

# A Systematic Review of Persuasive Technology in Defence and National Security: Extended Abstract

Steven E. Davis , Mirela Stjelja and Dragana Calic

*Defence Science and Technology Group, Edinburgh, SA 5111, Australia*

## Abstract

The use of persuasive technology (PT) is not well understood or documented in the context of defence and national security. The purpose of this study is to conduct a systematic review to present the current state-of-the art of PT with respect to defence and national security by identifying prominent sources, theories, methodologies, applications, and future trends. This understanding is necessary in a number of defence and national security areas, such as improving training and education and developing protective mechanisms to enhance digital resilience.

Our approach followed the Siddaway best practice guide for conducting systematic reviews. An initial search yielded 181,000 articles on PT, but no systematic reviews of defence and national security literature. After establishing inclusion/exclusion criteria, we refined search terms and limited our review to a 2002 to 2022 timeframe. Searches were then conducted in two academic databases (Web of Science, Scopus) and Google Scholar. We identified 1,233 unique articles, applying inclusion/exclusion criteria with at least two assessors examining each hit. At the time of submission, full texts of 236 (of 245) records have been analysed with 94 judged to meet inclusion criteria. Data were extracted in areas such as institution type/location, technology type, discipline, defence and national security application, theoretical perspectives, research design/methods, and future directions.

The results of the systematic review indicate that defence and national security related PT research predominantly focuses on defensive applications to build resilience and protect national interests. Prominent figures and institutions contributing to the field largely come from Western universities, often in collaboration with defence departments and research institutes. While academia appears to be driving the development of knowledge in the field, the collaborative nature underscores the practical relevance of PT in safeguarding national interests. This was also evident in the interdisciplinary character of the research, with substantial variation exhibited in methodological approaches and research designs. While foundational PT theories and psychological principles appear to play a significant role in shaping research, the large variety of theories, research designs and techniques indicate a multifaceted approach to understanding and applying PT in defence and national security. The dynamic and evolving nature of the area is substantiated by a significant prevalence of conference proceedings, planned future research directions, and varying technology types. Overall, trends in the literature demonstrate the evolving landscape of digital platforms (such as the integration of artificial intelligence), the need for adaptive strategies to counter emerging threats, and the need to establish ethical frameworks. As the field continues to evolve, focusing on building resilience and countering offensively used PT will be an important component of defence and national security in an increasingly digital world.

## Keywords

Defence, National security, Systematic review

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EMAIL: steven.davis5@defence.gov.au (S. E. Davis); mirela.stjelja@defence.gov.au (M. Stjelja); dragana.pittas@defence.gov.au (D. Calic);

ORCID: 0000-0003-4570-934X (S. E. Davis); 0009-0003-2676-0008 (M. Stjelja); 0000-0002-1314-5191 (D. Calic)

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