

Linking Anti-vaccination with the Flu:

College Students' Attitudes Regarding Influenza Vaccination

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Abstract

120 Washington College students reported their attitudes on flu vaccination and anti-vaccination. Findings suggest that most individuals would not consider others to be anti-vaxxers for not vaccinating for the flu. Also, those who chose to vaccinate for the flu felt discomfort in learning that they felt positively toward anti-vaxxer beliefs, possibly due to the negative connotation behind the term “anti-vaxxer.” This is especially important in understanding the stigma and shifting definition surrounding anti-vaxxers.

Introduction

- Anti-vaxxers have been targeted in the media and society as being against vaccinations for major illnesses, specifically MMR.
- Many Americans fail to adhere to standard flu vaccination recommendations.
 - **Recommendation:** Every individual who is 6 months or older should get a yearly influenza vaccination with the exception of those who have an allergy to the vaccine or those who cannot get the vaccine (Key Facts About Seasonal Flu Vaccine, 2019).
- Only 8-39% of college students have been vaccinated for the flu (National Survey on College Students & Flu, 2019).
- Purpose of the study is:
 - Identify how the term anti-vaxxer is defined amongst college students
 - Fill in gaps by exploring how cognitive dissonance and stigmatization influence college student perceptions of the term “anti-vaxxer” related to flu vaccination decisions.

Cognitive Dissonance – “describes the discomfort felt when an individual holds contradictory beliefs” (Stalder & Anderson, 2014)

Anti-vaxxer - “a person who opposes vaccination or laws that mandate vaccination”

Main Hypotheses

1. Those who choose not to vaccinate for the flu will not apply the label of anti-vaxxer to others who also refrain from flu vaccination.
2. If individuals experience cognitive dissonance between their beliefs about vaccinating and getting vaccinated (i.e. those who vaccinate for the flu but have anti-vaxxer tendencies and vice versa), then they will experience discomfort with this misalignment.

Method

- Qualtrics email sent via mass email to all Washington College students.
- Inclusion criteria:
 - 18 years or older and a Washington College student.
- Participants then answered questions asking their attitudes toward influenza vaccination and “anti-vaxxers.”

Table 1. Measures Administered

Modified National 2009 H1N1 Flu Survey (CDC, 2010)	Anti-vaxxer Perception Questions	Demographics
<ul style="list-style-type: none">• Used to understand an individual’s flu vaccination history and perceptions surrounding influenza vaccination• Utilized 17 questions from this survey and modified answer choices to reflect college population• Reasoning questions were included for qualitative analysis	<ul style="list-style-type: none">• Researcher-created questions to understand individual’s perceptions of the term “anti-vaxxer” in conjunction with influenza vaccination• Consisted of 22 questions that asked individuals to define the term “anti-vaxxer” and rate their level of cognitive dissonance based on if they had contradictory actions/beliefs	<ul style="list-style-type: none">• Age• Class Standing (School)• Sex• Gender• Ethnicity/Race• Highest Level of Education Your Parents Have• Social Class• Major/Area of Study• Location of Living During the School Year

Participants

- Participant ages ranged from 18 to 23 with the mode being 20 years old.
- 98 (81.7%) of participants were female and 20 (16.7%) were male.
- Grade level/school class standing were split evenly with all grades being between 23.3% and 25.8% represented.

Table 2. Race/Ethnicity Reported by Participants

	Frequency	Percentage
White	94	78.3%
Black/African American	11	9.4%
Hispanic/Latino	8	6.8%
Asian	1	0.9%
Other	3	2.6%

Results

Hypothesis I

- 100% ($N=35$) of non-flu vaccinators would not consider themselves anti-vaxxers for choosing not vaccinate for the flu.
- 85% ($N=102$) of individuals would not view someone else as an anti-vaxxer for not vaccinating for the flu.
- Chi-square tests (Table 3) indicate that those who do not currently vaccinate for the flu were more likely to say that someone else was not an anti-vaxxer compared to those who currently vaccinate for the flu, $X^2(1, N = 120) = 7.376, p = 0.007$.

Table 3. Chi Square of Current Flu Vaccinators vs Non-Vaccinators in Viewing Someone Else as an Anti-vaxxer for Not Vaccinating for the Flu

		If someone chose not to vaccinate for the flu, would you consider them an antivaxxer?		
Have you vaccinated/will vaccinate for the upcoming flu season?	Yes	Yes	No	Total
	No	18	71	89
	Total	0	31	31
		18	102	120

Hypothesis II

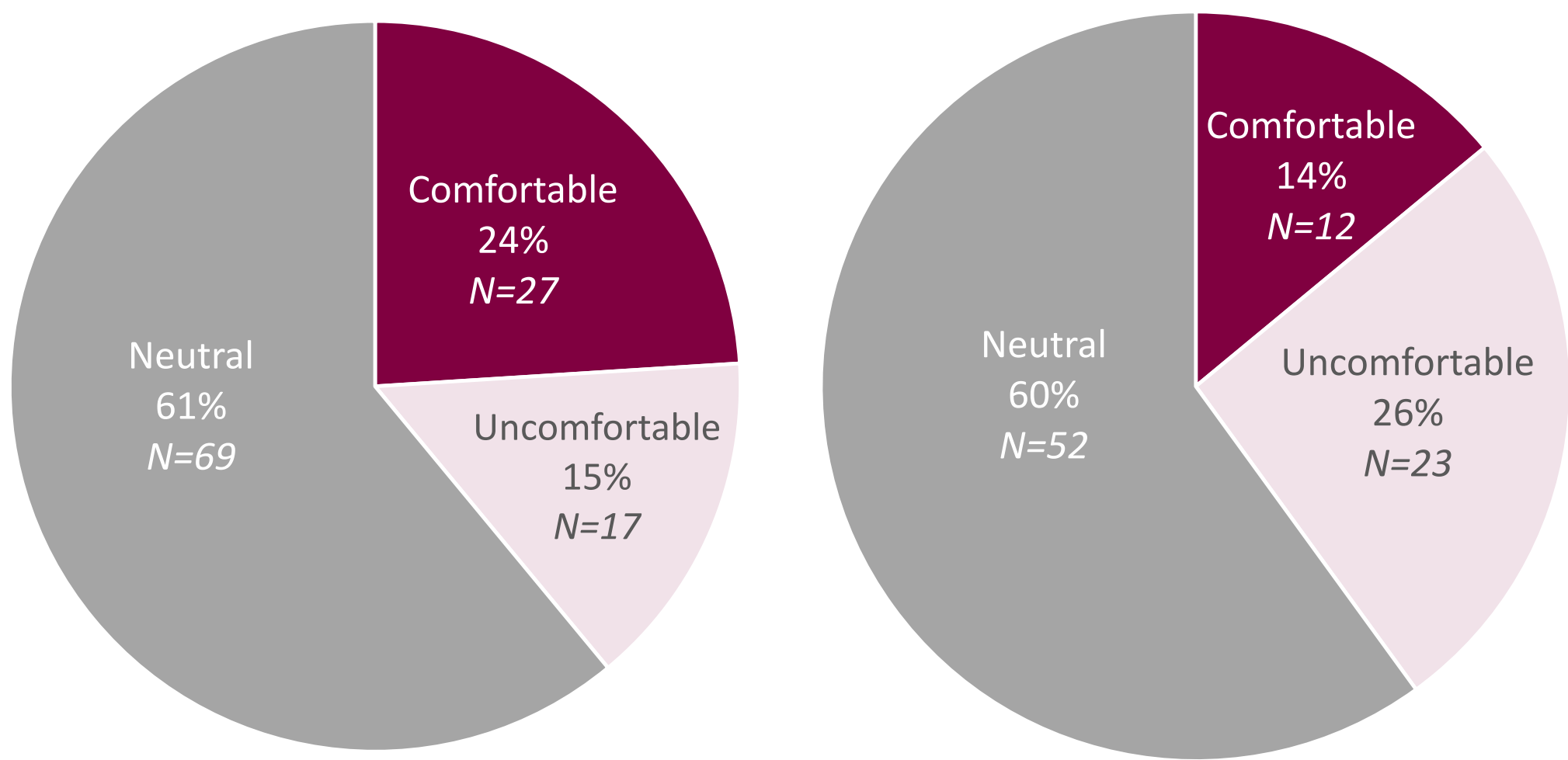


Figure 1 (Top Left). Cognitive Dissonance Levels for Those Who are Flu Non-Vaccinators and Not Anti-vaxxers

Figure 2 (Top Right). Cognitive Dissonance Levels for Those Who are Flu Vaccinators and Have Anti-vaxxer Tendencies

- Within the uncomfortable group, 52% ($N=12$) felt moderately uncomfortable about their misalignment.

Hypothesis II Cont.

- Independent Samples T-test indicates that there is a significant difference in cognitive dissonance between those who currently vaccinate/do not vaccinate for the flu when a “did not vaccinate/not an anti-vaxxer” misalignment was presented, $t(111) = 3.251, p = 0.002$.
 - Flu vaccinators felt slightly comfortable while non-vaccinators felt moderately comfortable.
- Independent Samples T-test indicates that there is a significant difference in cognitive dissonance between those who currently vaccinate/do not vaccinate for the flu when a “did vaccinate/has anti-vaxxer tendencies” misalignment was presented $t(85) = 2.606, p = 0.011$.
 - Flu vaccinators felt neutral/slightly uncomfortable while non-vaccinators felt slightly comfortable.

Discussion

- Individuals chose whether or not to vaccinate based on what they perceived would give them the flu (i.e. the actual virus vs the vaccine).
 - In a study done by Lawrence (2015), students believe the best way to prevent the flu was through sanitary measures (91%). Students chose to do what they believed would lower their risk.
- Results indicate that individuals perceive anti-vaxxers to be associated with not vaccinating for major illnesses.
 - We have seen this perception held in our society, especially when looking at the recent measles outbreak.
- In general, many people do not experience cognitive dissonance/discomfort between the action of vaccinating for the flu and beliefs regarding anti-vaxxer tendencies.
 - Due to the skew between the two different misalignments, this may indicate that we perceive greater importance over being called an anti-vaxxer (or claiming that we have anti-vaxxer tendencies) rather than the action of vaccinating.

References

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