

Utilizing the Theory of Planned Behavior to determine the intentions to receive the influenza vaccine during COVID-19: A cross-sectional survey of US adults

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Introduction

- The possibility of a concurrent flu epidemic with the COVID-19 pandemic in the US raised concerns of increased burden on the healthcare system.
- Vaccine hesitancy led to only 48.4% of US adults getting the flu vaccine in 2019-20.¹ Reasons and barriers should be addressed to increase flu vaccinations.
- The theory of planned behavior (TPB) stipulates that intention to carry out a behavior relies on the participant's attitude towards the behavior, subjective norms, and perceived behavioral control.

Purpose

- The objective of this study was to assess the intentions of US adults to receive the 2020-2021 influenza vaccine during COVID-19 based on the Theory of Planned Behavior.

Methods

- This study utilized a cross-survey design, administered using SurveyMonkey Audience in September 2020, to a national panel of US adults aged 18 years and older.
- The survey had 22 items developed by the authors based on TPB framework.
- Cronbach's alpha was used to assess internal consistency of construct items, and a regression model was used with intention as the dependent variable and attitude, subjective norm, and perceived behavioral control as the independent variables. The model was controlled for demographic variables.

Results

- Three-hundred sixty-four adults (59.1% female, 66.5% white), completed the survey.
- The items for each of the three TPB constructs demonstrated adequate reliability – 0.833 for attitude, 0.899 for subjective norms, and 0.785 for perceived behavioral control.

Table 1: Notable survey results

Past and future intentions to get the flu vaccine	
Received flu vaccine last year	56.00%
Already received flu vaccine by date of survey administration	19.50%
Likely or very likely to get flu vaccine this year	54.30%
Unlikely or very unlikely to get the flu vaccine this year	33.33%
Beliefs about the flu vaccine	
Agreed or strongly agreed flu vaccine is beneficial	46.60%
Agreed or strongly agreed that it protects the people around them or their social circle	51.80%
Previous diagnosis and intention to get the COVID-19 vaccine	
Had not been diagnosed with COVID-19	90%
Likely or very likely to get the COVID-19 vaccine	40%
Unlikely to very unlikely to get the COVID-19 vaccine	25.30%
Preferred flu vaccination location	
Will most likely get the flu vaccine at a doctor's office	48.90%
Will most likely get the flu vaccine at a community pharmacy	30.00%
Barriers to flu vaccination	
Concerns about adverse effects from the flu vaccine	41%
Fear of needles	22.30%
Inconvenience	17.20%
Likelihood of various stakeholders to influence participants	
Family	58.10%
Doctor	42.70%
Pharmacist	22.60%
Pharmacist providing education or contacting the participant would influence their decision to get the flu vaccine	23.30%

Table 2: Parameter estimates for the regression model predicting intention to get the flu vaccine

	Regression Coefficient	P-value	Confidence Intervals
Attitude	0.891	0.000	0.714 – 0.168
Subjective Norm	0.266	0.005	0.080 – 0.451
Received flu vaccine last year compared to no flu vaccine last year	1.445	0.000	1.050 – 1.839
Hispanic compared to whites	-0.726	0.03	-1.397 – -0.054
Being a healthcare provider compared to not being one	-0.542	0.03	-1.042 – -0.041

Only significant variables are presented here

Conclusions

- 75% participants had either received or intended to receive the influenza vaccine this year.
- For those who indicated that they are unlikely to get the influenza vaccine, doctors and families can play a significant role in educating patients.
- Limitations include selection and sample bias, desirability bias where participants may answer questions positively, and use of a non-validated questionnaire.

Authors and Disclosures

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