Preliminary insights from an AI-assisted scoping review into personalised communication of Socially Assistive Technologies B.M. Hofstede, S. Ipakchian Askari, R.H. Cuijpers, J.C.F. Ket, W.A. IJsselsteijn, H.H. Nap. *Gerontechnology* 25(s)

Purpose Socially Assistive Technologies (SATs), such as robots and virtual avatars, have gained attention for their potential to enhance social health for older adults [1]. Despite this potential, adoption remains low due to barriers like workload, costs, and user acceptance [2,3,4]. A critical factor contributing to this disengagement is the prevalence of generic one-size-fits-all interaction styles that fail to align with individual needs. Therefore, personalisation serves as an important concept to bridge this gap by increasing relevance and acceptance [5,6]. To gain more knowledge in possible personalisation strategies, this study aims to identify verbal personalisation strategies in SATs and assess their impact on user experience and acceptance in healthcare settings. **Method** A scoping review is conducted focusing on the personalisation of verbal communication in SATs within HCI and HRI contexts. A comprehensive search across seven databases (including ACM, Scopus, and Medline) yielded 25,093 records. To manage this volume efficiently, an AI-assisted active learning tool, ASReview [7], is utilised to prioritise relevant literature. Data extraction follows an iterative charting process, allowing for real-time validation of the research protocol and early identification of emerging themes regarding data sources and adaptation strategies. **Results and Discussion** Our preliminary findings demonstrate the efficiency of AI-assisted scoping reviews: 346 relevant papers were identified within the first 627 records screened, representing a relevance yield of over 55%. Furthermore, initial analysis reveals that the predominant personalisation method occurs at individual levels, for instance, through personal intervention schemes via text messages. However, group-level adaptations based on cultural or population-specific traits are also frequent, often derived from pre-deployment co-design sessions. Additionally, strategies employ both explicit and implicit awareness methods, predominantly aiming to induce positive behaviour or prevent negative health outcomes. Identified data sources for personalisation range from static inputs, such as questionnaires and community context, to dynamic inputs including sensor data (e.g., pedometers), in-app data, and context-awareness such as local weather reports. Currently, most strategies are resource-intensive due to manual customisation. We anticipate that advancements in self-learning AI and LLMs will reduce this burden in the future. In conclusion, these preliminary findings not only underscore the variety of personalisation approaches but also demonstrate the value of AI-assisted reviews in efficiently reviewing literature in the field of gerontechnology (i.e., the inter and multidisciplinary field that combines gerontology and technology).

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