

## What is This Study About?

- Amazon's Mechanical Turk™ (MTurk) is comparable to other online platforms and in-person laboratory studies within the social sciences (Thomas & Clifford, 2017).
- Researchers recently reported a decline in data quality on MTurk due **Virtual Private Servers (VPS)** allowing participants to circumvent traditional screening methods (Dennis, Goodson, & Pearson, 2018).
- Use of MTurk in clinical populations has led to serious concerns of individuals misrepresenting personal characteristics to meet eligibility requirements which could lead researchers to draw incorrect conclusions (Chandler & Paolacci, 2017; Kan & Drummey, 2018).

## Research Questions

- R1. What percentage of participant attempts in a survey of daily living activities are usable in a clinical sample of individuals or their caregivers with a self-reported ASD diagnosis aged 18-22?
- R2. What are the most common reasons for non-payment (i.e., failed to meet study eligibility)?
- R3. What are qualitative and quantitative differences in responses from VPS-respondents and non-VPS respondents?

## Method

Amazon's Mechanical Turk™



Online crowdsourcing marketplace.

Anonymously pay participants for completing surveys [mechanical turk](https://www.mturk.com)

### Participants

- R1-R2: All based on self-report data
- R3: Based on pilot caregiver report data (after inclusion of Fake ASD scale and additional open ended responses)

### Survey Study Design

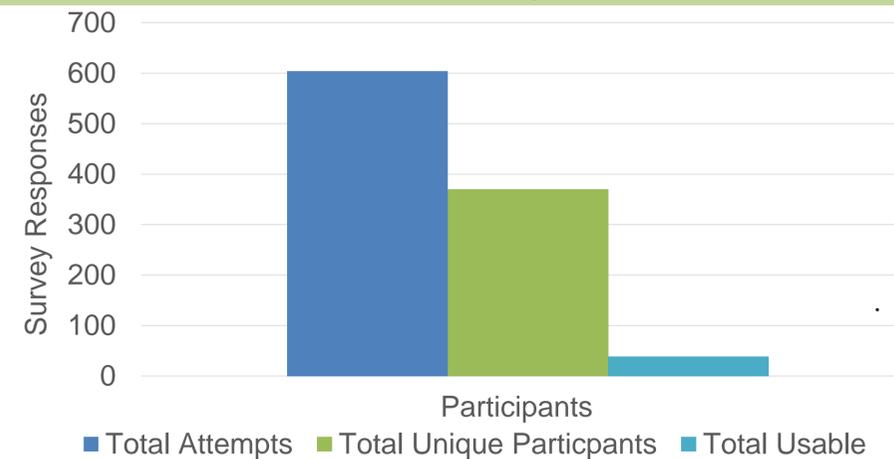
- Linked Qualtrics survey to MTurk
- Set two Worker qualifications in MTurk as well as 13 Screen- out questions in Qualtrics
- VPS respondents were identified post-hoc by tracing IP addresses via <https://www.iplocation.net/>

### Question Distribution



## Results

### R1. Usable Responses



### R2. Common Reasons for Non-Payment

- **Over 50%** of response attempts were deemed unusable within the first seven demographic questions because they did not meet inclusion criteria
  - Yes/No: Do you have a comorbid sensory disability?
    - 22% of participants reported they had a sensory disability in one version of the survey and then that they did not in a subsequent version
  - Yes/No: Are you over 22 years of age?
  - Yes/No: Did you have an IEP in school?
  - Yes/No: Did you have a formal autism diagnosis?

### R3. Quantitative Differences Between VPS and non-VPS Respondents

- On average, participants responding from VPS sources attempted the survey four times. Non-VPS participants attempted the survey two times
- Despite setting a qualification within MTurk to exclude international participants, some IP addresses were traced backed to international sources.
- Rates of VPS respondents increased over time

Date of Data Collection	% of sample comprised of VPS Respondents
September 2017	12.0
October 2018	78.5

## Results

### R3. Qualitative Responses to "Please describe your child's typical day" based on respondent type

This question was added to screen response quality.

VPS Respondents	Non-VPS Respondents
School day	They are home all day. They have different activities and programs to keep them interested happy and hopefully improving.
NICE	I typically wake up my son and get him ready for work. I drop him off at his work location and later pick him up. I will typically cook him a meal and ask about his day."
VERY NICE	he likes to play on his PSP at home alot and interact by having a a set schedule and time for everything such as eating bathing ext
medical assisting	He mostly sleeps and plays video games in his room and will come downstairs to eat or occasionally watch TV with the family

Note. Formatting was not edited.

## Discussion

- Usable return rates were low with demographic deception occurring at high percentages.
- Research conclusions based on MTurk samples should be **interpreted with caution** as traditional screening methods may not be adequate for screening out low quality or invalid responses.

## Recommendations

- Consistent with previous recommendations, it is important to incorporate open-ended responses within surveys to flag problematic responses (Dennis, Goodson, & Pearson, 2018).
- Incorporating programs such as Qualtrics that collect IP data is a useful post-hoc method to confirm participants are responding from non-VPS sources.
- Incorporation of multiple screen out questions, phrased in different ways can assist in identifying inconsistencies