

The Problem

Fraudulent survey takers and bots are a serious problem in online survey research. This issue is worsening and threatens the integrity and quality of data.



A recent study by the Maryland Department of Health and Market Decisions Research (MDR) illustrates how **people and bots are adapting to traditional methods of fraud detection and prevention and are becoming more difficult to stop.**

The original survey was conducted in Qualtrics and included a \$10 post survey incentive via email. Respondents were recruited through targeted Facebook and Instagram ads. The survey included standard data quality checks such as speed checks, attention checks, and use of a ReCAPTCHA score. Soon after the ads launched, **an unusual number of surveys were completed despite the security checks in place.**

Out of 5,978 surveys only 608 were valid completes.

How did we adjust?

MDR implemented a series of additional comprehensive security measures to catch fraudulent surveys. This included multiple consistency checks, checks for duplicate and suspicious emails, multiple logic check questions, IP address information, and open-end question checks.



The Bots are Taking Over!

Lessons Learned from Battling Bots on a Social Media Survey



This case study demonstrates:

- The challenges preventing bots and fraudulent survey takers from attacking surveys for monetary gain and bypassing most traditional prevention methods.
- The issues of using a social media recruitment strategy for surveys.
- Suggestions for better and more consistent data security measures in online surveys.

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Breakdown of Data Verification and Quality Control Checks

	# of Cases
Total surveys completed	5,978
Incomplete (<20% of the questions answered)	114
Identified as a likely bot	
ReCaptcha score <0.6	3,011
Entry into consent form from the end of previous survey	1,784
Age of 19 with a ReCAPTCHA score <0.9	47
Speeders (<120 seconds)	14
Duplicate and suspicious email addresses	107
Failed logic check question	182
Quality checks	
Implausible BMI, weight, or height values	37
Grade vs. Age discrepancy	8
Failed age verification	43
Failed County verification	23
Validated completed surveys	608

Discussion

Using social media as a recruitment strategy for survey research is a great way to reach certain populations but needs to be used with caution – especially with incentivized surveys. **With the rise of more sophisticated bots and fraudulent survey takers, it is important to implement aggressive prevention strategies from the beginning in order to collect usable and valid data.**

