Perceptions of COVID-19 and Seasonal Influenza Were Influencing Behavioural Intention to Take Up Seasonal Influenza Vaccination during COVID-19 Pandemic among Community-dwelling Older Adults in Hong Kong



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Objective

Seasonal influenza causes three to five million severe illness cases [1] and 290,000 to 650,000 deaths every year [2]. During the COVID-19 pandemic, co-infection of seasonal influenza and COVID-19 is associated with higher mortality risk [3]. Seasonal influenza vaccination is proven to be highly effective to prevent the disease and safe for older adults [4]. Promoting seasonal influenza vaccination uptake among older adults during the pandemic is important.

This study was to:

- Investigate behavioural intention to receive seasonal influenza vaccination during the COVID-19 pandemic among communitydwelling older adults in Hong Kong, China.
- Investigate the associations of perceptions related to COVID-19 and seasonal influenza with behavioural intention to receive seasonal influenza vaccination

Method

A random telephone survey



Results

Behavioural intention to receive seasonal influenza vaccination





	AOR (95% CI)	P values	
Which virus of COVID-19 and seasonal influenza has higher infectivity?			
Uncertain	1.00		
COVID-19	1.76 (0.94, 3.29)	0.08	
No different	1.61 (0.59, 4.39)	0.35	
Seasonal influenza	1.97 (0.87, 4.46)	0.10	
If you do not receive seasonal influenza vaccination, how high is your chance of having co-infection of seasonal influenza and COVID-19 in the incoming flu season?	2.97 (1.84, 4.80)	<0.001	
Seasonal influenza vaccination would negatively affect the effectiveness of COVID-19 vaccination	0.52 (0.31, 0.89)	0.02	
COVID-19 vaccination would negatively affect the effectiveness of seasonal influenza vaccination	0.53 (0.31, 0.91)	0.02	
AOR: adjusted odds ratio, odds ratio adjusted for significant			

Table 2. Associations of perceptions related to seasonal influenza with behavioural intention to receive seasonal influenza vaccination

	AOR	Р
	(95% CI)	values
Perceived Susceptibility ^a	3.51	< 0.001
	(2.13, 5.78)	
Perceived severity ^a	3.19	< 0.001
	(1.95, 5.21)	
Perceived Benefit Scale	1.57	< 0.001
	(1.31, 1.87)	
Perceived barrier ^a		
Seasonal influenza vaccination has	0.29	< 0.001
severe side effects	(0.17, 0.50)	
Seasonal influenza vaccination is	0.93	0.85
too expensive for you	(0.45, 1.92)	
It is inconvenient for you to receive	1.92	0.11
seasonal influenza vaccination	(0.87, 4.23)	
Your health conditions are not	0.59	0.005
suitable for seasonal influenza	(0.41, 0.85)	
vaccination		
Cue to Action Scale	2.28	< 0.001
	(1.67, 3.10)	
Perceived Self-efficacy Scale	1.37	0.19
	(0.85, 2.21)	
Peer influence related to SIV		
Your family or friends had history of		
seasonal influenza		
No	1.00	
Yes	0.57	0.04
	(0.34, 0.97)	
In Hong Kong, how many people of		
your age would receive SIV for the		
incoming flu season		
Very few/few/some	1.00	
Many/great many	1.99	0.02
	(1.09, 3.63)	

background characteristics; CI: confidence interval

Reference

https://www.who.int/news-room/fact-sheets/detail/influenza-(seasonal). (accessed on 20 February 2023). Juliano, A.D., et al., Estimates of global seasonal influenza-associated respiratory mortality: a modelling study. Lancet, 2018. **391**(10127): p. 1285-1300. J Kapoula, G.V., K.E. Vennou, and P.G. Bagos, Influenza and Pneumococcal Vaccimation and the Risk of COVID-19: A Systematic Review and Meta-Analysis. Diagnostics (Basel), 2022. **12**(12). J Behrouzi, B., et al., Influenza Vaccination to Reduce Cardiovascular Morbidity and Mortality in Patients With COVID-19: JACC State-of-the-Art Review. J Am Coll Cardiol, 2020. **76**(15): p. 1777-

AOR: adjusted odds ratio, odds ratio adjusted for significant background characteristics; CI: confidence interval;

^a: Item scores were used for data analysis

Conclusion

- It is necessary to promote seasonal influenza vaccination among older adults during the COVID-19 pandemic.
- Both Perceptions related to COVID-19 and seasonal influenza were influencing older adults' decision to receive seasonal influenza vaccination.

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