

**Lovesick: The Effects of Political Partisanship and COVID-19 Vaccine Perceptions on  
Online Romantic Partner Selection**

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by

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The undersigned, appointed by the dean of the Graduate School, have examined the thesis entitled

**Lovesick: The Effects of Political Partisanship and COVID-19 Vaccine Perceptions on  
Online Romantic Partner Selection**

presented by Caleb Seymour,

a candidate for the degree of Master of Communication,

and hereby certify that, in their opinion, it is worthy of acceptance.

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Professor Yerina Ranjit

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Professor Benjamin Warner

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Professor Sungkyoung Lee

## DEDICATION

My undergraduate career was, unfortunately, cut short as the COVID-19 pandemic changed the daily lives of every single person on this globe. My first step into graduate school was taken from my childhood bedroom via remote learning, in the safety of the home my parents welcomed me back into. I would like to thank my mom and dad, Brent and Kelly, for giving me everything I have ever needed and more than I ever could have wanted. Thank you to my brother Owen for always making me laugh, and my brother Aidan for always making me cry.

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## TABLE OF CONTENTS

|                                                                                             |     |
|---------------------------------------------------------------------------------------------|-----|
| APPROVAL.....                                                                               | i   |
| DEDICATION.....                                                                             | ii  |
| ACKNOWLEDGEMENTS.....                                                                       | iii |
| LIST OF TABLES / FIGURES.....                                                               | v   |
| ABSTRACT.....                                                                               | vii |
| Chapter                                                                                     |     |
| 1. INTRODUCTION.....                                                                        | 1   |
| Social Identity Theory: Social Comparison and Romantic Consideration                        |     |
| “Vaccine status” as In-group Out-group Bias, Romantic Consideration, and Gender Differences |     |
| Sensation Seeking as a Moderating Variable                                                  |     |
| 2. METHODS.....                                                                             | 11  |
| Participants                                                                                |     |
| Procedures                                                                                  |     |
| Measures                                                                                    |     |
| 3. RESULTS.....                                                                             | 18  |
| Discussion                                                                                  |     |
| Limitations                                                                                 |     |
| Future Research                                                                             |     |
| Conclusion                                                                                  |     |
| 4. BIBLIOGRAPHY.....                                                                        | 27  |

**Figure 1.** Dating avatars created for the experiment**Table 1.** Demographic characteristics of participants ( $N = 97$ ) ( $k =$  missing responses)

| Characteristics       |                 | Male<br>N, (%)                                | Female<br>N, (%)                              | Total<br>N, (%) |
|-----------------------|-----------------|-----------------------------------------------|-----------------------------------------------|-----------------|
| Race                  | White           | 53 (88.3)                                     | 33 (89.2)                                     | 86 (88.7)       |
|                       | Black           | 6 (10)                                        | 2 (5.4)                                       | 8 (8.2)         |
|                       | Asian           | 4 (6.6)                                       | 3 (8.1)                                       | 7 (7.2)         |
|                       | Hispanic/Latino | 1 (1.6)                                       | 2 (5.4)                                       | 3 (3.1)         |
| Political affiliation | Democrat        | 15 (25)                                       | 19 (51.4)                                     | 34 (35.1)       |
|                       | Republican      | 45 (75)                                       | 18 (48.6)                                     | 63 (64.9)       |
| Vaccination Status    | Vaccinated      | 42 (70)                                       | 31 (83.8)                                     | 73 (72.3)       |
|                       | Unvaccinated    | 18 (30)                                       | 6 (16.2)                                      | 24 (24.7)       |
| Sensation Seeking     | High SS         | 39 (65)                                       | 16 (43.2)                                     | 55 (56.7)       |
|                       | Low SS          | 21 (35)                                       | 21 (56.8)                                     | 42 (43.3)       |
| Age                   |                 | $M = 20.10$<br>( $SD = 1.24$ )<br>( $k = 2$ ) | $M = 20.75$<br>( $SD = 1.05$ )<br>( $k = 1$ ) |                 |
| Total                 |                 | 60 (61.9)                                     | 37 (38.1)                                     | 97 (100)        |

**Table 2.** Dating intentions of participants by political and vaccine similarity ( $N = 97$ )

| Variables |                      |                                | Male        |            |       | Female      |            |       |
|-----------|----------------------|--------------------------------|-------------|------------|-------|-------------|------------|-------|
|           |                      |                                | Mean (SD)   | t (df)     | Sig.  | Mean (SD)   | t (df)     | Sig.  |
| H1        | Political Similarity | Matched political affiliation  | 6.56 (1.39) | 4.670 (56) | <.001 | 5.80 (1.55) | 3.01 (36)  | 0.005 |
|           |                      | Opposite political affiliation | 5.67 (1.29) |            |       | 5.19 (1.20) |            |       |
| H2        | Vaccine Similarity   | Matched vaccine status         | 6.17 (1.28) | .935 (56)  | .0354 | 5.76 (1.39) | 2.880 (36) | 0.007 |
|           |                      | Opposite vaccine status        | 6.06 (1.14) |            |       | 5.23 (1.33) |            |       |

**Table 3.** Participant political affiliation and vaccination distribution by gender

|                |              | Male (N, %) |           |          | Female (N, %) |           |           |
|----------------|--------------|-------------|-----------|----------|---------------|-----------|-----------|
|                |              | Rep         | Dem       | Total    | Rep           | Dem       | Total     |
| Vaccine Status | Unvaccinated | 17 (28.3)   | 1 (1.7)   | 18 (30)  | 4 (10.8)      | 2 (5.4)   | 6 (16.2)  |
|                | Vaccinated   | 28 (46.7)   | 14 (23.3) | 42 (70)  | 14 (37.8)     | 17 (45.9) | 31 (83.8) |
| Total          |              | 45 (75)     | 15 (25)   | 60 (100) | 18 (48.6)     | 19 (51.4) | 37 (100)  |

**Lovesick: The Effects of Political Partisanship and Covid-19 Vaccine Perceptions on  
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**Abstract**

Many studies have reported the positive relationship of perceived political similarity with dating intention in the world of online dating. However, there are currently no studies which consider this relationship alongside coronavirus disease (COVID-19) vaccine status and their combined influence on romantic consideration. In this study, we conduct a posttest-only design with a 2 (vaccinated) x 2 (political affiliation) x 2 (gender) online experiment, including variables such as vaccine perceptions, party identification, sensation seeking, and dating intention. Participants (N=97) were shown four avatar profiles of the opposite sex; each profile was displayed as vaccinated or unvaccinated and Democrat or Republican. Once exposed to these dating profile, subjects answered a survey to determine how individual dating intention differed in relation to the subject's own political affiliation and "vaccination status." The results indicate that males and females have higher dating intention with partners that have political similarity. However, females have higher dating intention with partners who share vaccine similarity while males have no relationship between vaccine similarity on dating intention. The implications of these findings may suggest that the formation of romantic relationships is currently influenced by personal health decisions compared to the decisions of potential online partners; this being a symptom of a much larger degree of affective polarization in the United States which continues to grow.



## Introduction

On January 30, 2020, the World Health Organization (WHO) declared SARS-CoV-2 (COVID-19) a global health emergency. After more than two years, the virus continues to spread rampant across the world, currently totaling 81.5 million cases and 995,000 deaths within the United States (U.S.) as well as 515 million cases and 6.24 million deaths around the globe (The New York Times, 2022). Scientific evidence suggests that the most effective way to prevent severe symptoms of COVID-19 and reduce the risk of death by COVID-19 is to get vaccinated (CDC, 2022b). Two years after WHO's declaration, the effects of the pandemic on socialization are apparent such as normalization of COVID-testing before social gatherings, the presence of social distancing and masking, required proof of "vaccination status" for indoor activities. During this spread, online dating has become a safer alternative to meeting new romantic partners; it is only natural the people do not wish to be exposed to COVID-19, but the pandemic has happened at one of the most politically contentious times in the U.S.

In the U.S., the primary populations of the political spectrum consist of the Republican and Democrat parties. Partisanship strongly correlates with opinions of public policy (Green, Palmquist, & Schickler, 2002) and most Americans subscribe to one of these two camps which hold differing views on nearly every issue of policy: abortion, immigration, wage gaps, environmentalism, war, foreign policy, gun rights, religion, LGBTQ+ rights, racism, education, and more (Pew Research Center, 2017). Elected Republican officials focus on and elevate issues of national defense, crime, and foreign policy; elected Democrat officials do the same for education, health care, and Social Security (Benoit & Hansen, 2004). Republicans hold conservative values, favoring tradition and reliance on principle, whereas Democrats maintain

liberal values and favor progressive ideals and the ability to change (Benoit & Hansen, 2004; Hibbing, 2013). While polarization has always existed between Republicans and Democrats, “ordinary Americans increasingly dislike and distrust those from the other party” (Iyengar et al., 2018, p. 129) with affective polarization continuing to grow at a drastic pace, spiking during Barack Obama’s presidency and Donald Trump’s first year as president (Pew Research Center, 2017), and reaching record levels during the COVID-19 pandemic (Lopez, 2021).

Since the beginning of the pandemic, the Trump Administration attempted to downplay the severity and consequences of the virus (Lopez, 2021), splintering efforts to effectively fight the disease by further polarizing Democrats and Republicans (Lopez, 2021). The misinformation spread by former President Trump is undeniable (Evanega et al., 2020), in his own words: “I wanted to always play it down . . . I still like playing it down, because I don’t want to create a panic” (Trump, 2020b) and “it’s also more deadly than . . . even your most strenuous flus” (Trump, 2020a). The information shared in his interviews with Bob Woodward in February and March of 2020, directly contradict the information he gave to the public in the very same timeframe, to whom he instead claimed: “[cases are] going very substantially down, not up’ as health officials tracked the numbers actually going up” (Superville & Woodward, 2020, para. 6) and “The Democrats are politicizing the coronavirus . . . [this is] their new hoax . . . It’s going to disappear. One day — like a miracle — it will disappear” (Yen, Woodward, & Krisher, 2020, para. 12). Over the course of the COVID-19 pandemic, affective polarization in the United States has reached never-before-seen heights (Pew Research Center, 2020), as Republicans and Democrats continue to disagree on the proper course of action to take against COVID-19, even two years after it first surfaced.

The effects of this misinformation campaign echo in the present political divide over COVID-19 vaccines, resulting in avoidance of vaccination because of fear, distrust, and division that now exist disproportionately in the hearts of right-leaning American citizens (Wood & Brumfiel, 2021). As a result, the COVID-19 vaccine is not perceived as an acceptable or necessary measure by many Republican politicians and citizen members of the Republican party (Alcindor et al., 2021). All the while, preventative measures taken against COVID-19, such as wearing a mask in public or getting vaccinated, are now generally associated as left-leaning political statements (Van Kessel & Quinn, 2020) and so it is difficult to ignore the political nature of what vaccines mean in the U.S. today. A large majority of the vaccinated population within the U.S. are of the Democrat alignment, whereas a large majority of the unvaccinated population within the United States are of Republican alignment (Beer, 2021; Summers, 2020). This statistic is reflected in the current death toll, as counties which had 60% of its population supporting Trump during the 2020 elections had 2.73 times the COVID-19 mortality rates as Biden voting counties; this mortality rate was only rivaled by counties which had greater than 60% Trump support (Wood & Brumfiel, 2021). In July of 2020, “94 percent of Democrats said they ‘always’ or ‘very often’ wore a mask outside their home, while just 46 percent of Republicans said the same” (Lopez, 2021). Due to politicization of COVID-19 and vaccines, the U.S. is unable to reach the estimated 85% vaccinated rate necessary for the nation to achieve herd immunity (Macmillan, 2021).

While every age group has reported afflicted by COVID-19, from infancy to those who are 80+ (CDC, 2022a), younger age groups are more prone to affliction than others (Oster, 2020). Specifically, populations aged 18-24 are most likely to be afflicted by and subsequently

spread the COVID-19 virus; afflicted young adults even act as precursory cases which predict future COVID-19 positivity rates among older members of their community (Oster, 2020). This is due to young people being more prone to socialize in large groups such as bars and restaurants (Stone, 2020). As a result, the number of young adult dating profiles created in the past two years has only increased as people find safer alternatives to meeting new romantic partners (Iqbal, 2022).

Tinder (an online, geosocial dating application) shows users the dating profiles of other users so that they may select potential romantic candidates. As those 18-24 are most likely to contract and spread COVID-19 (Stone, 2020), nearly 15% of adults in the U.S. between ages 18-29 actively use Tinder (Statista, 2018): approximately 1.18 million users this age group (Iqbal, 2022). As people aged 18-24 are most likely to contract and spread the virus, they are also the population most active on Tinder (Iqbal, 2022). The notable overlap of these two populations—Tinder users and COVID-19 circulators—has not escaped the attention of the parent company, Match Group. In turn, Match Group has added COVID-19 “vaccination status” as a label to many of their dating services, including Tinder, Match.com, Meetic, OkCupid, Hinge, PlentyOfFish, Ship, OurTime, and many others in the forty-five global dating companies that they own (Mangalindan, 2018). As a result, the world of online dating has changed after the pandemic. On May 21, 2020, Tinder began campaign with the aid of “The White House” (Tinder Newsroom, 2021b, para. 1) to help users find their nearest COVID-19 vaccination sites; users who would get vaccinated against the virus were eligible to receive in-app rewards that could promote a limited increase in matchmaking capabilities and such a choice of vaccine stickers that could proclaim: “Vaccinated” or “Vaccines Save Lives.” There are no statistics online as to how many people were vaccinated as a result of this campaign, but from June 9 through July 4 of

2021, Tinder saw the mentions of the word ‘vaccine’ increase by “800% since the start of the pandemic” (Tinder Newsroom, 2021a). Since then, Tinder has permanently incorporated the ability for users to proclaim “vaccination status” in their biographical sections (written portions where users divulge personal traits, often referred to as the ‘bio’ section), where they may receive a ‘Vaccinated’ sticker if they are, or claim, to have received the COVID-19 vaccine. While the creation of a dating profile means an individual divulges some personal information to attract partners (e.g., physical appearance, interests, what town you live in, political affiliation, religious affiliation, etc.), the willingness to display personal health information to complete strangers online is a near unprecedented practice. Now, a person’s “vaccination status” against COVID-19 has become prominent label in the online profile or the ‘bio’ section consideration for online dating applications.

With growing levels of political polarization and varying levels of precautionary measures taken against COVID-19, online dating has become a platform where individuals divulge intimately personal details about their health and political leanings with complete strangers, many of whom they will never meet or even “match” with. Potential romantic partners of the same political alignment are given greater consideration in the world of online dating (Huber & Malhotra, 2017), but “vaccination status” is now a common attribute for online dating profiles with little research as to its influence as a variable, especially alongside political affiliation. By analyzing the intersection of political affiliation and perceptions of vaccines on interpersonal attraction, this study will explore how dating intentions are influenced by a potential date’s vaccination status and political affiliation. We will employ the theory of Social

Identity Theory to understand these processes in influencing the decision in choosing romantic partners.

### **Social Identity Theory: Social Comparison and Romantic Consideration**

Social Identity Theory (SIT) asserts that individuals cognitively place themselves into in-groups where they feel belonging, shifting others who are not a part of that group into out-groups (Trepte & Loy, 2017). These group memberships (based on things such as political partisanship, ethnic identity, gender, and more) are an integral source of self-worth and occur naturally in persons (Tajfel & Turner, 1979). This self-categorization, though an abstract concept, offers individuals a place in the world around them through which they may contextualize their own identities (Tajfel & Turner, 1979).

A primary principle of SIT is the phenomena known as social comparison: “the search for and utilization of information about other persons’ standings and opinions for the purpose of self-assessment” (Suls & Wheeler, 2012, p. 460). In-groups and out-groups feature prominently in the world of online dating; it is well founded that similarly aligned political beliefs are an important attribute to consider when selecting potential romantic partners (Maldeniya et al., 2017; Hernandez & Sarge, 2020). While individuals are more likely to date within their own political party, individuals are also more likely to instigate romantic relationships online when there are political similarities shared between themselves and the prospective partner (Huber & Malhotra, 2017). For example, in the past four years, 71% of Democrats reported that they “definitely would not consider being in a committed relationship with someone who voted for Donald Trump” (Brown, 2020, para. 2), providing evidence for preference to avoid dating a member of the out-group. In 2017, OkCupid— a sister company to Tinder—found that 74% of its subscribers would consider the act of voting for Donald Trump to be a dealbreaker, whereas

an additional 15% still said “No” to the prospect of dating a Trump voter (OkCupid, 2017). In direct response to this growing divide, conservative focused dating-apps have begun to surface, such as: Righter, Conservatives only, and Donald Daters (Valle, 2018). The purpose of these dating apps to provide “right-wingers a safe space to find love” as an answer to the online dating preferences “[amounting] to anti-conservative discrimination” (Valle, 2018). As 89% of the online dating population for OkCupid found issue with dating someone who voted for Donald Trump (2017) and right-leaning dating apps continue to surface, affective polarization and out-group bias seem a strong influence in selecting romantic partners. It is clear that the current levels of affective polarization in the U.S. are affecting the willingness of left-leaning and right-leaning individuals to associate with one another, let alone date one another. As this study understands the importance of political affiliation in the world of online dating, we posit the following hypothesis:

**H1:** People are more likely to have higher intentions to date avatars with a similar political affiliation compared to avatars with a dissimilar political affiliation.

### **“Vaccine Status” As In-Group Out-Group Bias, Romantic Consideration, and Gender Differences**

SIT explains that individuals view their in-group favorably and out-groups negatively to maintain positive social identity (Tajfel & Turner, 1979). Social identity is dependent on favorable group comparisons by the in-group compared to the out-groups; when social identity is unsatisfactory, individuals will choose to either leave their group or make their group satisfactory (Tajfel & Turner, 1979). Oftentimes, the betterment of one’s own group can be found in the form of discrimination against an out-group (Tajfel & Turner, 1979): while Republicans are noted to be growing “increasingly hostile to the notion of mandatory vaccines” (Wise, 2021, para. 3),

heavily Democratic states are enforcing proof of vaccination in various indoor venues, such as restaurants or bars (Hernandez, 2021; Treisman, 2021). The prevention of unvaccinated individuals from specific venues is a form of COVID-19 prevention, but it could be argued that such discernment qualifies as a form of out-group discrimination.

Currently, 86% of U.S. Democrats and Democrat leaning adults are fully-vaccinated against COVID-19, whereas only 60% of Republicans and Republican leaning adults make the same claim (Funk & Gramlich, 2021). Although right-leaning persons have lower vaccination rates, many of them are still vaccinated against COVID-19, albeit to a much smaller proportion when compared to their left-leaning counterpart (Galston, 2021); unvaccinated adults are, in fact, “three times as likely to lean Republican than Democrat” (Palosky, 2021, para. 2). While COVID-19 vaccinations have an undeniable relationship to political affiliation, there are unvaccinated Democrats just as there are unvaccinated Republicans. The presence of “vaccination status” in the bio sections of online dating profiles suggests that people would have preferences on the “vaccination status” outside of one’s preferences for political affiliation regarding potential romantic partners. It is for this reason that this study posits the in-group and out-group bias functions not only for political affiliation, for COVID-19 “vaccination status” as well.

**H2:** People are more likely to date avatars with similar vaccination status to their own compared to avatars with a dissimilar vaccination status.

As one’s “vaccination status” is a personal health attribute, it is important to note that males and females have different prioritization in online dating. Females are more likely to seek positive attributes from male partners such as kindness, intelligence, socio-economic attributes, physical attractiveness, religious affiliation, similar parenting styles, and so on (Dai & Robbins,



2021). Conversely, males were only influenced by “perceived attractiveness [as] the sole predictor of both long-term and short-term dating intentions” (Dai & Robbins, 2021, p. 5-6). The largest predictor of female partner selection is “[based] on male breadwinning abilities and [preference is given] to socio-economic characteristics . . . over physical attractiveness” (Abramova et al., 2016, p. 3865). As males and females differently prioritize romantic partner traits, it seems possible that this could be applied to “vaccination status” as well. There are no studies that could be found which explore this potential phenomenon; this study hopes to fill the gap. If males solely prioritize physical appearance and females prioritize positive attributes, then this study posits that political affiliation and “vaccination similarity” may have differing levels of importance between men and women.

**RQ1:** How does gender moderate the effect of perceived “vaccine similarity” on dating intention?

Whether or not one is vaccinated can bridge the political divide; there can be vaccinated Republicans and Democrats just as there can be unvaccinated Republicans and Democrats. While extraordinarily little could be found in the way of “vaccine similarity” predicting relational satisfaction and willingness to date, this study seeks to further understand which is a stronger motivator when considering the romantic relationships which one intends to pursue.

### **Sensation Seeking as a Moderating Variable**

There exists a “relationship between sensation seeking and evaluations of risk and attractiveness of potential romantic partners” (Henderson et al., 2005, p. 311). Sensation seeking is a trait which encapsulates an “the need for varied, novel, and complex sensations and experiences and the willingness to take physical and social risks for the sake of such experience”

(Zuckerman, 1979, p. 26). This places people into two categories: high sensation-seekers and low sensation-seekers. High sensation-seekers may find greater appeal in a partner who would be involved in risky activities like participating in extreme sports, engaging in narcotic drug use, gambling, or engaging in casual sex without protection (Zuckerman, 1994). Low-sensation seekers would find these kinds of activities and practices to be less appealing, would be less likely to engage in these activities, and would be and even less likely to find it attractive in potential romantic partners (Zuckerman, 1994). As sensation seeking plays a role in romantic partner selection, so too may it impact perceived threat of COVID-19. Risk assessment varies between high sensation-seekers and low sensation-seekers, such that:

Compared to low sensation seekers, high sensation seekers rated potential partners as more attractive, less risky, and were more likely to want to date the individual described [in the study]. However, they rated their likelihood of acquiring an STD infection after unprotected sex with the potential partner as lower than did the low sensation seekers. (Henderson et al., 2005, p. 311)

Since high sensation-seekers view the acquisition of sexually transmitted diseases to be less of a threat in romantic encounters than do low sensation-seekers, it seems probable that COVID-19 (a highly transmissible, airborne disease) may be viewed in an analogous manner. This study posits that sensation seeking could function as a moderating variable in the dating intention of someone with differing “vaccination status.”

**H3:** Sensation seeking will moderate the relationship between “vaccine status” and dating intention, such that low sensation-seekers will have higher dating intention toward avatars with similar “vaccination status” and high sensation-seekers will be unaffected by perceived similarities in “vaccination status.”

## **Methods**

This study is a 2 x 2 x 2 factorial posttest-only design experiment (Campbell et al., 1963) that was conducted online. The factors were “vaccination status” x political affiliation x gender. In the experiment, four male and four female avatars were shown to participants of the opposite sex; we manipulated the “vaccine status” and party affiliation of each avatar and observed participant dating intention in accordance with their own “vaccine status” and party affiliation. The survey was designed using Qualtrics and distributed electronically to various instructors and two Greek Life organizations at the University of Missouri. The study was approved by the Institutional Review Board (IRB) at the University of Missouri (#2079603).

### **Participants**

Participants were recruited from a large, midwestern university. Eligibility criteria included being a heterosexual, being between the ages of 18-22 years of age, and being enrolled as a student in the University of Missouri.

### **Procedures**

Participants were notified that this study was interested in understanding the effects of COVID-19 in the communicative habits of online dating. The participants were not informed to the true nature of this study in avoidance of the Hawthorne effect, in consideration that they may alter their behavior or responses because of their awareness of what was being measured. The participants were told that this study employed incomplete disclosure. The experiment began with general demographic questions to identify age, gender, race, ethnicity, year in college, sexual orientation, political affiliation, and status of COVID-19 vaccination. Questions regarding participant political orientation were two-fold: the first question being “Please state your political

affiliation as is best described on this scale,” followed by a 7- point Likert scale of 1 = Strongly Democrat to 7 = Strongly Republican. If 4 (No Preference) was chosen, a follow-up question was asked: “I know you don’t have a preference between the political parties, but based on everything you know, who would you be more likely to vote for?” with two possible answers being “A true Democrat,” or “A true Republican.” These questions and their exact phrasings were taken from Warner and Villamil (2017, p. 456) in an experiment on imagined cross-partisan contact. After determining political affiliations, participants were asked about their personal “vaccination status,” which was measured using CDC guidelines (CDC, 2022c) for determining whether the subjects were “unvaccinated”, “partially-vaccinated”, “fully-vaccinated”, or “up-to-date” with their COVID-19 vaccines. Unvaccinated individuals and partially-vaccinated individuals (those who have not completed a full vaccine series) are considered unprotected persons against COVID-19 (CDC, 2022c) and were therefore labelled as unvaccinated respondents. Fully-vaccinated individuals have completed their primary COVID- 19 vaccine series but did so more than six months ago. Up-to-date individuals have completed their primary vaccine series or received a booster within the last six months. While fully- vaccinated individuals are less protected against COVID-19 than up-to-date individuals, they are still considered to be vaccinated persons (CDC, 2022c) and for the purposes of this study. Therefore, fully-vaccinated and up-to-date persons were considered “vaccinated.” After demographics questions, participants responded to scale regarding their sensation seeking habits.

Filters were set in Qualtrics so that male participants would see only female avatars and female participants would see only male avatars. The use of avatars in lieu of real persons for experiments in online dating is well practiced (Vasalou & Joinson, 2009; Nowak et al., 2015;

Liao et al., 2019) and so the process stands credibility within the bounds of this experiment. Finally, participants were shown the avatars in question (Figure 1).

To make the avatars, the researchers used BitMoji, a custom emoji software, to emulate real Tinder profiles that could be found online. Each avatar in the experiment was uniform in design: the physical appearances of each avatar remained constant for the gender they represented. All avatars had identical facial structures, skin tones, eye colors, heights, and body types. The only variations between avatars were their visibly displayed names, the scenery behind them, hairstyles, and clothing. The visual alterations were deemed necessary to preserve the external validity of the study, as one would encounter a variety of different persons, settings, hairstyles, and outfits when viewing real-world Tinder profiles. Each avatar was unique in its presented stimuli, appearing as a vaccinated Democrat, an unvaccinated Democrat, a vaccinated Republican, or an unvaccinated Republican (Figure 1). The names of each avatar were chosen randomly from U.S. census data regarding what were the most common names for males and females. When an avatar was displayed, their image occupied the top half of the screen while the questions occupied the bottom half. This was done to ensure participants would be constantly exposed to the stimuli as they answered questions. After participants had seen all four avatars of the respective gender that they were assigned, and answered questions in response to each, the study was concluded.

## **Measures**

### *Dating Intention*

Dating intention was measured using four items such as: “[Avatar name] and I could establish a romantic relationship with each other,” “[Avatar name] is someone I would like to

spend time with,” “[Avatar name] and I could be in a romantic relationship,” and “I would like to “match” with [Avatar name] on Tinder,” on a 5-point Likert scale of 1 = Strongly Disagree to 5 = Strongly Agree. These items were adapted from Dai and Robbins (2021) who used these items to determine a participants’ intentions when faced with mock Tinder profiles of similar design. Each item would have a different name based on which profile was being displayed (e.g., Connor’s profile is displayed, the question specifies it is asking about Connor). The Cronbach’s  $\alpha$  for Connor ( $\alpha = .88$ ), Wyatt ( $\alpha = .93$ ), Cody ( $\alpha = .90$ ), Tanner ( $\alpha = .95$ ), Amy ( $\alpha = .82$ ), Claire ( $\alpha = .87$ ), Emily ( $\alpha = .86$ ), and Katie ( $\alpha = .91$ ) (Guidry et al., 2021).

### *Sensation-Seeking*

Sensation-seeking was measured using four items such as: “I would like to explore strange places”, “I like to do frightening things”, “I like new and exciting experiences, even if I have to break the rules”, and “I prefer friends who are exciting and unpredictable” on a 5-point Likert scale of 1 = Strongly Disagree to 5 = Strongly agree. The Brief Sensation Seeking Scale (BSSS) is a 40-item measure as created by Zuckerman, Eysenck & Eysenck (1978). This study, however, will use a 4-item measure as adapted by Hoyle et al. (2003), and then employed by Henderson et al. (2005), as it was effective in reducing participant fatigue. For this measure, the Cronbach’s  $\alpha = 0.79$  (Guidry et al., 2021).

### *Manipulation check*

#### *Male*

We use four questions as the manipulation check.: “I believe [Avatar] is a Republican,” “I believe [Avatar] is vaccinated,” “I believe [Avatar] is a Democrat,” and “I believe [Avatar] is unvaccinated,” on a 5-point Likert scale of 1 = Strongly Disagree to 5 = Strongly agree. Each

item would have a different name based on which profile was being displayed (e.g., Connor's profile is displayed, the question specifies it is asking about Connor).

For the political affiliation of Connor (Democrat, vaccinated avatar), the perception that Connor was a Republican was lower ( $M = 1.89$ ,  $SD = .936$ ) than the perception that he was a Democrat ( $M = 3.92$ ,  $SD = .983$ ) and was statistically significant (Wilks'  $\Lambda = .422$ ,  $p < .001$ ). The vaccine manipulation checks, "I believe Connor is vaccinated" ( $M = 4.22$ ,  $SD = .821$ ) and "I believe Connor is unvaccinated" ( $M = 1.86$ ,  $SD = .713$ ) were also statistically significant (Wilks'  $\Lambda = .267$ ,  $p < .001$ ).

For the political affiliation of Wyatt (Republican, vaccinated avatar), the perception that Wyatt was a Republican was higher ( $M = 4.19$ ,  $SD = .739$ ) than the perception that he was a Democrat ( $M = 1.73$ ,  $SD = .652$ ) and was statistically significant (Wilks'  $\Lambda = .204$ ,  $p < .001$ ). The vaccine manipulation checks, "I believe Wyatt is vaccinated" ( $M = 3.95$ ,  $SD = .848$ ) and "I believe Wyatt is unvaccinated" ( $M = 1.89$ ,  $SD = .614$ ) were also statistically significant (Wilks'  $\Lambda = .297$ ,  $p < .001$ ).

For the political affiliation of Cody (Democrat, unvaccinated avatar), the perception that Cody was a Republican was lower ( $M = 1.86$ ,  $SD = .673$ ) than the perception that he was a Democrat ( $M = 4.03$ ,  $SD = .726$ ) and was statistically significant (Wilks'  $\Lambda = .279$ ,  $p < .001$ ). The vaccine manipulation checks, "I believe Cody is vaccinated" ( $M = 1.84$ ,  $SD = .764$ ) and "I believe Cody is unvaccinated" ( $M = 4.24$ ,  $SD = .597$ ) were also statistically significant (Wilks'  $\Lambda = .216$ ,  $p < .001$ ).

For the political affiliation of Tanner (Republican, unvaccinated avatar), the perception that Tanner was a Republican was higher ( $M = 4.03$ ,  $SD = .866$ ) than the perception that he was

a Democrat ( $M = 1.81$ ,  $SD = .739$ ) and was statistically significant (Wilks'  $\Lambda = .306$ ,  $p < .001$ ). The vaccine manipulation checks, "I believe Tanner is vaccinated" ( $M = 1.95$ ,  $SD = .941$ ) and "I believe Tanner is unvaccinated" ( $M = 4.05$ ,  $SD = .880$ ) were also statistically significant (Wilks'  $\Lambda = .353$ ,  $p < .001$ ).

### *Female*

For the political affiliation of Amy (Democrat, vaccinated avatar), the perception that Amy was a Republican was lower ( $M = 1.80$ ,  $SD = .935$ ) than the perception that she was a Democrat ( $M = 4.33$ ,  $SD = .774$ ) and was statistically significant (Wilks'  $\Lambda = .273$ ,  $p < .001$ ). The vaccine manipulation checks, "I believe Amy is vaccinated" ( $M = 4.33$ ,  $SD = .705$ ) and "I believe Amy is unvaccinated" ( $M = 1.93$ ,  $SD = 1.163$ ) were also statistically significant (Wilks'  $\Lambda = .322$ ,  $p < .001$ ).

For the political affiliation of Claire (Republican, vaccinated avatar), the perception that Claire was a Republican ( $M = 4.25$ ,  $SD = .773$ ) was lower than the perception that she was a Democrat ( $M = 1.85$ ,  $SD = .936$ ) and was statistically significant (Wilks'  $\Lambda = .259$ ,  $p < .001$ ). The vaccine manipulation checks, "I believe Claire is vaccinated" ( $M = 4.17$ ,  $SD = .763$ ) and "I believe Claire is unvaccinated" ( $M = 1.85$ ,  $SD = .936$ ) were also statistically significant (Wilks'  $\Lambda = .325$ ,  $p < .001$ ).

For the political affiliation of Emily (Democrat, unvaccinated avatar), the perception that Emily was a Republican was lower ( $M = 1.93$ ,  $SD = .918$ ) than the perception that she was a Democrat ( $M = 4.23$ ,  $SD = .767$ ) was statistically significant (Wilks'  $\Lambda = .307$ ,  $p < .001$ ). The vaccine manipulation checks, "I believe Emily is vaccinated" ( $M = 1.92$ ,  $SD = 1.078$ ) and "I



believe Emily is unvaccinated” ( $M = 4.32$ ,  $SD = .792$ ) were also statistically significant (Wilks’  $\Lambda = .283$ ,  $p < .001$ ).

For the political affiliation of Katie (Republican, unvaccinated avatar), the perception that Katie was Republican was higher ( $M = 4.41$ ,  $SD = .619$ ) than the perception that she was a Democrat ( $M = 1.90$ ,  $SD = .977$ ) and was statistically significant (Wilks’  $\Lambda = .223$ ,  $p < .001$ ). The vaccine manipulation checks, “I believe Katie is vaccinated” ( $M = 2.17$ ,  $SD = .302$ ) and “I believe Katie is unvaccinated” ( $M = 4.34$ ,  $SD = .710$ ) were also statistically significant (Wilks’  $\Lambda = .342$ ,  $p < .001$ ).

## **Analysis**

In order to test the participants’ intention to date avatars with similar political affiliation and vaccination status, we created an aggregate mean for dating intention when participant-avatar matched on political affiliation and vaccine status; and dating intention when participant-avatar were unmatched on political affiliation and vaccine status. First, dummy variables were created for “Democrat (1,0)” and “Republican (0,1)”, and “vaccinated (1,0)” and “unvaccinated (0,1)”. Then, total intention to date Conner and Cody (Democrat avatars) was multiplied by the “Democrat” dummy variable and Wyatt and Tanner (Republican avatars) was multiplied by the “Republican” dummy variable. These four dating intentions were then summed to create an aggregate of score of dating intention to avatars with matching political affiliation. We repeated this process for vaccine status. Then we created aggregates for unmatched identities following the same process but mixing the political affiliation and vaccine status of the participants to the avatars. The entirety of the process was repeated for female avatars.

## Results

In total, 139 responses were collected. After the screeners removed ineligible participants ( $k = 42$ ) there were a remaining 97 valid responses (Table 1). The majority of participants were male ( $n = 60, 61.9\%$ ), identified as white ( $n = 86, 88.7\%$ ), identified as Republican ( $n = 63, 64.9\%$ ), were vaccinated ( $n = 73, 72.3\%$ ), and were considered high sensation-seeking ( $n = 55, 56.7\%$ ). The mean age of male ( $M = 20.10, SD = 1.24$ ) and female ( $M = 20.75, SD = 1.05$ ) participants is an estimation affected by missing inputs of male ( $k = 2$ ) and female ( $k = 1$ ) participants who were otherwise eligible for participation in this study.

The results of the experiment showed that participants were more likely to date avatars who had the same political affiliation as their own. Among male participants, dating intention toward female avatars of the same political affiliation was higher ( $M = 6.56, SD = 1.39$ ) compared to female avatars of the opposite political affiliation ( $M = 5.67, SD = 1.29$ ); this difference in the mean was statistically significant ( $t = 4.67, df = 56, p < .001$ ). The same is true for female participants, as dating intentions were higher toward male avatars of the same political affiliation ( $M = 5.80, SD = 1.55$ ) compared to male avatars of the opposite political affiliation ( $M = 5.19, SD = 1.20$ ); these results were also statistically significant ( $t = 3.00, df = 36, p = .005$ ). These findings support H1, confirming that males and females have higher dating intentions toward potential romantic partners who share the same political affiliation as themselves. This is in agreement of prior existing research.

Regarding H2, this study found that vaccine similarity did play a role in romantic partner selection, though it varied between male and female participants. Male participants' intention to date avatars who had similar in vaccine status ( $M = 6.17, SD = 1.28$ ) compared to avatars with dissimilar vaccine status ( $M = 6.06, SD = 1.14$ ) was not statistically significant ( $t = 2.88, df = 56,$

$p > .05$ ). For female participants, however, when an avatar had similar vaccine status as their own vaccine status, females had higher dating intention ( $M = 5.76$ ,  $SD = 1.39$ ) when compared to avatars with dissimilar vaccine status ( $M = 5.23$ ,  $SD = 1.33$ ); these results were statistically significant ( $t = 2.88$ ,  $df = 1.33$ ,  $p = .007$ ). As such, these findings provide partial support for H2 and effectively answers RQ1: gender moderates the effect of perceived “vaccine similarity” on dating intention such that women will have higher dating intention toward online profiles with similar “vaccine status” to themselves while males are unaffected (Table 2).

The effect size analysis of political similarity compared to vaccine similarity was measured using Cohen’s  $d$ . It was found that political similarity ( $d = 0.664$ ) was greater than the effect size of vaccine similarity ( $d = 0.091$ ), indicating that political similarity is more influential than vaccine similarity as predictors of dating intention.

To address H3, a median split was used to identify all participants as either high-sensation-seeking ( $n = 55$ , 56.7%,  $SS \geq 3.5$ ) or low sensation-seeking ( $n = 42$ , 43.3%,  $SS < 3.5$ ). We then created a multiplicative variable and employed a moderation regression test in SPSS, analyzing the effect of “vaccine similarity” on dating intention as moderated by sensation-seeking. Of the eight avatars, three yielded significance by means of the regression analysis: Connor (male, vaccinated, Democrat), Wyatt (male, vaccinated, Republican), and Katie (female, unvaccinated, Republican). However, further regression testing showed that interaction terms, “vaccine status” and sensation-seeking, were insignificant on Connor ( $B = .161$ ,  $p = .656$ ), Wyatt ( $B = .541$ ,  $p = .234$ ), and Katie ( $B = .128$ ,  $p = .737$ ) alike. Therefore, H3 is a null hypothesis; sensation-seeking does not moderate the dating intention of participants on profiles when accounting for “vaccine similarity.”

## Discussion

The results of this study showed that in this dataset, the perceived political similarity of a potential online romantic partner positively predicted dating intention, while the vaccine status of a potential online romantic partner only acted as a predictor for females and not males. This study builds upon previous research which indicates that males prioritize physical attraction and females prioritize positively perceived traits (Dai & Robbins, 2021; Abramova, 2016) by asserting that COVID-19 vaccine similarity is, indeed, to be considered a positive trait. Much in the way of prior research has determined the positive relationship of perceived political similarity in online romantic consideration, but this study believes it is the first to analyze the effect of COVID-19 vaccine similarity on dating intention.

While the findings of this study are interesting for their novelty by combining computer mediated communication, health communication, and romantic consideration, the implications of this are larger than differences of sex. As COVID “vaccination status” is strongly tied to political identity (Beer, 2021; Summers, 2020), these findings suggest the existence of a symptom—choosing to date another based-on vaccine similarity—that can be attributed to a much larger issue of political polarization within the U.S. As the left and right further entrench themselves into their respective ideologies (Pew Research Center, 2017; Lopez, 2021), here we observe a direct effect of this division in our social world: Republicans and Democrats grow increasingly unwilling to date one another while “vaccine similarity” influences the likelihood for online persons to match with one another, indicative of affective polarization that continues to grow and prevent the formation of interpolitical couples in the world of online dating. Furthermore, these findings speak to an increasing level of unwillingness for citizens to socialize with individuals outside of their party, or even their perceived vaccine in-groups.

Males are more likely to date partners of similar political affiliation with no influence by perceived “vaccine similarity” while females are more likely to date partners who are both politically similar and with “vaccine similarity.” If only female dating intention is predicted by vaccine similarity, and COVID-19 preventative practices are indeed suggestive of political leanings, these findings may suggest that females are more likely than males to observe COVID-19 vaccines as a political statement. Likewise, these findings suggest that the act of getting vaccinated has the potential to further separate the vaccinated and the unvaccinated as in-groups and out-groups not only in online dating, but in willingness to connect with one another in general. It should be noted, however, that this study does not have the findings to prove this claim. Rather, it instead opens an avenue for future research on political affiliation, vaccine perceptions, and their influence on the world of communication. This study asserts that Republicans and Democrats are increasingly less likely to associate with one another in the real world while females are less likely to romantically consider males of differing “vaccination status.”

While this study chose to employ sensation-seeking as a moderating variable due to the risks of contracting COVID-19 in online dating to be parallel to the risks of contracting STDs or STIs (Zuckerman, 1979, 1994), there was no statistical significance to support this notion.

### **Limitations**

As this study was conducted in analysis of the age demographic most likely to spread COVID-19 and use Tinder (Oster, 2020; Iqbal, 2022), the findings are limited to this population, aged 18 – 24, and is not representative of other age groups. Tinder is the most used dating app around the globe and is especially relevant in the United States (Statista, 2018; Iqbal, 2022), but

other dating apps may be subject to different effect sizes of this study's findings when considering the demographics each individual dating service appeals to.

One of the most notable areas where this study could have improved was scope of the study. Notably, there was only one male participant who was identified as an unvaccinated, Democrat. Similarly, there were only four unvaccinated, Republican females and a single unvaccinated, Democrat female (Table 4). Originally, this study also had added goal of applying homophily scales to understand how intersections of politics and "vaccine status" viewed adjacent outgroups. For example, would a vaccinated Democrat view more similarities with an unvaccinated Democrat or a vaccinated Republican? If social comparison occurs most strongly when an out-group bears great similarity or adjacency to an in- group (Treppe & Loy, 2017), then how would each permutation perceive these adjacent outgroups? Ultimately, this concept was cut for lack of participants. If this study had access to greater numbers of each population with which it was interested in analyzing, it could only serve to improve the statistical power and allow for these questions to be asked and answered. In future iterations, greater representation for all permutations of "vaccine status" and political affiliation would be sought.

There is some concern as to this study's external validity on an international level. As governing bodies vary from nation to nation, so too do the political climates, vaccine availability, beliefs of the citizens which reside within them, and values upheld by unique cultures shaped by external factors that this study does not consider. For example, in contrast with the United States, Japan has maintained low COVID-19 case counts with minimal political friction as wearing facemasks was already a common cultural practice long before the pandemic had begun (Rich, 2020). Additionally, 81% of the Japan's population is fully vaccinated, whereas U.S. still maintains 66% (Our World in Data, 2021), speaking to the inherent differences which exist in

collectivist cultures and individualistic cultures, respectively. The findings of this study, therefore, may lose external validity when comparing the results of an individualistic culture, such as the U.S., to other individualistic cultures or collectivist cultures. Thus, this data is only representative of perceptions within the U.S. and may need to draw from new sample populations when testing in other countries and cultures.

Another area where this study could have been improved would be to include consideration of how much time participants had been spent on dating apps prior to the experiment. Social media use has a negative influence on perceived susceptibility and social distancing to COVID-19 (Ranjit et al., 2021). As dating apps are a form of social media, it is possible that people who have greater experience and time invested with online dating apps may view COVID-19 to be less of a threat than those who have comparatively less time and experience with those same apps.

Next, while there is much research which employs avatars in lieu of humans in studies regarding online dating, it should be noted that the use of avatars in an experiment is still not the same as the use of images depicting real people. The avatars all share similar poses and expressions; this uniformity is atypical compared to most dating applications wherein profile pictures number more than one and typically hold different angles for the person in question.

### **Future Research**

A deliberate feature of this study was the choice to only consider the perceptions of straight participants and employ the use of only white avatars. Intersectionality, a concept used to promote feminism and antiracism (Crenshaw, 1991), refers to “the critical insight that race, class, gender, sexuality, ethnicity, nation, ability, and age operate not as unitary, mutually exclusive

entities, but as reciprocally constructing phenomena that turn in shape complex social inequalities" (Collins, 2015, p. 2). This study intentionally fails on an intersectional level but does so only to avoid tokenistic representation of marginalized identities, to emphasize the stimuli with which it is primarily interested in, and to maintain proper statistical power.

Regarding considerations of sexuality, there are a myriad of complications which come about in accounting for sexual orientations other than straight. Firstly, most gay individuals use online dating apps other than Tinder (Renninger, 2018; Wu & Ward, 2018). While there are LGBTQ+ options on Tinder, these options were only introduced in 2019 (Carman, 2019; O'Brien, 2019) and so most LGBTQ+ users are active on dating apps specific to their sexuality (Renninger, 2018; Wu & Ward, 2018). Thus, a Tinder-based simulation would not be effective for measuring LGBTQ+ perceptions.

Additionally, 63% of LGBTQ+ persons in the United States are Democrats, and only 21% are Republican (Newport, 2014) which has the potential to confound political affiliation as a measured variable. Finally, 85% of gay adults have received at least one dose of the COVID-19 vaccine, a greater percentage when compared to 76% of straight adults (Kekatos, 2022). The coalescence of these factors would make LGBTQ+ participants statistical outliers when placed alongside straight participants, thus requiring their own study for proper representation. We believe that, with minimal adjustments, it would be possible to repurpose current designs to study LGBTQ+ perceptions in an equivalent manner. In testing additional races, there would be more conditions created than this study has the scope to observe.

The added conditions of the four most predominant races in the United States—White, Black, Latino, and Asian (US Census Bureau, 2021)—is something that would be difficult to represent in this sample size and could, once again, detract from the effect size that this study is



concerned with measuring. Moreover, vaccination rates and COVID-19 infections vary greatly by race and ethnicity (Wong, 2021), as do affliction rates. Asian, Non-Hispanic persons are less likely to suffer affliction, hospitalization, and death from COVID-19 than white persons, but American Indian, Black, and Hispanic or Latino persons are far more likely to suffer affliction, hospitalization, and death from COVID-19 than white persons (CDC, 2020d). As this study is primarily concerned with the intersection of vaccine perceptions and political affiliation, the added conditions of race and sexuality would require their inclusion be foundational in the study's design.

However, the researchers are confident that this study could be replicated with the aforementioned populations in mind. Adapting the stimuli to represent different racial and ethnic groups would be a simple matter, as would changing the format so to better emulate LGBTQ+ dating apps. The researchers are hopeful that these designs could open avenues for similar studies to occur in the future.

## **Conclusion**

In the world of online dating, males and females are both more likely to date individuals who share political similarity to themselves, however: vaccine similarity is a trait that only influences female dating intention with no bearing on male dating intention. These findings affirm that “vaccine similarity” is a positive attribute sought by females in online dating but could suggest that females are more likely than males to view COVID-19 preventative measures as political statements. These findings speak to the ever-growing partisan divide by indicating that politics and personal health choices influence the likelihood that we will date, or even socialize, with one another. Sensation-seeking does not function as a moderator on the dating intention of individuals who perceive vaccine dissimilarity. The researchers believe that these

findings may contribute to the field of health communication with the potential to open doors into more research interested in investigating homophily and social comparison regarding “vaccine status” and the increasing levels of political polarization that exist in the U.S. today.

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