Article DOI: http://doi.org/10.3201/eid3007.231723

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Prevalence and Risk Factors of Post— COVID-19 Condition during Omicron BA.5— Dominant Wave, Japan

Appendix

Shown on the following pages is the questionnaire sent to residents in Shinagawa City, a metropolitan area located in the Tokyo area of Japan, who were 20–69 years of age and infected with SARS-CoV-2 during July 1–August 31, 2022, along with noninfected residents as controls (25,911 in each group).

Appendix

Questionnaire (written in green indicates directions)

_								
Su	Survey on the health of residents during COVID-19 pandemic							
	The purpose of this survey is to ask about your health and daily life during the	l agree.						
	Coronavirus Disease 2019 (COVID-19) pandemic and the recovery status of those							
	who have had COVID-19 in order to provide reference for future healthcare							
	systems.							
	Please read the enclosed "Regarding Cooperation with the 'Survey on the health of							
	residents during COVID-19 pandemic,'" and if you agree to cooperate with this							
	survey, please click the "I agree" button to proceed to the answer section.							
	This work was supported by MHLW Research on Emerging and Re-emerging							
	Infectious Diseases and Immunization (Program Grant Number JPMH21HA2011).							
Se	ction 1 (questionnaire for all participants)							
Q	Respondent	1=the person himself/herself						
		2 = substitute						
Q	Sex (of the person himself/herself)	1 = m a le						
		2 = fe m a le						
		3=I prefer not to answer						
Q	Age (of the person himself/herself)	year						
Q	Have you ever been diagnosed to be a close contact with someone who had COVID-	1 = Y e s						
	19?	2 = N o						
		3=1 don't know						
		4=1 prefer not to answer						
Q	Has anyone living with you been diagnosed with COVID-19	1 = Y e s						
		2 = No						

		3=No roommate (living alone)
		4=I don't know
		5=1 prefer not to answer
Q	Have you ever been diagnosed to have COVID-19?	1 = Y e s
	Yes \rightarrow move to the questionnaire for infected persons; other answers \rightarrow move to	2 = N o
	the questionnaire for noninfected persons	3=I don't know
		4=I prefer not to answer

	Section 2-A (questionnaire fo				
Q	How many times have you be	Once			
		Twice			
					Three times or more
	(Show only the number of tir	nes diagnosed) Whe	en was the date o	f diagnosis?	Choose from below
	If you do not know the exact	date, please provid	e an approximate	e date.	B: 2019, 2020, 2021, 2022, 2023
	First diagnosis date	B year	C mo	D day	C: January-December
			nth		D: 1-31, unknown
	Second diagnosis date	B year	C month	D day	
	Third diagnosis date	B year	C month	D	
				day	
Q	How was your medical condi	tion when you had C	OVID-19 for the	first time?	
	Did you have any symptoms?	1 = Yes 2 = No 3 = I don't know			
	Were you diagnosed with pn	eumonia?			1=Yes 2=No 3=I don't know
	Were you hospitalized?				1=Yes 2=No 3=I don't know

	<those being="" hospitalized="" reported="">Were you admitted to the intensive care unit (ICU)?</those>	1=Yes 2=No 3=I don't know	
	Was oxygen administered?	1=Yes 2=No 3=I don't know	
	<those administration="" oxygen="" with="">Please select all methods of oxygen</those>	1 = Nasal cannula	
	administration received at that time.	2=oxygen mask	
		3=high-flow nasal cannula	
	1 2 3 4 5 6	4=noninvasive positive pressure	
		ventilation (NPPV)	
		5 = mechanical ventilation	
		6=extracorporeal membrane	
		oxygenation (ECMO)	
		7=Oxygen was administered, but I	
		don't know how.	
Q	How was your medical condition when you had COVID-19 for the second time?		
	Did you have any symptoms?	1=Yes 2=No 3=I don't know	
	Were you hospitalized?	1=Yes 2=No 3=I don't know	
	Was oxygen administered?	1=Yes 2=No 3=I don't know	
	Were you intubated (mechanical ventilation)?	1=Yes 2=No 3=I don't know	
Q	How was your medical condition when you had COVID-19 for the third time?		
	Did you have any symptoms?	1=Yes 2=No 3=I don't know	
	Were you hospitalized?	1=Yes 2=No 3=I don't know	
	Was oxygen administered?	1 = Yes 2 = No 3 = I don't know	
	Were you intubated (mechanical ventilation)?	1 = Yes 2 = No 3 = I don't know	
Q	<pre><female only="">Were you pregnant when you had COVID-19? (multiple choices)</female></pre>	1 = Yes 2 = No 3 = I don't know 4 = I	
		prefer not to answer	

	-	
	Those who answered yes, multiple choice > During which infection episode were	First infection, second infection, third
	you pregnant?	infection, other
	Those who answered yes>What was the gestational age at the time of the first	1=First trimester (≤15 weeks gestation)
	infection?	2=Second trimester (≥16weeks and ≤27
		weeks)
		3=Third trimester (≥28 weeks)
		4=1 don't know the gestational age at
		the time of infection
	Those who answered yes>What was the gestational age at the time of the second	1=First trimester (≤15 weeks gestation)
	infection?	2=Second trimester (≥16weeks and ≤27
		weeks)
		3=Third trimester (≥28 weeks)
		4=1 don't know the gestational age at
		the time of infection
	Those who answered yes>What was the gestational age at the time of the third	1=First trimester (≤15 weeks gestation)
	infection?	2=Second trimester (≥16weeks and ≤27
		weeks)
		3=Third trimester (≥28 weeks)
		4=1 don't know the gestational age at
		the time of infection
Q	We would like to ask you about the symptoms that appeared after the COVID-19	Selecting symptoms will display "Was
	diagnosis.	present from the time of infection
	Please select the symptoms that existed between the COVID-19 diagnosis in the	through the recovery period", "Was
	summer of 2022 to date.	present at 3 months after the
	Please check all that apply regarding the duration of the symptoms.	

- If the symptoms were present from the time of infection through the recovery period, check "Was present from the time of infection through the recovery period"
- If the symptoms were present at 3 months after the infection, check "Was present after three months of infection"
- If the symptom lasted 2 months or more, check "lasted 2 months or more"
- If the symptom is present, check "Still present"

If none of the symptoms were present, please select "No symptoms of any of the above" at the bottom.

*For those who had COVID-19 more than once, please answer the following questions regarding the infection in the summer of 2022.

Symptom	Symptom	Was	Was	Lasted 2	Still
s that		present	present	months	present
have		from the	at 3	or more	
existed		time of	months		
between		infection	after the		
the		through	infection		
COVID-		the			
19		recovery			
diagnosis		period			
in the					
s u m m e r					
of 2022					
to date					
	Fever (≥37.5 °C)				

infection", "Lasted 2 months or more", and "Still present".>

Т	Т	I	T	
	Cough			
	Fatigue			
	Sore throat			
	Chest pain			
	Lack of appetite (anorexia)			
	Brain fog (Brain fog is a state such as being "foggy," "confused," "having difficulty learning new things," "indecisive," or "unable to think clearly.")			
	Difficulty in concentrating			
	Loss of smells (smelling disorder)			
	Loss of tastes (tasting disorder)			
	Shortness of breath			
	Hair loss			
	Muscle weakness			
	Palpitations			

Difficulty sleeping,			
waking up at night or			
early in the morning			
 (sleep disorder)			
Runny nose			
Headache			
Joint pain or swelling			
Muscle pain			
Nausea and vomiting			
Abdominal pain			
Skin rash			
Eye symptoms (eye pain,			
itching, foreign body			
sensation, redness,			
watery eyes, blurred			
vision, difficulty seeing)			
Dizziness			
Erectile disfunction (male			
only)			
Menstrual change			
 (female only)			
Other 1 (in detail			
)			

		Other 2 (in detail							
		No symptoms of any of the above							
Q	question cu Please choo	ent are the symptoms after rrently interfering with your se a number from 0 to 10, we me hindrance."	0 to 10						
Q	Are you cur	rently receiving treatment fo	or any of th	ie symptom	s selected in	the	1 = Y e s		
	previous qu	estion?					2 = N o		
	<those td="" who<=""><td>o answered yes> Please sele</td><td>ct all treat</td><td>ments you a</td><td>re currently</td><td>receiving.</td><td>1=in-patient care</td></those>	o answered yes> Please sele	ct all treat	ments you a	re currently	receiving.	1=in-patient care		
							2=out-patient care		
							3=prescription drugs (other than		
							herbal medicines)		
							4=prescription drugs (herbal		
							medicines)		
							5=over-the-counter drug		
							6=rehabilitation		
							7 = psychological counseling		
							8=other ()		
Q	Please selec	ct all new diseases diagnosed	d at medica	al facilities a	fter COVID-	19	1 = Malignancy		
	diagnosis in	the summer of 2022.	2=Myocardial infarction, angina						
							3=Heart failure		
							4 = Arrhythmia		
							5 = Myocarditis / cardiomyopathy		



Q We would like to ask you about the symptoms that appeared after July 2022.

Please select the symptoms that existed between July 2022 to date.

- If the symptom lasted 2 months or more, check "lasted 2 months or more"
- If the symptom is present, check "Still present"

If none of the symptoms were present, please select "No symptoms of any of the above" at the bottom.

Symptoms that have existed from July 2022 to date	5 y m p t o m	Lasted 2 months or more	Still present
	Fever (≥37.5 °C)		
	Cough		
	Fatigue		
	Sore throat		
	Chest pain		
	Lack of appetite (anorexia)		
	Brain fog (Brain fog is a state such as being "foggy," "confused," "having difficulty learning new things," "indecisive," or "unable to think clearly.")		
	Difficulty in concentrating		

Loss of smells (smelling disorder)	
Loss of tastes (tasting disorder)	
Shortness of breath	
Hair loss	
Muscle weakness	
Palpitations	
Difficulty sleeping, waking up at night	
or early in the morning (sleep	
disorder)	
Runny nose	
Headache	
Joint pain or swelling	
Muscle pain	
Nausea and vomiting	
Abdominal pain	
Skin rash	
Eye symptoms (eye pain, itching,	
foreign body sensation, redness,	
watery eyes, blurred vision, difficulty	
seeing)	
Dizziness	
Erectile disfunction (male only)	
Menstrual change (female only)	

		Other 1 (in detail)			4
		Other 2 (in detail)			
		No symptoms of any of the above			
Q	Please select all r	new diseases diagnosed at medical facilition	es after July 2022	2.	1 = Malignancy
					2 = Myocardial infarction, angina
					3 = Heart failure
					4 = Arrhythmia
					5 = Myocarditis/cardiomyopathy
					6 = Stroke
					7 = Hypertension
					8 = Hyperlipidem ia
					9=Gout (Hyperuricemia)
					10-12=Diabetes (Type 1, type 2,
					I don't know if it's type 1 or 2)
					13=Interstitial
					pneumonia/interstitial lung
					disease
					14 = Asthma
					15=Pulmonary embolism
					16=Chronic obstructive
					pulmonary disease (COPD)
					17 = Hepatitis/cirrhosis
					18-19=Chronic kidney disease
					(with dialysis, without dialysis)
					20=Connective tissue disease

	21 = Shingles
	22= Dementia
	23 = Depression
	24 = Anxiety
	25 = Other
	0 = None
<pre><female only="">Have you been pregnant between July 2022 to date?</female></pre>	1=Yes 2=No 3=I don't know
	4=1 prefer not to answer

Section 3 (questionnaire for all participants)

	We would like to ask about COVID-19 vaccines.	
Q	How many doses of COVID-19 vaccine have you received so	0 (unvaccinated), once, twice, three times, four times or
	far?	more
Q	Please indicate the date of vaccination.	Choose from below
	If you do not know the exact date, please provide an	A: 2020, 2021, 2022, 2023
	approximate date.	B: January-December
	(Displayed according to the number of vaccinations	
	selected)	
	First dose : A year B month	
	Second dose : A year B month	
	Third dose : A year B month	
	Fourth dose : A year B month	

	We would like to ask about your health and daily life.					
Q	Current height	cm				

Q	Current weight	kg
Q	Weight about 6 months ago	kg
	For infected persons: Weight about 6 months ago (before COVID-19	
	diagnosis in summer 2022)	
Q	Do you currently have "breathlessness"? Please choose one that	1 = No breathlessness
	comes closest.	2=1 only get breathless with strenuous exercise
		3=1 get short of breath when hurrying on level ground
		or walking up a slight hill
		4=On level ground, I walk slow than people of my age
		because of breathlessness, or I have to stop for
		breath when walking at my own pace on the level
		5=1 stop for breath after walking about 100 m or after
		a few minutes on level ground
		6=1 am too breathless to leave the house or 1 am
		breathless when dressing/undressing
Q	Do you currently have "fatigue"? Please choose one that comes	1=Fully active, able to carry on all (infected persons:
	closest. If you do not have "fatigue," please choose "Fully active."	pre-disease) performance without restriction
		2=Restricted in physically strenuous activity but
		ambulatory and able to carry out work of a light or
		sedentary nature, e.g., light house work, office work
		3 = Ambulatory and capable of all selfcare but unable
		to carry out any work activities. Up and about more
		than 50% of waking hours
		4=Capable of only limited selfcare, confined to bed or
		chair more than 50% of waking hours

		5 = Completely disabled. Cannot carry on any selfcare.
		Totally confined to bed or chair
Q	Please select all diseases diagnosed at medical institutions before	1 = Malignancy
	July 2022.	2= Myocardial infarction, angina
	For infected persons: Please select all diseases diagnosed at medical	3=Heart failure
	facilities prior to the COVID-19 infection in the summer of 2022.	4 = Arrhythmia
		5 = Myocarditis/cardiomyopathy
		6=Stroke
		7 = Hypertension
		8 = Hyperlipidemia
		9=Gout (Hyperuricemia)
		10-12=Diabetes (Type 1, type 2, I don't know if it's
		type 1 or 2)
		13=Interstitial pneumonia/interstitial lung disease
		14 = Asthma
		15=Pulmonary embolism
		16=Chronic obstructive pulmonary disease (COPD)
		17 = Hepatitis/cirrhosis
		18-19=Chronic kidney disease (with dialysis, without
		dialysis)
		20=Connective tissue disease
		21 = Shingles
		22=Dementia
		23 = Depression
		24= Anxiety

		25 = Other
		0 = None
Q	On an about July 2022 (infacted naveance at the time of COVID 10	1 = Yes
Q	On or about July 2022 (infected persons: at the time of COVID-19	
	diagnosis in summer 2022), were you treated with steroids	2 = No
	(excluding ointments), anticancer drugs, immunosuppressive drugs	3=I don't know
	or biologics (such as Remicade)?	
Q	Do you smoke cigarettes (cigarettes, heated tobacco products, e-	1 = Never smoked cigarettes habitually before
	cigarettes including nicotine)?	2=Smoked cigarettes in the past but have quit
		3 = Currently still smoking cigarettes
	<those answered="" have="" quit="" to="" who=""></those>	1 = Before COVID-19 diagnosis (noninfected persons:
	When did you quit smoking cigarettes?	before July 2022)
		2=After COVID-19 diagnosis (noninfected persons:
		after July 2022)
	<those answered="" currently="" smoking="" who=""></those>	1 = Decreased
	Has the amount of cigarettes you smoke changed compared with	2 = Unchanged
	that 6 months ago (infected persons: 6 months ago (before COVID-	3=Increased
	19 infection in summer 2022))?	
Q	How often do you currently drink alcohol (alcohol-containing	1=I don't drink at all (can't drink)
	beverages)?	2=Hardly drink (about once a month)
		3=1-3 times a month
		4=1-2 times a week
		5=3-4 times a week
		6=5-6 times a week
		7=every day

	<those "don't="" above="" all"="" at="" chose="" drink="" other="" than="" who=""></those>	1=Less than 1 cup (180ml) of sake
	What is the average amount of alcohol you drink per day? Please	2=1 cup of sake
	choose one that applies to you in terms of sake.	3=2 cups of sake
		4=3-4 cups of sake
		5=5 cups of sake
	Compared with that 6 months ago (infected person: 6 months ago	1=I quit
	(before COVID-19 infection in summer 2022)), has the amount of	2 = Decreased
	alcohol you drink changed?	3 = Unchanged
		4=Increased (started drinking)
Q	Please select your current average daily sleep duration.	1=less than 5 hours
		2=5 hours
		3=6 hours
		4=7 hours
		5=8 hours
		6=9 hours
		7=10 hours or more
Q	Compared with that 6 months ago (infected persons: 6 months ago	1 = Decreased
	(before COVID-19 infection in summer 2022)), has your sleeping	2 = Unchanged
	duration changed?	3 = Increased
Q	How much sports or exercise do you currently do on average per	5=7 hours or more
	week in total?	4=5-6 hours
		3=3-4 hours
		2=1-2 hours
		1 = seldom or never

Q	How much time do you currently spend v	walkin	4=3 hours or more			
	on average per day?		3=about 2 hours			
			2=about 1 hour			
			1 = about 30 minutes			
			0=seldom or never			
Q	Compared with that 6 months ago (infec	ted pe				
	(before COVID-19 infection in summer 2	022))	, have	you	changed	
	the way you move your body or how long	gyou	sit?		-	
		De	∪ _r	_		
		crea	Uncha	ncre		
		s e	a n g e	ease		
		ď	e d	bg		
	Frequency and duration of sports and					
	exercise					
	Time spent walking indoors and					
	outdoors					
	Sitting time					
Q	< For those aged 50 years or older only>				_	
	Please select "Yes" or "No" for the follow	ing fi	ve ite	ms.		

-	7				
				Yes	No
	Have you lost 2 kg or more in the				
	Do you think you walk slower tha				
	Do you go for a walk for your hea	a 🗆			
	Can you recall what happened 5				
	In the past 2 weeks, have you fe reason?	lt tired v	vithout a		
Q	For each item, please indicate how	v often y	ou feel.	.	-
		None of the time	Seldom of the time	Often	All of the time
	How often do you feel that you lack companionship?				
	How often do you feel left out?				
	How often do you feel isolated from others?				

Q	During the past 30 days,	, about h	now ofter	n did yo	u feel	•	•
		None of the time	A little of the time	Some of the time	Most of the time	All of the time	
	nervous?						
	hopeless?						
	restless or fidgety?						
	so depressed that nothing could cheer you up?						
	that everything was an effort?						
	worthless?						
Q	Over the last 2 weeks, he	ow ofter	n have vo	ou been	bother	ed bv	_
	thoughts that you would						elf in
	some way?						

Q	What is your current marital status?	1 = Unmarried
		2 = Married
		3 = Widowed
		4= Divorced
		5 = Prefer not to answer
Q	Who do you currently live with? Please check all persons living with	1 = S pouse
	you.	2 = Child
		3 = Parent
		4=Other ()
Q	<those above="" check="" question="" the="" who=""></those>	persons
	How many people are currently living with you (not including you)?	
	Of the number of people living with you above, how many are under	persons
	the age of 18 (not including you)?	
Q	What was the last school you graduated from?	1=Junior high school
		2=High school
		3 = Vocational school
		4=Some college
		5 = University
		6=Graduate school
		7=Prefer not to answer
Q	What is your household income (including taxes and income from	1 = No household income
	pensions and dividends) in 2021?	2 = < 500,000 yen
		3 =≥500,000 yen and <1,000,000 yen
		4 =≥1,000,000 yen and <2,000,000 yen
		5 =≥2,000,000 yen and <4,000,000 yen

		6=≥4,000,000 yen and <6,000,000 yen
		7 =≥6,000,000 yen and <8,000,000 yen
		8 =≥8,000,000 yen and <10,000,000 yen
		9=≥10,000,000 yen and <12,000,000 yen
		10 =≥12,000,000 yen and <14,000,000 yen
		11 =≥14,000,000 yen
		12 = Prefer not to answer/don't know
Q	Has your financial situation changed compared with that 6 months	1=Very worse
	ago (infected persons: 6 months ago (before COVID-19 infection in	2 = W or se
	summer 2022))?	3 = Unchanged
		4 = Better
		5=Very better
Q	Please select one of your main occupations at present. If you have	1= Administrative and managerial
	more than one occupation, please select one main job.	2 = Professional and engineering (healthcare)
		3 = Professional and engineering (nursing
		care/welfare)
		4=Professional and engineering (childcare/education
		5 = Professional and engineering (other)
		6=Clerical
		7=Service (accommodation industry)
		8=Service (restaurant business serving alcohol
		beverage)
		9=Service (restaurant business without serving
		alcohol beverage)

		10=Service (entertainment)
		11=Service (other)
		12=Sales (retail store owners, sales clerks, etc.)
		13=Security
		14=Manufacturing process
		15 = Agricultural, forestry and fishery
		16=Transport and machine operation
		17=Construction and mining
		18=Carrying, cleaning, packaging, and related
		19=Student
		20 = Housewife/househusband
		21=Not apply to the above
		22=Unem ployed
Q	Please select one of your current employment statuses (including	1=Regular employee (manager)
	student). If you have more than one type of employment, please	2=Regular employee (other than managers)
	choose one main status.	3=Executive of company or corporation
		4=Self-employed worker
		5 = Assistance in private business
		6=Dispatched worker from temporary labor agency
		7=Contract employee
		8=Part-time worker
		9=Doing piecework at home
		10=Students
		11 = Housewife / househusband

		12=Unemployed
		13 = Other ()
Q	< Display selected occupations > Is the occupation here the same as	1=Yes
	the occupation as of July 1, 2022?	2 = No
	<those answered="" no="" who=""></those>	1 = Administrative and managerial
	Please select your occupation as of July 1, 2022. If you have more	2=Professional and engineering (healthcare)
	than one occupation, please select one main occupation.	3 = Professional and engineering (nursing
		care/welfare)
		4=Professional and engineering (childcare/education)
		5 = Professional and engineering (other)
		6 = Clerical
		7=Service (accommodation industry)
		8=Service (restaurant business serving alcohol
		beverage)
		9=Service (restaurant business without serving
		alcohol beverage)
		10=Service (entertainment)
		11=Service (other)
		12=Sales (retail store owners, sales clerks, etc.)
		13 = Security
		14 = Manufacturing process
		15 = Agricultural, forestry and fishery
		16=Transport and machine operation
		17 = Construction and mining

		18=Carrying, cleaning, packaging, and related
		19=Student
		20 = Housewife/househusband
		21 = Not apply to the above
		22 = Unemployed
Q	<< Display selected employment status>	1=Yes
	Is the employment status here the same as of July 1, 2022?	2 = N o
	<those answered="" no="" who=""></those>	1 = Regular employee (manager)
	Please select your employment status as of July 1, 2022. If you have	2=Regular employee (other than managers)
	more than one employment status, please select one main status.	3=Executive of company or corporation
		4=Self-employed worker
		5 = Assistance in private business
		6=Dispatched worker from temporary labor agency
		7 = Contract employee
		8=Part-time worker
		9=Doing piecework at home
		10 = Students
		11 = Housewife/househusband
		12=Unemployed
		13 = Other ()
Q	In the past 6 months, have you experienced any of the following?	1 = Working (schooling) hours increased
	Please select all that apply.	2 = Working (schooling) hours decreased
		3 = Telecommuting (online classes) has increased
		4=Telecommuting (online classes) has decreased
		5=I have found a job (entered to school)

	6=1 took a leave of absence
	7 = Changed jobs (schools)
	8=Retired (withdrew from school)
	9=I've been frequently absent
	10=Other ()
	11 = None of the above
<those above="" no.1-10="" selected="" who=""></those>	1=Because I was instructed by my employer or school
Please select all applicable reasons.	2=Due to deteriorating health conditions caused by
	COVID-19
	3=Due to deteriorating health conditions caused by
	conditions other than COVID-19
	4= Due to a new need for childcare or nursing care for
	a family member, etc.
	5 = For financial reasons
	6=Because I could no longer pay my tuition fees
	7 = Other ()