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

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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

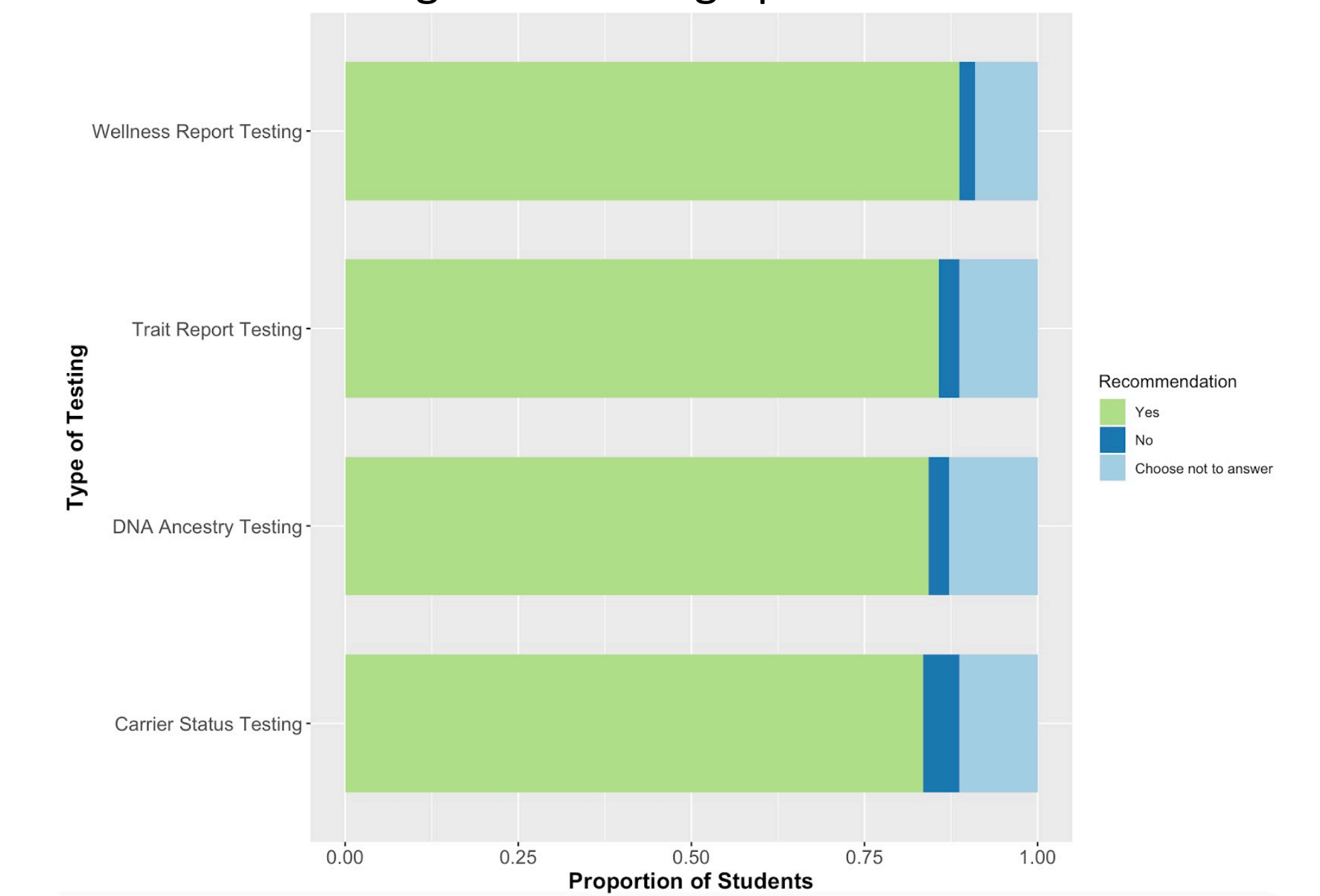
- Data came from a study conducted in an upper-level biology course focusing on understanding undergraduate science students' overall experiences with receiving personalized genetic testing results from 23andMe, Inc.
- The present study used data collected at the baseline assessment which assessed their 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%).

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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.

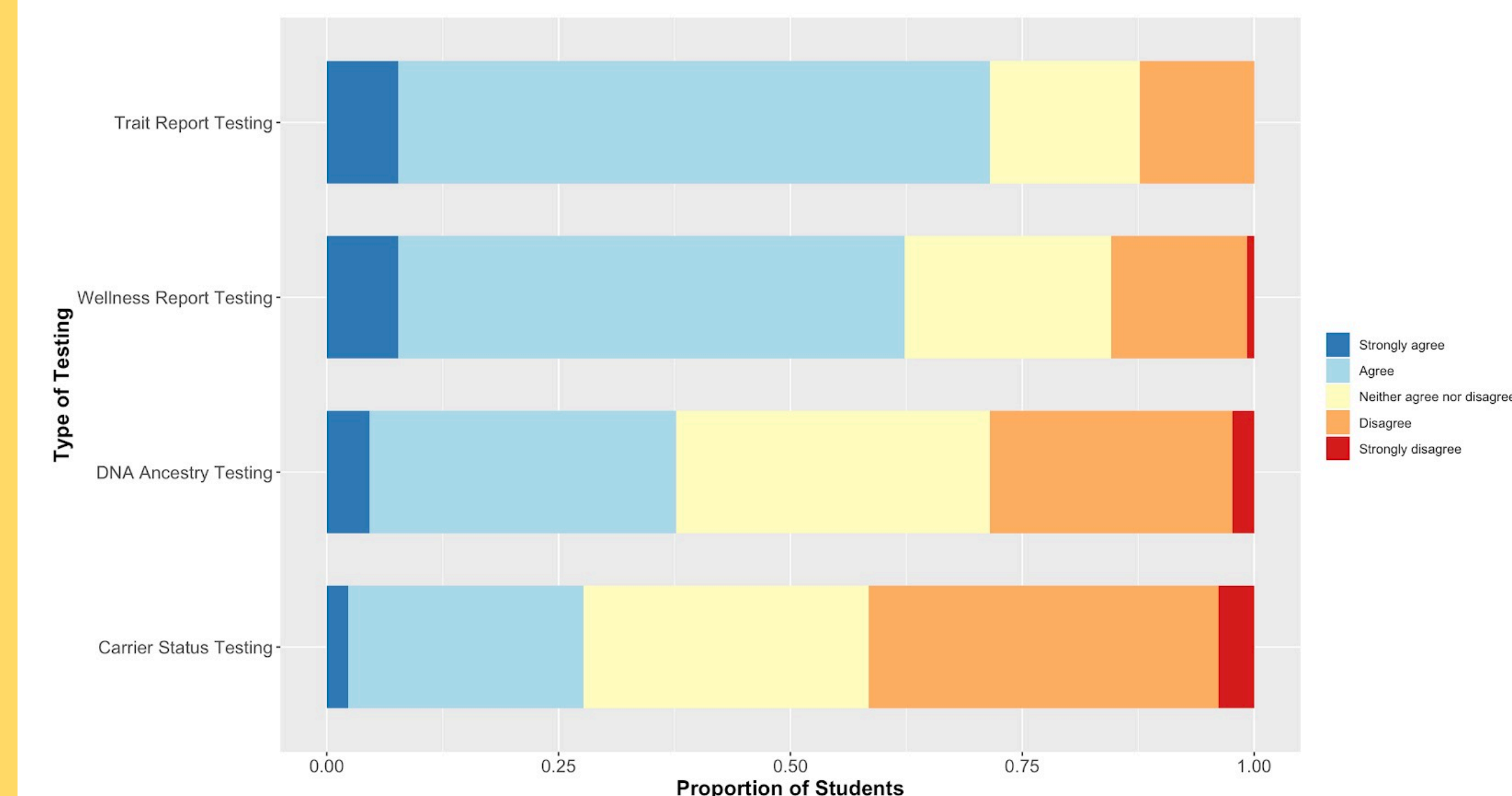
Results:

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.

