

APPENDIX C: ADDITIONAL DETAILS

This appendix provides additional details for many parts of Section 1 – Literature Review and Synthesis. Additional details for each section fall under the same main headings as used in Section 1, with some additional sections only appearing in this appendix.

Gambling prevalence and vulnerability to gambling harms among military personnel and veterans

THE PREVALENCE OF GAMBLING AMONG MILITARY PERSONNEL AND VETERANS

Many studies on gambling in military personnel and veterans rely on either combined samples of military personnel and veteran populations (e.g. ^{1,2}) or focus solely on veterans (e.g., ³⁻⁶) with fewer appearing to focus specifically on military personnel.

Veterans

Many studies on gambling in military populations have focused specifically on veterans.

→ A 2018 study on UK Armed Forces veterans found 1.4% of all veterans met the DSM-IV diagnostic criteria for problem gambling, compared to 0.2% of non-veterans.³

- Note that there were no differences in gambling problems between veterans who left service after a few years, compared to those who served for more than 4 years.

→ According to the more recent UK Armed Forces Veterans' Health and Gambling 2021 study:⁴

- 91.5% of armed forces veterans gambled in the past year compared to 71.0% of age- and gender-matched civilians;
- among veterans who gambled in the past year, 43.1% met the Problem Gambling Severity Index criteria for problem gambling (PGSI score ≥ 8), compared to 6.5% of age- and gender-matched civilians; and
- veterans were over 10 times as likely to experience gambling harms and over seven times as likely to gamble to escape or to avoid distress compared to age- and gender-matched civilians.

→ 4.2% of US veterans had at-risk or probable pathological gambling.⁶

→ A recent review found US military veterans had higher rates of gambling disorder and at-risk problem gambling compared to civilians, with 2.2–2.8% of veterans experiencing gambling disorder at some point.⁵

These results provide a wide range of prevalence estimates for problem gambling in veterans. However, they all demonstrate that veterans are at higher risk of gambling harms than civilians.

Military personnel

Until very recently, little work has focused specifically on currently serving military personnel, who may experience distinct risks for gambling harms compared to veterans. For example, a review of the literature on gambling harms in military personnel up to 2018 found only 11 relevant sources (including four peer-reviewed journal articles), all of which focused on US military personnel.⁷

Earlier this year, the Royal Air Force Benevolent Fund released a report on *Gambling and Wellbeing in the RAF*.⁸ This was the first large-scale study to use validated screening and assessment tools to study gambling in UK military personnel. This report found:

- 67.9% of currently serving Royal Air Force personnel gambled in some capacity in the past year; and
- of those who gambled in the past year, 9.8% were at low-risk of problem gambling, 3.9% were at moderate-risk and 2% had problem gambling.

We are not aware of any recent studies comparing the prevalence of gambling harms in UK military personnel to veterans. However, a recent study of US military personnel and veterans found that military personnel had higher rates of moderate to severe problem gambling than veterans.²

WHAT GAMBLING ACTIVITIES ARE MILITARY PERSONNEL ENGAGING IN?

Royal Air Force personnel report gambling on several different activities.⁹

- The most common activities across all personnel and those with problem gambling were:
 - National Lottery (74.2% of all personnel; 69.6% of those with PG)
 - Any other lottery (34.5% of all personnel; 43.5% of those with PG)
 - Scratch cards (29.6% of all personnel; 65.2% of those with PG)
 - Online betting (23.1% of all personnel; 52.2% of those with PG)
- Those with problem gambling also frequently gambled on:
 - Online gambling (56.5%)
 - Virtual gambling machines (56.5%)
 - Fruit or slot machines (43.5%)

MILITARY PERSONNEL, VETERANS, AND VULNERABILITY TO GAMBLING HARMS

Gambling may cause many harms for military personnel and veterans. For example, UK Royal Air Force personnel felt gambling negatively impacted their mental health during service.⁸

Some of the most extreme harms from gambling can include increasing the risks of homelessness or suicidality.

Homelessness

Studies on the link between gambling and homelessness in US military veterans have found:

- veterans who reported gambling “with money they could not afford to lose” were about three times more likely to have experienced homelessness in the past year;¹⁰ and
- in veterans who used Veterans Affairs mental health specialty services, those with pathological gambling were over three times more likely to experience homelessness than those without pathological gambling.¹¹

Suicidality

Suicidal ideation is a common problem in military personnel and veterans. For example, in a representative sample of individuals from the USA:²

- 55.7% of military personnel and 6.0% of veterans seriously considered attempting suicide in the past year;
- for comparison, 2.4% of civilians seriously considered attempting suicide in the same timeframe.

Gambling and problem gambling may increase risks for suicidality in military personnel and veterans:

- In a combined sample of US military personnel and veterans, suicidality was linked to worse problem gambling severity.²
- US military veterans who engaged in at-risk or problem gambling were more likely to have thought about or attempted suicide.¹²
- Among US veterans attending a treatment program for pathological gambling, 39.5% reported they had attempted suicide at some point during their life.¹³ Of those who had attempted suicide, 64% reported their attempt was related to gambling.

Predisposition to gambling harms

No additional details beyond what is included in the Phase II Report.

Service may increase vulnerability

Factors that may increase the risk of problem gambling include environmental factors such as the availability of gambling, as well as the stress and trauma of military experience.

UK Royal Air Force personnel identified many environmental factors that could increase risks of gambling, and thus gambling harms, including:

- having disposable income and opportunities to gamble during unsupervised time;⁸
- being on deployment and away from family members;⁸ and
- the gambling culture in the Royal Air Force, which includes sharing tips about gambling.⁸

Military service can also be stressful and traumatic. Some military personnel and veterans may gamble to relieve stress and escape trauma both during their military service and after it has ended.

- Some UK Royal Air Force personnel reported that the exposure to risks during service increased their risk of gambling.⁸
- UK veterans were more likely to experience symptoms of depression, anxiety, and post-traumatic stress disorder (PTSD) than civilians.⁴
- UK veterans also reported gambling to escape or to avoid distress.⁴
 - Veterans who gambled with the motivation of reducing stress or avoiding distress were more likely to have higher gambling severity.⁴

Barriers to help-seeking

The literature on gambling harms in US military personnel show that many personnel hide their gambling problems because of:

- unclear confidentiality policies;⁷
- concerns about the confidentiality of seeking treatment;¹⁴
- the perception that having problems lowers their military readiness;⁷ and
- the hierarchical structure of the military⁷
 - for example, supervisors are meant to provide advice and support, but they can also discipline or discharge personnel for problems related to gambling.

Similarly, a study on UK Royal Air Force personnel found that many personnel did not want to discuss gambling problems within the military because of:

- concerns about confidentiality;⁸
- concerns about it negatively impacting their career;⁸ and

→ the military culture, which expects them to be strong and resilient, making it difficult to seek help.⁸

Promising practices for sharing safer gambling information among military personnel and veterans

SOURCE

No additional details beyond what is included in the Phase II Report.

MESSAGE

Specific details on studies highlighting the importance of framing the messages to military and veterans include:

→ Langford and colleagues recommend that messages about suicidal ideation focus on cases where military personnel and veterans adaptively coped and recovered, rather than cases where they did not receive help and ended up committing suicide.¹⁵

- Too much messaging about negative stories of suicide (including statistics about people committing suicide) can normalize it and create hopelessness about solutions.

→ US military officers felt that messages should focus on the benefits of seeking help, instead of the harms of not seeking help.¹⁶

- They believed positively framed messages about mental health would help balance out the negative messages they constantly hear from news stories.
- They felt messages should avoid “disorder” terminology like “PTSD” and instead focus on “combat stress” so that it does not feel like a permanent condition.

→ US veterans had greater intentions to seek help if they received messages that framed help-seeking for suicidality as normal and socially acceptable.¹⁷

Studies also suggest messages should provide specific information or recommended actions.

→ Messages that include target behaviours, like where and how to seek help, made help-seeking feel more achievable to US veterans.¹⁷

→ US military officers felt messages about PTSD should provide information to educate people on the specific signs and symptoms of PTSD, rather than vaguely suggesting to “look for signs” in others.¹⁶

→ A review on messaging about suicide suggested informational messages that promote straightforward actions can help create behaviour change.¹⁵

Finally, research on tobacco and alcohol use in military found:

→ campaigns that focus on deglamourizing alcohol use may help reduce alcohol misuse in young adults in the US military;¹⁸ and

→ US military personnel felt that messages about discouraging tobacco use should focus on:¹⁹

→ the higher drop-out rates of military personnel who smoke;

→ the idea that smoking lowers readiness to fight in and win wars; and

→ how military personnel should try to be positive role models by not smoking, as they can influence others, especially youth.

CHANNEL

The channel of communication describes the way the information is delivered. Some prior gambling education and treatment campaigns have used multiple channels to deliver information, such as in-person training sessions, informative videos, posters, and leaflets.

→ In an evaluation of an overseas gambling treatment program for US military personnel, researchers found that integrating the gambling treatment program in an already-existing substance abuse program was effective.¹⁴ In addition to the treatment program, they provided information about the symptoms of pathological gambling and how to receive help by:

- creating a 5-minute video which aired on a local channel; and
- placing informative posters in each base club slot machine room.

→ EPIC Risk Management's harm minimisation project for armed forces included 1-hour training sessions to raise awareness about gambling harms.²⁰

- These sessions included interactive components where participants answered questions using hand-held devices.
- This campaign also included handing out leaflets to both those who attended training sessions and those who did not. These leaflets appeared to be in demand.

Studies on alcohol misuse and mental health promotion targeted to military populations have also used different channels to deliver their information:

- A US Marine alcohol misuse training program was delivered via in-person training sessions and helped reduce some alcohol-related problems.²¹
- US military officers felt using posters to spread information about mental health and combat stress could be beneficial, as they can be placed where both military members and others in the Armed Forces community could see them.¹⁶
- US military officers were impressed by TV commercials that aired on armed forces TV channels, but noted that people on deployment in specific regions may not see these commercials.¹⁶

RECEIVER

No additional details beyond what is included in the Phase II Report.

REFERENCES (FOR APPENDIX C)

1. Milton AC, La Monica H, Dowling M, Yee H, Davenport T, Braunstein K, et al. Gambling and the Role of Resilience in an International Online Sample of Current and Ex-serving Military Personnel as Compared to the General Population. *J Gamb Stud*. 2020;36(2):477-98. Plain language summary available at <https://www.greo.ca/Modules/EvidenceCentre/Details/better-resilience-may-help-to-protect-military-populations-from-gambling-harms>
2. van der Maas M, Nower L. Gambling and military Service: Characteristics, comorbidity, and problem severity in an epidemiological sample. *Addict Behav*. 2021;114:106725. Plain language summary available at <https://www.greo.ca/Modules/EvidenceCentre/Details/gambling-and-problem-gambling-in-us-military-members-veterans-and-civilians>
3. Dighton G, Roberts E, Hoon AE, Dymond S. Gambling problems and the impact of family in UK armed forces veterans. *J Behav Addict*. 2018;7(2):355-65. Plain language summary available at <https://www.greo.ca/Modules/EvidenceCentre/Details/understanding-the-role-of-family-in-problem-gambling-among-veterans>
4. Dymond S, Dighton G, Wood K. The United Kingdom Armed Forces veterans' health and gambling study. Swansea, UK: Swansea University; 2021. Available from: <https://s31949.pcdn.co/wp-content/uploads/20210906-SwanseaUni-Gambling2-Report-v8-FINAL.pdf>
5. Etuk R, Shirk SD, Grubbs J, Kraus SW. Gambling Problems in US Military Veterans. *Current Addiction Reports*. 2020;7(2):210-28. Plain language summary available at <https://www.greo.ca/Modules/EvidenceCentre/Details/what-is-known-about-gambling-problems-in-us-military-veterans>
6. Whiting SW, Potenza MN, Park CL, McKee SA, Mazure CM, Hoff RA. Investigating Veterans' Pre-, Peri-, and Post-Deployment Experiences as Potential Risk Factors for Problem Gambling. *J Behav Addict*. 2016;5(2):213-20. Plain language summary available at <https://www.greo.ca/Modules/EvidenceCentre/Details/do-military-service-experiences-contribute-to-the-risk-of-problem-gambling-in-vet>
7. Paterson M, Whitty M, Leslie P. Exploring the prevalence of gambling harm among active duty military personnel: a systematic scoping review. *J Gamb Stud*. 2021;37(2):529-49. Plain language summary available at <https://www.greo.ca/Modules/EvidenceCentre/Details/a-review-of-gambling-problems-among-active-duty-military-personnel>
8. Royal Air Force Benevolent Fund. Gambling and wellbeing in the RAF. London, UK: Royal Air Force Benevolent Fund; 2022. Available from: <https://www.rafbf.org/sites/default/files/2022-01/Gambling%20and%20Wellbeing%20Report.pdf>

9. Pritchard A, Dymond S. Gambling problems and associated harms in United Kingdom Royal Air Force personnel. *Addict Behav.* 2022;126:107200. Plain language summary available at <https://www.greo.ca/Modules/EvidenceCentre/Details/uk-royal-air-force-personnel-may-be-at-higher-risk-of-problem-gambling>
10. Harris T, Kintzle S, Wenzel S, Castro CA. Expanding the Understanding of Risk Behavior Associated With Homelessness Among Veterans. *Mil Med.* 2017;182(9):e1900-e7.
11. Edens EL, Kaspro W, Tsai J, Rosenheck RA. Association of substance use and VA service-connected disability benefits with risk of homelessness among veterans. *Am J Addict.* 2011;20(5):412-9.
12. Stefanovics EA, Potenza MN, Pietrzak RH. Gambling in a National U.S. Veteran Population: Prevalence, Socio-demographics, and Psychiatric Comorbidities. *J Gambli Stud.* 2017;33(4):1099-120. Plain language summary available at <https://www.greo.ca/Modules/EvidenceCentre/Details/associations-between-gambling-level-socio-demographics-and-mental-disorders-among-veterans>
13. Kausch O. Suicide attempts among veterans seeking treatment for pathological gambling. *J Clin Psychiatry.* 2003;64(9):1031-8.
14. Kennedy CH, Cook JH, Poole DR, Brunson CL, Jones DE. Review of the first year of an overseas military gambling treatment program. *Mil Med.* 2005;170(8):683-7.
15. Langford L, Litts D, Pearson JL. Using science to improve communications about suicide among military and veteran populations: looking for a few good messages. *Am J Public Health.* 2013;103(1):31-8.
16. Clark-Hitt R, Smith SW, Broderick JS. Help a buddy take a knee: creating persuasive messages for military service members to encourage others to seek mental health help. *Health Commun.* 2012;27(5):429-38.
17. Karras E, Stokes CM, Warfield SC, Elder H, Stephens B, Bossarte RM. The Use of Theory-Based Formative Research to Design Suicide Prevention Messaging for U.S. Veterans in Midlife. *Health Educ Behav.* 2018;45(6):1016-24.
18. Ames G, Cunradi C. Alcohol Use and Preventing Alcohol-Related Problems Among Young Adults in the Military. *Alcohol Research and Health.* 2004;28(4):252-7.
19. Hoffman KM, Haddock CK, Poston WS, Taylor JE, Lando HA, Shelton S. A formative examination of messages that discourage tobacco use among junior enlisted members of the United States military. *Nicotine Tob Res.* 2008;10(4):653-61.
20. Chrysalis Research. EPIC Risk Management's harm-minimisation project: Armed forces. Evaluation report. London, UK: Chrysalis Research UK Ltd,; 2019. Available from: <https://www.begambleaware.org/sites/default/files/2020-12/epic-armed-forces-project-independent-evaluation-report.pdf>
21. Hurtado SL, Shaffer RA, Schuckit MA, Simon-Arndt C, Castillo EM, Minagawa RY, et al. Evaluation of an alcohol misuse prevention program in a military population. *San*

Diego, CA: Naval Health Research Center, Program ORR, Report No.: 03-26; 2003.
Available from: <https://apps.dtic.mil/sti/citations/ADA421218>