



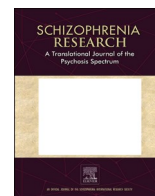
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Letter to the editor



H1N109 pandemic research in people with schizophrenia providing insights into COVID-19 clinical care

We conducted research on the H1N109 (swine) influenza pandemic in people with schizophrenia, and provide an overview to inform the clinical care of people with schizophrenia during the COVID-19 pandemic.

Two key components of an effective response plan to a pandemic (Australian Government, 2019) are: (1) communication of the best available health information to the public, and (2) minimization of community spread of the virus. People with schizophrenia are a vulnerable group during a pandemic, due to their increased medical comorbidity (especially CHD, COPD and diabetes mellitus type 2) and barriers to accessing health care. Therefore, our research investigated: (1) how people with schizophrenia obtain information on health matters; (2) how they perceive the risks associated with the viral pandemic; (3) what they are prepared to do about those risks; and (4) perceived obstacles to adopting protective measures.

A cross-sectional study comparing the questionnaire responses of 71 people with schizophrenia to 238 people in the general population was conducted in Canberra, Australia in 2009 during the early phase of the swine influenza pandemic (Maguire, 2014; Maguire et al., 2011). Patients with schizophrenia from both inpatient and community health centre settings were invited to participate through flyers and information brochures. People without schizophrenia attending one of thirteen general practices (representing a more "general population") were similarly recruited into the study, as a comparator group. The study received institutional ethical approval. The questionnaire was designed based on key concepts in risk perception and health behaviours literature (Maguire, 2014).

The most commonly used sources for obtaining health information for people with schizophrenia were: doctor (59.2%); family and friends (53.5%); television (52.1%) followed by radio (37.1%), Internet (35.2%), magazines (25.4%) and newspapers (19.7%) (Table 1). Regression analysis revealed that, compared the general population, people with schizophrenia were less likely to obtain health information from their doctor (adjusted odds ratio [AOR] = 0.27) and the Internet (AOR = 0.43). They were also less likely to trust their doctor as a source of information on health matters (AOR = 0.22). A substantive amount of the information obtained from a given source was explained by variance in the level of trust in that source (e.g. for family and friends, $R^2 = 0.3$ for people with schizophrenia, and $R^2 = 0.5$ for the general population).

There were no statistically significant differences between people with schizophrenia and the general population in terms of influenza risk perception (Maguire et al., 2019). Positive predictors of perceived risk to oneself, in the absence of adopting protective measures, for people with schizophrenia, included perceived likelihood and perceived seriousness of oneself contracting swine influenza, and affective forecast of fear (self-prediction of feeling afraid) in the event of contracting the

pandemic virus.

Regarding protective measures, the majority of participants with schizophrenia reported that they would be willing to increase hand washing (88.6%), be vaccinated (74.2%), self-isolate (73.2%), and wear a face mask (54.9%), if advised to by government authorities (Maguire et al., 2018). However, they were less willing to receive a vaccination (AOR = 0.41) and to self-isolate (AOR = 0.41) compared with the general population. In addition, 71.8% of people with schizophrenia were concerned about "catching 'flu' from vaccination. Predictors of willingness to adopt protective actions for the schizophrenia group included self-efficacy (vaccination, face mask, self-isolation), perceived likelihood of contracting swine flu (vaccination), perceived effectiveness of the protective measure (self-isolation), and perceived overall risk from swine flu (face mask). In addition, for people with schizophrenia, affective forecast of fear was a predictor for all protective measures except for self-isolation, being a particularly strong predictor of willingness to increase handwashing (AORs: vaccination = 2.3; face mask = 3.1; handwashing = 15.2). Affective forecast of feeling depressed was a predictor only for wearing a face mask.

Key perceived barriers to adopting protective measures for people with schizophrenia included: vaccination – concerns about side effects, cost, transport to a clinic; self-isolation – loneliness, accessing food and groceries, boredom; face mask – appearance/stigma, discomfort, difficulty breathing; and increased handwashing - access to washing facilities (e.g. basin), skin irritation and time.

Based on our findings, people with schizophrenia require a more assertive approach compared with the general population during the COVID-19 pandemic, including:

- (1) Exploration and education regarding any misconceptions about contracting influenza or COVID-19 from a vaccine, by treating doctors (GP and psychiatrists), in addition to public messaging via television.
- (2) Facilitation of self-efficacy to increase uptake of protective measures e.g., reduce vaccine hesitancy through modelling of vaccination by doctors, family and friends.
- (3) Modify education based upon understanding of fear motivation to increase uptake of protective measures (especially hand washing).
- (4) Provision of funding and transport for vaccination, or administration of the vaccine through outreach or home visits.
- (5) Targeted strategies promoted via community mental health centres to reduce loneliness and boredom during periods of social isolation and to facilitate access to food and essentials if necessary.

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Table 1
H1N109 pandemic: differences between people with schizophrenia and general practice attendees (Maguire, 2014).

	SCZ (n = 71)	GP (n = 238)	AOR (p value)
Information source			
Doctor	59.2%	80.7%	0.27 (<0.01)
Internet	35.2%	66.5%	0.43 (0.02)
Family and friends	53.5%	58.4%	0.74 (0.41)
Television	52.1%	34.0%	1.51 (0.23)
Radio	37.1%	20.6%	1.58 (0.23)
Newspaper	19.7%	29.1%	0.61 (0.22)
Magazine	25.4%	23.9%	1.45 (0.35)
Predictor variable for perceived overall risk from swine flu (within-group analysis)			
Perceived likelihood of oneself contracting swine flu	5.66 (< 0.01)	2.13 (< 0.01)	
Perceived seriousness of oneself contracting swine flu	5.12 (< 0.01)	1.04 (0.81)	
Affective forecast: afraid	5.14 (0.04)	1.52 (0.07)	
Affective forecast: depressed	0.29 (0.04)	1.12 (0.6)	
General self-rated health	0.16 (0.02)	0.72 (0.11)	
K10 total score	0.79 (0.02)	0.99 (0.53)	
K10 anxiety subscale score	0.44 (0.01)	1.06 (0.50)	
Protective measure			
Vaccination			
Willingness (%)	74.3	80.1	0.41 (0.02)
Predictors of willingness (Exp(B), p value)	<ul style="list-style-type: none"> ■ Perceived self-efficacy (3.44, 0.04) ■ Perceived likelihood of self contracting swine flu (3.48, 0.04) ■ Affective forecast of fear (if swine flu contracted) (2.33, 0.04) 	<ul style="list-style-type: none"> ■ Perceived effectiveness (3.68, <0.01) ■ Perceived risk of adverse reaction (0.58, 0.01) ■ Perceived self-efficacy (1.72, <0.01) 	
Concern about “catching flu” from vaccine (%)	71.8	50.2	2.19 (0.02)
Perceived barriers	Concern about side-effects; cost; transport to clinic	Concern about side-effects; time; cost	
Isolation			
Willingness (%)	73.2	86.1	0.41 (0.03)
Predictors of willingness (Exp(B), p value)	<ul style="list-style-type: none"> ■ Perceived effectiveness (5.23, 0.01) ■ Self-efficacy (4.89, <0.01) 	<ul style="list-style-type: none"> ■ Perceived self-efficacy (2.18, <0.01) 	
Perceived barriers	Loneliness; accessing food and groceries; boredom	Loneliness; attending work or university; attending to child, family or career duties	
Face mask			
Willingness (%)	54.9	61.6	0.44 (0.40)
Predictors of willingness (Exp(B), p value)	<ul style="list-style-type: none"> ■ Self-efficacy (2.43, 0.02) ■ Perceived overall risk to self from swine flu (5.61, 0.01) ■ Affective forecast of fear (if swine flu contracted) (3.10, 0.01) ■ Affective forecast of feeling depressed (if swine flu contracted) (2.49, 0.01) 	<ul style="list-style-type: none"> ■ Self-rated general health (1.75, 0.02) ■ Perceived effectiveness (2.48, <0.01) ■ Perceived self-efficacy (3.01, <0.01) ■ Affective forecast of fear (if swine flu contracted) (1.50, 0.02) 	
Perceived barriers	Appearance/stigma; uncomfortable; difficulty breathing	Appearance/stigma; uncomfortable; Difficulty breathing	
Hand washing			
Willingness (%)	88.6	93.2	0.78 (0.58)
Predictors of willingness (Exp(B), p value)	<ul style="list-style-type: none"> ■ Affective forecast of fear (if swine flu contracted) (15.20, 0.02) 	<ul style="list-style-type: none"> ■ Self-rated general health (0.33, 0.02) ■ Perceived effectiveness (3.68, <0.01) ■ Perceived overall risk to self from swine flu (3.65, 0.01) 	
Perceived barriers	Access to handwashing facilities; skin irritation; time	Access to handwashing facilities; remembering; time	

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