

Nudging Adoption: Creating Awareness in Antivirus Software

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Motivation

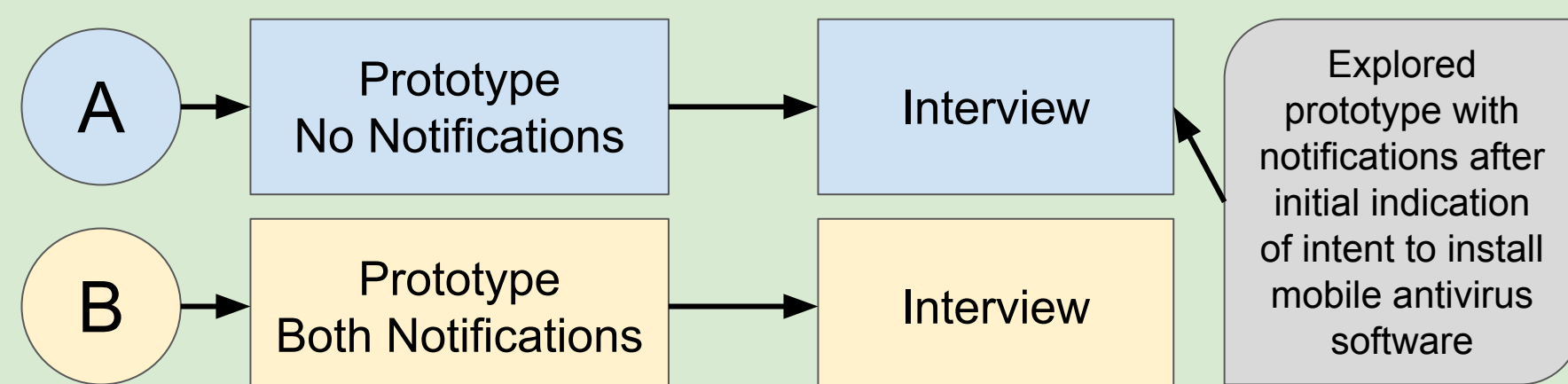
- Notifications, alerts, and warnings have been widely used in applications to inform users and prompt action
- Users generally have decreased awareness of potential security risks and mechanisms on non-traditional computing devices
- Nudges can be used to subtly influence users to make a beneficial choice

Research Questions

1. Could notifications in existing security tools be utilized to nudge existing users to adopt the tools on a different platform?
2. What are the user suggested design guidelines for such a nudge to encourage attention and adoption?

Methodology

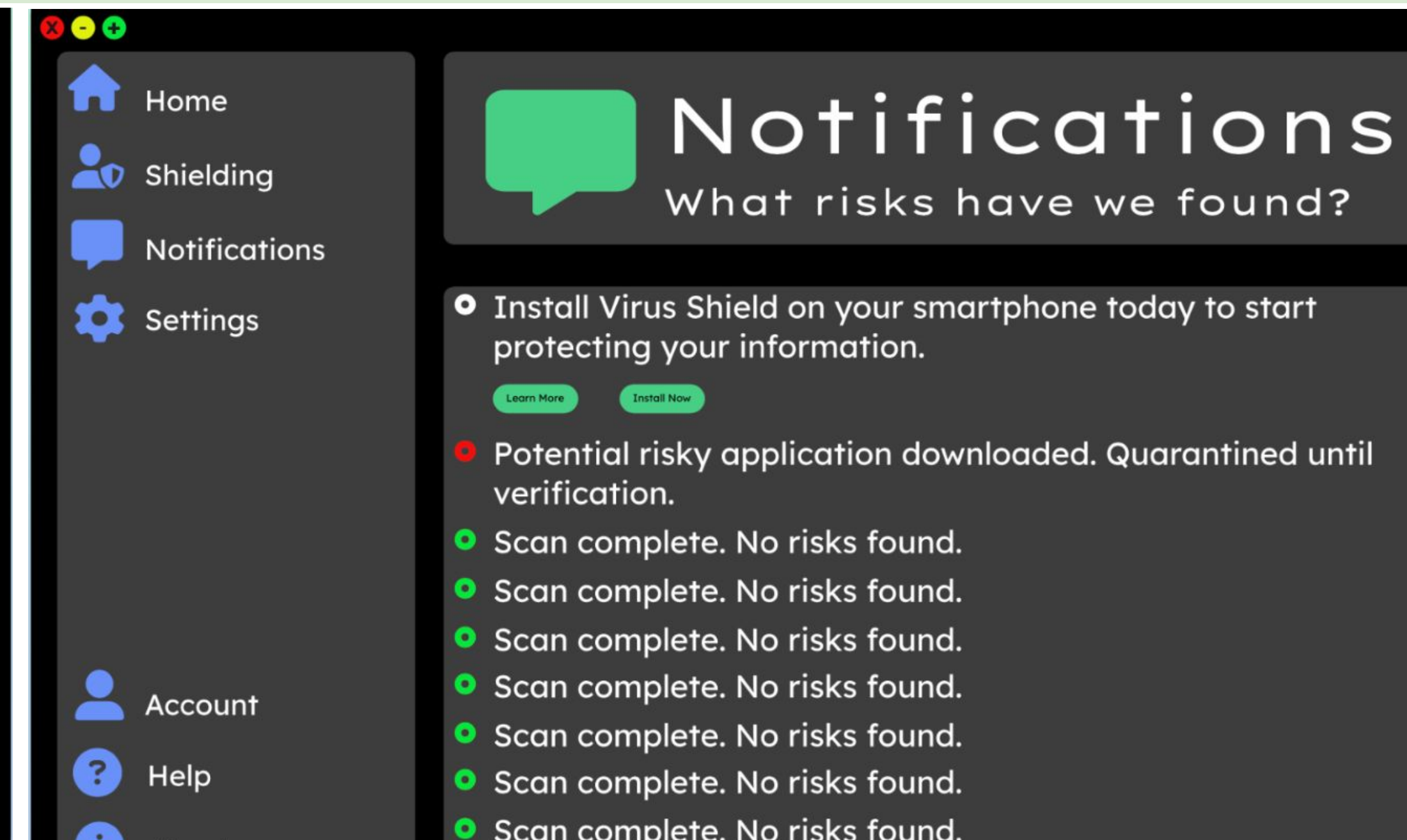
- **Study 1:** Design feedback
 - Discussed three potential notifications with a semi-structured interview
 - 12 Participants
 - Designed two notifications based on participant feedback
- **Study 2:** Perceived Effectiveness
 - Prestudy survey regarding current antivirus software usage and perceptions
 - A/B user study of prototype of antivirus software with semi-structured interview
 - 36 participants



- **Analysis:** Qualitative analysis to identify key themes regarding installation motivations and user suggested design guidelines



Notification 1- Active Notification

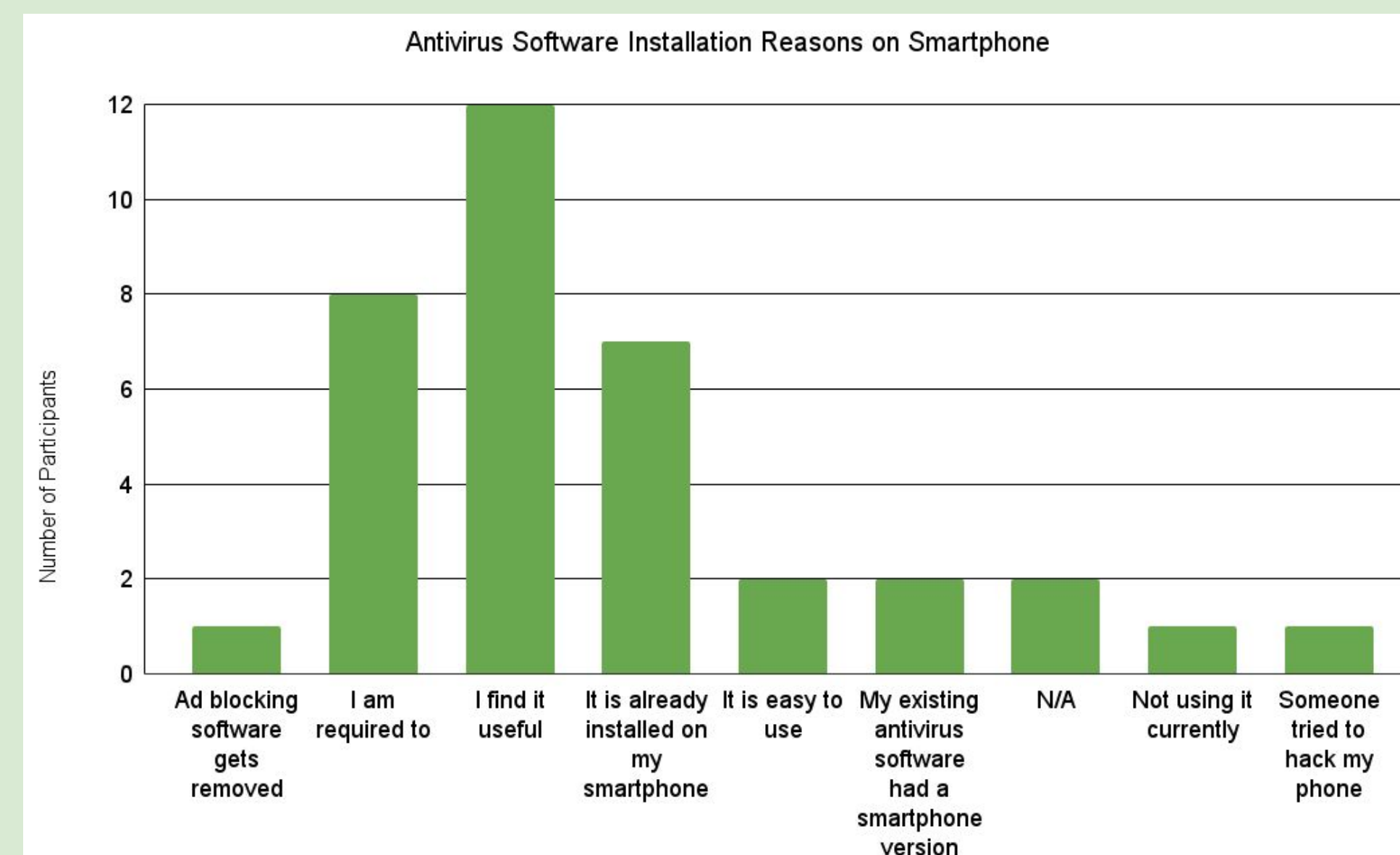


Notification 2- Passive Nudge

Preliminary Results

Survey

- Already using antivirus software
 - Smartphone: 5
 - Laptops/desktops: 22
- Antivirus software is beneficial
 - Smartphone: 28
 - Laptops/desktops: 29
- Recommend to others
 - Smartphone: 21
 - Laptop/Desktop: 30
- Reasons for installation of antivirus software
 - Useful, already installed, required to



Qualitative Analysis

- 24 participants indicated they would consider installing antivirus software on their smartphone
 - Group A: 10 participants
 - Group B: 14 participants

Installation Motivations

- **Functionality:** ability of the mobile antivirus software to actually protect the device and data
- **Awareness** of the mobile version of antivirus software
- **Promotions:** cost of the software, inclusion into existing coverage costs, and free trials
- **Risk:** perceptions of risk to security threats on smartphones
- **Installation** is easy and quick

Design Guidelines:

- **Minimalist design:** limited buttons, limited blocks of text, etc
- **User-friendly design:** easy to navigate, tasks easy to execute, easy to understand interface and instructions
- **Information:** include information regarding security risks on smartphones, effectiveness of the software in reducing risk, etc