Unravelling age-specific disparity in acceptance of COVID-19 vaccination
Explore the contextual and individual psychosocial influences

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1 Background

• High COVID-19 vaccination uptake rates across age groups are important for achieving herd immunity. However, disparity in vaccination acceptance across age groups was widespread.

• Existing studies mainly examined the association of age with COVID-19 vaccine hesitancy, 1-3 yet the contributors to disparity in age-specific acceptance of COVID-19 vaccination remain a ‘black box’.

2 Objectives

• This study examined the extent to which contextual (i.e., vaccine-related news sentiment) and psychosocial factors (i.e., trust in government, social norms, vaccine confidence and risk perception of COVID-19) contributed to age-specific COVID-19 vaccination acceptance.

3 Methods

Data Collection
Four rounds of data collection on representative samples of the Hong Kong population were conducted between December 28, 2020 and March 3, 2021.

Contextual factors
Vaccine-related news headlines published in ten most popular newspapers in Hong Kong were collected using Python crawler within the same timeframe.

Psychological factors
• Covid-19 vaccination acceptance
• Trust in government
• Social norms
• COVID-19 vaccine confidence
• Risk perception of COVID-19

Statistical Analysis
• News sentiment was conducted by SnowNLP. 4
• Logistic regression was used to determine the impact of vaccine news sentiment on COVID-19 vaccine acceptance across age groups.
• The mediation effects of psychosocial factors on the associations of age with COVID-19 vaccination acceptance were examined using path analyses.

4 Results

Vaccine hesitancy increased in all age groups as the news sentiments became overall negative, the impact of negative news sentiment was greater among older people.

(A) (B)

Older people had greater trust in government, perceived greater influence of social norms on their vaccination, and had greater vaccine confidence which all in turn were associated with greater acceptance of COVID-19 vaccines.

However, older people were less worried about contracting COVID-19 which was associated with lower vaccination acceptance.

(C)

5 Discussion

Major conclusions
Older people’s vaccination decision tended to rely on affective and norm-related cues.

Implications
1. Continuously communicating statistical information about COVID-19 risk may not be effective to encourage COVID-19 vaccination uptake in older people.

2. Risk messages should be tailored to incorporate age-specific values to induce risk-related worry across age groups to increase overall vaccination acceptance.

Limitations
1. The sample of news items used for sentiment analysis may not be representative of all relevant news in Hong Kong.

2. Not all potential mediators were measured simultaneously within one survey.

3. Using cross-sectional data, casual inferences cannot be drawn.

Scan here for references