

# Usable Security and Privacy (ECE 750)

## Study Variables Handout: Case 2

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### Case 2: Retrospective Lab Study

Arie is interested in how people identify fraudulent SMS messages. He knows that people are likely to behave differently in a lab setting than they would normally, so he decides to create a study that involves both a retrospective component and a lab component.

He asks people to come into a lab and starts with a short structured interview. He asks them to tell him about past SMS spam and fraud they have experienced, including what the message looked like and how they determined it was fraud. After the interview he conducts a lab study. He shows them 6 SMS messages half of which are messages from real organizations and the other half are fraudulent. He asks the participant to indicate which messages are real and which ones are fraud. He also asks them to fill in a short form asking demographic information including age, gender, occupation, how long they have owned a mobile phone, and how often they receive fraudulent communications.

After all the studies are done, he uses qualitative data analysis (thematic analysis using open coding) to analyze the retrospective interviews. He determines that people often get fraud claiming to be from delivery companies, phone providers, and internet service providers. He also determines that people use cues like if the message is the first one they have received from that number (no message history), professionalism, weird characters or digits, and if they are expecting the message. For the lab study he looks at how accurate the participant was in identifying fraud.

### RQ1: What factors do people self-report as being important when describing past SMS spam and fraud?

**Dependent Variable(s):**

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**Independent Variable(s):**

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**Fixed Aspect(s):**

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## RQ2: What factors correlate with ability to correctly identify SMS fraud?

Where "ability to correctly identify" is defined as the percentage of the 6 SMS messages that were correctly classified.

**Dependent Variable(s):**

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**Independent Variable(s):**

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**Fixed Aspect(s):**

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