

Peer Review

# Review of: "The Potential of Conversational AI for Mental Health Support in UK Armed Forces Personnel and Veterans: A Mixed-Methods Health Needs Assessment and Feasibility Study"

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This was a mixed-method study of the acceptability of AI voicebot technology amongst military personnel in the UK Army.

The study benefits from a pragmatic design and good identification of a key unmet need with regards to meeting the mental health needs of military personnel in the UK.

One of the limitations of the study is the lack of comparison of the demographic characteristics of the surveyed group with the wider Army cohort. The authors note that male, senior army members are over-represented in the sample, but it would be beneficial to know the baseline demographic characteristics to better understand how representative the convenience sample is of the target population.

It would further benefit from a sub-group analysis by active service status. The key barrier to accessing mental health services identified by the participants is the logistical difficulty of waiting lists and appointment scheduling. However, this might differ significantly based on whether they are in active service or veterans. This key insight could have significant implications for the future structuring of mental health services for the Armed Forces.

As identified by the authors, the convenience sampling method can lead to over-inclusion of individuals with higher base rates of digital literacy and openness to new technologies. As the study sets out to investigate barriers to care, it risks significant selection bias away from the most underserved individuals within the target population.

The addition of qualitative interviews provides an interesting dimension to the study by contrasting the survey results, which did not identify stigma and worry about career repercussions as a significant barrier to accessing care, with the perception of key informants. The inclusion of prompts for the semi-structured interviews in the Methods section would be welcome to allow further insight into the formulation of interview questions and whether they may have influenced the responses in line with the initial hypothesis of the study.

Overall, this exploratory study provides good insight into barriers to access and the acceptability of new technologies to facilitate the provision of mental health care amongst military personnel in the UK.

## **Declarations**

**Potential competing interests:** No potential competing interests to declare.