

## Introduction

- Through voice phishing or **vishing**, adversaries use voice to target individuals into disclosing sensitive information.
- Prior research has shown that users' first language influences their susceptibility to text-based phishing.
- Research Gap:** No research has been conducted on the **impact of native language accents on susceptibility to voice phishing**.
- Research Goal:** How native language accents influences willingness to share sensitive data.

## Method

- Recruited 140 Prolific participants, fluent in English.
- Average age: 33.2 years (std: 10.8).
- 43% had a technical background.
- Used an AI-based tool to generate voice prompts.

## Example Study Vishing Prompt

Hi! We are calling to inform you about **parcel delivery**. To deliver, you need to provide your **credit card details** for just the shipping charges urgently. The parcel contains a gift that you've won at your local pharmacy store. Please provide your details now.

## Study Design

- Created 7 surveys based on one between-subjects and two within-subjects factors.
- Between-subjects factor:**
  - Native language of participants (four levels: English, Hindi, Chinese, Spanish).
- Within-subjects factors:**
  - Phishing languages (two levels: native language and English)
  - Phishing prompts (two levels: parcel delivery, new Medicare card).

Survey Number	Native Language	Accent Ethnicity of Phishing	
		Prompt One	Prompt Two
1	English	English	English
2	Chinese	Chinese	English
3	Chinese	English	Chinese
4	Spanish	Spanish	English
5	Spanish	English	Spanish
6	Hindi	Hindi	English
7	Hindi	English	Hindi

Table 1. We generated seven surveys based on accent Ethnicity and participants' native languages

## Quantitative and Qualitative Analyses

- Quantitative Analysis: Polychoric correlation.
- Qualitative Analysis: Thematic analysis.
- Creating a codebook with two coders and resolving all the disagreements in the coding process.

## Results

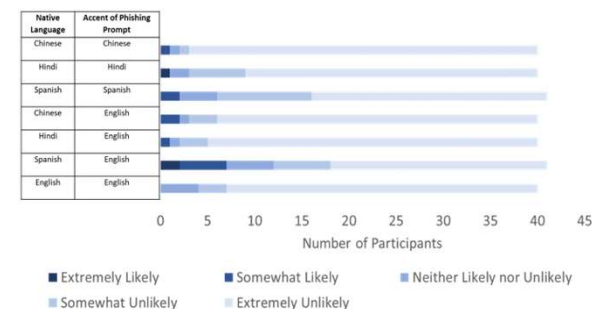


Fig. 1. Participants reported willingness to share credit card information

Accent Prompt	Native Language			
	Spanish	English	Hindi	Chinese
Spanish	0.99	-	-	-
English	*0.80	0.99	0.99	*0.91
Hindi	-	-	0.99	-
Chinese	-	-	-	0.99

- Except for Hindi native speakers, Spanish and Chinese native speakers were significantly more susceptible to vishing attacks in US-English accents compared to their native language accents.
- Participants mentioned the implied urgency in the prompt as the main reason to be willing to share their sensitive data.

“ As somebody who utilizes Medicare and relies on it greatly, it's the only way I can obtain my health insurance so making sure I have the right card is extremely important as otherwise I can't get medical aid. ”