Understanding Saudis' privacy concerns when using WhatsApp

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Where People and Computing **Connect**.

Privacy and Culture

- In 2004 , Saudi Arabia's highest religious authority has banned use of cell phones with built-in cameras.
- Why?
  - Concern about photos being taken of women without their headscarves "hijab" or their modest clothes.

http://www.foxnews.com/story/2004/09/30/saudis-ban-use-cell-phone-cameras.html

FOX NEWS

Saudis Ban Use of Cell-Phone Cameras

Published September 30, 2004

Associated Press

RIYADH, Saudi Arabia – Saudi Arabia's highest religious authority has issued an edict barring the use of cell phones with built-in cameras, blaming them for "spreading obscenity" — a final resort after a ban on their sale and import to the kingdom failed to dent their popularity.

Privacy and Culture

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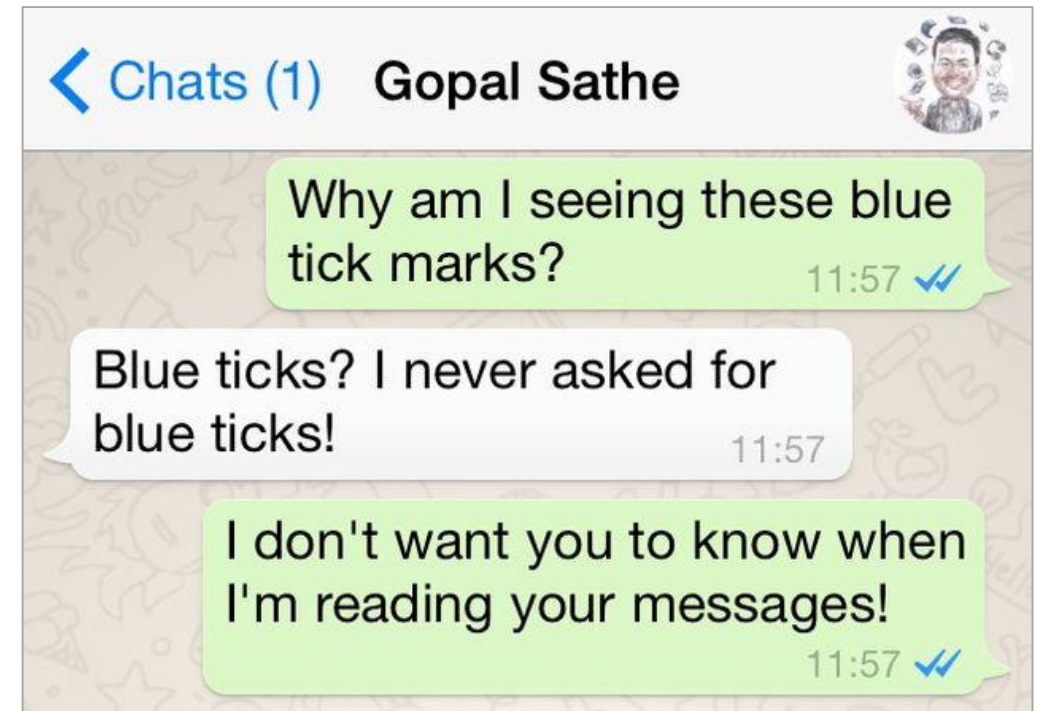
Privacy and Culture

- At the end of 2004, the Saudi government allowed the sale and use of phones with built-in cameras.

- Use of camera phones are still discouraged or prevented in women gathering events.

الرجاء عدم التصوير بالخلويات

Mobile Instant Messaging (MIM) and Privacy

- In 2015, Mobile phone messaging apps were used by more than 1.4 billion consumers worldwide.

- In 2015, 75% of smartphone users used at least one mobile messaging app at least once a month.
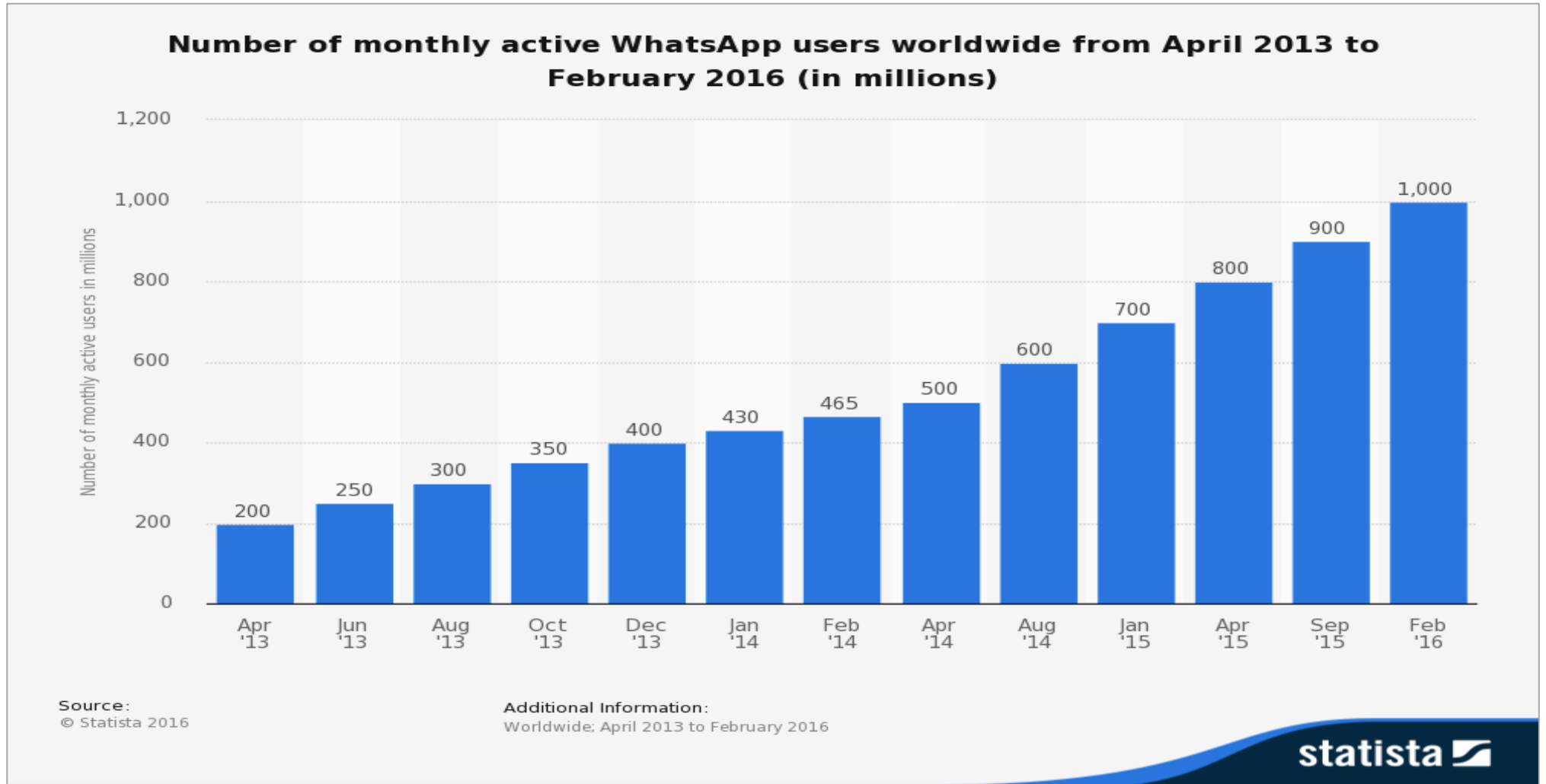
http://www.emarketer.com/Article/Mobile-Messaging-Reach-14-Billion-Worldwide-2015/1013215

WhatsApp Messenger

What is WhatsApp?

Number of monthly active WhatsApp users worldwide from April 2013 to February 2016 (in millions)

Number of monthly active users in millions

Apr '13	Jun '13	Aug '13	Oct '13	Dec '13	Jan '14	Feb '14	Apr '14	Aug '14	Jan '15	Apr '15	Sep '15	Feb '16
200	250	300	350	400	430	465	500	600	700	800	900	1,000

http://www.statista.com/statistics/260819/number-of-monthly-active-whatsapp-users/

Methodology

Research Questions

R1: How do Saudi users control access to their information using WhatsApp settings?

R2: How do Saudi users manage issues associated with one-sided connections?

Web-based Survey

- Written in English and Arabic

- Tested by native speakers

- Survey Design
  - 42 questions; Multiple choices and 5-point Likert scales questions
  - Demographics, MIMs use, WhatsApp use, non-privacy and privacy settings, and opinions.

- Snowball sampling by sending messages to existing WhatsApp contacts and public social networking pages for Saudis in the United States

Demographics

- 1238 respondents accessed the online survey.
- 945 respondents completed it.

Ethnicity (self report)	Percentage
Arab (Saudi)	66.17% (n=626)
Arab	22.73% (n=215)
Indian	2.43% (n=23)
American	1.48% (n=14)
Asian	1.27% (n=12)
No Answer	5.92% (n=56)

How respondents chose to identify themselves (percentage, frequency)

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How respondents chose to identify themselves (percentage, frequency)

Demographics

- 51.37% students
- 18.43% unemployed
- 46.33% aged between 25 to 30 years old
- 64.54% women

Employment Status	Percentage
Graduate Students	28.54%
Undergraduate Students	22.83%
Employed	23.66%
Unemployed	18.43%
No Answer	6.54%
Age	Percentage
18-24	21.88%
25-30	46.33%
31-40	21.25%
41+	8.79%
No Answer	1.76%
Gender	Percentage
Women	64.54%
Men	31.79%
No Answer	3.67%

Results

- WhatsApp usage

- Awareness and use of settings

- Managing unwanted contact

WhatsApp Usage

Results

WhatsApp: New connections

- WhatsApp uses phone numbers to uniquely identify users.

- The contacts list on WhatsApp is drawn directly from the phone's contact list.

- Mutual consent is not required to add someone as a contact.
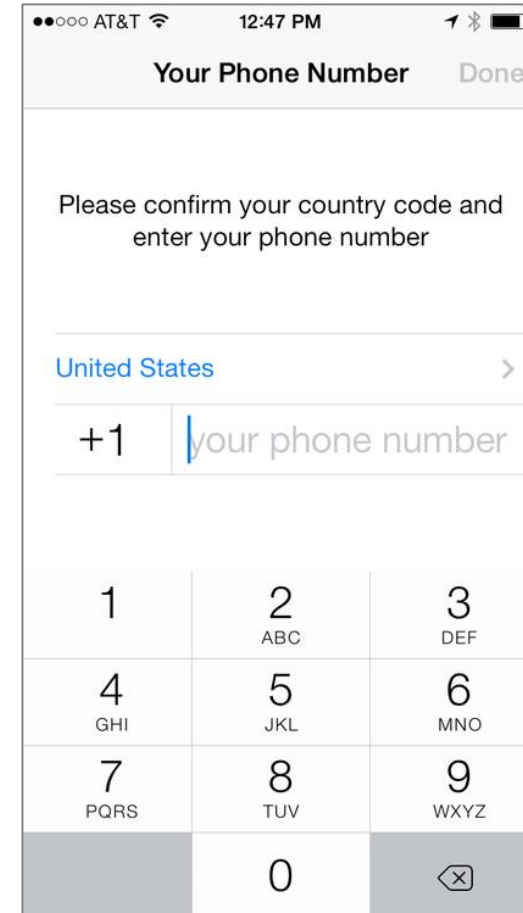
WhatsApp Usage

Data Type	Percentage
Text Messages	88%
Images	82%
Links and News	77%
Videos	71%
Contact Information	58%
Location	44%

Type of information respondents sent to their contacts using WhatsApp.

- 53.4% agreed that they use WhatsApp to send "sensitive content".

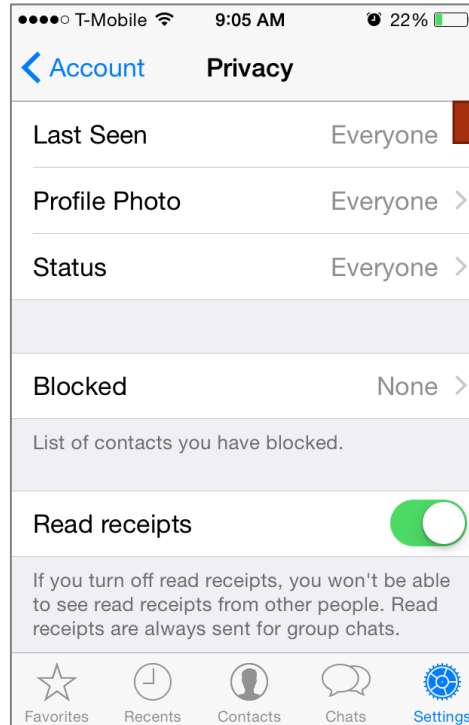How often respondents contact each group through WhatsApp
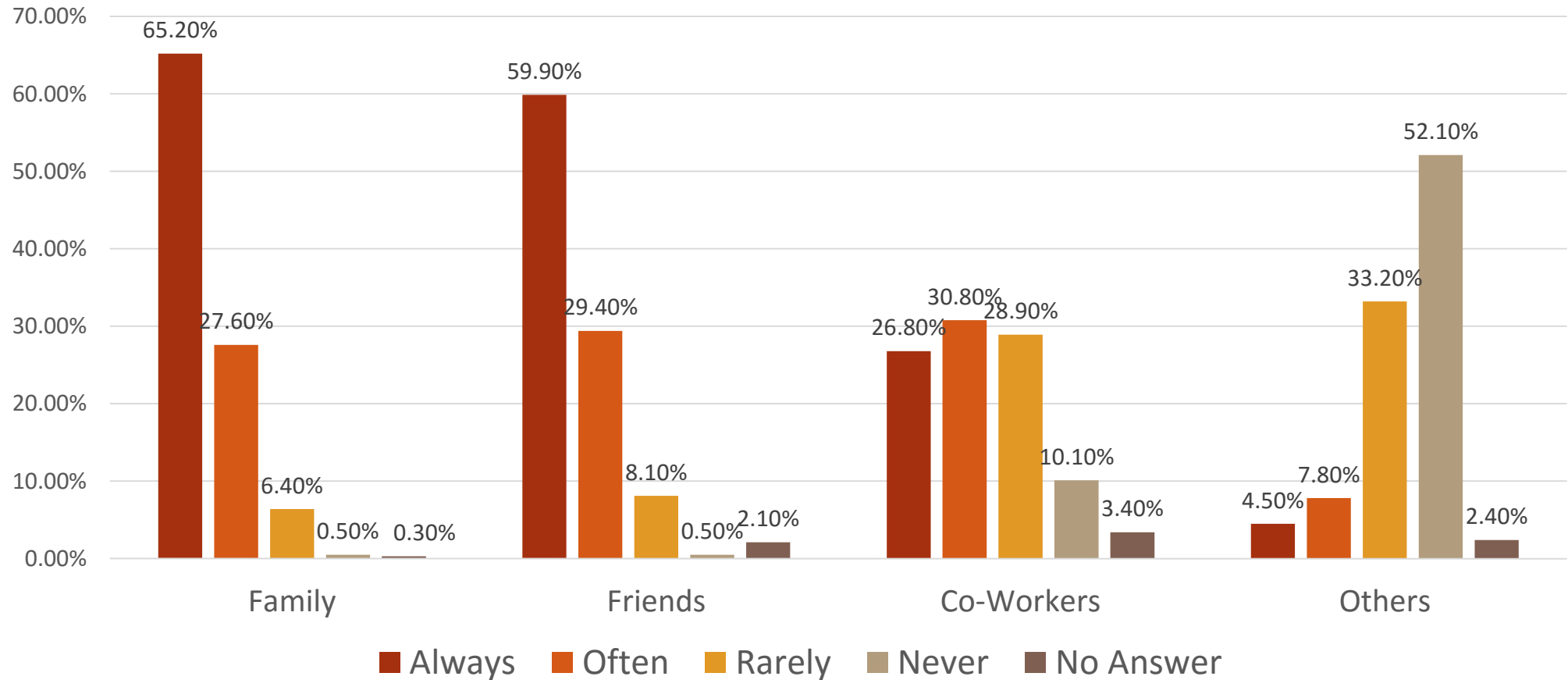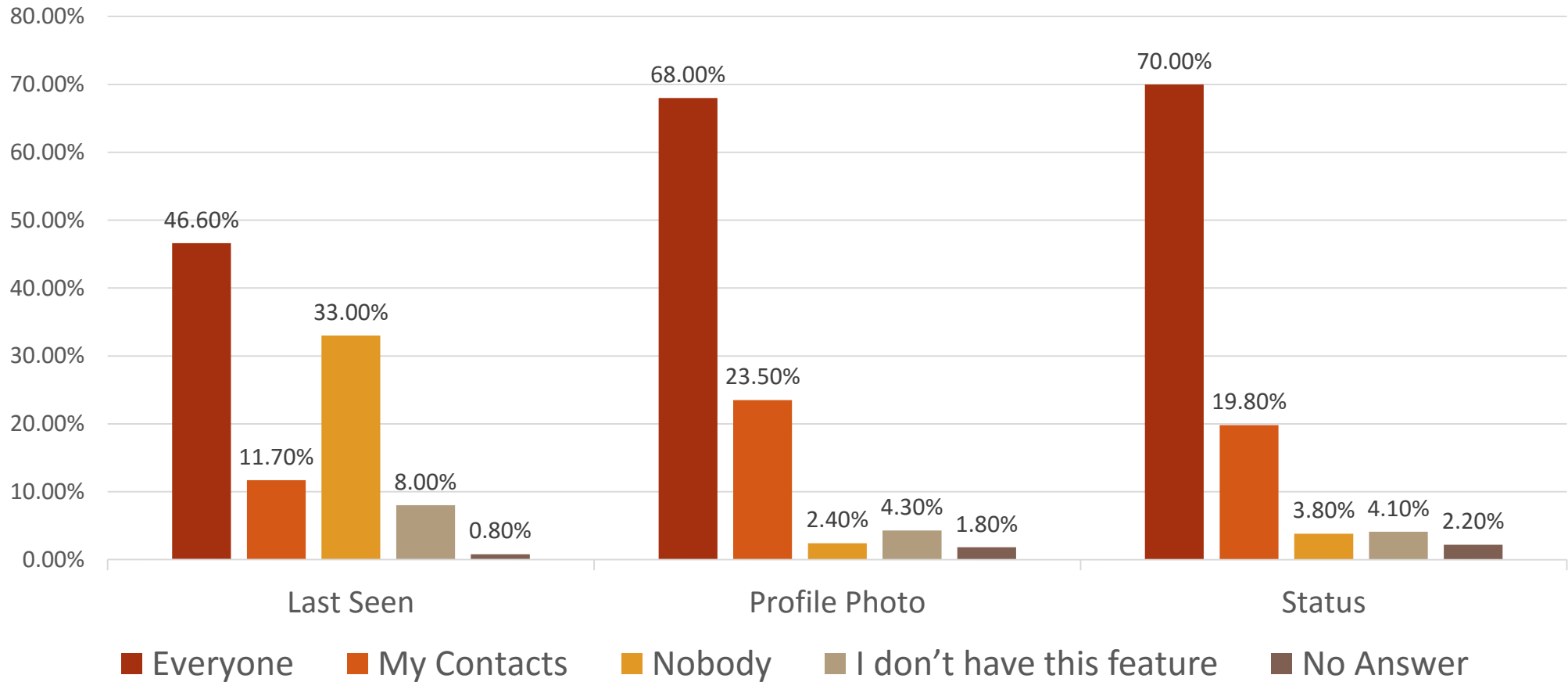
Awareness and Use of Settings
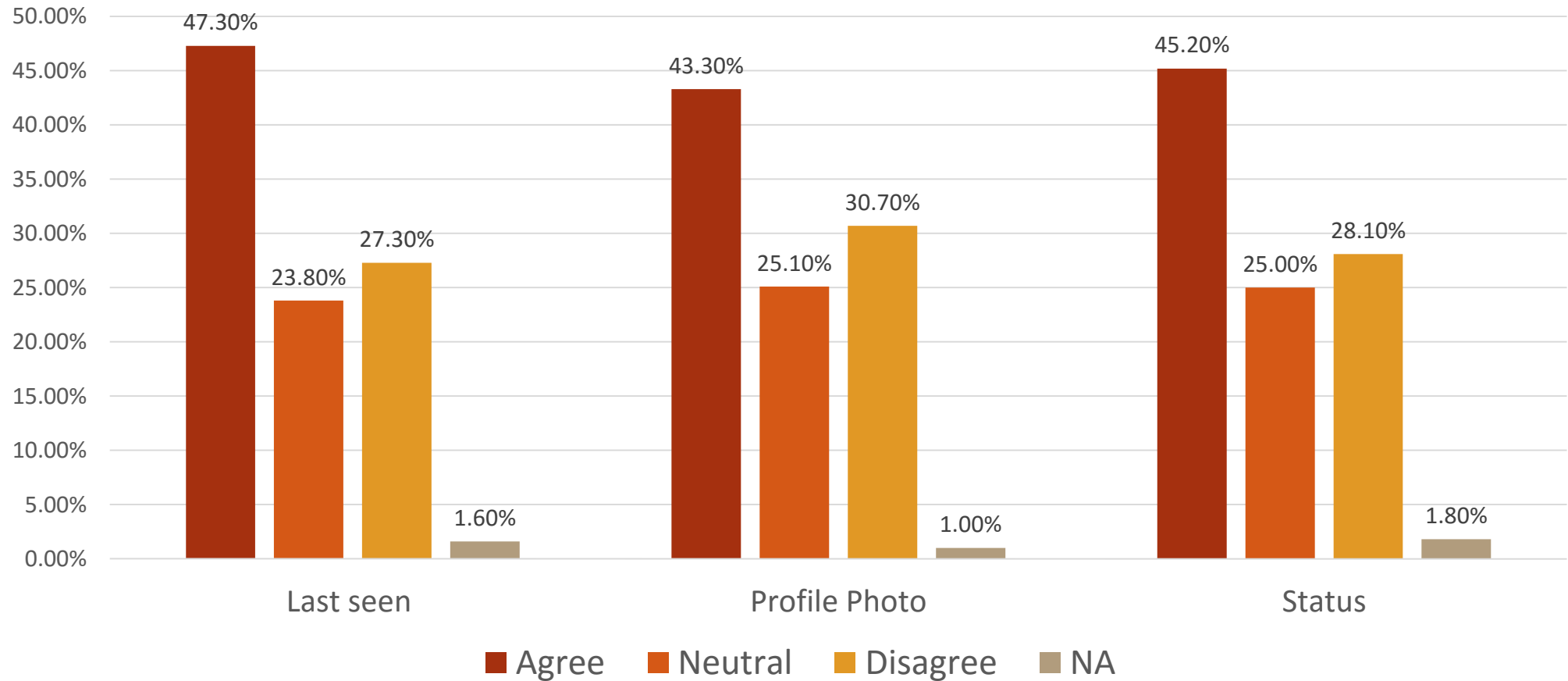
Results

WhatsApp: Privacy settings

- Profile information is visible to all users by default.

- The only way to prevent communication is by blocking.
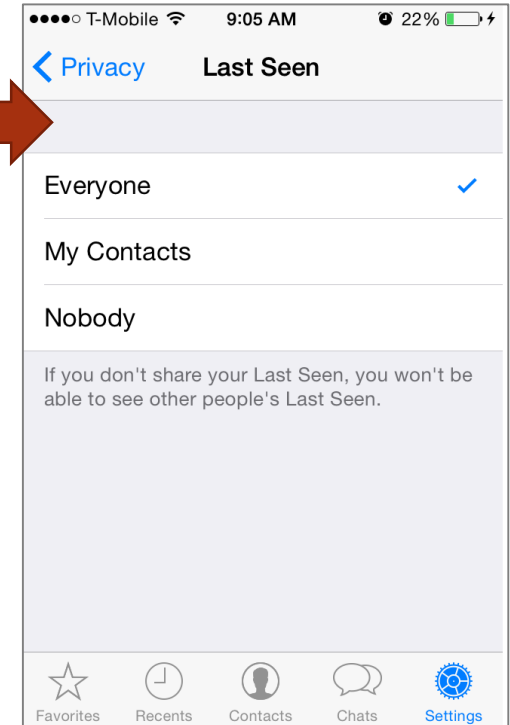
Respondent self-reported privacy settings

I want to be able to hide my [profile information] from specific people in my contact list
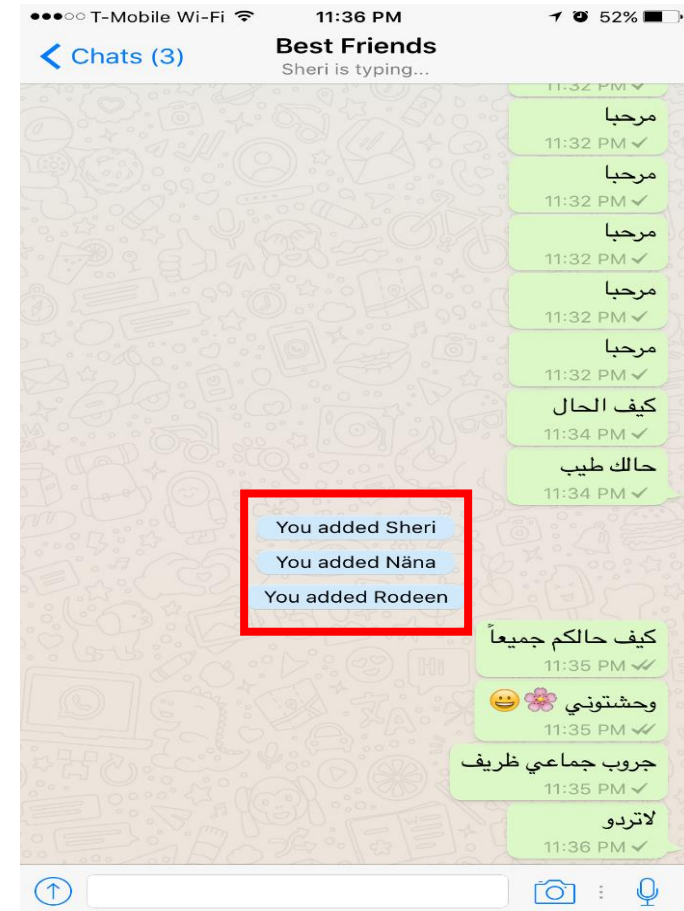
WhatsApp: Group Chat

- A Group Chat is a conversation amongst a group of WhatsApp users.
- Phone numbers are visible to all members of a Group Chat.

Group Chat

The vast majority of participants agreed that they would like to be asked before being added to a group (80.8%, n=506 in agreement and 7.0%, n=44 against).

Managing Unwanted Contact

Results

Contacting by A Stranger

- 83.9% had been contacted by strangers previously.

- No statistically significant difference between men and women in the frequency of contact by strangers.

- 53.8% agreed that it bothered them that a stranger can see their profile information while 28.6% said "maybe".

Blocking Feature

- 75.1% had used blocking feature before.

- Women (81.7% of female respondents) were statistically significantly more likely to use the blocking feature than men (62.8% of male respondents).
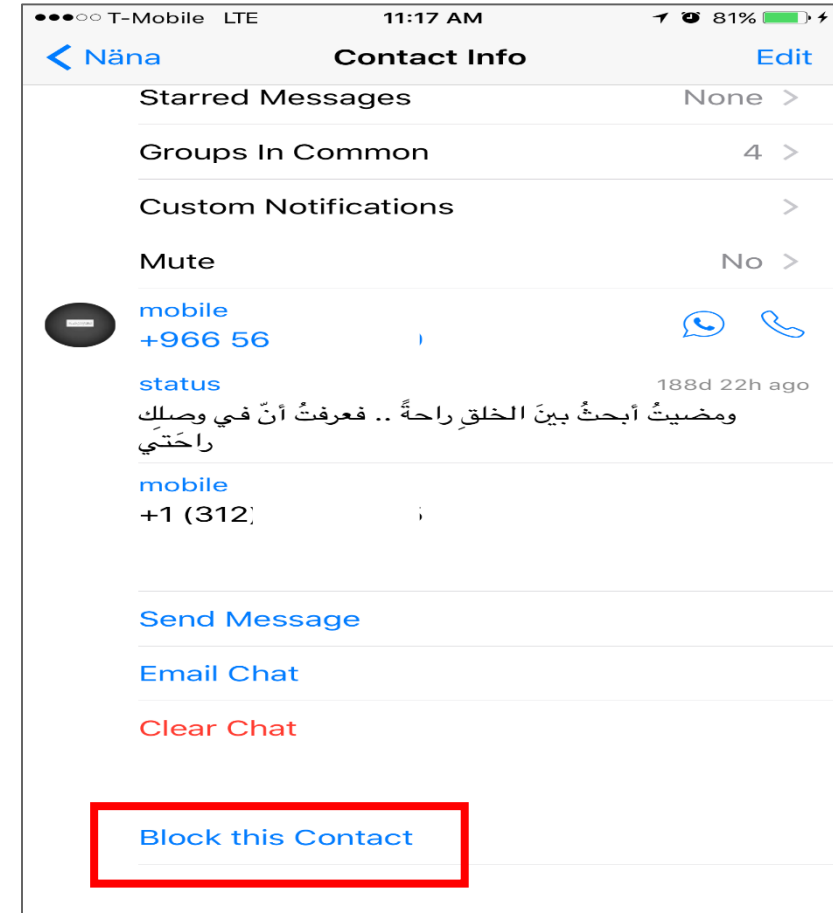
Reasons why men and women who have blocked someone before chose to block people.

Reason	Women	Men
He has my number but I don't know this person	52.2%	21.6%
I have this person's phone number, but I don't want him to contact me over WhatsApp	7.2%	10.6%
I don't want him to be able to see my profile photo and/or status	9.7%	7.0%
We are not friends anymore	4.2%	8.5%
We had a bad fight	12.9%	20.1%
No Answer	13.9%	32.2%

* Values shown as a percentage of women and men due to the uneven number of female versus male respondents.

Discussion

One-sided connections

One-sided connections

- WhatsApp makes it easy to add a new contact by not requiring that contact to approve the connection.
- Users do not know if they have been added by someone not in their contact list.
- The feature does not take into account the change of use of WhatsApp.

Unwanted Contact and Blocking

- 83.9% of our respondents have been contacted by a stranger.

- Saudi women were more likely than men to use the blocking feature after being contacted by a stranger.

- This might due to the nature of relationship between men and women in KSA.

Unwanted Contact and Blocking

- Managing unwanted contacts put a burden on users.
- Blocking might not be enough to prevent any future new contact(s).
- A female respondent explained in the comment section that:

    "I once had to delete my phone number because of a stalker that kept sending me messages from different phone numbers. Blocking his numbers was not effective. That was a breach of my privacy."

Conclusion

- Our survey contributes to the body of literature on how users manage their privacy using MIM applications.

- Saudi users are aware of the privacy settings, and make use of them.

- Majority want to be asked before adding them to a Group Chat.

- Block feature is also used to control access to the profile information.

- Men and Women use blocking, but for different reasons.