

Organisational Privacy Culture and Climate

A Scoping Review Protocol

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Document versioning control			
LHI	v0.0	- Proposed protocol for Scoping Review.	03/09/2021
LHI	v0.2	- Incorporating changes suggested by AVS.	13/09/2021
LHI	v1.0	- Adding the concept of “organisational values” to the search strategy. - This version of the protocol has been agreed upon among all authors, allowing the searches to start.	16/09/2021

Motivation

In recent years, several countries have enacted privacy and data protection regulations, e.g., the European General Data Protection Regulation (GDPR), the California Consumer Privacy Act (CCPA), and the Brazilian General Data Protection Law (LGPD). This scenario has forced organisations to adapt and implement new privacy practices and strategies to not only achieve regulatory compliance but, most importantly, to respect people’s privacy when developing new technology.

Recent research suggests that privacy practices are strongly influenced by the organisation’s privacy culture and climate [1][2]. The organisation’s culture and climate influence how its employees perceive and address privacy in working systems. Unfortunately, however, the current understanding of what “organisational privacy culture and climate” stands for remains vaguely defined. Given that, this research project proposes a scoping review [3] to identify and synthesise existing work on the topic of organisational privacy culture and climate.

Justification

Before starting this research project, the authors searched for existing systematic reviews on the topic. A few databases (i.e., Google Scholar, Scopus, IEEE Xplore, ACM Digital Library and Web of Science) were searched using the keywords: review, organisational culture, organisational climate, and privacy. This preliminary search reassured us that there are no existing systematic reviews on the topic. Nonetheless, we were able to identify a few existing reviews that are worth mentioning.

Table 1 - Summary of existing related work.

Ref	Year	SLR	Title	Limitations
[4]	2020	Yes	Privacy and Security in the Digitalisation Era	- It does not directly address Organisational Culture but points to it as an essential component.
[5]	2016	No	Technological, Organisational and Environmental Security and Privacy	- Focus on Big Data. - It does not address directly Organisational Culture but points to it as an influential factor.

			Issues of Big Data: A Literature Review	
[6]	2015	No	An identification of variables influencing the establishment of information security culture	<ul style="list-style-type: none"> - Focus on identifying variables that influence cultivating a Security Culture. - It does not address Privacy, specifically.
[7]	2017	No	Review of IS Security Policy Compliance: Toward the Building Blocks of an IS Security Theory	<ul style="list-style-type: none"> - Focus on security policy compliance for information systems. - It does not address privacy nor organisational culture.
[8]	2017	No	Exploring Organizational Culture for Information Security in Healthcare Organizations: A Literature Review	<ul style="list-style-type: none"> - Focus on Organizational Culture for information security in healthcare organisations. - It does not address privacy, specifically.
This ScR		Yes	Organisational Privacy Culture and Climate	<ul style="list-style-type: none"> - Focus on information privacy rather than information security, observing the fundamental differences between concepts. - It does not address explicitly Security Culture, although we can take into consideration the potential overlap.

There is a lack of systematic reviews in the area, especially scoping reviews that synthesise research evidence. The area of information security culture has been given more attention [6][7][8]. However, it is critical to differentiate between information security and information privacy. Privacy has broader dimensions, and even though security is a crucial pillar for achieving privacy, it cannot fulfil it alone. For instance, privacy includes transparency, informed consent, and intervenability, which are fundamentally different from the security properties of confidentiality, integrity, and availability. Lastly, existing research that touches on privacy is rather specific in scope (i.e., focus on digitalisation [4], and big data [5]) only indirectly points to the importance of organisational culture for ensuring privacy. The understanding of Organisational Privacy Culture and Climate remains vaguely defined and mostly unaddressed by the current work.

Research questions

General

This project aims to answer the overarching research question: **What is this thing called organisational privacy culture and climate?** The PCC mnemonic is used as a guide to frame the scoping review question, which stands for Population, Concept, and Context [3]. In this instance, organisations (such as a company, an institution, or an association, comprising one or more people and having a particular purpose) can be considered as the population, the concept is related to organisational culture and privacy, and the context involves the organisations' approaches for handling privacy when processing personal data and building working systems.

Here we aim to summarise existing work on the topic, identify gaps in current research, and provide a framework to position new research activities appropriately.

Other Specific Research Questions

- *What is the nature of the evidence on organisational privacy culture and climate?*
- *What is known about the concept of organisational privacy culture and climate?*
- *What is the state of existing primary research studies on organisational privacy culture and climate?*

Methods

Design

This research follows the methodology proposed in Preferred Reporting Items for Systematic Review and Meta-Analysis Extension (PRISMA) [9], and it is also guided by the PRISMA for Scoping Reviews (PRISMA-ScR) [10]. For this protocol, we also followed the PRISMA-P guidelines [11] to ensure the completeness and transparency of the review process. This protocol will be registered, if possible, in an appropriate database before carrying out the review (e.g., in the Center for Open Science, <https://osf.io/>).

Eligibility criteria

The publications retrieved through the searches will have their titles and abstracts screened by two reviewers and selected following the inclusion criteria that links back to the research objectives. Table 2 provides a summary of the inclusion and exclusion criteria.

Table 2: Summary of Selection Criteria

Inclusion	Rationale
Studies relating to organisation culture (and climate) with regards to privacy and data protection	Publications need to address both areas: (1) organisational culture or climate; and (2) information privacy. Organisations can be of the most diverse context and environments (e.g., businesses, governmental agencies, non-profit organisations, etc.). Privacy relates to the context of “Information Privacy” and “Data Protection”, concerning the collection and processing of personal data of individuals (e.g., system users, employees, civilians, etc.) by organisations.
Exclusion	Rationale
Studies that focus on “organisational culture and climate” for “information security”	There are works already published on “Information Security Culture” around Organisational Culture. In this study, however, we focus on Privacy rather than Security. Although information privacy and information security concepts overlap, the former has broader dimensions.
Studies that address key terms in isolation	Since this study addresses (1) organisational culture and climate and (2) privacy, publications that do not intersect these areas should not be included. For instance:

	<ul style="list-style-type: none"> • Papers that only propose security or privacy theories, methods, tools or techniques, without addressing “organisational culture”. • Papers on people’s or users’ privacy that do not address “organisational privacy”. • Papers that address privacy culture in populations (e.g., a country’s culture) without addressing “organisational culture”.
Foreign language studies	Papers published in foreign languages that the authors do not master will be acknowledged, and their existence documented with ‘language’ recorded as the reason for exclusion. The languages that the authors can review are: English, Portuguese, Spanish, French, German.

Information Sources and Search Strategy

We will search four bibliographic and full-text databases: Scopus, Web of Science, IEEE Xplore, and ACM Digital Library. The databases will be searched, without any specific period of time, for peer-reviewed publications. A structured search strategy will be used based on key terms and ordered vocabulary relevant to our study objectives. Key terms relevant to our inclusion criteria include: organisational culture, organisational climate, organisational values, and privacy.

Therefore, the generic search string is structured as follows:

- (“organi*ational culture” OR “organi*ational climate” OR “organi*ational values”) AND privacy.

We also plan to conduct backward searches (screening references cited in included studies) and forward searches (exploring studies that cite included studies using Google Scholar). Furthermore, we will also search for relevant grey literature (e.g., unpublished work, reports, website information, newspaper articles) using the ‘OpenGrey’ literature database.

Study records

Data Management

To manage the screening process, we will export search results from each database and then import them to the RAYYAN software, allowing both researchers to select papers independently (i.e., double-blinded) and manage conflicts by a third reviewer. Duplicated publications can also be removed using RAYYAN during the selection process.

Data Extraction

After completing the selection of the relevant studies, the reading in full of the publications starts. The primary reviewer will extract significant data from each publication and initiate the data charting at this stage. A secondary reviewer will perform quality control, assessing the consistency for a representative sample of selected publications. This pre-trial will allow us to resolve any conflicts, discuss and settle among reviewers, and a new data charting iteration can be performed following an agreed and consistent process. We will use a charting form to include study details, characteristics, and key findings related to the review question. This process of reading, extracting and charting data constitutes an

iterative process in which researchers can continuously criticise, agree, and update the charting form as needed. To ensure transparency in the reporting, we will take notes to explain the rationale for the charting form creation and updates.

Preliminary components of the charting form

- Demographics of the publications: author(s), publication date, title, journal, and citation. Most of these data points can be easily obtained from the final list of publications after the selection process using RAYYAN software (i.e., exported to Excel format).
- Potential facets for data charting: publication type, research type, contribution type, organisation type, relevant privacy laws, relevant privacy measures and controls.
- Main contributions and summary of the work.
- Study results and relevant conclusions, effects on organisational privacy culture, and directions for future research.
- Critical appraisal of quantitative and qualitative studies.
- Potential references cited in the study for backward snowballing.

Data Synthesis

The data charting process will provide us with a structured dataset that can be used to summarise the research results. Quantitative data (e.g., year of publication, citations) and qualitative data (e.g., type of publication, contribution type) can be discussed and reported using tables and figures when necessary. This first step of the data synthesis will allow us to create a map of the body of knowledge. As a second step, a descriptive thematic analysis will be performed based on the content of the charting forms, allowing us to generate a narrative summary of the data synthesis. Besides, the search process will be described using the PRISMA flow chart diagram.

Preliminary components of the data synthesis

- Demographics of the publications.
- Privacy definitions and context.
 - Privacy dimensions covered; relevant legislation.
- Organisation types and context.
 - Elements and aspects of organisational culture for privacy; strategies and practices.
- Overall summary of the existing research, e.g., using potential categorisations and comparisons.
- Conceptions, definitions and theoretical frameworks for organisational privacy culture and climate.
- Impact and influence of organisational privacy culture, negative and positive privacy climate, etc.
- Summary of the critical appraisal of studies.

Dissemination

The results of this study will be made available in scientific venues, such as conferences and journals. We also plan to disseminate findings among key stakeholders, such as international associations of privacy practitioners, research communities and industry partners.

Conclusion

This scoping review will map the existing literature on organisational privacy culture and climate, summarise the body of knowledge, identify gaps in current research, and provide a framework to position new research activities appropriately. As a result, a more precise understanding of organisational privacy culture and climate will help scholars and industry practitioners to manage privacy within organisations and working systems better.

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