THF Unit 1: Blog post entry understanding user attitudes and behaviours towards using smartphones and their security implications based on data collected in China (Zhang et al., 2017).

When referring to the data collected by Zhang et al. (2017), we can base an understanding of user attitudes and behaviours toward using smartphones. Despite the study having a smaller sample, the study can give a fair representation of the results.

The study refers to two main approaches: installing security measures in the device or managing user behaviour towards preventing unauthorised access to sensitive information.

Results collected identified that gender roles offer differing approaches toward smartphone use. Males tend to offer a higher risk approach with overconfidence in downloading and authorising applications with little regard for permissions. However, males do tend to log out more of accounts. Females would more likely offer a screen lock mechanism on their phones.

Delving further, we understand that concerns are raised from users' attitudes and behaviour, with 59% of users downloading from untrusted sources. This leaves sensitive data at greater risk, and of this, 42% may click links to untrusted sources, allowing themselves to open themselves to potentially malicious users. The installation of security measures is also a concern, with only 52% of users installing anti-virus, 64% sometimes using unsecured wifi networks and 42% using simple passwords. We can assume that attitudes and behaviour may be deemed poor to maintain the CIA triad, protect sensitive information, and reduce malware's potential infection. Concerns escalate at 22% never back up their data, and 40% of users do not erase data from

an end-of-life device. The study indicated that whilst the sample was broad and generally of an education level, it is clear that education is vital, and greater emphasis should be placed on this area. Users have no formal security training in using their devices, and education would be helpful. In order to move forward, training programmes, recommended application sources, logging out, allowing updates, permission scrutiny, backing up data, erasing data from unused devices, and anti-virus installation may be helpful practices. However, these recommended solutions can only be effective if users can reflect and be aware of potential risks. Users would need to change their behaviour and consider the security implications of a habitual nature.

Zhang, X. J., Li, Z. & Deng, H. (2017). Information security behaviors of smartphone users in China: an empirical analysis. *The Electronic Library,* 35, (6): 1177-1190.