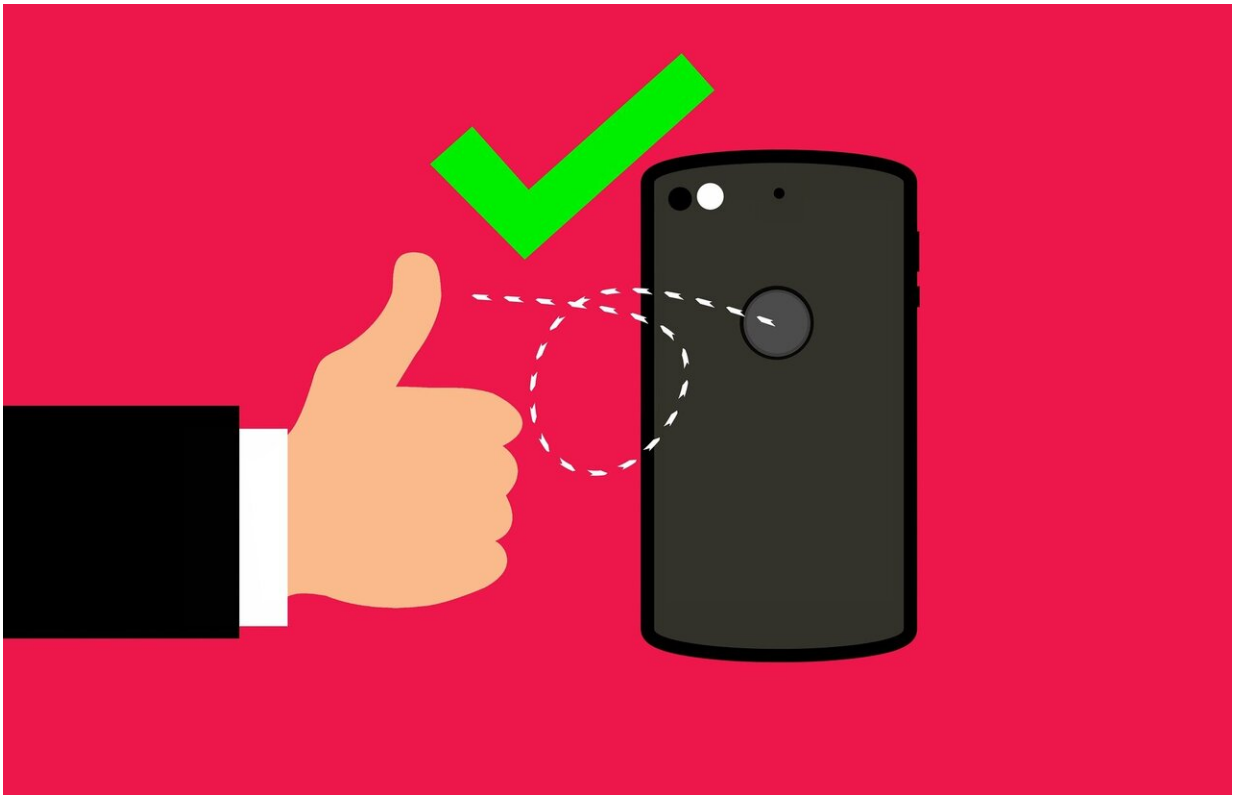


# How you lock your smartphone can reveal your age: study

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Credit: CC0 Public Domain

Older smartphone users tend to rely more on their phones' auto lock feature compared to younger users, a new UBC study has found. They also prefer using PINs over fingerprints to unlock their phones.

Researchers also found that older users are more likely to unlock their phones when they're stationary, such as when working at a desk or sitting at home.

The study is the first to explore the link between age and [smartphone](#) use, says Konstantin Beznosov, an electrical and computer engineering professor at UBC who supervised the research.

"As researchers working to protect smartphones from unauthorized access, we need to first understand how users use their devices," said Beznosov. "By tracking actual users during their daily interactions with their device, we now have real-world insights that can be used to inform future smartphone designs."

Analysis also showed that older users used their [phone](#) less frequently than younger users. For every 10-year interval in age, there was a corresponding 25 per cent decrease in the number of user sessions. In other words, a 25-year-old might use their phone 20 times a day, but a 35-year-old might use it only 15 times.

The study tracked 134 volunteers, ranging from 19 to 63 years of age, through a custom app installed on their Android phones. For two consecutive months, the app collected data on lock and unlock events, choice of auto or manual lock and whether the phone was locked or unlocked while in motion. The app also recorded the duration of user sessions.

The study also found gender differences in authentication choices. As they age, men are much more likely to rely on auto locks, as opposed to manually locking their devices, compared to women.



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In terms of overall use, women on average use their phone longer than men, with women in their 20s using their smartphones significantly longer than their male peers. However, the balance shifts with age, with men in their 50s logging longer usage sessions than women of the same age.

While the study didn't look at the reasons for these behaviours, Beznosov says the findings can help smartphone companies design better products.

"Factors such as age should be considered when designing new smartphone authentication systems, and devices should allow users to pick the locking method that suits their needs and usage patterns," he said, adding that future research should look into other demographic factors and groups of participants, and explore the factors involved in authentication decisions.

The study was presented at last month's CHI Conference on Human Factors in Computing Systems in Glasgow, Scotland.

**More information:** Lina Qiu et al, Towards Understanding the Link Between Age and Smartphone Authentication, *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems - CHI '19* (2019). [DOI: 10.1145/3290605.3300393](https://doi.org/10.1145/3290605.3300393)

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