

NOTE: All content that has been *italicized* is to help illustrate survey flow as it appears in Qualtrics

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## Initial Questions

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What is your Prolific ID?

*Free Text (Auto Populates with their ID from URL redirect)*

### *CONSENT FORM AND SIGNATURE*

Smartphones are arguably one of the most important innovations to come up in recent history. And one of the best features is the ability to use mobile applications. Mobile applications like Facebook, TikTok, and Google are practically impossible to avoid in a person's day-to-day life. When a user lands their hands on a smartphone, they are given a plethora of pre-download applications and given a place like the App. Store or Play Store to download other applications according to their wishes. In mobile applications, user security and data privacy are major issues that affect many people and organizations. The numerous incidents of data breaches and privacy violations that have impacted various companies amplify this. Data breaches can happen for different reasons, such as cyberattacks, insider threats, insufficient security practices, or unintentional exp - there is also room for improvement, we would optimize the code to work efficiently exposures. When confidential user data is compromised, it can result in identity theft, financial fraud, privacy invasion, and other harmful outcomes for individuals. Google and Apple are among the companies that have faced criticism and legal actions related to data privacy and security. They are often required to meet the highest standards by regulators and the public to ensure they protect user data properly and securely

In this survey, we will provide you with a list of applications for social media and instant messaging mobile applications and a set of questions to answer.

1. How often do you use social media?

*Participants select one of:*

- ☐ Never
- ☐ Rarely
- ☐ Occasionally

- ☐A moderate amount
- ☐A great deal

*Only if never is not selected or skip to the next question*

2. What social media platforms do you use the most, please select up to 3.

- ☐Facebook
- ☐YouTube
- ☐WhatsApp
- ☐Instagram
- ☐TikTok
- ☐Snapchat
- ☐Twitter
- ☐Telegram
- ☐WeChat
- ☐iMessage

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## Treatment

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*The participants will see two sets of social media apps, each containing two of the top 10 most popular apps in the market.*

3. Please look at the following app and answer the following two questions.





Instagram

2 billion MAUs

3.1 If you had to choose only one app to use, which one would you prefer over the other?

*Participants select one of:*

☐ TikTok

☐ Instagram

3.2 Why(Optional)?

*Free text response*

3.3 How likely are you to share this app with your family / friends?

*Participants select one of:*

☐ Very likely

☐ Somewhat likely

☐ Neither likely or unlikely

☐ Somewhat unlikely

☐ Very unlikely

4. Please look at the following app and answer the following two questions



WhatsApp

1 billion MAUs



Snapchat

2 billion MAUs

4.1 If you had to choose only one app to use, which one would you prefer over the other?

*Participants select one of:*

☐ Whatsapp

☐ snapchat

4.2 Why(Optional)?

*Free text response*

4.3 How likely are you to share this app with your family / friends?

*Participants select one of:*

☐ Very likely

☐ Somewhat likely

- ☐Neither likely or unlikely
- ☐Somewhat unlikely
- ☐Very unlikely

5. What factors are most important to you, while choosing a mobile application?

- ☐Security and Privacy
- ☐Popularity and User Reviews
- ☐Features and Functionality
- ☐App Developer Reputation
- ☐Recommendations from Friends or Family
- ☐Others: *Free text response*

6. How well-informed do you believe you are about mobile app security and privacy?

- ☐Very Well-Informed
- ☐Somewhat Well-Informed
- ☐Neutral
- ☐Not Very Well-Informed
- ☐Not Informed at All

7. Have you ever refrained from downloading a mobile application due to concerns about its security and privacy features?

- ☐Yes
- ☐No

If yes please specify : *free text response*

8. Have you ever stopped using a mobile application due to concerns about its security and privacy features?

☐Yes

☐No

If yes please specify : *free text response*

9. Are you concerned about overreaching permissions when using mobile applications, such as access to your camera, location, or contacts?

☐Very Concerned

☐Somewhat Concerned

☐Neutral

☐Not Very Concerned

☐Not Concerned at All

### **Information about different applications**

First set:

TikTok - TikTok has faced concerns regarding data privacy, including allegations of data sharing with Chinese authorities.

Instagram - Instagram sells user data to third-party advertisers without user consent.

Second Set:

WhatsApp - WhatsApp allows third-party companies to access and store user chats for advertising purposes.

Snapchat - Snapchat retains all user data, including snaps and chats, indefinitely.

Third Set:

Facebook - There are concerns regarding the sharing of personal data to third parties.

Twitter- There were reports towards the end of 2022 that hackers were selling data stolen from 400 million Twitter users.

Fourth Set:

WeChat - WeChat has faced criticism for sharing user data with the Chinese government due to Chinese regulations.

iMessage - iMessage stores message content on Apple servers, making it susceptible to data breaches.

## EVALUATION PROCESS

Now that you have seen the different sets of apps, we'll show them to you again and ask you a few questions about how you made your downloading decision.

*Participants will be shown the same app set again in the same order and asked the following questions.*

10. Please look at this app set again and answer the following questions.

TikTok  1 billion MAUs

Instagram  2 billion MAUs

10.1 If you had to choose only one app to use, which one would you prefer over the other?

*Participants select one of:*

- ☐ TikTok
- ☐ Instagram

10.2 What was the main factor that influenced your decision to download the app now?

- ☐ Security and Privacy
- ☐ Popularity and User Reviews
- ☐ Features and Functionality
- ☐ App Developer Reputation
- ☐ Recommendations from Friends or Family
- ☐ Others: *Free text response*

10.3 How much did the presence of information about security level affect your decisions on downloading?


*Participants select one of the following:*

- ☐ No effect
- ☐ Minor effect
- ☐ Moderate effect
- ☐ Major effect
- ☐ Not sure

If so, why did the information about the security level impact your decision?

*Free text response*

11. Please look at the following app and answer the following two questions

WhatsApp		1 billion MAUs
Snapchat		2 billion MAUs

11.1 If you had to choose only one app to use, which one would you prefer over the other?

*Participants select one of:*

- ☐ Whatsapp
- ☐ snapchat

11.2 What was the main factor that influenced your decision to download the app now?

- ☐ Security and Privacy
- ☐ Popularity and User Reviews
- ☐ Features and Functionality
- ☐ App Developer Reputation
- ☐ Recommendations from Friends or Family

☐Others: *Free text response*

11.3 How much did the presence of information about security level affect your decisions on downloading?

*Participants select one of the following:*

- ☐No effect
- ☐Minor effect
- ☐Moderate effect
- ☐Major effect
- ☐Not sure

If so, why did the information about the security level impact your decision?

*Free text response*

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## Demographics

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We are going to end the survey with 3 short questions about your demographics.

12. What is your age?

*Free text response*

13. How do you describe your gender identity?

*Choose one:*

- ☐Female
- ☐Male
- ☐Agender
- ☐Non-binary
- ☐Gender-queer
- ☐Not sure
- ☐Not listed above:\_\_\_\_\_
- ☐Prefer not to respond



14. What level of education have you attained?

*Choose one:*

- ☐ Less than high school
  - ☐ High School graduate (high school diploma or equivalent such as GED)
  - ☐ Some college, but no degree
  - ☐ Associate Degree
  - ☐ Bachelor's Degree
  - ☐ Master's Degree
  - ☐ Professional Master's Degree (JD, MD)
  - ☐ Prefer not to respond
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## Debrief

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In this study, you were shown two sets of social media apps with different security background information. Most of the security information provided was not based on actual events but was created for scientific purposes(Fake). This was done to simulate what you would do when downloading apps in the real world, where you would not always know if an app is secure or not without research.