Digital exclusion and mental health in UK Armed Forces veterans

June 2026

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Core message

Digital-first must not become digital-only. In this study of UK Armed Forces veterans, digital exclusion was common even among people with devices and confidence, and it was linked to poorer mental health and loneliness. Veteran-facing services should routinely check digital needs, address affordability and privacy concerns, and keep non-digital routes open.

1,607	41.7%	60.2%	57.7%
veterans	reported digital exclusion	reported a cost barrier	Sometimes/often ran out of data or minutes

In this study, self-reported digital exclusion was measured by asking veterans whether they had ever felt excluded or disadvantaged because of a lack of digital access or skills. Those answering "yes, often" or "yes, occasionally" were classified as digitally excluded; those answering "no" were classified as not digitally excluded. "Not sure" responses were treated as missing for this measure. This measure captures perceived disadvantage related to digital access, skills or participation, rather than objective absence of internet access or digital devices.

Key findings

The study found that digital exclusion is a real and measurable issue among UK Armed Forces veterans. It was reported by 553 of 1,327 respondents with valid data on the primary digital exclusion measure, equivalent to 41.7%. This is notable because the survey was completed online, meaning the most digitally excluded veterans are likely to be under-represented. For context, the UK Government's Digital Inclusion Action Plan estimates that 1.6 million people in the UK are offline, and that around 23% of the UK population may struggle to interact with online services. Our estimate of 41.7% is not directly comparable because the Veterans' Digital Needs (VDN) study used a different measure, focused on whether veterans felt excluded or disadvantaged due to digital access or skills. However, it suggests that digital exclusion among veterans may be an important and under-recognised issue, even among those able to complete an online survey.

The findings show that digital exclusion is not simply about whether someone owns a smartphone or can connect to the internet. Most respondents reported access to three or more device types (e.g. smartphones, laptops, tablets, smart TVs) and most described themselves as very confident using digital technologies. However, many also reported affordability problems, data limits, privacy concerns and difficulties using digital platforms for essential services. Only 52.2% reported accessing healthcare services online in the past year and 48.7% reported accessing government or public services online in the past year; 26.3% reported having experienced difficulties using digital platforms for essential services. In practical terms, a person may be online but still unable to use digital services reliably, safely or confidently when they need support.

Self-reported digital exclusion was also associated with poorer mental health and loneliness. After adjustment for age, gender, education, income, disability, region, service branch, service type, rank and deployment count, veterans who reported digital exclusion had higher odds of screening positive for probable depression (AOR 1.38, 95% CI 1.04 to 1.83), probable anxiety (AOR 1.63, 95% CI 1.23 to 2.16) and probable loneliness (AOR 1.85, 95% CI 1.43 to 2.40). Put simply, this means digitally excluded veterans had approximately 38% higher odds of probable depression, 63% higher odds of probable anxiety and 85% higher odds of probable loneliness than veterans who did not report digital exclusion, after accounting for measured demographic and service-related factors.

Finding	Why it matters
Digital exclusion was reported by 41.7% of respondents.	Digital exclusion should be treated as a mainstream access issue, not a marginal concern.
Device access and confidence were high, but cost, data and privacy barriers were common.	Policy should look beyond device ownership and address affordability, trust, privacy and practical support.
Younger veterans and female veterans reported higher levels of digital exclusion in this sample.	Digital inclusion initiatives should not be targeted only at older people.
Digital exclusion was associated with probable depression, anxiety and loneliness.	Digital-first systems may widen health inequalities if vulnerable groups are not supported.
Only around half reported accessing healthcare services (52.2%) or government/public services (48.7%) online in the past year; 26.3% had experienced difficulties using digital platforms for essential services.	Digital veteran services should not assume that online routes are already reaching everyone, even among veterans able to complete an online survey.

Why this matters

Digital health and public services are now central to how people access care, welfare advice, benefits information, government services and social support. For veterans, digital services can improve reach and convenience, particularly where specialist support is geographically dispersed. Digital interventions also have potential for mental health support, alcohol reduction, transition support and social connection.

However, digital transformation can create a new barrier when services assume that access to a device is enough. Veterans may be digitally excluded because they cannot afford reliable connectivity, run out of data, struggle with online forms, lack privacy at home, distrust how their data will be used, or feel unable to complete digital tasks when unwell. These barriers matter because they can affect access to healthcare, welfare support, charities, local authority services and wider social participation.

The central implication is that digital inclusion should be built into service delivery from the start. Digital-first services can only be equitable if people who cannot use digital routes easily are identified and supported, and if non-digital routes remain available for those who need them.

A practical interpretation

A veteran may own a smartphone, have internet access and still be digitally excluded if they cannot afford data, cannot complete online forms, are worried about privacy, or feel unable to use digital systems when anxious, depressed or isolated.

Evidence base

The Veterans' Digital Needs Study used a cross-sectional online survey of UK Armed Forces veterans. Data were collected over nine months during 2025 to 2026 using an anonymous questionnaire. The survey asked about sociodemographic characteristics, military service background, health status, digital access, digital barriers and digital needs. The digital question bank was developed for this study and adapted from a previously implemented US veterans' digital needs approach for UK language and service context. Items included access to different device types; confidence using digital technologies such as online forms and apps; whether people run out of phone data or minutes; whether they had received digital-skills support; whether cost or privacy concerns affected digital access; whether they had accessed healthcare, government or public services online; and whether they had experienced difficulties using digital platforms for essential services.

A total of 1,911 responses were received. Responses were excluded if they were completed in under five minutes (*n*=198), flagged as duplicate responses (*n*=84), or had a Qualtrics Fraud Risk score greater than 0.5 (*n*=22). The cleaned descriptive sample comprised 1,607 veterans. The mean age was 43.7 years, and 65.1% of respondents were male. The majority had served in the Army and Royal Marines grouping, and most had served as junior ranks.

Probable depression was assessed using the PHQ-2, probable anxiety using the GAD-2, and probable loneliness using the 3-item UCLA Loneliness Scale. The main exposure was self-reported digital exclusion, measured by asking whether participants had ever felt excluded or disadvantaged due to lack of digital access or skills. Those answering "yes, often" or "yes, occasionally" were classified as digitally excluded; those answering "no" were classified as not digitally excluded; and "not sure" responses were treated as missing for this indicator.

Digital exclusion was patterned across the veteran sample

Digital exclusion was not evenly distributed across the sample. It was reported by 53.5% of female veterans compared with 35.9% of male veterans. It was highest among younger veterans, with 60.3% of those aged under 35 years and 51.4% of those aged 35 to 44 years classified as digitally excluded. By comparison, 26.0% of those aged 65 years or older were classified as digitally excluded.

Household income was also important. Digital exclusion was lowest among respondents reporting household income above £55,000, at 11.1%, and higher across lower- and middle-income groups. It was also more common among junior ranks than among officer ranks. These findings challenge the assumption that digital exclusion is primarily an older-adult issue. In this sample, affordability, service background and wider social circumstances appear to matter as much as age.

Digital exclusion was linked to mental health and loneliness

Across all three outcomes, digitally excluded veterans were more likely to screen positive for probable mental health difficulties or loneliness. More than half of digitally excluded veterans met screening thresholds for probable depression and probable anxiety, and nearly two-thirds met the threshold for probable loneliness. These differences remained after adjustment for sociodemographic, regional and service-related factors. The adjusted odds ratios in the table compare digitally excluded veterans with veterans who did not report digital exclusion, while holding the listed covariates constant. Values above 1 indicate higher odds among digitally excluded veterans.

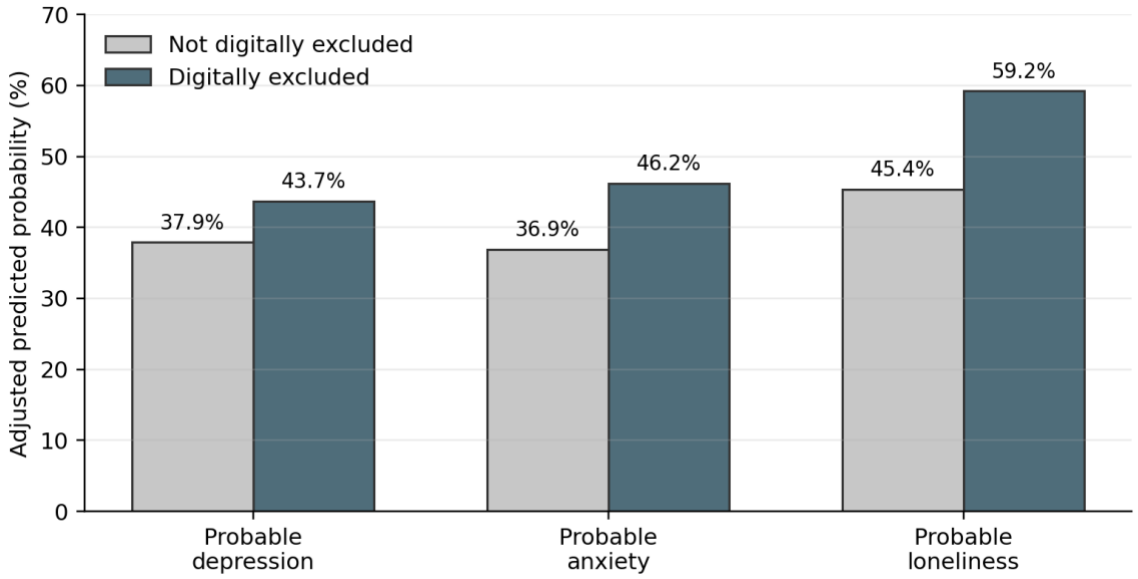
Outcome	Not digitally excluded	Digitally excluded	Adjusted Odds Ratios
Probable depression	223/770 (29.0%)	311/549 (56.7%)	AOR 1.38 (95% CI 1.04 to 1.83)
Probable anxiety	224/770 (29.1%)	317/548 (57.9%)	AOR 1.63 (95% CI 1.23 to 2.16)
Probable loneliness	328/769 (42.7%)	350/548 (63.9%)	AOR 1.85 (95% CI 1.43 to 2.40)

Note. Adjusted models included age, gender, education, income, disability, region, service branch, service type, rank and deployment count. Adjusted odds ratios use complete-case data for the variables included in each model.

In practical terms, an odds ratio above 1 indicates that probable symptoms were more common among digitally excluded veterans even after accounting for other measured factors. For example, the adjusted odds ratio of 1.85 for loneliness means that the odds of screening positive for probable loneliness were estimated to be 85% higher among digitally excluded veterans than among otherwise similar veterans who did not report digital exclusion. These estimates do not prove that digital exclusion causes poorer mental health, but they indicate a consistent relationship that should be considered when designing digital-first services.

In plain language, Figure 1 shows model-based percentages after adjustment for demographic and service-related factors. The predicted probability of probable depression was 37.9% among veterans not reporting digital exclusion and 43.7% among digitally excluded veterans. For probable anxiety, the equivalent figures were 36.9% and 46.2%; for probable loneliness, they were 45.4% and 59.2%. The largest difference was for loneliness, reinforcing that digital exclusion may be particularly important for veterans who are socially isolated.

Figure 1. Adjusted predicted probabilities of probable depression, anxiety and loneliness by digital exclusion status.



What this means for digital-first services

The findings support the principle that digital transformation should be accompanied by digital inclusion safeguards. The issue is not whether digital services should exist. Digital routes can be valuable and, for many veterans, convenient. The issue is whether online systems become the default or only practical route into support, especially for people experiencing mental health difficulties, loneliness, financial pressure or low confidence.

A narrow focus on device ownership risks missing the people who are *connected but excluded*. For this group, the barriers are more likely to be affordability, data limits, complexity, lack of support, privacy concerns and the cognitive burden of completing digital tasks. These are not minor usability issues; they are access and equity issues.

The association with loneliness is particularly important. Digital services are often introduced to improve reach and connection, but for those who cannot use them effectively they may reinforce isolation. If forms, triage, appointment systems, welfare applications and charity support increasingly move online, those who struggle digitally may face delayed help-seeking, incomplete applications or disengagement from services.

Policy implications and practical actions

The findings point to practical actions for national government, the NHS, local authorities, the Office for Veterans' Affairs, the Ministry of Defence, Armed Forces charities and other veteran-facing organisations. The overall message is that digital inclusion should be treated as part of service quality, safeguarding and health-equity work.

Policy area	Practical action
Digital needs screening	Introduce a short digital-needs check in veteran health, welfare, transition and charity settings. This should ask about data, affordability, confidence, privacy and help available, not just device ownership.
Non-digital access	Keep telephone, postal, community-based and face-to-face routes open for people who cannot use digital routes easily or safely. Digital-first should not mean digital-only.
Affordability	Recognise data, connectivity and device reliability as access-to-service issues. Consider targeted support, signposting or partnerships that reduce cost barriers for those most at risk.
Trust and privacy	Provide clear, plain-English explanations of how personal data are handled, who can see it, and how confidentiality is protected.

Policy area	Practical action
Inclusive design	Design veteran-facing digital services to work on older devices, minimise data use, use plain language and offer assisted-use options.
Evidence and evaluation	Evaluate digital services for who they fail to reach, not only who uses them. Future research should include offline and assisted-completion routes.

Limitations

The main limitation is that the survey was conducted online. Veterans with the most severe digital exclusion, including those without internet access, no suitable device or very low confidence, are likely to be under-represented or absent. The findings should therefore be read as evidence that digital exclusion is present even among veterans able to complete an online survey, rather than as a definitive estimate of prevalence in the whole veteran population.

The study was cross-sectional, so it cannot determine whether digital exclusion causes poorer mental health or whether depression, anxiety and loneliness reduce digital engagement. Both pathways are plausible and may reinforce each other. All measures were self-reported, questionnaire items were optional, and the primary digital exclusion measure was a single item capturing whether participants felt excluded or disadvantaged due to lack of access or skills. Future research should use representative sampling, offline recruitment, assisted-completion routes and more detailed measures of digital inclusion.

Conclusion

This study shows that digital exclusion is a significant issue among UK Armed Forces veterans and is associated with probable depression, probable anxiety and probable loneliness. The findings are particularly important because exclusion was reported despite high device access and high self-rated digital confidence. Digital exclusion should therefore be understood as a broader access, affordability, trust and capability issue.

For Government and veteran-facing services, the practical message is clear; digital innovation should continue, but it must be matched by safeguards that protect those at risk of being left behind. Routine digital needs screening, practical support, privacy reassurance and genuinely available non-digital access routes should be central to digital-first public services.

Further information

No funding was reported for this study.

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