

# The Study of Cybersecurity Self-Efficacy: A Systematic Literature Review of Methodology

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## Cybersecurity Self-Efficacy:

The belief about one's own ability to enact skills related to IT security or privacy has an inherent importance for security behaviors.

Blurred terminology and recent technological innovations call for a systematic review.

## Focus of Research Questions:

- Methodology and psychometric properties of self-efficacy scales
- Role of self-efficacy for IT security and privacy
- Intervention to manipulate self-efficacy
- Research in the context of smart home devices

## Methods:

Preregistered at OSF: <https://bit.ly/3wPWBYF>

## Selection criteria:

- ✓ empirical studies with  $N > 1$
- ✓ published after 2009 in English
- ✓ measures self-efficacy regarding IT security or privacy

Our search string combined self-efficacy and IT security terms (e. g. cybersecurity, data protection, privacy).

Records identified through 18 electronic database searches (hits = 1769)

Records after duplicates automatically removed (titles= 1017)

Records after removal with python script for abstract relevance (titles = 862)

1. Randomization

Titles of records screened (n = 696)

Abstracts of records screened (n = 562)

Full text articles assessed for eligibility (n = 286)

Studies included in coding (n = 169)

2. Randomization

Coding by 3 blinded reviewers à two thirds of final study sample



<https://bit.ly/3aCi9Ge>

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## Preliminary Results:

- Lack of consensus on a high-quality instrument
- Self-efficacy affects attitudes, intentions, and security behaviors
- Intervention designs are rare
- Smart home context overlooked

## Conclusion:

Our systematic literature review paints the current research on cybersecurity self-efficacy as a fragmented and incoherent picture.

## Updated Version:

Visit <https://bit.ly/3j57eTJ> for an updated version of this poster.

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## References:

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- [3] Mark Chan, Irene Woon, and Atreyi Kankanhalli. Perceptions of information security in the workplace: Linking information security climate to compliant behavior. *Journal of Information Privacy and Security*, 1(3):18–41, 2005.

