



Virginia Commonwealth University  
VCU Scholars Compass

---

Graduate Research Posters

Graduate School

---

2021

## Attitudes and Opinions About Direct-to-Consumer Genetic Testing in Undergraduate Science Students

Morgan N. Driver  
*Virginia Commonwealth University*

Sally I-Chun Kuo  
*Virginia Commonwealth University*

Olivia Nayeri  
*Virginia Commonwealth University*

*See next page for additional authors*

Follow this and additional works at: <https://scholarscompass.vcu.edu/gradposters>

 Part of the [Genetics Commons](#), and the [Psychology Commons](#)

---

### Downloaded from

Driver, Morgan N.; Kuo, Sally I-Chun; Nayeri, Olivia; Walker, Chloe J.; Derlan Willians, Chelsea; Smith, Tricia; Adkins, Amy E.; and Dick, Danielle M., "Attitudes and Opinions About Direct-to-Consumer Genetic Testing in Undergraduate Science Students" (2021). *Graduate Research Posters*. Poster 120.  
<https://scholarscompass.vcu.edu/gradposters/120>

This Poster is brought to you for free and open access by the Graduate School at VCU Scholars Compass. It has been accepted for inclusion in Graduate Research Posters by an authorized administrator of VCU Scholars Compass. For more information, please contact [libcompass@vcu.edu](mailto:libcompass@vcu.edu).

---

**Authors**

Morgan N. Driver, Sally I-Chun Kuo, Olivia Nayeri, Chloe J. Walker, Chelsea Derlan Willians, Tricia Smith, Amy E. Adkins, and Danielle M. Dick

# Attitudes and Opinions About Direct-to-Consumer Genetic Testing in Undergraduate Science Students

Morgan N. Driver<sup>1</sup>, Sally I-Chun Kuo<sup>2</sup>, Olivia Nayeri<sup>3</sup>, Chloe J. Walker<sup>2</sup>, Chelsea Derlan Williams<sup>2</sup>, Tricia Smith<sup>3</sup>, Amy E. Adkins<sup>2</sup>, & Danielle M. Dick<sup>1,2</sup>

<sup>1</sup> Virginia Commonwealth University School of Medicine, Department of Human and Molecular Genetics, Richmond, Virginia, 23298, USA

<sup>2</sup> Virginia Commonwealth University, Department of Psychology, Richmond, Virginia, 23284, USA

<sup>3</sup> Virginia Commonwealth University, Department of Biology, Richmond, Virginia, 23284, USA

## Background

- There has been exponential growth in the number of direct-to-consumer genetic testing kits sold in the past decade.
- Consumers utilize direct-to-consumer genetic tests for a number of reasons which include learning about one's ancestry and potential ways to manage health.
- Emerging adults tend to be early adopters of new technologies; however, there has been little research regarding the opinions about direct-to-consumer genetic testing in emerging adults.

## Methods

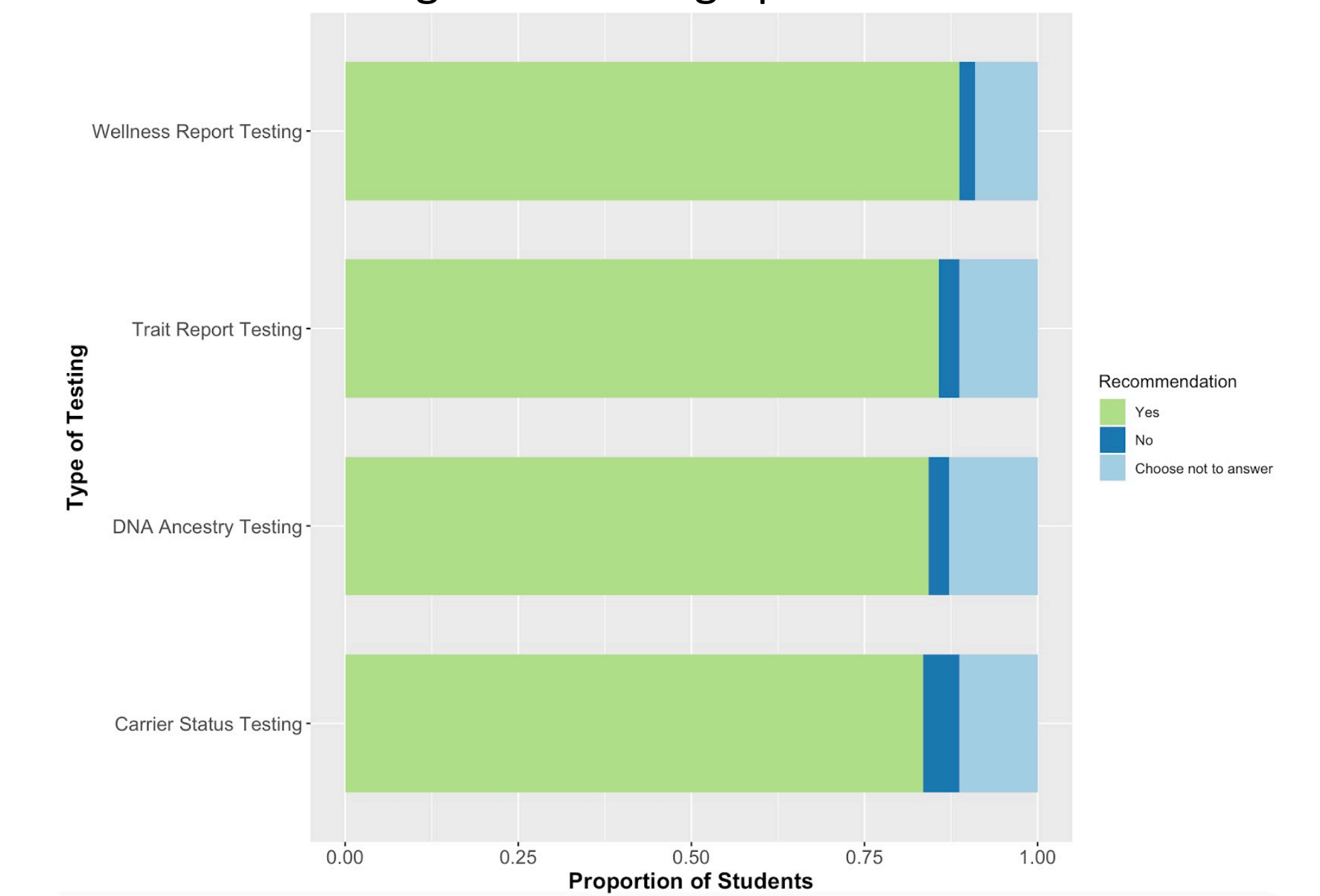
- Data came from a study conducted in an upper-level biology course focusing on understanding undergraduate science students' overall experiences with receiving personalized genetic testing results from 23andMe, Inc.
- The present study used data collected at the baseline assessment which assessed their opinions and attitudes about direct-to-consumer genetic testing (N=133).
- A majority of the participants were female (69%), seniors (97%), and 21-25 years old (84%).
- The participants self-reported ethnic/racial identity as White (29%), Asian (29%), Black/African American (20%), Multi-racial (14%), Hispanic/Latinx (8%), and Other (1%).

*Acknowledgements: This research was supported in part by 23andMe, Inc. which provided genetic testing kits for the study. We would like to thank Nathaniel Thomas and Constance Bolte for helping with data collection.*

More than 80% of undergraduate science students recommend direct-to-consumer genetic testing options, but there is considerable variability as to whether students believe that others can accurately interpret various genetic testing results.

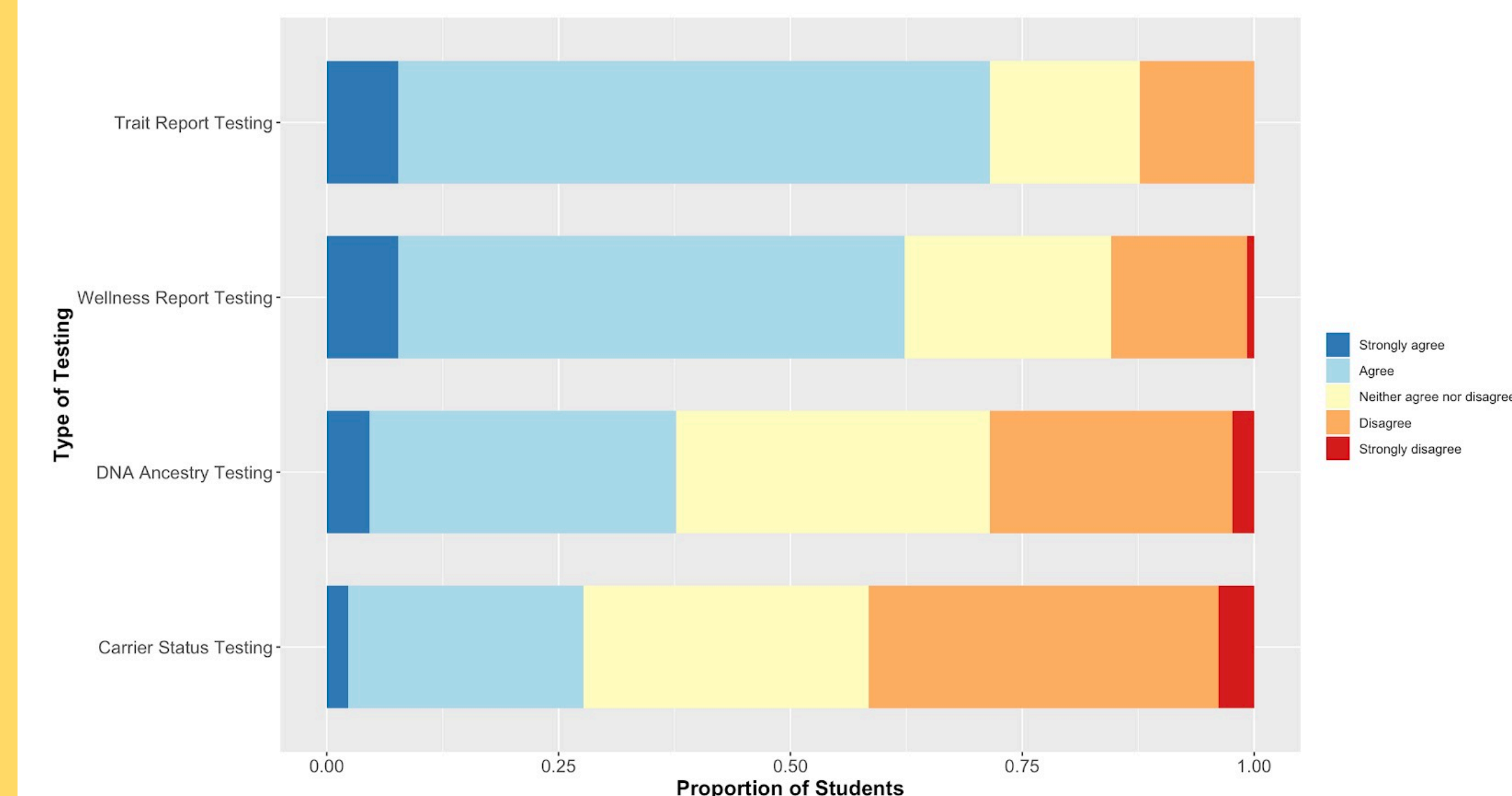
## Results:

**Figure 1.** Students' recommendations of different direct-to-consumer genetic testing options.



- Over 80% of participants would recommend direct-to-consumer genetic testing options including carrier status reports, DNA ancestry reports, wellness reports, and trait reports to others.

**Figure 2.** Students' beliefs about whether others can accurately interpret direct-to-consumer genetic testing results.



- Participants were not as confident that others would be able to accurately interpret their test results.
- More than two-thirds of the participants also stated that they would ask a healthcare provider to help interpret their personalized genetic test results.

## Conclusions

- Participants lack confidence in both their ability to interpret their own results and others to interpret their results.
- It is important for direct-to-consumer genetic testing companies to educate consumers before providing results in order to minimize potential harms due to misinterpretation of results.
- Further research is needed to assess motivations to participate in direct-to-consumer genetic testing, impact of testing, and understanding of genetic testing results in emerging adults.

