



I Think They're Trying to Tell Me Something

Advice Sources and Selection for Digital Security

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Security Advice



U.S. CERT

~30,000 words
60+ topics

McAfee

~40,000 words
49 topics

NCPC

~12,000 words
30 topics



Research Questions



1

Where do users get advice?

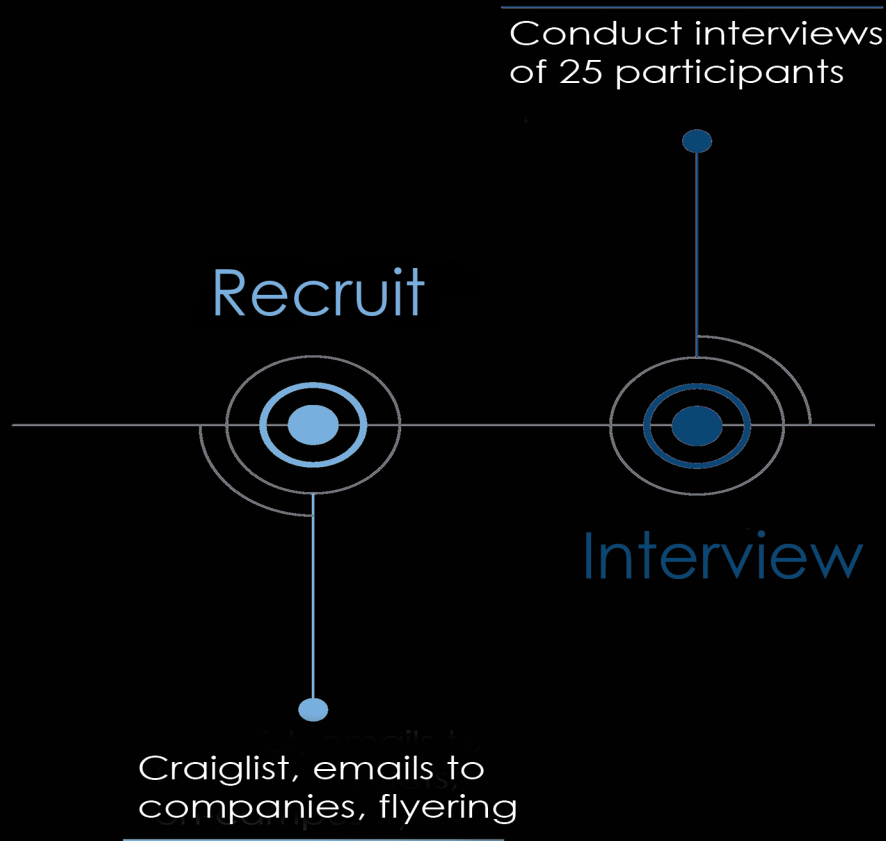
2

How do they evaluate this advice?

3

Do users with different backgrounds make different choices?

Semi-Structured Interview Study



Interview Details



Security Domains

Digital

Authentication/Passwords
Anti-Virus
Online Banking/Shopping
Two-Factor Authentication

Physical

Home
Transit
Walking Alone at Night

Questions

Information Source

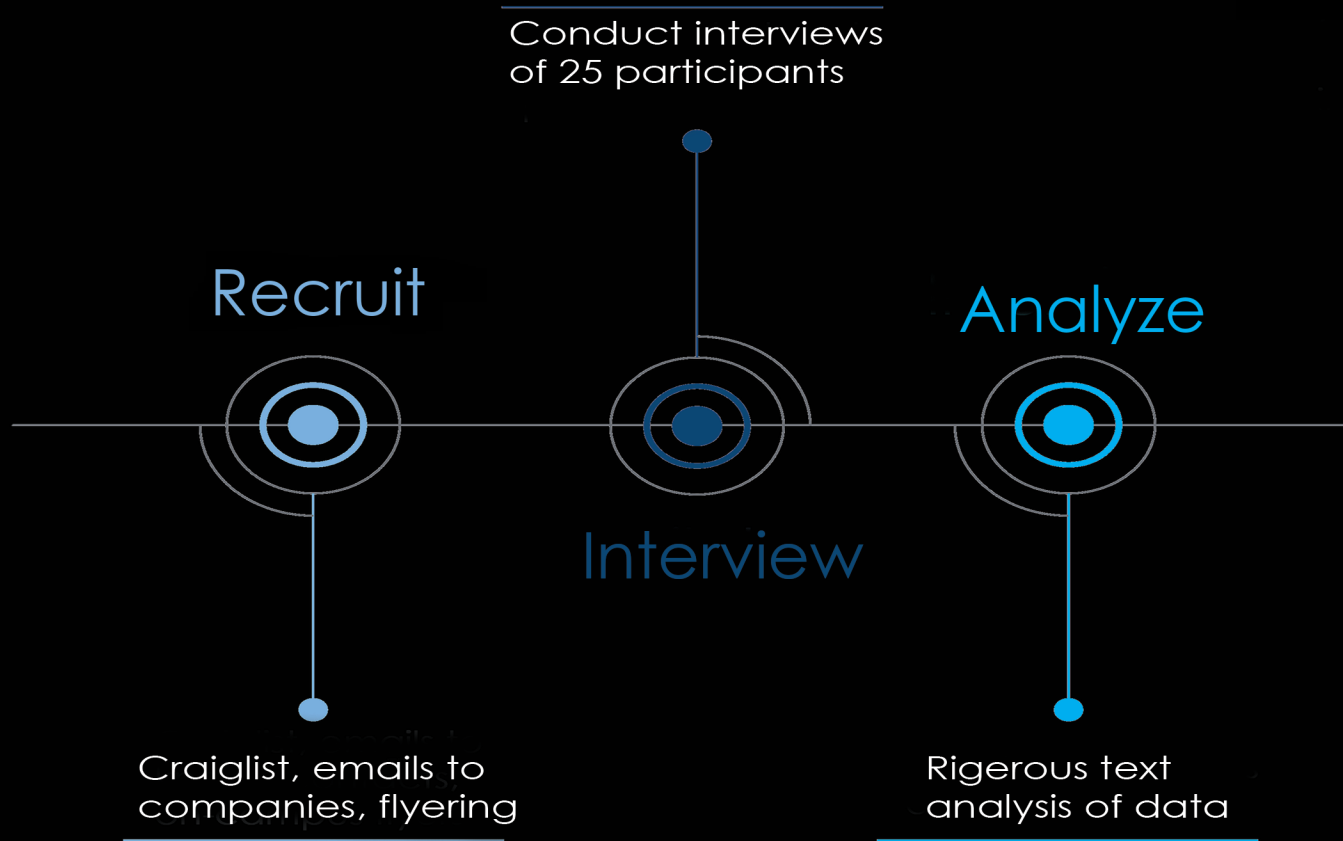
Decision Making

Strategies Not Used

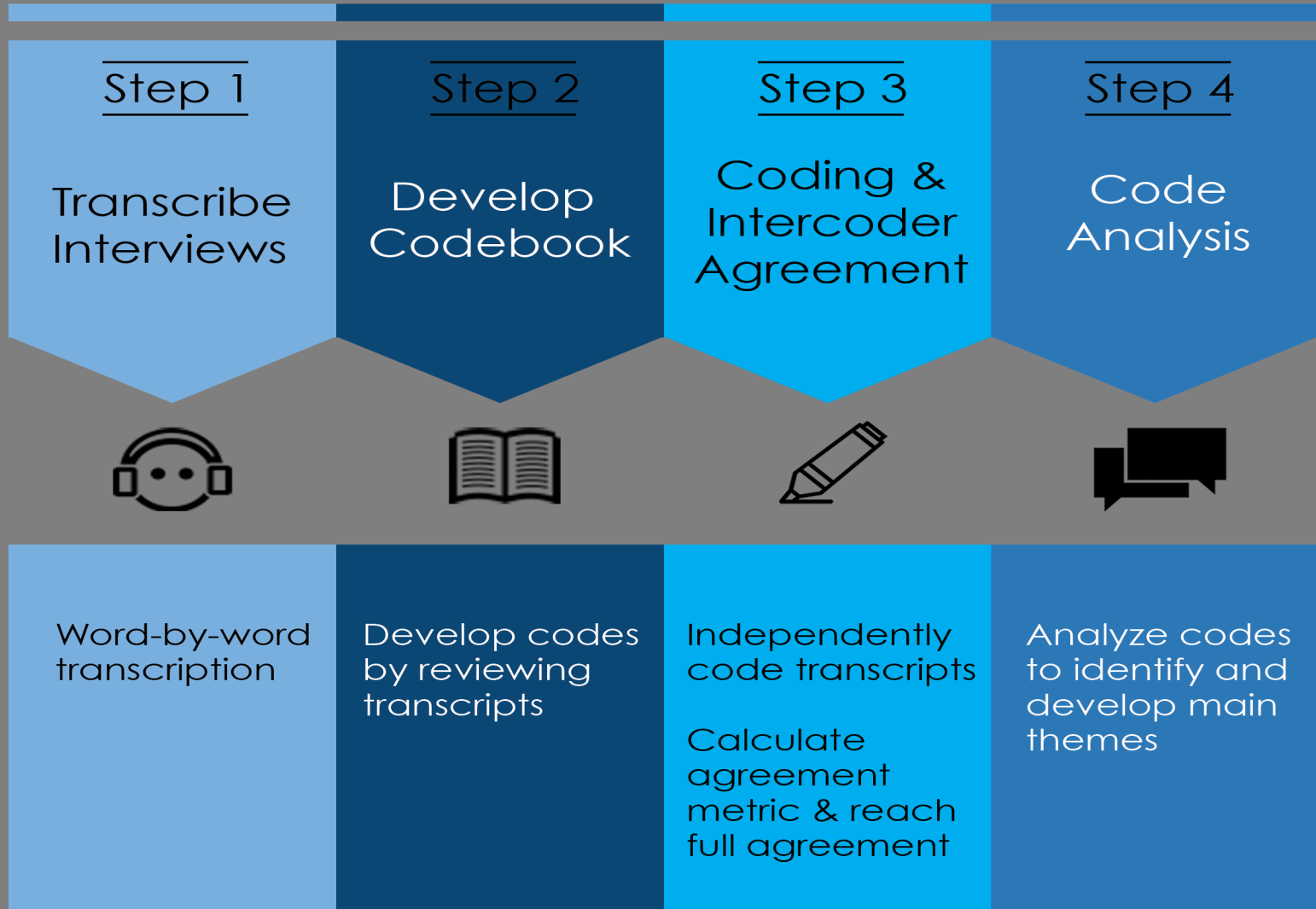
Negative Experiences

General Advice Seeking & Eval.

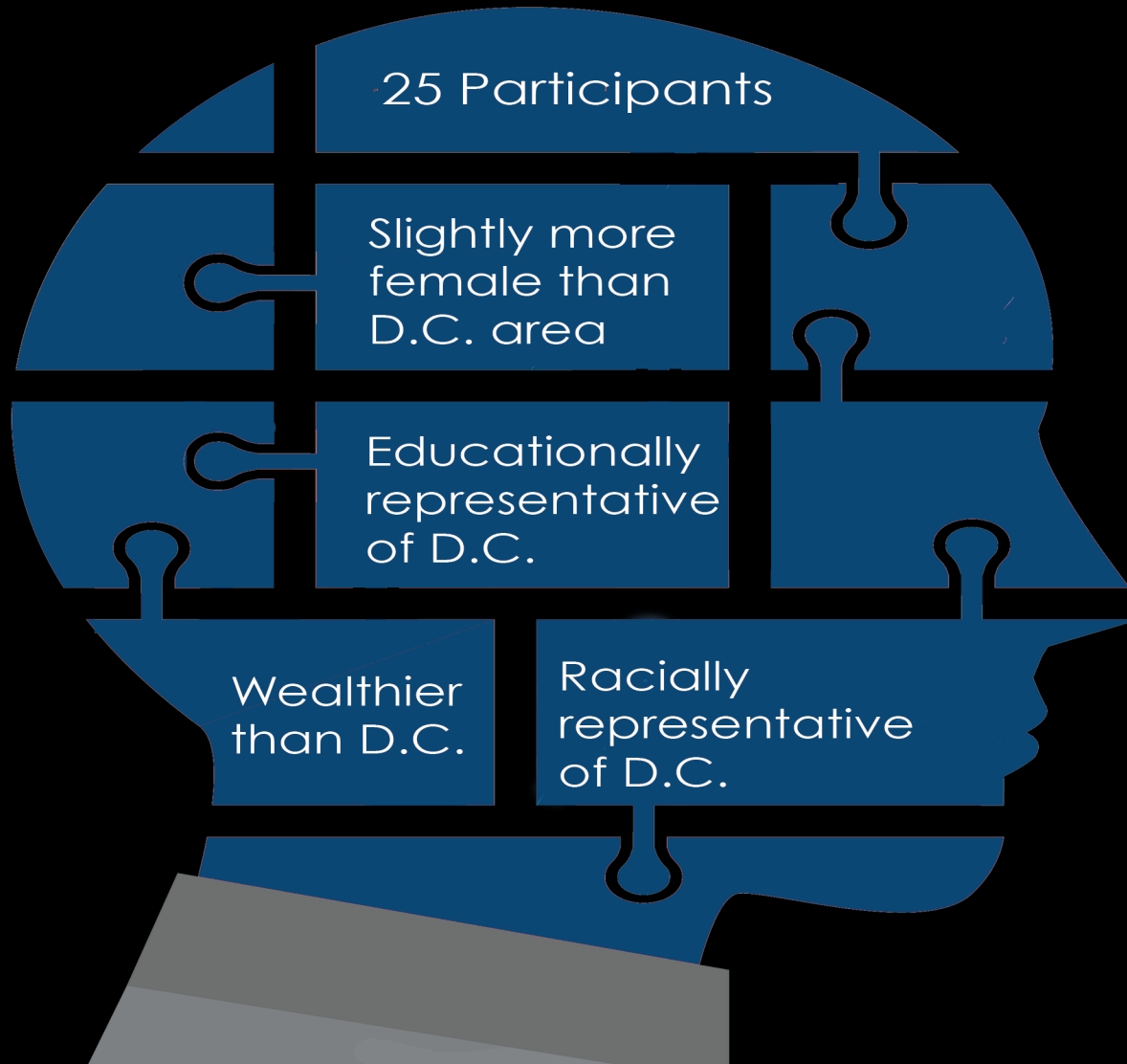
Semi-Structured Interview Study



Qualitative Analysis



Participant Demographics



Selected Results



Advice Evaluation

Why did you choose to use or not use this security strategy?



Security Sensitivity

Do you hold a security clearance or work with HIPAA or FERPA data?



Negative Security Experience

Have you ever had a negative experience with this activity?





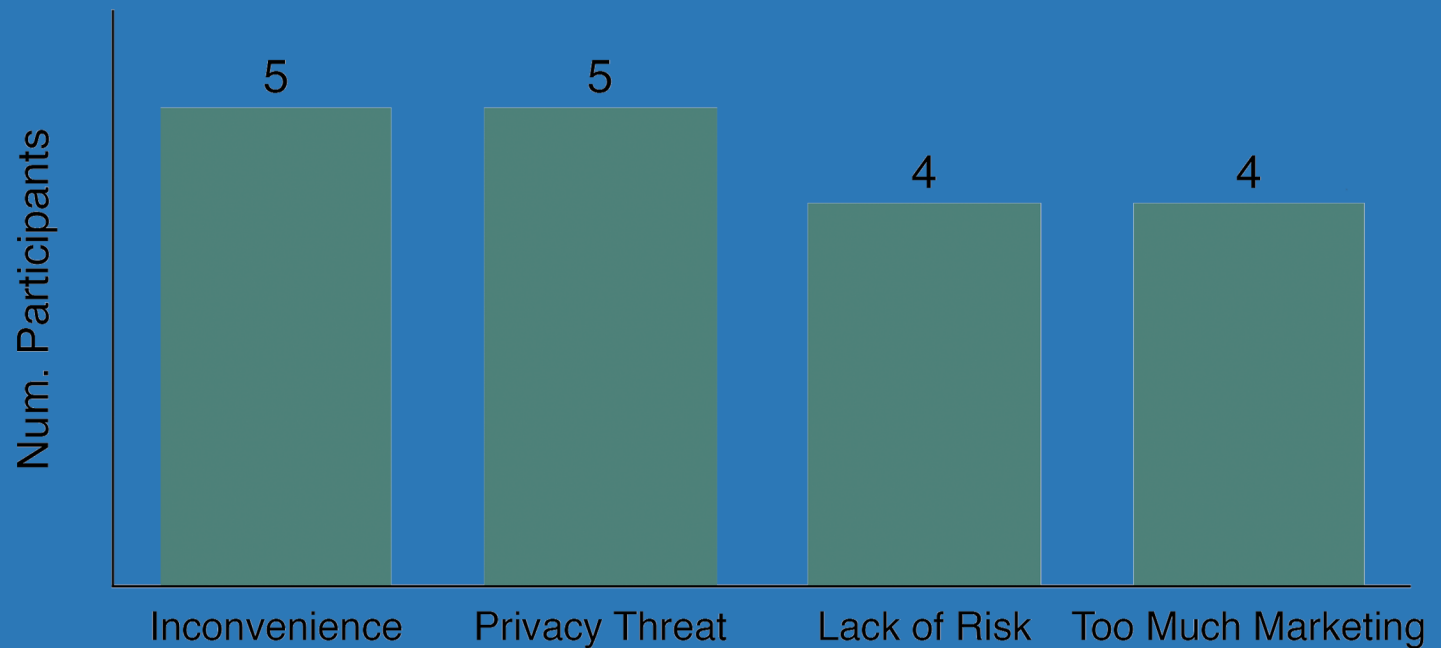
Participants' evaluation of
digital-security advice:
their trust of the advice source

Evaluation of physical-security advice:
their own assessment of the content

“With computer security, I’m securing myself from threats that I don’t even know anything about...

I know when somebody walks up with a gun that I should be worried.”

Participants rejected advice for containing **too much marketing** or **threatening their privacy**



“I don’t take any advice with a price tag attached...

I did have my identity stolen one time but I was able to fix it...

I’m not one of those people who signs up for identity theft protection or something like that.”

“I think I do have that two factor authentication capacity,

but I’ve always declined...

Based on what I know about Gmail, it just seemed like giving up too much information to Google.”

Selected Results



Advice Evaluation

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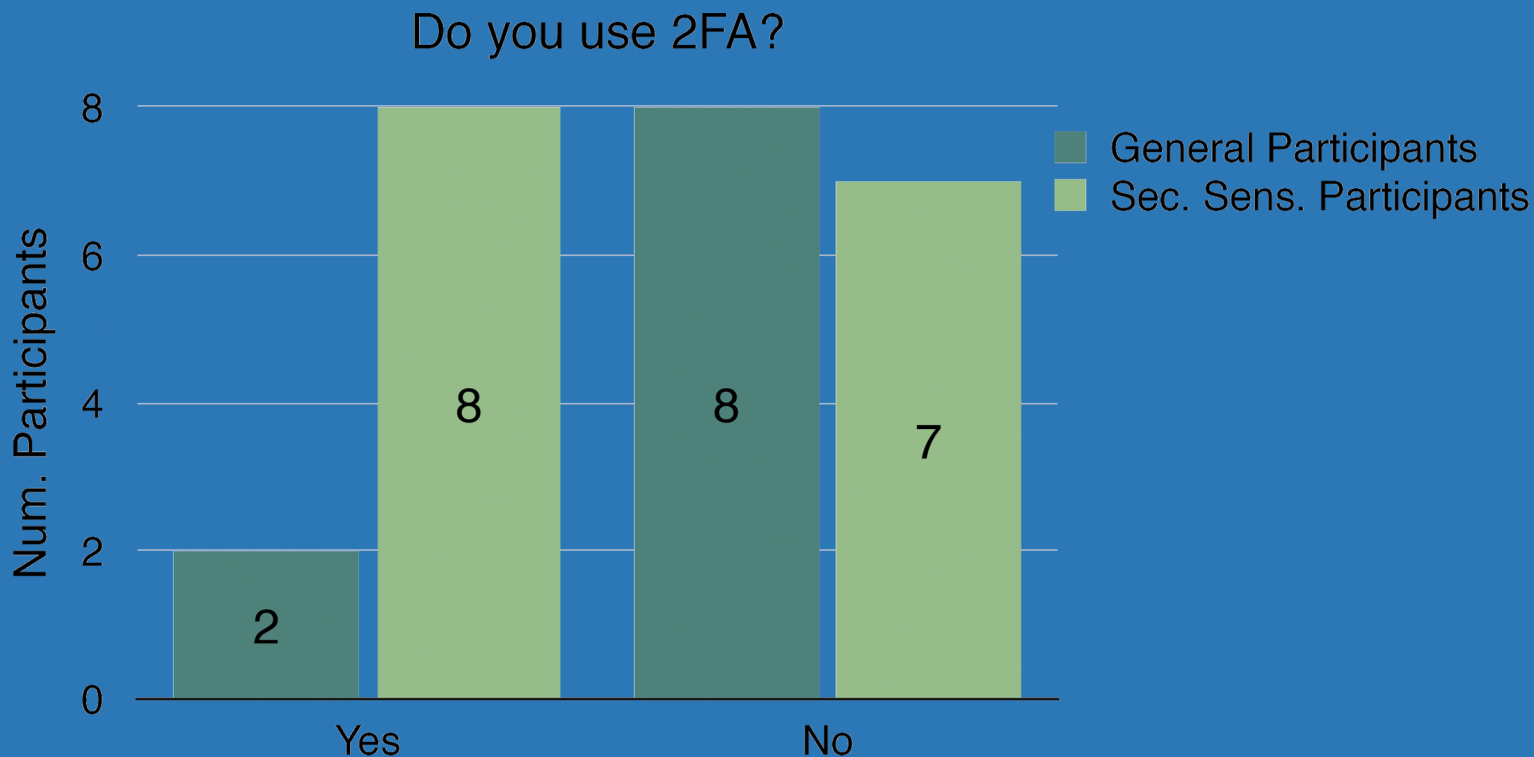


Negative Security Experience

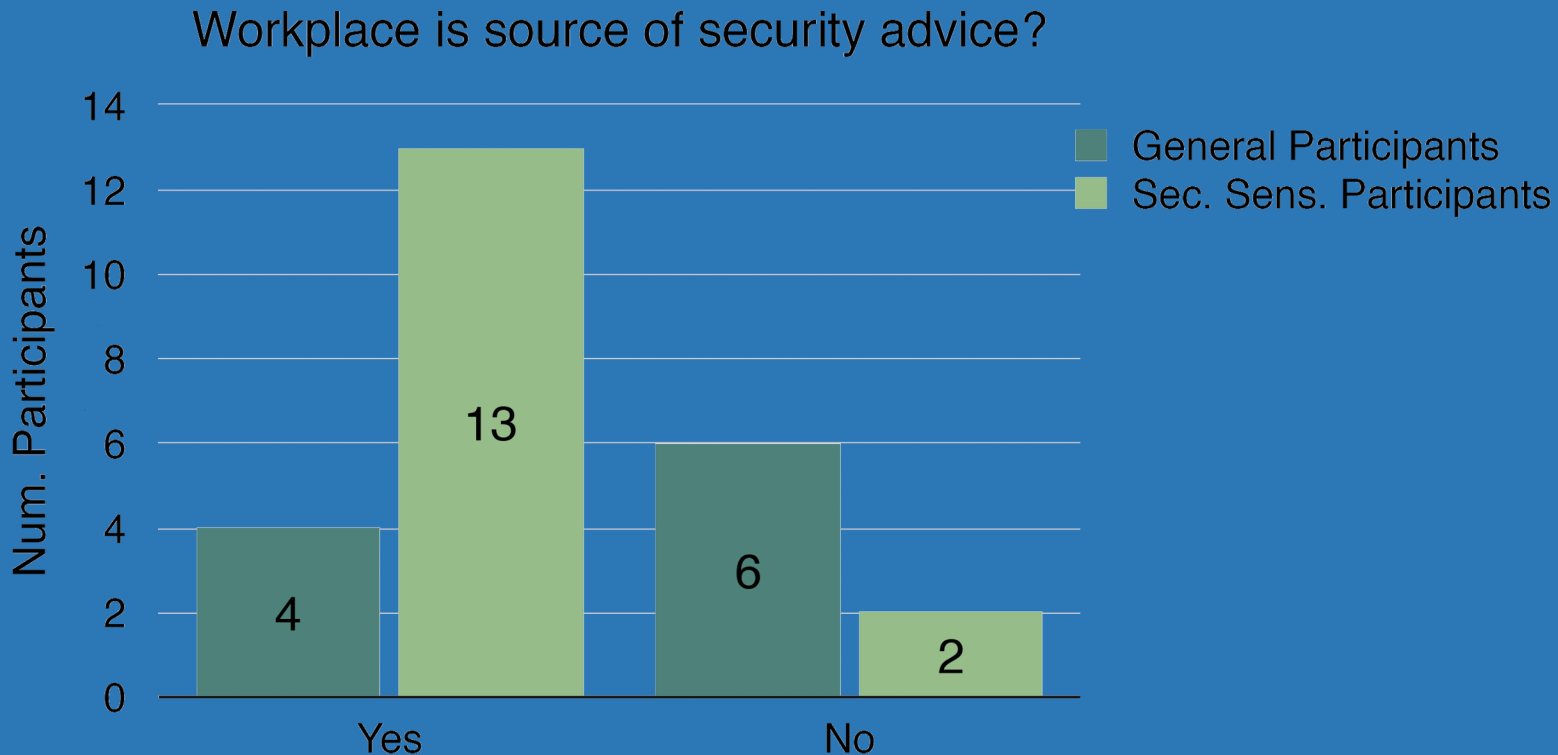
Have you ever had a negative experience with this activity?



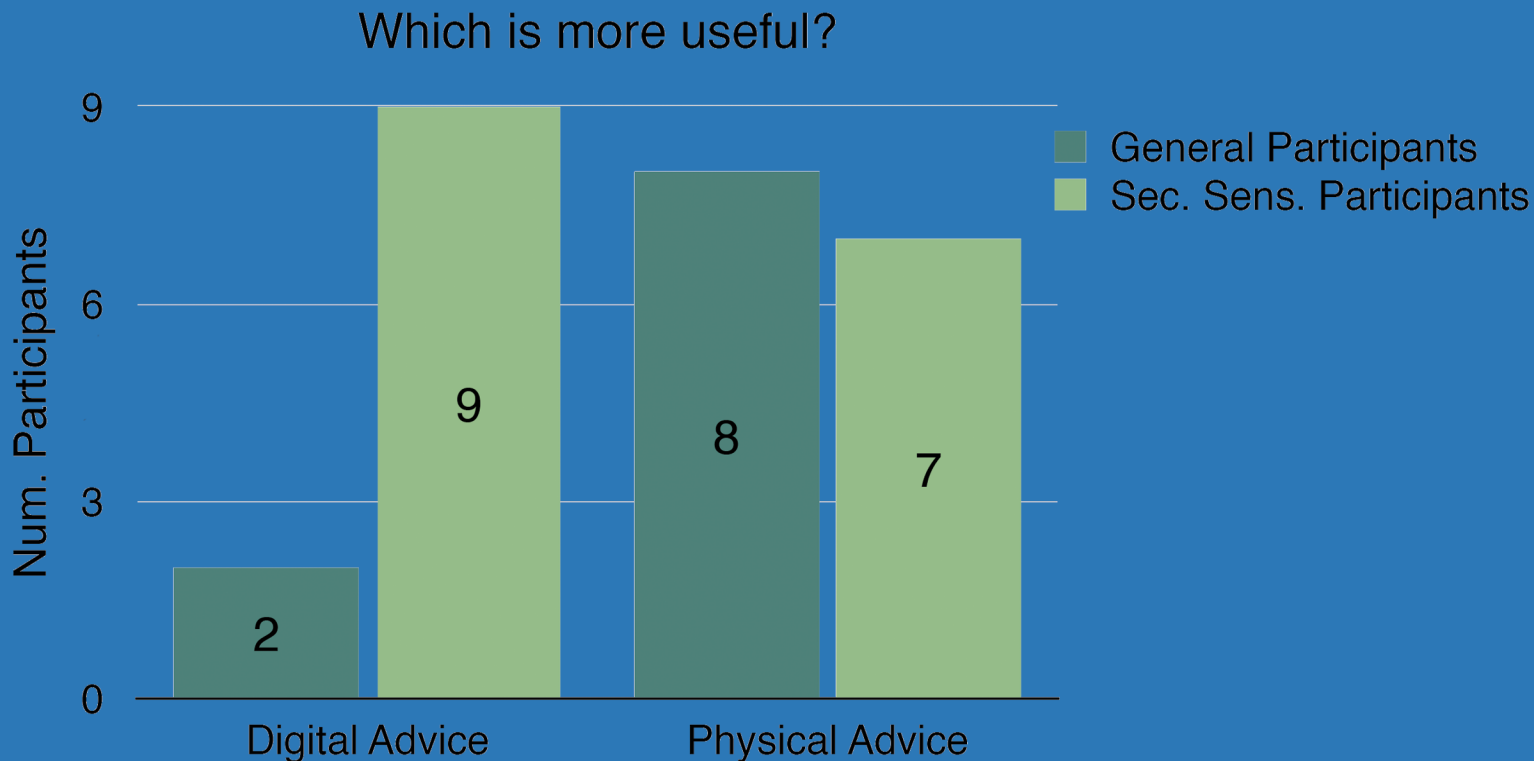
Security sensitive participants differ from general participants in behavior, source & beliefs



Security sensitive participants differ from general participants in behavior, source & beliefs



Security sensitive participants differ from general participants in behavior, source & beliefs



Selected Results



Advice Evaluation

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A network diagram consisting of black dots (nodes) connected by black lines (edges) on a blue background. The nodes are scattered across the frame, with a higher density on the left side, forming a complex web-like structure.

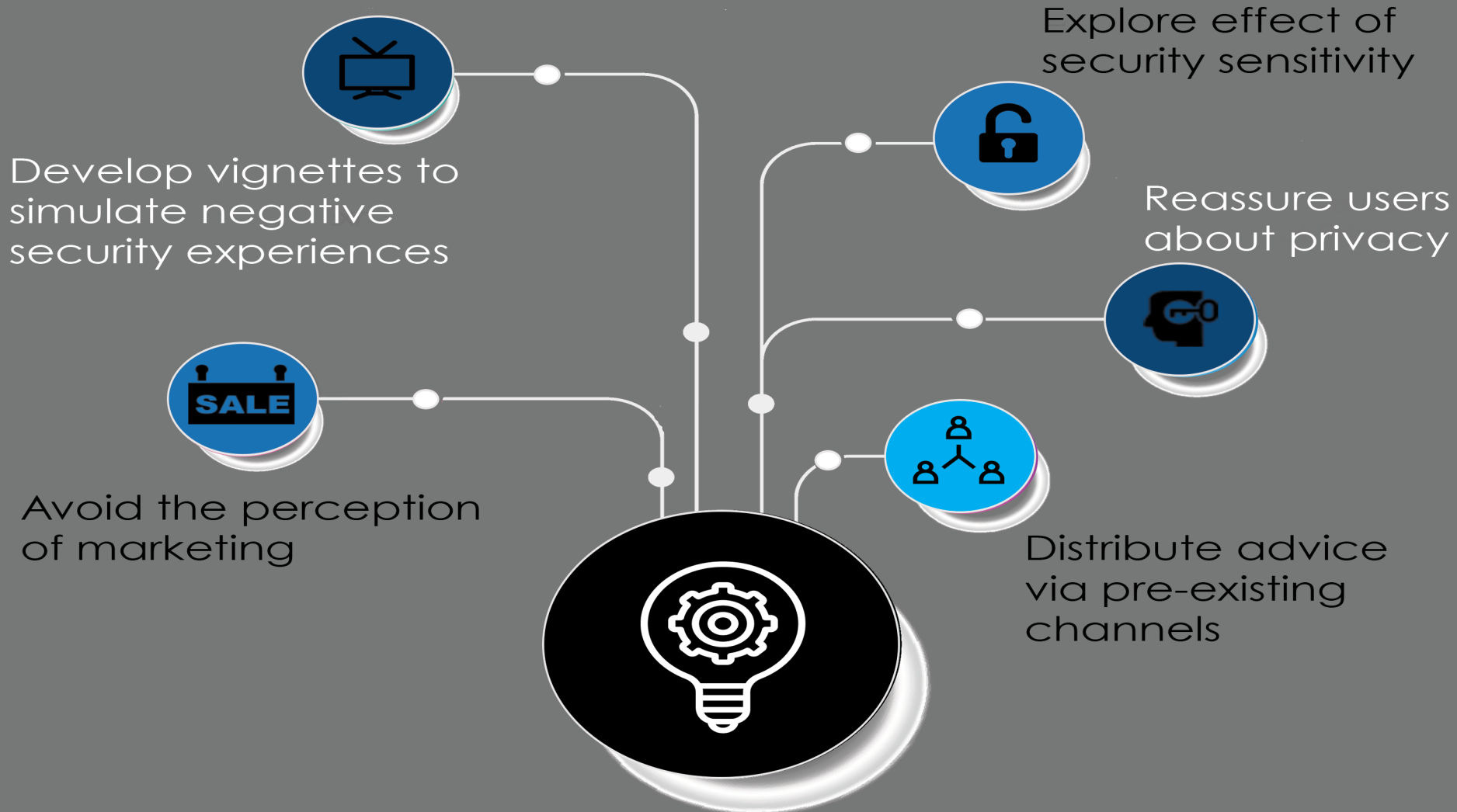
Participants noted the **impact of negative-security events** including events portrayed in **fictional narratives like T.V. shows** on altering their security behavior

“I put a password on my WiFi network after watching a TV show.

It showed people going by houses and WiFi snooping

... shows like that, they make you think.”

Research & Design Recommendations



Summary



Research Questions

Where do users get advice?

Why do they take it?

How can we improve it?

Methods

Semi-structured interview w/ 25 participants

Selected Results

Trust of source key metric for digital security

Advice rejection: marketing & privacy concern

Security-sensitive participants differ

Fictional narratives can alter security behavior

Questions?

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