

The use of authentication methods on mobile devices by people with vision impairment

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Context

People who are blind or have low vision tend not to protect their smartphones with user authentication methods, according to prior work.

How people with vision impairment perceive and use authentication methods?

Approach

Conduct an accessible online survey, with ~30 questions (multiple choice or text entry).

The survey was posted in Qualtrics and shared by email and Facebook with more than 400 organizations that support people with vision impairment.



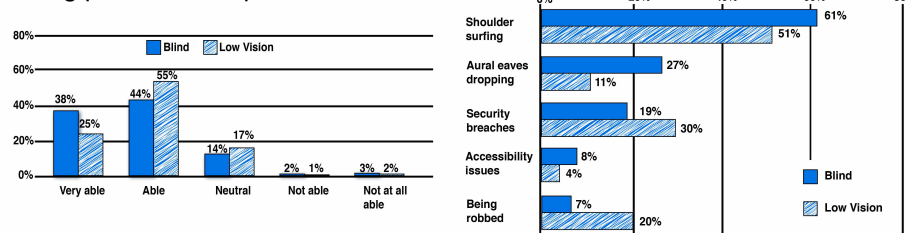
We collect answers from 325 participants from 12 countries: 225 blind and 100 with low vision 53% females and 47% males Age: M=45.7

Results

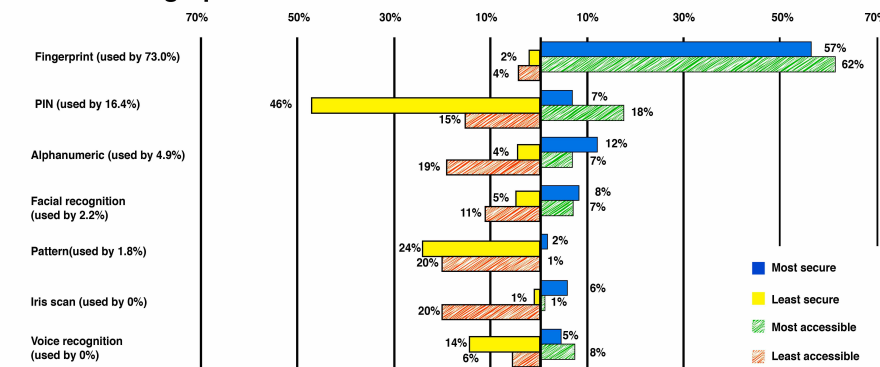
Most have protected smartphones.

91% have smartphones (75% of them use authentication methods).

Most feel able to protect their digital information, but **70% are concerned** using passwords in public.



Most use fingerprint and consider it the **most secure** and **accessible** method.



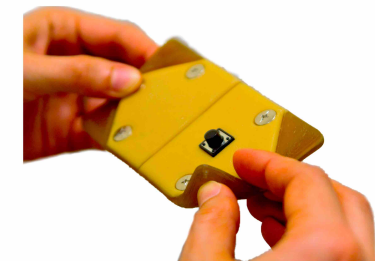
However, **PIN** is considered the **least secure** method.

Conclusion

PINs are required to use fingerprint, but are considered unsecure by people with vision impairment.

Future work

Explore a novel authentication method that: **1)** does not require vision, **2)** uses tactile cues, **3)** provides haptic feedback and **4)** it is easy to use.



BendyPass prototype

Reference

Briotto Faustino, D. and Girouard, A. 2018. Understanding Authentication Method Use on Mobile Devices by People with Vision Impairment. ACM SIGACCESS conference on Computers and accessibility (2018).