry about being infected with COVID-19 was measured on a four-point scale (1 = not worried, 2 = somewhat worried, 3 = quite worried, 4 = very worried). In addition, a selection of demographic information was selected as control variables: gender (0 = male, 1 = female), age group, education (0 = secondary education or below, 1 = tertiary educated), personal income, political orientation, level of satisfaction with the Hong Kong government and survey period. Age group was coded as two dummy variables, namely 18–29 years old and 30–59 years old, while 60 years old and above was the reference group. Personal income was coded as two

Table 15.3 Worried about being infected with COVID-19 by significantly related socio-demographic variables (%)

	(u)	(331)	(113) (378) (215)	(357)	3 1	1 ( )	(67) (330) (280)	(303) (195) (201)	(449) (146) (111)
	БэітгошулэЧ	6.1	11.3 8.8 6.2	9.3	1. 1	1 1 3	10.1 6.8 9.7	9.2 6.0 7.7	9.4 5.9 7.8
	bəirriowətinp/tniwəmo2	60.4	68.8 61.8 57.7	57.7 66.9	1 - 6	( h i	54.0 57.6 68.7	64.5 69.3 51.2	65.3 66.9 40.9
	b birrowtoN	33.5	19.9 29.4 36.1	33.0 25.2	1.1	1 1 1	35.9 35.6 21.6 **	26.2 24.7 41.1	25.3 27.2 51.3 ***
	(u)	1.1	(104) (378) (215)	(342)	·	T 1 C	(76) (324) (267)	(308) (203) (177)	(467) (131) (94)
	bəirrowyraV		9.6 4.5 7.4	3.9	1 1	J. I. I.	7.9 6.5 5.6	7.1 5.4 5.1	6.0 7.6 5.3
	Somewhat/quiteworried	1 1	67.3 63.8 44.7	54.1 64.0	1 1	1.7	35.5 58.0 66.7	66.9 65.0 36.2	66.4 53.4 27.7
Inne	boirrowsoN	1.1	23.1 31.7 47.9 ***	37.7 32.1 **	1 1	î î î.	56.6 35.5 27.7 ***	26.0 29.6 58.8 ***	27.6 38.9 67.0 ***
	(u)	(347)	(102) (392) (228)	(345)	1 1	(108) (132) (111)	(74) (342) (267)	(320) (220) (171)	(494) (133) (93)
	Veryworried	8.5	6.4 6.4 8.3	8.7	1.30	12.0 1.5 5.4	9.5 7.3 4.5	8.4 4.5 6.4	6.9 8.3 4.3
	bəirrowəsinp\snhwəsno&	58.5	70.6 62.2 52.2	58.0 63.6	1.1	53.7 68.2 62.2	33.8 61.1 68.5	67.2 64.1 42.7	67.4 52.6 34.4
May	bəirrowsoN	36.6 29.6 *	24.5 31.4 39.5 *	33.3 32.1 *	т т.	34.3 30.3 32.4 **	56.8 31.6 27.0 ***	24.4 31.4 50.9 ***	25.7 39.1 61.3 ***
	(u)		(66) (374) (240)	(343)	1.1	9 T E	(81) (363) (234)	(258) (243) (204)	(433) (152) (125)
	bəirrowyrə $ar{V}$		4.5 8.6 9.6	11.1	ř.	1 1 2	7.4 8.5 8.1	10.9 9.5 3.4	10.2 9.2 1.6
	bəirriomətinp \tanhuəmoS	C 1	78.8 71.9 56.3	61.2	1 1	1 1 1	49.4 66.1 76.5	72.9 72.0 53.4	72.3 63.8 50.4
April	рыттоштоN		16.7 19.5 34.2 ***	27.7 21.3 **	1.1	1 1 1	43.2 25.3 15.4 ***	16.3 18.5 43.1 ***	17.6 27.0 48.0 ***
	(u)	(231)	(62) (250) (168)	(246)	1 1	; t 1 1	(51) (257) (175)	(195) (178) (138)	(331) (100) (82)
	bərrrowyrəV	13.0	4.8 11.2 20.8	19.5	1.1	i i i	17.6 14.4 11.4	13.8 13.5 13.8	14.2 15.0 9.8
	Bəirrowəsinp\sahwəmoS	61.0	77.4 73.2 52.4	61.0	1 1	8 j t	52.9 62.6 76.6	72.8 65.2 55.8	70.7 61.0 52.4
March	bsirrowtoN	26.0 16.3 *	17.7 15.6 26.8 ***	19.5 20.4 ·	F I	1 (	29.4 23.0 12.0 **	13.3 21.3 30.4 **	15.1 24.0 37.8 ***
	×		**		ıtrıs	000	8	Section	
	1 ·	Gender Male Female Age	18–29 years old 30–59 years old 60 years old or above	Secondary or below Tertiary	Economic activity status Non-working Working Personal income	S20,000 - below \$40,000 \$40,000 or above	Pro-establishment Neutral/no preference Non-establishment	O point 1–49 points 50–100 points HK Government Sariefaction	Dissatisfied In-between Satisfied

Notes 'Do you worry about being infected with COVID-19?' \*p < .05 \*\* p < .01 \*\*\* p < .001

Table 15.4 Fixed-effect OLS regression on worried about being infected with COVID-19

Female	.118***
Age (60 years old or above)	
18-29 years old	.139*
30-59 years old	:088*
Tertiary educated	111**
Personal income (non-working)	
Below \$20,000	063
\$20,000 or above	031
Political orientation (Pro-establishment)	
Neutral/no preference	.003
Non-establishment	.044
HK Government Satisfaction (Satisfied)	
Dissatisfied	.435***
In-between	.334***
Survey period (August)	
March	.278***
April	.106*
May	090
June	119*
Constant	1.613
Adjusted R <sup>2</sup>	.059
(n)	(2890)

Motes

Reference groups are in parentheses.

dummy variables, namely below \$20,000 HKD per a month and \$20,000 HKD or above per a month, while non-working was the reference group. Political orientation was coded as two dummy variables, namely non-establishment and neutral or no preference, while proestablishment was the reference group. Level of satisfaction with the Hong Kong government was coded as two dummy variables, namely dissatisfied and in-between, while satisfied was the reference group. Survey period was coded as four dummy variables: March, April, May, and June, while August was the reference group.

The fixed-effect OLS regression on feeling worried about catching COVID-19 showed that gender, age, education, level of satisfaction with the Hong Kong government and survey period passed the statistical significance level. It was found that those who were female, middle-aged or below, non-tertiary educated, in-between or dissatisfied with the Hong Kong government showed higher levels of worry about catching COVID-19 than their counterparts who were male, older, tertiary educated or satisfied with the Hong Kong government. Overall, respondents showed a higher level of worry in March and April than in August, and the level of worry was lowest in June (Table 15.4).

# Anti-infection measures and behaviour

Facing the difficult realities of an invisible virus, scientific methods to stop infection, such as wearing a face mask, washing and sanitising hands, and cleaning the home with disinfectants,

<sup>\*</sup> p < .05, \*\* p < .01, \*\*\* p < .001

were commonly adopted. In the series of surveys, respondents were asked how frequently they did each of these three types of COVID-19-prevention measures. Regarding wearing a face mask when going out, over 90% responded that they often wore a mask when they went out. Around 4–8% said that they wore a mask sometimes. The remaining near 1% replied that they seldom or never wore a mask, or did not know the answer. The overall pattern of this type of anti-infection behaviour did not change much over the research period, as most people considered that there was no sign of the pandemic abating.

When respondents were asked if they use liquid soap or hand sanitiser to clean their hands, 80–85% indicated that they often washed their hands with liquid soap or hand sanitiser, and 10–17% mentioned that they did so sometimes. A small proportion of 1–3% indicated that they seldom or never did so. Less than 1% answered 'don't know'. Across the research period, variation in doing these types of anti-infection behaviours was small.

In response to the question 'How often do you clean your home with disinfectants?', 50–60% replied that they often cleaned their homes with disinfectants, and 30–40% said that they did so sometimes. The remaining around 10% answered one of, 'seldom', 'never' or 'don't know'. Again, there was little change in the rates of response about cleaning one's home with disinfectants from March to August (Table 15.5).

Cross-tabulation data further revealed that for wearing a face mask when going out, age, economic activity status, political orientation, rating of the CE and satisfaction with the Hong Kong government showed statistically significant differences in all five rounds of surveys. Specifically, respondents who were either middle-aged or below, working, non-establishment, gave the CE mark of zero or felt dissatisfied with the Hong Kong government had a higher inclination to wear a face mask. For respondents of different education levels, only the May survey did not show statistically significant variation. In the other four survey rounds, respondents with a tertiary education were more likely to wear a mask when going out than the

Table 15.5 Frequencies of taking personal anti-infection measures (%)

	Often	Sometimes	Seldom	Never	Don't know	(n)
Wearing me	isk when going	out			n	
August	95.1	4.3	0.3	0.2	0.2	(717)
June	91.7	7.8	0.3	0.1	0.1	(707)
May	94.5	4.9	0.4	0.0	0.1	(732)
April	93.1	6.4	0.4	0.0	0.1	(722)
March	95.4	4.2	0.4	0.0	0.0	(518)
Using liquid	l soap/hand san	itiser to wash hands				
August	81.3	14.8	2.4	1.2	0.4	(717)
June	79.9	17.0	2.5	0.6	0.0	(707)
May	82.8	13.8	2.6	0.5	0.3	(732)
April	83.2	13.6	1.8	1.0	0.4	(722)
March	85.9	10.8	1.4	1.4	0.6	(518)
Cleaning ho	me with disinfe	ctants				
August	53.0	38.8	5.0	2.6	0.7	(717)
June	50.6	38.8	7.4	2.5	0.7	(707)
May	53.8	37.4	6.6	1.5	0.7	(732)
April	58.2	33.9	6.5	1.0	0.4	(722)
March	61.2	31.3	6.8	0.6	0.2	(518)

other education groups. For respondents of different genders or personal income, no statistically significant differences in the five rounds of surveys was found (Table 15.6).

For responses about washing hands with liquid soap or hand sanitiser, cross-tabulation data showed that there were statistically significant differences among age groups in the five rounds of the survey. Middle-aged respondents washed their hands more often than other age groups. For other socio-demographic background indicators, some survey rounds showed statistically significant variation. For instance, female respondents said they washed their hands more frequently than male respondents. People who had attained a higher level of education responded they washed their hands more frequently than the other education groups, and people dissatisfied with the Hong Kong government said they were more likely to than those satisfied or in-between. These patterns occurred in five rounds of the survey, the exception being in April. Respondents who were working, earning a higher income, held a non-establishment perspective or gave the CE a mark of zero also indicated a higher frequency of hand washing with liquid soap or hand sanitiser than their those who were non-working, earning a lower income, held a pro-establishment perspective, gave the CE a higher mark, or were satisfied the Hong Kong government work (Table 15.7).

. Cross-tabulation of the question regarding cleaning the home with disinfectants showed a similar pattern to hand washing with liquid soap or sanitiser. Briefly, with the exception of economic activity status, the socio-demographic background points indicated that there were statistically significant differences in some rounds of the surveys. For instance, respondents who were female, middle-aged, tertiary educated, earned a higher personal income, held non-establishment views, gave the CE a mark of zero or were dissatisfied with the Hong Kong government indicated they cleaned their home with disinfectants more frequently than their counterparts (Table 15.8).

The three infection control measures (wearing a mask when going out, washing hands with liquid soap or hand sanitiser, and cleaning the home with disinfectant) were each used to run a fixed-effect logistic regression in accordance to each respondents' anti-infection practise/frequency (0 = sometimes/seldom/never, 1 = often) to explore the different infection control behaviours. The results indicated that for wearing a mask when going out, respondents' gender, age, political orientation, satisfaction with the government, and the survey period passed the statistical significance level. Respondents who were female, middle-aged or below, non-establishment, neutral or no preference in political orientation, in-between or dissatisfied with the Hong Kong government wore a face mask more often than those who were male, older aged, pro-establishment and satisfied with the government. People indicated they wore a face mask more often in August than in June.

On hand washing with liquid soap or hand sanitiser, respondents' gender, age, personal income, political orientation, level of satisfaction with the Hong Kong government and the survey period passed the statistical significance level. Respondents who were female, middle-aged, non-working, neutral or no preference in political orientation or dissatisfied with the Hong Kong government were more often to wash their hands with liquid soap or hand sanitiser than those who were male, older aged, had a low income, held pro-establishment view or were satisfied with the Hong Kong government. People were more often to wash their hands in March than in August.

For cleaning the home with disinfectants, respondents' gender, age, personal income, political orientation and the survey period passed the statistical significance level. Those who were female, middle-aged, non-working and held non-establishment views cleaned their homes more often with disinfectants than those who were male, older aged, earned a lower income and held proestablishment views. People cleaned their homes more often in March than in August.

Table 15.6 Wearing mask when going out by significantly related socio-demographic variables (%)

Angust	Sometimes/ Often (n)		1			1	98.5	98.5 97.7 89.3	98.5	- 98.5 97.7 89.3	98.5 97.7 89.3 92.8	98.5 97.7 89.3 92.8	98.5 97.7 89.3 92.8	98.5 97.7 89.3 92.8 98.5	98.5 97.7 89.3 92.8 92.8	98.5 97.7 89.3 92.8 92.8 92.8	98.5 97.7 97.7 92.8 98.5 92.8	98.5 97.7 89.3 92.8 92.8 97.7	98.5 97.7 89.3 89.3 98.5 97.7	98.5 · 97.7 · 89.3 · 98.5 · 92.8 · 92.8 · 97.7 · 97	98.5 97.7 89.3 92.8 92.8 97.7	98.5 97.7 92.8 92.8 97.7	98.5 97.7 92.8 92.8 97.7 1	98.5 97.7 97.7 92.8 98.5 1	98.5 · 99.3 99.5 · 99.2 8 99.5 · 99.7 7 99.7 99.7 99.7 99.5 99.5 99.5 99	98.5 97.7 97.7 92.8 98.5 94.5 94.5 94.5	98.5 97.7 97.7 92.8 92.8 97.7 97.0 97.0	98.5 97.7 92.8 92.8 92.8 97.7 97.0 97.0	98.5 97.7 97.7 92.8 92.8 97.7 94.5 97.0 97.0	98.5 97.7 97.7 92.8 92.8 97.0 97.0 97.0 97.3	98.5 97.7 92.8 92.8 92.8 97.7 97.0 97.0 97.0	98.5 97.7 97.7 92.8 92.8 97.7 97.0 97.0 97.5	98.5 97.7 97.8 92.8 97.0 97.0 97.0 97.5 97.5	98.5 97.7 92.8 92.8 97.7 97.0 97.0 97.5 97.5 87.9	98.5 97.7 97.7 92.8 92.8 97.0 97.0 97.0 97.3 97.3 97.5 97.5 97.5 97.5
	(ii)		1						23 23 30										8.23 8.23 2.20 7.77 3.93 3.93 3.93 3.93	0-4) 8-2) 2-2) 3-3) 3-5)					04) 82) 82) 83) 847 85) 85)										
	es/ Often		ı		1.	ı	96.2	96.2 96.6 81.4	96.2 96.6 81.4	96.2 96.6 81.4	96.2 96.6 81.4 89.3	96.2 96.6 81.4 89.3	96.2 96.6 81.4 89.3 95.0	96.2 96.6 81.4 89.3 95.0	96.2 96.6 81.4 89.3 87.5	96.2 96.6 81.4 89.3 95.0 95.4	96.2 96.6 96.6 89.3 89.3 87.5 87.5	96.2 96.6 81.4 89.3 95.0 87.5	96.2 96.6 89.3 89.3 95.0 1	96.2 96.6 96.6 89.3 87.5 1	96.2 96.5 89.3 87.5 1 1 95.4	96.2 96.6 89.3 87.5 1 1 95.4	96.2 96.6 96.6 97.5 97.5 97.5 97.5 97.5 97.5	96.2 96.6 89.3 87.5 87.5 81.6 81.6 92.4 94.8	96.2 96.6 89.3 89.3 87.5 95.0 87.5 95.4 95.4 94.8	96.5 96.6 89.3 87.5 87.5 81.6 1 1 92.4 92.4 92.4	96.2 96.6 96.6 97.5 95.0 95.4 97.5 97.5 97.5	96.2 96.6 89.3 87.5 87.5 87.5 95.2 95.2 95.2 95.2	96.2 96.6 89.3 87.5 87.5 95.2 95.2 95.2 83.3	96.2 96.6 89.3 87.5 95.0 95.2 95.2 95.2 83.3	96.2 96.6 89.3 87.5 87.5 95.2 81.6 95.2 81.8 83.3 83.3	96.5 96.6 89.3 87.5 1.4 81.6 1.7 95.2 95.2 95.2 95.2 95.2 95.2 95.2 95.2	96.2 96.6 89.3 87.5 95.0 95.2 95.2 95.2 97.3 94.7	96.2 96.6 89.3 87.5 87.5 95.0 81.6 81.6 94.7 94.7 94.7 94.7 94.7	96.2 96.6 89.3 87.5 95.0 95.2 95.2 95.2 95.2 95.3 95.3 95.3 95.3
June	Sometimes/ seldom/never		τ	1					2) 3.8 5) 3.4 4) 18.6																										
	Often (n)		1					97.1 (10) 97.7 (39) 88.5 (23)	7.1 (102) 7.7 (395) 8.5 (234)	1.7.3	17 5	27.8	27.6			208 44																			
May	Sometimes/ C. seldom/never		1						2.3 97										,	, ,			,,,		, , ,		,,,	,,,	,,,	,,,	,,,	,,,	,,,		
	(u)		ı			(376)																													
	s/ Often ver		L	ı	98.5	896	0 0	87.8	87.8	87.8	87.8 91.1 95.8	87.8 91.1 95.8	87.8 91.1 95.8	87.8 91.1 95.8 89.5	87.8 95.8 95.8 89.5 96.9	87.8 91.1 95.8 89.5	87.8 91.1 95.8 89.5	87.8 91.1 95.8 89.5 96.9	87.8 91.1 95.8 89.5 1	87.8 91.1 89.5 96.9	87.8 95.8 89.5 96.9	87.8 95.8 89.5 6.9 7.8 82.7	87.8 95.8 96.9 1	87.8 89.5 89.5 96.9 	87.8 99.5 89.5 96.9 92.6 92.6	87.8 89.5 89.5 89.5 90.9 82.7 82.7 92.6 98.3	87.8 99.5 89.5 90.5 92.6 98.3 98.3	87.8 95.8 89.5 96.9 92.7 82.7 92.6 98.3 98.9 88.0	87.8 89.5 89.5 96.9 92.6 98.3 96.5 96.5 96.5 96.5 88.0	87.8 99.5 89.5 90.9 92.6 98.3 98.0 88.0	87.8 89.5 89.5 96.9 92.7 82.7 92.6 98.3 98.0 88.0	87.8 89.5 89.5 89.5 96.9 96.9 96.5 96.5 96.5 96.5 96.5 9	87.8 89.5 89.5 90.5 90.5 90.5 90.5 90.5 90.5 88.0	87.8 89.5 96.9 92.6 92.7 88.0 98.3 95.6 95.6 95.6 88.0	87.8 89.5 89.5 82.7 92.6 98.3 96.5 96.5 97.6 97.6 97.6 97.6 97.6 97.8 97.8 97.8 97.8 97.8 97.8 97.8 97.8 97.9
	Sometimes/ seldom/never		ı	ı		3.2																													
	(n)		į		(63)	(251)	(170)	(1111)	(471)	(249)	(249)	(249)	(249)	(249) (251) (233)	(249) (251) (233) (263)	(249) (251) (233) (233)	(249) (251) (233) (263)	(249) (251) (233) (263)	(249) (251) (233) (263)	(249) (249) (233) (263) (263) (263) (263)	(249) (251) (233) (263) (263)	(249) (251) (233) (263) (263) (263)	(249) (251) (233) (263) (263) (51)	(249) (249) (251) (263) (263) (259) (176)	(249) (251) (233) (263) (263) (176) (176)	(249) (240) (251) (233) (263) (263) (253) (176) (176)	(249) (251) (233) (263) (263) (176) (176) (179)	(249) (251) (233) (263) (263) (176) (176) (176) (176)	(249) (251) (251) (263) (263) (263) (259) (179) (179) (179)	(249) (251) (253) (263) (263) (263) (176) (176) (179) (140)	(249) (251) (233) (263) (263) (176) (176) (176) (179) (179)	(249) (251) (233) (263) (253) (170) (170) (170) (101)	(249) (251) (253) (263) (263) (263) (259) (170) (170) (170) (170) (140) (160) (170) (160) (170) (160) (170) (160) (170) (160)	(249) (251) (253) (263) (259) (176) (176) (176) (176) (179) (170)	(249) (249) (251) (263) (263) (263) (259) (179) (179) (179) (179) (179) (179) (179) (179) (179) (179)
	imes/ Often 1/never				98.4	99.2	91.2			92.8	92.8	92.8	92.8	92.8 98.8	92.8 98.8 92.7 98.5	92.8 98.8 92.7 98.5	92.8 98.8 92.7 98.5	92.8 98.8 92.7 98.5	92.8 98.8 92.7 92.7	92.8 98.8 92.7 98.5	92.8 98.8 92.7 98.5	92.8 98.8 92.7 98.5 88.2	92.8 98.8 92.7 98.5 1 88.2 94.2	92.8 98.8 92.7 98.5 - - - - - - - - - - - - - - - - - - -	92.8 98.8 92.7 98.5 1 88.2 99.4.2	92.8 98.8 92.7 98.5 1 94.2 99.4	92.8 98.8 92.7 98.5 1 1 94.2 96.9 96.9	92.8 98.8 92.7 98.5 1 88.2 99.4 99.4 96.9	92.8 98.8 92.7 98.5 1 94.2 99.4 96.9 96.6	92.8 98.8 92.7 98.5 1 94.2 99.4 96.6 91.4	92.8 98.8 92.7 94.2 99.4 96.9 96.9 97.6	92.8 98.8 92.7 98.5 94.2 99.4 96.9 96.9 97.6	92.8 98.8 98.5 98.5 94.2 99.4 96.9 96.9 97.6	92.8 98.8 92.7 98.2 94.2 99.4 96.9 96.9 97.6 91.1	92.8 98.8 92.7 92.7 94.2 94.2 96.9 96.9 97.6 97.6
	Sometimes/ seldom/never	1	1		1.6	8.0	8.8		* * *	7.2	27.																								
		Gender Male	Female	Age	18-29 years old	30-59 years old	60 years old or above		Education	Education Secondary or below	Education Secondary or below Tertiary	Education Secondary or below Tertiary	Education Secondary or below Tertiary Economic activity status	Education Secondary or below Tertiary Economic activity status Non-working	Education Secondary or below Tertiary Economic activity status Non-working	Education Secondary or below Tertiary Economic activity status Non-working Working	Education Secondary or below Terrary Economic activity sratus Nori-working Working Personal income	Education Secondary or below Tertian Connomic activity status Non-working Working Personal income	Education Secondary or below Tertiary Economic activity status Non-working Working Personal income Pelselow below \$40,000	Education Secondary or below Tertiary Economic activity status Nont-working Working Personal income Below Below St.0,000	Education Secondary or below Tertion	Education Secondary or below Tertian Rom-working Working Personal income Pletows 440,000 S40,000 a above Political orientation Pro-establishment	Education Secondary or below Tertiary Economic activity status Non-working Working Personal income Below 840,000 540,000 or above Polifical orientation Pre-establishment Neutral/no preference	Education Secondary or below Tertiary Economic activity status Nort-working Working Personal income Below \$40,000 \$40,000 or above Political orientation Pro-establishment Neutral/no preference Non-establishment	Education Secondary or below Tertiary Economic activity status Non-working Working Personal income Below Below \$40,000 \$40,000 or above Political orientation Pre-ostablishment Neutral/no preference Non-establishment Neutral/no preference Non-establishment Neutral/no preference Non-establishment	Education Secondary or below Tertian Non-working Working Working Personal income Below Below Self,0000	Education Secondary or below Tertian Economic activity status Non-working Working Personal income Pelcow below \$40,000 selfow above Political orientation Pro-establishment Neutral/no preference Nor-establishment Rating of C.E. O points	Education Secondary or below Tertiary Economic activity status Non-working Working Personal income Below \$40,000 S40,000 or above Political orientation Pro-establishment Neutral/no preference Non-establishment Rating of C.E. 0 point 1-49 points	Education Secondary or below Tertian Non-working Working Working Personal income Below Below S40,000 S40,000 Perfical orientation Pro-establishment Neutral/no preference Noursalvishment Rettian of C.E. Opoint 1 -49 points 50 -100 points	Education Secondary or below Tertian Rom-working Non-working Working Personal income Pelcow \$40,000 s40,000 or above Political orientation Pro-establishment Neutral/no preference Non-establishment Rating of C.E. O points 50 –100 points H. Government Satisfa	Education Secondary or below Tertiary Working Working Personal income Below S40,000 or above Political orientation Pro-exablishment Neutral/no preference Non-establishment Rating of C.E. Of point S0 -100 points HK Government Suisilaction	Education Secondary or below Tertian Non-working Working Working Personal income Below Below Personal income Below Personal income Personal in	Education Secondary or below Tertian Rom-working Working Working Working Working Working Personal income Peleow Below Pelor above Political orientation Pro-establishment Neutral/no preference Norr-establishment Rating of C.E. Rating of C.E. 1 –49 points 50 –100 points HK Government Satisfia. HK Government Satisfia. Disstatified	Education Secondary or below Tertiary Ron-working Working Working Working Working Personal income Bletow \$40,000 S40,000 or above Political orientation Pro-establishment Neutral/no preference Non-establishment Rating of C.E. O point I. 49 points 50 –100 points L. 49 points Dissatisfied Dissatisfied Dissatisfied	Education Secondary or below Tertiny Non-working Working Personal income Below Below Sel,000 Sel,000 a shove Political orientation Pro-establishment Neutral/no preference Non-establishment Angung of C.E. Oppint 1 —49 points 50 –100 points HK Government Sarisfia Dissatisfied Dissatisfied Dissatisfied Satisfied

Notes 'How often did you take the measures to prevent infection? Wore mask when going out. Often, sometimes, seldom or never? \*p < .05 \*\* p < .01 \*\*\* p < .001

Table 15.7 Washing hands with liquid soap or hand sanitiser by significantly related socio-demographic variables (%)

		(ii)	(336)	(382) (218)	(360)	(304) (396)	(112) (144) (111)	(67) (336) (281)	(303) (197) (205)	(451) (149) (112)
		Often	77.6	85.0 86.2 71.7	76.3	76.6 85.4	76.0 90.1 87.5	74.2 78.2 85.8	83.1 86.5 73.8	85.8 76.2 71.4
				2 8 8 7	8.7	.× 85	2,73	77. 37. 85.	38 52	85 77 71
	Angust	Sometimes/ seldom/never	22.4	15.0 13.8 28.3 ***	23.7 12.6 ***	23.4	24.0 9.9 12.5 **	25.8 21.8 14.2	16.9 13.5 26.2 **	14.2 23.8 28.6
		(w)	(367)	(104) (383) (220)	(348)	(297) (395)	(95) (136) (112)	1 T T	(310) (207) (181)	(469) (134) (98)
		Often	74.9	76.9 88.0 67.3	74.7 86.1	73.4 84.8	73.7 85.3 88.4	1 1 1	84.8 79.2 72.9	83.2 76.9 70.4
,	June	Sometimes/ seldom/never	25.1	*** 23.1 12.0 32.7 ***	25.3 13.9 ***	26.6 15.2 ***	26.3 14.7 11.6	1.1.1	15.2 20.8 27.1 **	16.8 23.1 29.6
	٠	(H)	(355)	(102) (394) (234)	(349)	LE	111	(74) (346) (269)	1.1.1	(496) (138) (94)
		Often	76.1	78.4 89.1 74.8	80.2 86.3	1.1	1 1 1	73.0 85.0 84.0	111	85.7 78.3 77.7
	May	Sometimes/ seldom/never	23.9	*** 21.6 10.9 25.2 ***	19.8 13.7 *			27.0 15.0 16.0		14.3 21.7 22.3
	ا ۲	% इ	21-13		*	1 1	111		111	- 61 61
		(ii)	1.1	(67) (374) (245)	T 1	1 I	1 1 1	(81) (366) (235)	(258) (244) (209)	1 1 1
		Often	t I	83.6 89.3 76.3	1.1	t t	1 I I	71.6 84.2 86.4	87.6 83.2 78.5	1 1 1
	April	Sometimes/ seldom/never	1.1	16.4 10.7 23.7 ***	1.1	1 1	1 1 1	28.4 15.8 13.6 **	12,4 16.8 21.5	E E I
		(n)	(231) (284)	(63) (249) (169)	(247)	1 1	(64) (99) (68)	(51) (257) (175)	(194) (178) (140)	(330) (101) (83)
		_						ž		
		Often	81.8	87.3 90.8 81.1	82.6 91.2	1 1	78.1 93.9 91.2	76.5 84.8 90.9	90.7 86.5 80.0	88.8 85.1 78.3
	March	Sometimes/ seldom/never	18.2	12.7 9.2 18.9	17.4 8.8 **	I I	21.9 6.1 8.8 **	23.5 15.2 9.1	9.3 13.5 20.0	11.2 14.9 21.7
				Age 18-29 years old 30-59 years old 60 years old or above Education	Secondary or below Tertiary Economic activity status	Non-working Working	Personal income Below \$20,000 below \$40,000 \$40,000 or above	Products of control of Pro- Pro-cstablishment Neutral/no preference Non-establishment Rating of C.E.	0 point 1–49 points 50–100 points	overnment Satisfaction sfied veen d
			Gender Male Female	Age 18–29 year 30–59 year 60 years ol Education	Secondar Tertiary Economi	Non-worl Working	Below below \$40,000	Pro-est Neutra Non-e:	0 point 1–49 points 50–100 point	Dissatisfied In-between Satisfied

Notes 'How often did you take the measures to prevent infection? Washed your hands with liquid soap or hand sanitiser. Often, sometimes, seldom or never?'  $^*P < .05 *^*p < .01 *^**p < .01$ 

Table 15.8 Cleaning home with disinfectants by significantly related socio-demographic variables (%)

	March			April		2	May			June		- 25	August		
	Sometimes/ seldom/never	Often	(n)	Sometimes/ seldom/never	Often	(ii)	Sometimes/ seldom/never	Often	(n)	Sometimes/ seldom/never	Often	(ii)	Sometimes/ seldon/never	Often	(ii)
Gender Male Female	B 1 .	f 1	1.1	. 1 T		1.1	53.9	46.1 62.0	(356)	58.1	41.9	(365)	53.0	58.9	(332)
Age 18-29 years old 30-59 years old 60 years old or above	1 1 1	1 I E	T 1 E	 I I I	111	( T 1	*	1 1 1	111	50.0	50.0 57.2 40.6		** 45.5 41.0 57.0	54.5 59.0 43.0	(114) (381) (217)
Education Secondary or below Tertiary	1 1	1 1	1 1	t i	t f	1.1	) (	1.1	1 1	1.1	1.1	( 1	50.0 41.7	50.0	(358)
Economic activity status Non-working Working Personal income	t I	1.1	1 1	1 1	1.1	1.1	. (1)	1.1	1.0	î î	1.1	( )	: * []	1.7	1 1
Below \$20,000 below \$40,000 \$40,000 or above	f 1 1	1 35 1	1 1 1	48.9 47.0 29.4	51.1 53.0 70.6	(90) (149) (102)	111	111	1 1 1	1.(1	1 ( )	1 1 1	59.8 36.9 38.9	40.2 63.1 61.1	(112)
Political orientation Pro-establishment Neural/no preference Non-establishment	1.1.1	1 1 1	· I I I	50.6 44.7 34.7 *	49.4 55.3 65.3	(81) (365) (236)		1 1 1	1 1 1	64.5 49.5 44.8	35.5 50.5 55.2	(76) (327) (268)	* *		111
Rating of C.E. 0 point 1-49 points 50 -100 points	1.1.1	1 8 1	1 1 1	1.1.1	111	111	111	111	1 1 1	42.6 49.8 58.9	57.4 50.2 41.1	(310) (203) (180)	TTT	( ) (	1 1 1
HK Government Satisfaction Dissatisfied In-between Satisfied	1 1 1	i ci	1(1		t i i	T 1 1	43.0 56.9 45.3	57.0 43.1 54.7	(493) (137) (95)	* + +5.3 5.4.1 5.8.8	54.7 45.9 41.2	(466) (133) (97)	f 1 i		111

Notes 'How often did you take the measures to prevent infection? Cleaned your home with disinfectants. Often, sometimes, seldom or never?  $^*p < .05 *^*p < .01 *** p < .001$ 

Table 15.9 Fixed-effect logistic regression on three measures of infection prevention

	Wore mask when going out	going out	Washed hands with	Washed hands with liquid soap or hand sanitiser	Cleaned home with disinfectants	th disinfectants
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Female	562**	4444	C02***	1		
Age (60 years old or above)	*			×××)55.	.501***	·469***
18-29 years old	**496.	**946	199	000	Č.	
30-59 years old	1.144***	1.122***	803***	75035	042	120
Tertiary educated	.326	280	228	**************************************	.512××	.275*
Personal income (non-working)		) 	011	.293	.102	.160
Below \$20,000	.544	.511	- 474**	- 440**	***************************************	
\$20,000or above	.211	197	123	123	330.~	305*
Political orientation (Pro-establishment)				661.	0/8	081
Neutral/no preference	.664**	743***	403*	733**	1	
Non-establishment	1.074***	1 178***	360	250	.197	.209
HK Government Satisfaction (Satisfied)				666.	.332×	.335*
Dissatisfied	.523*	.383	430**	201	0	1
In-between	.505*	364	204	141	505.	//0.
Survey period (August)				141.	360.	.013
March	.259	.190	470**	371	711	į
April	277	-319	222	120	.3/5%	*6/2.
May	108	760 -	100	051.	261.	.143
June	- 550*	*655 -	701:	160.	.022	.042
Worried about being infected		7550	000.	092	087	055
Constant	620	750		.268***	ĺ	.286***
Constant 2.2	.863	.935	.037	342	633	-1.092
Nagelkerke 18-	.147	.138	.095	.102	048	064
(n)	(2914)	(2887)	(2910)	(2882)	(2903)	.00+
Notes * p < .05, ** p < .01, *** p < .001		8	?			
Reference groups are in parentheses.	强					
						c

In model 2 of the three measures of infection prevention, worry about being infected passed the statistical significance level in two measures only. Those who showed a higher level of worry about being infected with COVID-19 were more likely to wash their hands with liquid soap or hand sanitiser and clean their homes with disinfectant (Table 15.9).

# Impact on household income and the Hong Kong economy

Compared to the 2003 SARS virus, or other infectious viruses, the mortality rate of COVID-19 is not considered to be very high. It is even lower than some influenza pandemics (Petersen et al., 2020; Our World in Data, 2020). Nevertheless, as COVID-19 is highly infectious and has spread through the wider public for a prolonged period, it has struck the economy badly, not only in Hong Kong but also across the globe. As a result, some people have become unemployed and others' household income has been severely reduced. A common developmental path is that if a government cannot bring a pandemic under control, and promptly revitalise the economy, political pressure would mount, possibly having the ultimate effect of changing the terms of governance.

As we saw the pandemic would not be eradicated in a short period of time, and while the Hong Kong economy rapidly shrank, starting from the April we asked respondents to comment on their household income in the survey. Our survey data showed that around 45–55% of respondents indicated that their household income fell due to the pandemic. Meanwhile around 42–52% replied that there was no effect on their income. The remaining 2–5% answered 'don't know' (Table 15.10). Although, when the epidemic was less serious in Hong Kong, the problem of deceasing household income became less severe. Nonetheless, around half of the respondents still indicated a drop of household income due to the epidemic, which is by no means a small proportion and so should be seen as a significant warning.

Cross-tabulation data indicated that there were statistically significant variations among different education and personal income groups in four rounds of the survey. Compared to higher education and higher personal income groups, low education and low personal income respondents were more likely to say that their household income had reduced due to the epidemic. This reflected the fact that under-privileged groups were hit more seriously by the economic damage. Other socio-demographic background indicators, such as gender, age, economic activity status, political orientation, rating of the CE and satisfaction with the Hong Kong government did not show any statistically significant variation (Table 15.11).

We will now take a further look at the results of the fixed-effect logistic regression on household income reduced due to the epidemic (0 = no, 1 = yes). Respondents' age, education, personal income and the survey period passed the statistical significance level. Those who were middle-aged or below and non-tertiary educated, were more likely to have had their household income reduced due to the epidemic than older and tertiary educated people. Those

Table 15.10 Whether household income reduced or not due to the epidemic (%)

	Yes	No	Don't know	(n)
August	53.7	42.1	4.3	(717)
June	45.5	51.9	2.4	(706)
May	48.6	49.6	1.8	(732)
April	50.8	46.7	2.4	(721)

Table 15.11 Whether household income reduced or not due to the epidemic by significantly related socio-demographic variables (%)

									, ,			
	April			May			Јипе			August		
	No	Yes	(u)	No	Yes	(n)	No	Yes	(11)	N	Vos	1
Gender												(11)
Male	1	1	1	1	Į	1						
Female	1	, t	ı	1			I	1	ı	1	Ī	1
Age					ı	ı	1	1	1	1	1	1
18-29 years old	1	ı	ı	)								
30-59 years old	ı	1		ſ.	I	1	I	1	1	1	1	J
60 years old or above				1_	1	î.	į	1	Ī.	1	1	1
Education		ı	ľ	Ĺ	ı	1	Ĺ	1	ı	ı	ì	1
Secondary or below	5 14	r Xr	(340)	41.0	6	1000	į	1				
Tertiary	53.7	46.3	(348)	59.6	40.4	(349)	45.1 61.4	54.9 38.6	(335) (334)	39.0 48.9	61.0	(343)
Fronomic activity, spens	<b>«</b>			**			***			*		(1-0)
Economic activity status												
Non-working	1	Ī	1	Ī		1	,	3				
Working	1	Ī	ī	1				ı	1	Ī	1	1
Personal income					ı		1	ĺ	1	1	1	ī
Below \$20,000	35.2	64.8	(91)	37.0	0 29	(100)	0 / 0		i			
below \$40,000	47.3	52.7	(148)	53.4	46.6	(100)	20.0	63.2	(95)	33.3	2.99	(110)
\$40,000 or above	59.2	40.8	(86)	65.8	34.2	(111)	36.2 67.0	41.8 33.0	(134) (112)	44.8 52.0	55.2 48.0	(139)
Political orientation				k k			***			*		
Tomaca offendation												
Pro-establishment	I	į	Ĭ	ì	f	1	ï	ı	1			
Neutral/no preference	1	I	1	Ī	1	ı	1			ı	Ł	I
Non-establishment		į	1	į	ı			ı	ľ	Ĭ	1	i
Rating of C.E.							ſ	ı	1	1	1	}
0 point	1	1	ı	ı								
1-49 points	ı	1	ı			ı	1	ı	ı	ĩ	1	1
50-100 points	1	ı			I	I	1	ı	1	Ī	1	j
HK Government Satisfaction				I	ı	1	ı	1	í	ī	T	i
Dissatisfied	1	1	1	ļ	ì							
In-between	1	I	ı	J		ľ	ſ	1	1	Ī	I	1
Satisfied	1	,			ı	I	1	ı	Ĭ	1	1	1
			ı	ı	1	ſ	1	1	Ĭ	ì	1	ť
7.1.0												

Notes 'Had your household income been reduced due to the epidemic?' \*p < .05 \*\* p < .01 \*\*\* p < .001

who earned a low personal income were more likely to be affected. Moreover, household income was more likely to be reduced in August than in May or June.

In model 2, worry about being infected passed the statistical significance level. Respondents who were more worried about being infected with COVID-19, were more likely to have their household income reduced due to the epidemic (Table 15.12).

Our last research question was to examine whether our respondents were worried about an economic recession in Hong Kong, starting from the May survey onwards. Over 70% of respondents indicated that they were worried about an economic recession in Hong Kong. Around one-fifth said that they were not worried about a recession. Around 4% gave the answer 'don't know' (Table 15.13). Obviously, the majority of our respondents were worried that the Hong Kong

Table 15.12 Fixed-effect logistic regression on whether household income reduced or not due to the epidemic

	Model 1	Model 2
Female	132	133
Age (60 years old or above)		
18-29 years old	.555***	.550***
30-59 years old	.415***	.416***
Tertiary educated	603*-	605*-
,	**	**
Personal income (non-working)		
Below \$20,000	.340*	.348**
\$20,000 or above	257*	242*
Political orientation (Pro-establishment)		
Neutral/no preference	079	100
Non-establishment	.021	.003
HK Government Satisfaction (Satisfied)		
Dissatisfied	.147	.099
In-between	048	094
Survey period (August)		
April	099	111
May	297*	273*
June	423*-	388**
	**	
Worried about being infected	_ ·	.115*
Constant	.296	.101
Nagelkerke R <sup>2</sup>	.060	.063
(n)	(2417)	(2396)

Notes

Reference groups are in parentheses.

Table 15.13 Whether worried about economic recession in Hong Kong (%)

	Not worried	Worried	Don't know	(n)
August	21.8	74.0	4.2	(717)
June	24.2	71.7	4.1	(707)
May	25.0	71.0	4.0	(732)

<sup>\*</sup> p < .05, \*\* p < .01, \*\*\* p < .001

Table 15.14 Whether worried about an economic recession in Hong Kong by significantly related socio-demographic variables (%)

	Мау			June			August		
	Not worried	Worried	(u)	Not worried	Worried	(n)	Not worried	Worried	(n)
Gender									
Male	29.4	70.6	(344)	1	1	1		ļ	j
Female	22.8	77.2	(359)	I	i	1	- 1		l l
	*		`						ļ
Age									
18-29 years old	1	I	I	ſ	ı	1	ı	ı	)
30-59 years old	1	1	1	1	ı	1	1	1	
60 years old or above	t	1	j	1	1	ı	ı		1
Education									I,
Secondary or below	1	1	Į	30.4	9.69	(329)	t	ı	1
Tertiary	1	į	1	19.9	80.1	(331)	1	ı	1
				**					
Economic activity status									
Non-working	Ī	1	1	. 1	ı	1	1	1	1
Working	1	1	1	1	É	Į	ï	1	1
Personal income									
Below \$20,000	18.7	81.3	(107)	1	ť	I	14.8	85.2	(109)
\$20,000-below \$40,000	21.1	78.9	(128)	1	1	Ĺ	20.6	79.4	(138)
\$40,000 or above	33.9	66.1	(109)	1	1	ĺ	31.7	68.3	(108)
	*						**		
Political orientation									
Pro-establishment	36.2	63.8	(69)	34.7	65.3	(72)	31.2	. 8.89	(99)
Neutral/no preference	28.6	71.4	(329)	27.3	72.7	(315)	25.5	74.5	(319)
Non-establishment	20.7	79.3	(390)	20.9	79.1	(263)	16.8	83.2	(272)
	*			*		ŭ	**		

Rating of C.E.									
0 point	1	1	1	1	1	ĵ		81.0	(290)
1-49 points	î	1	ı	1	1	Ī		77.6	(190)
50 -100 points	ı		Į.	1	Í	ĵ		70.4	(198)
HK Government Satisfaction									
Dissatisfied	23.2	76.8	(479)	23.4	76.6	(453)	19.5	80.5	(435)
In-between	28.6	71.4	(133)	21.9	78.1	(128)	20.3	7.67	(144)
Satisfied	38.2	61.8	(68)	38.5	61.5	(91)	39.0	61.0	(106)
	*			**	ű		***		

Notes
'Do you worry about a recession in Hong Kong?'
\*p < .05 \*\* p < .01 \*\*\* p < .001

economy might fall into a recession. In three rounds of survey, although the proportion that indicated worry increased gradually, the increase falls within the sampling error.

Looking closer, when tested by cross-tabulation there are statistically significant differences among respondents of different political orientation and satisfaction with the Hong Kong government in three rounds of the survey. Respondents who held a non-establishment perspective and were dissatisfied with the Hong Kong government indicated a higher level of worry than those who held a pro-establishment viewpoint and satisfied were with the government. The characteristics of gender, education, personal income and rating of the CE showed some statistically significant differences in some survey rounds. For instance, respondents who were female, higher educated, earned a lower income and gave the CE zero mark worried more about an economic recession than those who were male, lower educated, earned a higher income and gave the CE a higher mark. Age and economic activity status did not show any statistically significant differences (Table 15.14).

Similarly, if we look at the results of the fixed-effect logistic regression on whether respondents were worried about an economic recession in Hong Kong or not (0 = not worried, 1 = worried), one could see that gender, education, personal income, political orientation, and level of satisfaction with the Hong Kong government passed the statistical significance level. Those who were female, tertiary educated, earned a low personal income, held non-establishment views and were in-between or dissatisfied with the Hong Kong government showed a higher level of worry about an economic recession in Hong Kong than those who were male, non-tertiary educated and non-working, held pro-establishment views and satisfied with the Hong Kong government.

In model 2, being worried about being infected passed the statistical significance level. Those who showed a higher level of worry about being infected with COVID-19 also showed a higher level of worry about an economic recession in Hong Kong (Table 15.15).

#### Conclusion

The eruption of the COVID-19 pandemic is doubtlessly a health crisis without equal in the prosperous postwar era. Although it was short-sighted to conclude that the outbreak was ever under control, and it is impossible to predict when it could come to an end, the low mortality rate and high infection rate are irrefutable. Judging from the results, such as that below 20% of the respondents were very worried about being infected, it could be concluded that in Hong Kong concern about the virus is not very high. However, our respondents clearly showed a very high level of alertness, reflected in the overwhelming majority wearing face masks when going out, as well as washing their hands and cleaning their homes frequently. This high standard of personal hygiene behaviour, as a mitigating factor, seems to be some explanation to the general public's low level of worry about being infected.

Since tightening daily social and economic activities are key measures for fighting the virus, it was inevitable that government efforts to contain COVID-19 would badly affect the overall economy. A vicious process ensued, where as the economy suddenly contracted, the unemployment rate jumped up. Then, personal and household income plummeted, and that can breed discontent towards the government. In a highly divided society where political trust is weak, prolonged economic downturns can further frustrate the public and easily become highly politicised issues that mount significant pressure upon the government. If improperly handled, this pressure may ultimately turn into a political crisis that endangers sound governance.

Our survey data demonstrates that although only around 6-13% of the respondents were very worried about being infected with COVID-19, around a half of people's household income was

Table 15.15 Fixed-effect logistic regression on whether worried about an economic recession in Hong Kong

	Model 1	Model 2
Female	.293*	.251*
Age (60 years old or above)		
18-29 years old	169	229
30-59 years old	.011	033
Tertiary educated	.290*	.296*
Personal income (non-working)		
Below \$20,000	.375*	.409*
\$20,000 or above	259	234
Political orientation (Pro-establishment)		
Neutral/no preference	.187	.215
Non-establishment	.633**	.640**
HK Government Satisfaction (Satisfied)		
Dissatisfied	.652***	.495**
In-between	.688***	.535**
Survey period (August)		
May	164	128
June	128	088
Worried about being infected	_	.315***
Constant	.157	321
Nagelkerke R <sup>2</sup>	.059	.073
(n)	(1791)	 (1775)

Notes

Reference groups are in parentheses.

reduced due to the epidemic, and this number was more severe amongst under-privileged and lower-class people. However, when asked their feeling about the Hong Kong economy, over 70% indicated that they were worried it might fall into a recession. More importantly, our regression result indicated that respondents with a non-establishment political orientation and those were dissatisfied with the Hong Kong government were more worried about an economic recession. If the Hong Kong government could not strike a balance between fighting the epidemic and revitalising the economy, and avoid a prolonged period of decreased personal and household income, the foundation of social stability would be threatened.

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#### References

Centers for Disease Control and Prevention. (2020). Coronavirus disease (COVID-19): Coping with stress. https://www.cdc.gov/coronavirus/2019-ncov/daily-life-coping/managing-stress-anxiety.html

<sup>\*</sup> p < .05, \*\* p < .01, \*\*\* p < .001

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- Hang, Q., Ekberg, J., Yip, J., Chen, J., He, L. Y., & He, L. (2020). COVID-19 Impact: Challenges and opportunities for the Chinese financial sector. Hong Kong: Oliver Wyman. https://www.oliverwyman. com/content/dam/oliver-wyman/v2/publications/2020/apr/covid-19-impact.pdf
- Harari, Y. N. (2016). Homo deus: A brief history of tomorrow. London: Harvill Secker.
- Nicola, M., Alsafi, Z., Sohrabi, C., Kerwan, A., Al-Jabir, A., Losifidis, C., Agha, M., & Agha, R. (2020). The socio-economic implications of the coronavirus and COVID-19 pandemic: A review. International Journal of Surgery, 78, 185-193. https://doi.org/10.1016%2Fj.ijsu.2020.04.018
- Our World in Data. (2020). Statistics and research: Mortality risk of COVID-19. https://ourworldindata.org/ mortality-risk-covid
- Petersen, E., Koopmans, M., Go, U., Hamer, D. H., Petrosillo, N., Castelli, F., Storgaard, M., Al Khalili, S., & Simonsen, L. (2020). Comparing SARS-CoV-2 with SARS-CoV and influenza pandemics. The Lancet Infectious Diseases, 20(9), E238-E244. https://doi.org/10.1016/S1473-3099(20)30484-9
- Phillips, D. R. (1988). The Epidemiological Transition in Hong Kong: Changes in health and disease since the nineteenth century. Hong Kong: Centre of Asian Studies.
- The Government of the Hong Kong Special Administrative Region. (2020). Latest situation of cases of COVID-19. https://www.coronavirus.gov.hk/eng/index.html