



# COVID-19ワクチン接種の促進・阻害要因

— 第3回追加接種開始後におけるデータからの検討 —

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## Background

- Vaccination may play a role in controlling COVID-19 pandemics, but negative attitudes toward vaccines are as prevalent as they have been for other vaccines (e.g., influenza, HPV).
- According to the IPSOS (2020) international survey, Japan ranked 4<sup>th</sup> highest aversive attitude among the countries participating in the survey, following Russia and France.
- Some previous studies focused on the attributes of participants (Tsuchida et al., 2021), and others examined them from the perspective of social class and personality (Murphy et al., 2021), but the total number of such studies is small.

## Objectives

- Based on previous research on reputational risks after the Tohoku Earthquake (Kudo and Nakayachi, 2014), in this study, we considered the aversive attitude toward vaccination as overestimation of risk.
- We focused on risk perception and risk literacy based on the dual process theory (e.g., Stanovich & West, 2001) and its related theories.
- Previous studies have examined the impact of these factors (e.g., risk perception of COVID-19/COVID-19 vaccine, optimism for COVID-19, risk aversion, knowledge of COVID-19 vaccine, risk literacy) on vaccination (Kudo & Li, 2021a, Kudo & Li, 2021b, Kudo, Iwai & Li, 2021).
- Based on previous studies, this study aims to examine people's attitudes toward vaccination (COVID-19, influenza, HPV) and the factors that influence them after the start of the third round of additional COVID-19 vaccination.

## Methods

- In February 2022, when the third round of additional COVID-19 vaccination was started, we conducted an online survey of 284 Japanese general adults (F = 137, M = 146, O = 1;  $M_{age} = 39.40$ ,  $SD_{age} = 10.13$ ).
- Independent variables included demographic variables, risk perception of the COVID-19 infection, risk / effectiveness perception of the COVID-19 vaccine, optimism for COVID-19, risk aversion, and risk literacy (Kanazawa et al., 2020).
- Dependent variable is intention to vaccinate with COVID-19 vaccine.

## Results

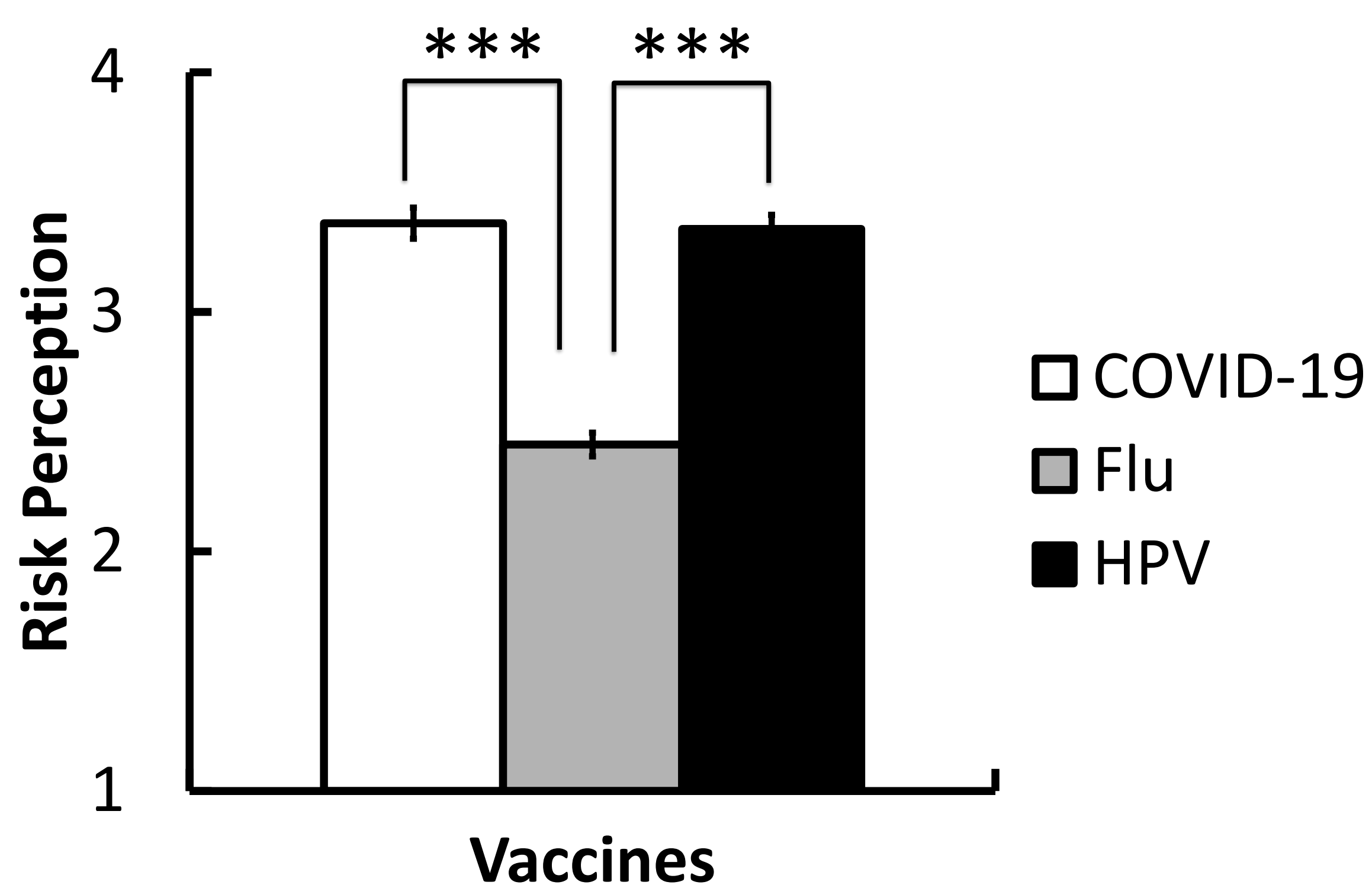


Fig 1. Comparing Risk perception of vaccines

Main effect:  $F(2, 560) = 196.56$ ,  $p < .001$ ,  $\eta_p^2 = .41$

COVID-19 > Flu ( $t(280) = 16.92$ ,  $p < .001$ )

HPV > Flu ( $t(280) = 17.67$ ,  $p < .001$ )

Table 1 Results of analysis with generalized linear model

Variables	$\beta$	95% Lower	95% Upper	VIF
<b>Gender</b>	<b>-.081+</b>	<b>-.171</b>	<b>.009</b>	<b>1.551</b>
Age	.046	-.047	.139	1.430
Education	.008	-.066	.083	1.156
<b>Marital Status</b>	<b>.094+</b>	<b>-.015</b>	<b>.203</b>	<b>2.847</b>
Child/Children	-.054	-.154	.047	2.460
Income	.027	-.062	.116	1.308
<b>Use of public transportation</b>	<b>.079*</b>	<b>.004</b>	<b>.155</b>	<b>1.171</b>
Risk perception of COVID-19	.100	-.019	.219	2.260
<b>Knowledge of COVID-19 Vaccine</b>	<b>.087*</b>	<b>.005</b>	<b>.169</b>	<b>1.210</b>
<b>Risk perception of COVID-19 Vaccine</b>	<b>-.502**</b>	<b>-.610</b>	<b>-.394</b>	<b>1.677</b>
<b>Effectiveness perception of COVID-19 Vaccine</b>	<b>.281**</b>	<b>.178</b>	<b>.383</b>	<b>1.710</b>
Media contact	-.010	-.090	.069	1.318
Optimism for COVID-19	-.049	-.168	.070	2.059
Risk aversion	.005	-.076	.085	1.137
Risk literacy: Zero risk	.040	-.072	.151	2.217
Risk literacy: Benefit tradeoff	.022	-.052	.097	1.467
Risk literacy: Risk tradeoff	.010	-.095	.115	1.848
Risk literacy: Risk paradox	.028	-.071	.128	1.815
Risk literacy: Basic knowledge	.005	-.092	.103	1.482
Risk literacy: Risk bias	-.052	-.163	.059	2.142

$R^2 = .586^{**}$

† $p < .10$ , \* $p < .05$ , \*\* $p < .01$

## Discussion & Conclusion

- Comparison of risk perception among vaccines showed that the COVID-19 vaccine had a similar level of risk perception as the HPV vaccine that caused adverse health effects, and remained consistently high more than a year after vaccination was initiated (cf. Kudo & Li, 2021a, Kudo & Li, 2021b, Kudo, Iwai & Li, 2021).
- In the demographic variables, men were more likely to avoid vaccination, while those with children and those who used public transportation more frequently were more likely to promote vaccination.
- Risk perception of COVID-19 did not directly promote vaccination intention, but risk perception of the vaccine suppressed vaccination intention.
- The results of the study revealed that vaccination intention increases with knowledge about vaccines and awareness of vaccine effectiveness, suggesting that promoting information about vaccines and their effectiveness can promote vaccination.