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King’s Centre for Military Health Research
King’s College London

Previously the Gulf War Illness Research Unit, King’s Centre for Military Health Research (KCMHR) was launched in 2004 as a joint initiative between the Institute of Psychiatry, Psychology and Neuroscience and the Department of War Studies, King’s College London. KCMHR draws upon the expertise of a multi-disciplinary team led by Professor Sir Simon Wessely and Professor Nicola Fear. KCMHR conducts research investigating military life using both quantitative and qualitative methods. Data from our studies have been used to analyse various military issues, and papers have been published in peer reviewed, scientific journals. Our findings are regularly reported in the press and have also been used to inform military, charity and governmental policies.

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Executive summary

Background
The United Kingdom (UK) veteran population is predominantly elderly, with the majority of ex-service personnel aged over 65. Despite this, relatively little is understood about the impact of military service as an occupation on the wellbeing of older veterans later in life. The limited available research evidence indicates there may be a number of long-term mental and physical health implications from military service. However, as individuals over 65 in the general population are also prone to physical and mental health problems, it is thus unclear whether the health issues experienced by older veterans are attributable to UK military service or are more generally related to the ageing process.

Objective
This research explored the impact of occupation on an individual’s wellbeing later in life. Using qualitative methods, this study investigated the impact of military vs non-military occupations on mental, physical, and social functioning.

Method
The study comprised of semi-structured qualitative interviews conducted with four groups of participants: veterans (≥65 years, n=25), veterans with self-reported mental health diagnoses (≥65 years, n=10), non-veterans (≥65 years, n=25) and a close companion (e.g. spouse, child, close friend, n=60) of all participants. All veterans had served for at least five years in the UK Armed Forces (UK AF); non-veterans must have been in a non-military profession for at least five years. Interviews focused on perceptions of the impact of occupation on physical and mental health, views of (in)formal treatment sought for any difficulties, and the impact of career on relationships.
Results
The results of the qualitative interviews yielded several key themes relating to the impact of occupation on physical, mental and social functioning later in life.

Physical functioning. Veterans engaged in high levels of physical activity during their UK AF service and this was seen as a key reason for their good physical health later in life. However, on leaving the AF, several veterans experienced challenges in continuing to be physically active due to new commitments and limited sports facilities. Few non-veterans had the opportunity to exercise in civilian jobs. Both veterans and non-veterans sustained physical injuries in the workplace, with the majority of injuries due to a paucity of protective equipment or poor health and safety regulations. However, ongoing physical health difficulties related to their work, such as deafness caused by a lack of ear defenders, appeared more common in veterans compared to non-veterans.

Psychological functioning. Occupation-related stress and trauma exposure were more frequently reported in veterans compared to non-veterans. However, while a minority of veterans experienced mental health difficulties related to these stressors, many felt their challenging experiences in the AF made them more resilient and self-confident. Resilience in non-veterans was more often thought to be due to non-work, life experiences. Veterans with self-reported mental health diagnoses most commonly perceived that their psychological problems resulted from retirement and concerns of advancing old age than adverse experiences in work. Family members provided much of the day-to-day care for these veterans, which they reported finding isolating and overwhelming. Families of veterans with mental health difficulties felt it would have been beneficial to have received additional guidance about how to provide better support for their veterans.

Implications
The results of this investigation detail the significant impact of varying and distinct workplace practices on wellbeing later in life. Our findings have considerable implications for the ways in which individuals (both veterans and non-veterans) can be supported to ensure optimal wellbeing later in life.

First, veterans reported long-term benefits of physical exercise in the AF, reinforcing the importance of physical activity in the workplace. Additional steps could be taken to ensure that non-veteran workplaces encourage physical activity. Recent research has found several workplace interventions, such as promoting walking in the workplace and active travel, to be efficacious. Given the significant societal cost of obesity, healthcare providers, employers and policy makers should come together to support and improve physical activity in the workplace to foster employee
wellbeing. Moreover, as difficulties continuing physical activity on leaving the AF were experienced, additional support for veterans to facilitate ongoing physical activity may be beneficial. For example, raising more awareness of the discounted gym memberships available to AF veterans and providing further sponsorship for local veteran sports clubs may be worthwhile.

Second, our results highlight that UK AF military service can have both positive and negative long-term implications for the psychological wellbeing of older veterans. While the majority of veterans coped well, those experiencing psychological problems, such as recent worsening of military-related post-trauma symptoms, expressed a desire for additional support to manage these difficulties. We did not find evidence to support the use of recent initiatives delivered online or via mobile phone apps by older veterans with mental health problems. We consider that such efforts, at present, might not be appropriate for older veterans, who may lack internet or mobile phone access or the skills to engage with such interventions.

Third, our results suggest, contrary to the belief that military service is inevitably detrimental to mental health, the majority of older veterans positively appraised their experiences of challenge and trauma during service. Many veterans attributed their post-service psychological resilience to such experiences encountered during military service. This was distinctly different from non-veterans who did not tend to attribute their psychological resilience to work. These findings may help with planning future mental health promotion campaigns for those who are still serving or have recently served.

Fourth, providing care to veterans with self-reported mental health diagnoses could be very challenging and overwhelming for family members. Particularly in cases where veterans reported chronic or debilitating mental health difficulties, additional guidance and support from clinical care teams was needed to improve family members’ understanding of and responses to veteran symptoms. Our findings illustrate the need for tailored advice and support to be provided to carers of older veterans experiencing a variety of significant mental health problems.

Finally, limited time with family during military service led to poorer perceived family cohesiveness and contributed towards feelings of isolation in later life. Our results indicate that families may benefit from additional support. For instance, some veteran affiliated organisations currently offer support to assess family’s needs (e.g. in cases of dementia, health problems, etc.) as well as offer family respite and holidays. Our findings suggest it may also be advisable to assess family needs more broadly and provide assistance with childcare, respite for spouses, and support to facilitate good familial relationships.

Conclusions
In keeping with the Armed Forces Covenant, understanding the potential implications of military service on wellbeing later in life is important for ensuring those who serve in the UK AF are at no disadvantage compared to their non-veteran peers. By exploring perceptions of the later impact of military service on physical, psychological and social functioning as compared to non-veterans, this study represents a valuable first step in improving our knowledge and awareness of older veterans’ needs. This study identified several generally similar challenges faced by both veterans and non-veterans in later life due to their occupation, as well as distinct differences, both positive (i.e. resilience linked with AF service), and negative (i.e. concerns of lower family connectedness due to AF service). We illustrate that workplace practices can have long-lasting health effects, and that provisions should be made by employers to ensure adequate protection and support is available for employees. Our findings have several implications for the support that statutory and third sector services provide to older veterans and their families, including ensuring that support is appropriate and accessible for this age group.
Introduction
The UK veteran population is predominantly elderly, with 64% over the age of 65.1 Furthermore, this community is growing, with 46% of older veterans aged over 75 years in 2014 compared with 28% in 2005.2 Veterans aged over 65 may have been deployed on numerous operations, including World War II (WW2; 1939-1945), Malaya (1948-1960), Cyprus (1955-1959), Northern Ireland (1969-2007), the Arabian Peninsula (1957-1960), and Iraq (1991). Despite the sizeable and growing older veteran community, relatively little is understood about the impact of military service on the wellbeing of ‘older veterans’; here defined as individuals over 65 years who served in the UK Armed Forces (AF) for at least five years. Limited literature, mostly from the US, suggests there may be several mental and physical health implications from military service.2-4 However, research indicates that over 65’s in the general population also commonly suffer from physical and mental health problems, such as arthritis, heart disease and depression.5-8 Therefore, whether health issues experienced by older veterans can be attributed to UK military service, or ageing, remains unclear.

Physical, psychological and social functioning are key factors in contributing towards geriatric wellbeing and ‘successful ageing’.9 Outlined in Figure 1, rather than simply the absence of disease or infirmity,10 successful ageing reflects complete mental, physical, and social well-being. As a brief overview, some of the potential implications of military service on physical, psychological and social functioning in later life are examined:

---

Figure 1. Model of successful ageing (Source: von Faber et al., 2001)
**Physical functioning.** In some respects, UK AF veterans may potentially be more likely than the general population to experience a range of long-term illnesses that affect their daily activity. For example, working age UK AF veterans commonly have difficulties with hearing as well as musculoskeletal problems. Serving in the UK AF requires considerable physical activity, potentially creating a vulnerability to chronic musculoskeletal issues. Compared with 7% of the general population, 14% of working age UK veterans report long-term back problems, with arthritis also more prevalent among non-elderly US veterans than civilian populations. Such musculoskeletal problems in middle age are associated with poorer functioning and mobility in the elderly. Health problems may also be due to veterans not sustaining physical activity upon leaving service. UK AF personnel often transition to more sedentary roles, elevating their risk of obesity and subsequent heart problems and diabetes. However, individuals who enter military service undergo a degree of health-related selection, which may result in a “healthy soldier effect.” The healthy soldier effect may explain why a 25% lower mortality risk for older Australian veterans compared with non-veterans has been observed. Nonetheless, this effect is not entirely unique to the military, as employed individuals may be healthier than their comparison group - the general population – which includes sick, disabled and unemployed individuals. Therefore, our understanding of the effect military service may have on physical health in later life remains limited.

**Psychological functioning.** Older veterans may be at an increased vulnerability to mental health problems compared to similarly aged non-veterans. A significant proportion of elderly veterans will have experienced combat and may have long-term mental health problems as a result. Older veterans may be at an increased risk of post-traumatic stress disorder (PTSD) than older non-veterans because of exposure to potentially traumatic events during military service. In addition to this, older veterans may have been exposed to childhood adversity associated with WW2 and its aftermath, which may leave this population more vulnerable to PTSD, as childhood trauma exposure can increase vulnerability to PTSD following military trauma exposure. Furthermore, alcohol-use disorders are a prevalent mental health problem for younger UK AF veterans, commonly attributed to military culture and combat exposure. Alcohol misuse has been found to be more prevalent in elderly US veterans compared to the general population. It is unclear whether this is the case for UK veterans but is important to consider as persistent alcohol misuse may lead to dementia. However, in spite of the above challenges, military service may also have lasting positive psychological and social benefits, such as improved self-discipline and the ability to cope with adversity. Whether on balance military service is good for mental health in later life is unclear.

**Social functioning.** Previous research has examined social functioning, such as regular involvement in social activities (e.g. receiving visitors, participation in social activities or associations, "Military personnel have been found to differ from the general population in that they are often fitter and healthier at the time of enlistment than the general population, leading to a phenomenon termed the "healthy soldier effect".")
etc.) and studies of both military and civilian populations have highlighted the importance of social support and strong social networks with family, friends and (ex-)colleagues for good mental health and quality of life. In civilian roles, high levels of workplace social support are associated with better wellbeing and job satisfaction. Such social support may be particularly important in the UK AF, as strong camaraderie and unit cohesion has been found to be associated with better psychological adjustment following combat trauma. Conversely, isolation, low social support and poor familial connectedness have been associated with psychological difficulties in older populations. Transition studies have highlighted that some veterans may be vulnerable to mental health difficulties on leaving the AF due to a loss of social support. Moreover, a military career can adversely impact familial connectedness in some cases. UK older veterans have reported high levels of social isolation; however, isolation and loneliness are also a common problem in the older UK civilian population. It therefore remains uncertain if and how a military occupation impacts social functioning in later life.

**Need for research**

In keeping with the Armed Forces Covenant, military personnel should experience no disadvantage due to their AF service; thus, understanding the impact of a military career on veteran wellbeing later in life is imperative. Moreover, with an ageing population and ageing veteran community, health issues experienced by the elderly are of pressing concern from a societal view point. The impact of poor health in later life is not only restricted to quality and duration of life, but the economic costs of poor health-related issues is considerable. In fact, two fifths of the NHS’ budget is spent on caring for those over the age of 65, with each individual over 85 costing the NHS an average of £7,000 per year. Physical and mental health in older veterans represent a possible public health problem. Of particular importance, are the possible preventative and supportive measures that the UK AF and veteran’s services could employ to diminish military-related health consequences and maximise the potential advantages for its veterans. To do so, we need to better understand the nature of the specific impacts of military service on ageing and the impact of work on health more generally.

**Research objective**

This study was commissioned by the Royal British Legion and primarily aimed explore the impact of occupation on an individual’s wellbeing later in life via the recruitment of older veterans (≥ 65 years) and non-veterans (≥ 65 years). Information from these groups was triangulated with interviews from a close companion (e.g. spouse, child, close friend). The secondary objectives of the study were to: 1) explore the effect of occupation on participant resilience and mental health, 2) investigate participants’ views on the impact of occupation on physical wellbeing, 3) examine participants’ beliefs on the impact of occupation on their social functioning, and 4) to explore companions’ views of the impact of occupation on the mental and physical health of older veterans and non-veterans.
Method
This project used qualitative interviews with UK veterans and non-veterans to enable an in-depth understanding of the impact of occupation on wellbeing over the life course. Interviews with a close companion of all participants served to verify findings and examine occupation impact from another perspective. Participants also completed measures of their own physical and psychological health, which were used to describe the sample (see Table 2).

Veteran and non-veteran participants were recruited from GP surgeries, mental health services, and community services between March and December 2017 (a full list of recruitment sites can be found in Appendix 1). Participants could also self-refer to the study via study advertisements. Of the 85 eligible participants approached, 18 participants did not participate (see Figure 2).

Ethical approval for this study was granted by the NHS Camden & King’s Cross Research Ethics Committee (17/LO/0077). All participants gave informed consent for their participation.

Figure 2. Diagram of participant recruitment

Note. Individuals were not eligible to participate if they had any brain damage or cognitive impairment, were unable to speak English, had current self-injurious behaviour, suicidal intent or active mental health problems, or did not have an appropriate close companion. One veteran was ultimately excluded from the study as, following his participation, his close companion later decided they did not wish to participate. An additional veteran/close companion pair were recruited to bring our total veteran sample size to 25.
Table 1. Sub-samples of participants recruited (all veterans/non-veterans aged 65 years or over).

<table>
<thead>
<tr>
<th>Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 25 veterans</td>
</tr>
<tr>
<td>2 25 non-veterans</td>
</tr>
<tr>
<td>3 10 veterans with self-reported diagnosis of mental health issues</td>
</tr>
<tr>
<td>4 A close companion of all participants</td>
</tr>
</tbody>
</table>

Note. Veterans = served in the AF for five years or more but no longer serving. Non-veterans = did not serve in the AF and worked in a civilian profession for five years or more. Close companion = aged 18 or over and knew participant during and after military service/profession.

Participants

Four sub-samples of participants were recruited (see Table 1):
1) 25 older veterans, 2) 25 older non-veterans, 3) 10 older veterans with a self-reported diagnosis of mental health issues, and 4) a close companion of all participants. The 25 veterans and 25 non-veterans were age (+/- 5 years) and gender matched.

Quantitative data

Participants completed several psychological and physiological measures prior to their interview, either online or by post. The measures included a range of health topics, including; trauma exposure, psychological adjustment, alcohol consumption, physical health and quality of life (see Table 2 for measures). Veteran participants completed all measures, non-veteran participants completed all apart from the Combat Exposure Scale, and close companions completed the General Health Questionnaire only. Participant questionnaire responses are discussed in the Results section.

Table 2.

<table>
<thead>
<tr>
<th>Psychological measures of health and wellbeing</th>
<th>Score range</th>
<th>Cut off scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTSD symptoms</td>
<td>The PTSD Checklist - Civilian version (PCL-C)&lt;sup&gt;42&lt;/sup&gt;</td>
<td>0-80</td>
</tr>
<tr>
<td>Combat experience</td>
<td>Combat Exposure Scale (CES 43)</td>
<td>0-41</td>
</tr>
<tr>
<td>Childrhood adversity</td>
<td>Childhood Adversity Scale (CAS)&lt;sup&gt;20&lt;/sup&gt;</td>
<td>0-16</td>
</tr>
<tr>
<td>Psychological adjustment</td>
<td>General Health Questionnaire (GHQ-12)&lt;sup&gt;44&lt;/sup&gt;</td>
<td>0-36</td>
</tr>
<tr>
<td>Alcohol consumption</td>
<td>Alcohol Use Disorders Identification Test (AUDIT)&lt;sup&gt;45&lt;/sup&gt;</td>
<td>0-40</td>
</tr>
<tr>
<td>Physical health</td>
<td>SF-12 Health Survey&lt;sup&gt;46&lt;/sup&gt;</td>
<td>0-100</td>
</tr>
<tr>
<td>Mental health</td>
<td>SF-12 Health Survey&lt;sup&gt;46&lt;/sup&gt;</td>
<td>0-100</td>
</tr>
<tr>
<td>Quality of life</td>
<td>EQ-5D Visual Analog Scale (EQ-5D VAS)&lt;sup&gt;47&lt;/sup&gt;</td>
<td>0-100</td>
</tr>
</tbody>
</table>

Note. Cut off score refers to the score used to decree ‘psychiatric caseness.’ a = Maximum possible score of 100, higher score indicates better health state.
Qualitative data

The qualitative interview schedule was designed to be semi-structured to encourage openness and allow participants to explore topics in their own words. Figure 3 displays an overview of the broad areas included in the interview for veteran and non-veteran participants. Close companions were asked for their perceptions of the veteran or non-veteran’s career and the impact of their career on the areas listed in Figure 3, as well as their experiences of providing any care for the veteran or non-veteran. Participants with self-reported experience of mental health difficulties were additionally asked about factors that contributed towards their issues, how they cope/coped with their mental health, and experiences with accessing treatment.

The majority of assessments were conducted face-to-face, although some were conducted by the telephone (n=38). Interviews lasted for an average of 67 minutes (median = 65 minutes, SD = 0.02, IQR Range = 52:29 – 01:20:56 minutes). Veteran interviews lasted for a mean of 81 minutes, non-veterans for 77 minutes and companions for 54 minutes. All participants were offered a £20 gift card for their time.

Analysis

All interviews were digitally recorded and transcribed in full, with any identifying information removed at this stage. To maintain confidentiality, all names provided in this report are pseudonyms. Thematic analysis (TA) was used to analyse the interview transcripts. TA identifies patterns, or “themes”, within data. For further information, see Appendix 2.

Figure 4. Methodological summary

Methodological Summary:

- Four sub-groups of participants were recruited: veterans, non-veterans, veterans with experience of mental health difficulties, and close companions.
- Participants completed self-report measures of physical and mental health, and a qualitative interview.
- Qualitative data was analysed using Thematic Analysis to identify patterns across the life-course.

Figure 3. Interview schedule topics and example questions
Results
**Descriptive information**

Of our 25 veterans, 88.0% were males with a mean age of 74.6 years (SD 6.9). The sample of veterans with mental health diagnoses (n=10) had a mean age of 71.8 (SD 6.47) and 70.0% were males. As a whole, the 35 veterans served in the AF between 5-40 years, with 51.4% serving in the Army, 34.3% in the Naval Services, and 14.3% in the Royal Air Force (RAF, see Table 3). In the non-veteran sample (n=25), 88.0% were males with a mean age of 75.3 years (SD 7.5). No significant differences were found between veterans and non-veterans in terms of age and sex (p>.05).

Close companions of the veterans and non-veterans (n=60) were largely spouses (n=46, 76.7%) or close friends (n=8, 13.3%) and were often female (n=51, 85.0%). The mean age of close companions was 68.4 years (SD 10.6). See Table 4 for full demographic details. Differences between close companions of veterans and close companions of non-veterans GHQ-12 scores were not statistically significant (p>.05).

**Table 3: Key demographic information of veteran and non-veteran participants**

<table>
<thead>
<tr>
<th>Demographic</th>
<th>Veterans n (%)</th>
<th>Non-veterans n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age (years)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>65 - 70</td>
<td>14 (40.0)</td>
<td>9 (36.0)</td>
</tr>
<tr>
<td>71 - 75</td>
<td>9 (25.7)</td>
<td>4 (16.0)</td>
</tr>
<tr>
<td>76 - 80</td>
<td>3 (8.6)</td>
<td>5 (20.0)</td>
</tr>
<tr>
<td>81 - 85</td>
<td>7 (20.0)</td>
<td>4 (16.0)</td>
</tr>
<tr>
<td>86 – 89</td>
<td>2 (5.7)</td>
<td>3 (12.0)</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>29 (82.9)</td>
<td>22 (88.0)</td>
</tr>
<tr>
<td>Female</td>
<td>6 (17.1)</td>
<td>3 (12.0)</td>
</tr>
<tr>
<td><strong>Ethnicity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White British</td>
<td>35 (100.0)</td>
<td>24 (96.0)</td>
</tr>
<tr>
<td>Asian/Asian British</td>
<td>n/a</td>
<td>1 (4.0)</td>
</tr>
<tr>
<td><strong>Service Branch</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Naval Services</td>
<td>12 (34.3)</td>
<td>n/a</td>
</tr>
<tr>
<td>Army</td>
<td>18 (51.4)</td>
<td></td>
</tr>
<tr>
<td>RAF</td>
<td>5 (14.3)</td>
<td></td>
</tr>
<tr>
<td><strong>Service Length (years)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M = 19.8, 9.7 SD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 – 10</td>
<td>7 (20.0)</td>
<td>n/a</td>
</tr>
<tr>
<td>11 – 15</td>
<td>7 (20.0)</td>
<td></td>
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<tr>
<td>16 – 20</td>
<td>3 (8.6)</td>
<td></td>
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<tr>
<td>21 – 25</td>
<td>11 (31.4)</td>
<td></td>
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<tr>
<td>26 – 30</td>
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<tr>
<td>31 – 35</td>
<td>5 (14.3)</td>
<td></td>
</tr>
<tr>
<td>36 – 40</td>
<td>2 (5.7)</td>
<td></td>
</tr>
<tr>
<td><strong>Non-veteran Professions</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doctor/nurse</td>
<td>n/a</td>
<td>3 (12.0)</td>
</tr>
<tr>
<td>Managerial/office</td>
<td>6 (24.0)</td>
<td></td>
</tr>
<tr>
<td>Manual labour</td>
<td>5 (20.0)</td>
<td></td>
</tr>
<tr>
<td>Small business owner</td>
<td>3 (12.0)</td>
<td></td>
</tr>
<tr>
<td>Police</td>
<td>1 (4.0)</td>
<td></td>
</tr>
<tr>
<td>Engineer/scientist</td>
<td>4 (16.0)</td>
<td></td>
</tr>
<tr>
<td>Civil service</td>
<td>3 (12.0)</td>
<td></td>
</tr>
</tbody>
</table>

Note. M=mean. Service length= length of AF service in years. n/a= not applicable. Non-veteran professions = profession the non-veteran held for the longest period of time. Veterans sample includes veterans with mental health diagnoses (n=35).
When veterans (n=25) were directly compared to age and gender matched non-veterans (n=25), the only significant difference between these two groups on the questionnaires related to alcohol consumption. Veterans were found to report significantly higher rates of alcohol consumption (32.0% veterans reporting ‘hazardous’ AUDIT scores vs 4.0% non-veterans, p=.02) compared to non-veterans. However, criteria for ‘harmful’ AUDIT scores (a score ≥16) was not met by any of the participants. Furthermore, although not statistically significant (p=.08), veterans reported more experiences of childhood adversity compared to non-veterans. On the other hand, probable PTSD was observed in 20.0% of non-veterans compared to 4.0% of veterans. This difference in likely PTSD was also not significant (p=.19); trauma exposure in the non-veteran sample was largely non-occupational (e.g. death of a child) and often had occurred within the last ten years. Trauma in the veteran sample was primarily military related and had occurred ≥30 years ago during their AF service. No other marked differences between groups were observed on the psychological symptom measures.

### Veterans with mental health diagnoses

The veteran with mental health diagnoses sample were eligible to participate if they reported previously receiving a formal diagnosis of a mental health condition. Diagnoses in the veteran mental health sample (n=10) were varied and included: bipolar disorder, PTSD, schizophrenia, substance misuse, eating disorders, and depression. No significant differences in the questionnaire responses were found between veterans with mental health diagnoses and sample of age and gender matched veterans (n=25) and non-veterans (n=25) (data not shown in table). Despite no statistically significant differences being found between groups, there are some interesting trends which should be observed. In veterans with mental health diagnoses, 30.0% met ‘hazardous’ AUDIT criteria (score between 8-15) and 10.0% met criteria for ‘harmful’ consumption (score ≥16). Notably, 50.0% of veterans from this sample reported high levels of childhood adversity (>4 events), compared to veterans without diagnoses and non-veterans (see Table 5).

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**Table 4: Demographic characteristics of close companions**

<table>
<thead>
<tr>
<th>Demographic</th>
<th>Veteran CC n (%)</th>
<th>Non-veterans CC n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;55</td>
<td>4 (11.5)</td>
<td>1 (4.0)</td>
</tr>
<tr>
<td>56 - 65</td>
<td>10 (28.5)</td>
<td>5 (20.0)</td>
</tr>
<tr>
<td>66 - 75</td>
<td>16 (45.7)</td>
<td>14 (56.0)</td>
</tr>
<tr>
<td>&gt;75</td>
<td>5 (14.3)</td>
<td>5 (20.0)</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>6 (17.1)</td>
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<td>22 (88.0)</td>
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<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White British</td>
<td>35 (100.0)</td>
<td>24 (96.0)*</td>
</tr>
<tr>
<td>Relationship</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spouse</td>
<td>23 (65.7)</td>
<td>23 (92.0)</td>
</tr>
<tr>
<td>Child</td>
<td>4 (11.4)</td>
<td>1 (4.0)</td>
</tr>
<tr>
<td>Close friend</td>
<td>7 (20.0)</td>
<td>1 (4.0)</td>
</tr>
<tr>
<td>Niece/nephew</td>
<td>1 (2.9)</td>
<td>n/a</td>
</tr>
</tbody>
</table>

*Note. CC = close companion. Relationship = relationship to the veteran/non-veteran participant. a= this demographic information was missing for one participant.*
Table 5: Participant scores on psychometric measures

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Veterans with MH diagnoses % (n=10)</th>
<th>Veteran % (n=25)</th>
<th>Non-veteran % (n=25)</th>
<th>Veteran vs non-veteran p values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Common mental health disorder caseness (n)</td>
<td>30.0 (n=3)</td>
<td>12.0 (n=3)</td>
<td>36.0 (n=9)</td>
<td>.095</td>
</tr>
<tr>
<td>Potentially ‘hazardous’ alcohol consumption (n)</td>
<td>30.0 (n=3)</td>
<td>32.0 (n=8)</td>
<td>4.0 (n=1)</td>
<td>.023</td>
</tr>
<tr>
<td>Potentially ‘harmful’ alcohol consumption (n)</td>
<td>10.0 (n=1)</td>
<td>0 (n=0)</td>
<td>0 (n=0)</td>
<td>n/a</td>
</tr>
<tr>
<td>Probable PTSD (n)</td>
<td>20.0 (n=2)</td>
<td>4.0 (n=1)</td>
<td>20.0 (n=5)</td>
<td>.189</td>
</tr>
<tr>
<td>Moderate- heavy combat exposure</td>
<td>20.0 (n=2)</td>
<td>20.0 (n=5)</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Mental health score M(SD)</td>
<td>56.4 (3.0)</td>
<td>58.1 (2.6)</td>
<td>57.3 (2.9)</td>
<td>.272</td>
</tr>
<tr>
<td>Physical health score M(SD)</td>
<td>53.4 (2.4)</td>
<td>54.3 (2.7)</td>
<td>53.5 (2.3)</td>
<td>.236</td>
</tr>
<tr>
<td>Quality of life M(SD)</td>
<td>66.4 (16.4)</td>
<td>77.2 (18.1)</td>
<td>70.7 (21.2)</td>
<td>.274</td>
</tr>
<tr>
<td>Number of adverse childhood events</td>
<td>0-1</td>
<td>20.0 (n=2)</td>
<td>28.0 (n=7)</td>
<td>20.0 (n=5)</td>
</tr>
<tr>
<td></td>
<td>2-3</td>
<td>30.0 (n=3)</td>
<td>36.0 (n=9)</td>
<td>52.0 (n=13)</td>
</tr>
<tr>
<td></td>
<td>4-5</td>
<td>40.0 (n=4)</td>
<td>12.0 (n=3)</td>
<td>20.0 (n=5)</td>
</tr>
<tr>
<td></td>
<td>6+</td>
<td>10.0 (n=1)</td>
<td>24.0 (n=6)</td>
<td>8.0 (n=2)</td>
</tr>
</tbody>
</table>

Note. Veterans with MH diagnoses = veterans with a previous diagnosis of mental health disorders. M = mean, SD = standard deviation. Common mental health disorder caseness = GHQ-12 score of 4 or more. Potentially ‘hazardous’ drinking = AUDIT score of 8-15. Potentially ‘harmful’ drinking = AUDIT score of 16 or more. Probable PTSD = PCL-C score of 50 or more. Moderate – heavy combat exposure = CES score between 17-41. Mental health score = mean score on SF-12 mental health component. Physical health score = mean score on SF-12 physical health component. Quality of life = mean score on the EQ-5D VAS. Number of adverse childhood events = number of adverse childhood experiences reported via CAS. Veteran vs non-veteran p values = refers to whether differences between veteran (n=25) and non-veteran group (n=25) were statistically significant (p<.05), examined via Fishers exact or t-tests. Data missing for one veteran on the AUDIT, one non-veteran on the CAS, and three non-veterans and one veteran on the EQ-5D VAS.

Qualitative findings

We examined the impact of occupation as a function of three interconnected domains: physical (e.g. physical health conditions, self-care, etc.), psychological (e.g. mental health problems, coping strategies, etc.) and social functioning (e.g. engagement in social activities, relationships with family and friends, etc.). We selected the domains as these areas enhance our understanding of the impact of occupation on wellbeing across the life-course and are consistent with previous large-scale studies of successful ageing. Anonymised participant comments are provided to illustrate our findings, and all participants have been assigned a pseudonym. Whether veterans self-reported having a mental disorder diagnosis is detailed for all veteran quotes.

Physical functioning

Both veteran and non-veteran participants reported several occupation-related effects on their physical health, particularly related to physical exercise and health and safety implications. Their experiences in employment and understanding of physical wellbeing influenced how participants felt about and responded to physical health problems.
**Physical exercise.** The majority of veterans reported, as expected, high-levels of physical exercise in the AF, which was not experienced by non-veterans in civilian roles. Many veterans reported they had been very physically fit due to the military training exercises, with a number describing being involved in sports to a high level. In many cases, veterans had also been active as children and participated in sports at school. This high volume of exercise during their military career was seen as a key reason for veteran’s good physical health later in life. Many veterans continued to exercise once leaving the AF and keeping physically active was also a central part of their day to day life in retirement.

**Interviewer:** And how would you describe your physical health over your life?

**Veteran 1 (mental disorder diagnosis):** Pretty good. I've always been pretty healthy, I used to do a lot of sport when I was in the Army.... In the Army [I did] regular exercise and sport and everything. Yeah, [now] I like to go for walks to keep me fit and I think you've seen behind the TV is a treadmill...I use that... So, yeah, mentally and physically I'm not too bad for my age, I don't think.

Nonetheless, several veterans reported arthritis and other musculoskeletal health complaints in older age which were thought to be a result of the physically demanding activities required in the AF (e.g. marching exercises, parachuting, etc.) or playing competitive sports.

**Veteran 2 (no mental disorder diagnosis):** The main thing it had an effect on my knees, osteoarthritis... [The] activity I think...When I joined the Army...I did an awful lot of athletics and, you know, sports and running and jumping and God knows what else. And, of course, the Army doesn't do you any good, I mean you've only got to come to a parade here and see the old RSM [Regimental Sergeant Major] banging his feet on the ground and all that sort of thing. And so, my knees are shot.

On leaving the AF, a number of veterans reported difficulties continuing physical activity, either due to the long work hours of their civilian job, being employed in a more sedentary civilian role (e.g. HGV driving, security, etc.), limited access to sports facilities, or due to a military-related physical injury or disability.

Non-veterans did not report having many opportunities to engage in physical exercise or sport during the course of their professional careers. In roles where non-veterans had the opportunity to do some exercise (e.g. manual labour, regular walking between departments), this activity was considered to have kept them in good health at time but long term benefits were not reported. A strong focus on keeping physically active outside of work was not described by non-veterans and they often did not spontaneously report playing sports as children.

**Interviewer:** What impact do you think that your jobs...kind of had on your [health]?

**Non-veteran 1:** Well...I think probably I didn't get enough exercise when I was at the [shop] counter...so I did tend to put on weight at that period. [I was there from] ten o'clock in the morning till six o'clock in the evening.

**Health and safety.** Participants in both groups reported sustaining physical injuries in the workplace, with the majority of injuries due to a lack of protective equipment or poor health and safety regulations (e.g. lack of ear defenders, limited protection available against harmful substances, including asbestos, radiation and hazardous chemicals).

**Non-veteran 2:** We were made to do asbestos and they didn’t even bother to give us a facemask. And the dangers weren’t known in them days...One fellow was actually down the hatch and an [asbestos] flake landed on his nose and he licked it off with his tongue...he swallowed it. But, of course, it was a killer.

Veterans more frequently reported ongoing health difficulties due to having little or no protective equipment compared to non-veterans, with veterans often reporting hearing loss due to a lack of ear defenders in loud engine rooms or during gun fire, as well as skin cancer caused by having no sun protection during training activities or deployment.
**Veteran 4 (no mental disorder diagnosis):** I was on the ranges...we were firing this anti-tank gun. Well, in them days, ear defenders were unheard of, and I mean they were unheard of. We were put on the ranges where we were told to fire this anti-tank gun, plus the fact we was also firing it numerous times... Well long and short of it, I went deaf in the right ear... [I now hear] a sort of whistling noise.

For non-veterans, those in physically demanding jobs reported occupation-related strain juries due to heavy lifting or spending long hours standing. Physically demanding jobs often exacerbated existing physical health conditions (e.g. pre-existing musculoskeletal problems made worse by heavy lifting or repetitive strain). Some individuals in healthcare roles or jobs requiring foreign travel (e.g. Foreign Office, employment with an international company, etc.) also reported contracting serious like illnesses. Such injuries/illnesses often had long lasting effects, with non-veterans continuing to experience physical pain or disability.

**Non-veteran 3:** I was in charge of that ward and... that’s where I caught rubella. I was on duty... and the nurse in charge...said ‘I’ve heard you’re pregnant, great! Don’t come any closer, my little boy’s got rubella!’ And I didn’t... I didn’t even go into the room and two weeks later, I had rubella.

**Figure 5. Physical functioning summary**

<table>
<thead>
<tr>
<th>Physical functioning summary</th>
<th>Veterans</th>
<th>Non-veterans</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Similarities</strong></td>
<td>Injuries reported due to lack of health and safety. Veterans reported more hearing issues.</td>
<td>Injuries experienced due to lack of health and safety. Non-veteran health issues due to heavy lifting, contracting illnesses or standing for extended periods.</td>
</tr>
<tr>
<td><strong>Differences</strong></td>
<td>Many opportunities to engage in exercise in AF which is central to wellbeing later in life. Musculoskeletal issues are often attributed to AF service.</td>
<td>Fewer opportunities to engage in physical exercise in civilian employment. Themes not found in non-veterans.</td>
</tr>
<tr>
<td></td>
<td>Veterans more reluctant to seek medical treatment due to perceptions one should be self-sufficient and ‘tough.’</td>
<td>Unwillingness to seek and accept care or treatment was less common in non-veterans.</td>
</tr>
<tr>
<td></td>
<td>Close companions are central in encouraging veteran’s access to healthcare.</td>
<td>Theme not commonly found in non-veterans.</td>
</tr>
</tbody>
</table>

**Responding to physical health problems:** Reluctance to seek medical treatment for physical health problems was commonly reported in both male and female veterans. This reluctance often continued into later life and was not commonly reported in non-veterans. Unwillingness to admit physical health problems and access treatment was reportedly due to a sense of self-sufficiency instilled by the AF and a need to feel and be seen by colleagues as ‘tough.’ If treatment was sought, most veterans reported receiving high-quality medical care, another factor that was central to their perceived good health in later life.

**Veteran 5 (no mental disorder diagnosis):** It’s a man thing! Compounded by the Army. You can’t be seen to be a wimp! You are a wimp, but you can’t be seen... You’ve got to keep a stiff upper lip, yeah... if you go to anything like an injection. You know, there’s no way you flinch. It might hurt, but you don’t flinch! No!

Close companions played a central role in encouraging veterans to access medical treatment, often accompanying them to appointments and ensuring medication was taken. Close companions of veterans often reported that veterans were extremely reluctant to accept physical care from them (e.g. assistance with getting dressed, daily hygiene, etc.), often due to embarrassment or pride. Unwillingness to seek and accept care or treatment was less common in non-veterans, as described by close companions. Similarly, when close companions of both veterans and non-veterans were asked for their views of the veteran/non-veteran’s mental health, female close companions (e.g. spouse, daughter, close friend) were more likely to report that male veterans were experiencing mental health difficulties (e.g. low mood, depression, hazardous alcohol consumption, hostility, etc.) which were often unreported by the veteran themselves. This pattern was not found in non-veterans and their close companions.
**Psychological functioning**

Occupation had both positive and negative implications for mental health. Participants in both groups reported that their mental health could be adversely affected by workplace trauma and high levels of occupation-related stress. Leaving the AF and/or retirement could also affect mental health. Nonetheless, increased self-confidence, the development of adaptive coping strategies, and, in some cases, preventing the development of mental health problems was also reported, especially in veterans.

**Positive effects of occupation on mental health**

*Resilience.* The majority of veterans reported that their time in the military was a valuable, largely positive experience that was highly stimulating and varied. Military service increased veteran’s confidence through skill development, the opportunity to manage and support junior colleagues, and interact with people from a variety of backgrounds. Non-veterans reported improved social skills as a result of their career, however this was not experienced to the same degree as veterans.

**Veteran 6 (no mental disorder diagnosis):** I think the fact of being the rank I was, [Staff Sergeant] in the Army... [and] you’ve got six blokes to look after... that teaches you an awful lot about yourself and about other people. You’ve got to be confident and be able to turn around and say ‘That’s what we’re going to do chaps!’ You know... You’re just confident in what we were doing, you know.

Exposure to some stressful situations in the AF (e.g. basic training, meeting challenging regiment entry requirements), when appraised positively, were believed to improve veteran’s ability to cope with stress. Veterans reported developing adaptive coping strategies and felt able to cope with ‘anything’ having coped successfully with stressful events in the military.

**Veteran 7 (no mental disorder diagnosis):** I’ve just got on with things really.... it may fall back on my military career... Being in the military you had to have a certain amount of discipline, you know, you knew you had to do things... And I think that’s sort of attitude developed a positive defence to dealing with anything that came up, you know, and whatever problems, you deal with them.

The improved ability to cope with stress, self-confidence and skill development was reported to be instrumental to having a successful military and, later, civilian career. Close companions also reported that this experience contributed to veteran’s ability to cope well with non-occupational stressors later on, such as the death of a close family member or serious illness.

For non-veterans, an ability to cope well with stressful experiences was reportedly due to experiences of childhood adversity (e.g. WW2 exposure) and a non-military career did not improve self-confidence or coping to the same extent as reported by veterans.

**Non-veteran 4:** I think there’s a sort of an inner core.

**Interviewer:** Where does that come from do you think?

**Non-veteran 4:** Well, I don’t know... Of course, you know, during the war when I was about eight and the schools were evacuated and I went away... So, I’ve always been used to sort of, you know, coping.

**Non-veteran 5:** You know the things like drugs and prostitution, all those things. Other people have got that as a problem, thankfully [I] haven’t... [I] try and avoid them... you know, you see what other people have done with their lives and how it’s affected theirs. And try to learn by their mistakes as well as your own.

**Negative effects of occupation on mental health**

*Workplace trauma.* As described above, exposure to workplace trauma was uncommon in non-veterans but a frequent occurrence for veterans across all branches of service. Many veterans reported coping adaptively following trauma exposure (e.g. being under enemy fire, serious road traffic accident, witnessing dead bodies/others serious injuries, etc.), including seeking social support from colleagues to discuss the event or positively reframing the experience. However, a minority of veterans reported maladaptive responses, including cognitive avoidance and substance misuse. Veterans perceived this poor post-trauma adjustment to be due insufficient training, younger age at the time of the event, or prolonged exposure to several traumatic events without respite. In some cases, post-trauma distress had reportedly worsened in recent years since retiring or leaving the AF and veterans expressed interest in additional support to better manage these difficulties. However, it should be noted that most veterans reporting a recent worsening of symptoms in the qualitative interviews did not meet criteria for PTSD on the psychometric questionnaire.
Veteran 8 (no mental disorder diagnosis): The young seventeen, eighteen, nineteen year old lads who were aircraft handlers... they were the first ones to see these helicopters full of bodies... people with bits missing and skin hanging... they'd just joined the Navy and suddenly there they are. And there was no sort of training for that, not for them.

High-levels of occupational stress. Many veteran participants reported more experiences of occupational stress, including extended separation from family members, workplace bullying, responsibility to lead their unit, a heavy workload with tight deadlines, and feeling their performance was constantly being assessed. In the AF, veterans reported feeling helpless at times, having little say in how they did their work and for how long they would be separated from their families. This occupational stress reportedly led to psychological problems, including depression, anxiety, substance misuse, or suicidality and self-harm. Feelings of helplessness were particularly pronounced in veterans with formally diagnosed mental health problems and reportedly contributed towards the development or worsening of their psychological difficulties.

Veteran 9 (mental disorder diagnosis): I did self-harm a couple of times...I poured scalding hot water on my leg... it's a cry for help really. But I said I just had an accident you know.

High levels of occupational stress were not reported to the same extent in non-veterans. When these stressors were present, it was often because of high-pressure roles such as nursing. Bullying or discrimination (e.g. discriminated against because of gender, disability, etc.) were the most salient stressful experiences in non-military occupations, contributing to anxiety, depression and burn out.

Non-veteran 6: The same time the bullying started from more senior admin telling you that you mustn't sit beside [patients], you mustn't be getting too fond of them, you mustn't do this, you mustn't do [that]... You know, it was quite upsetting... [and] well the stress brought on shingles, I had shingles. And that was because of the stress of the job. And a depression as well...mostly because [of the] staff and frustration.

Redundancy and unemployment. For a minority, leaving the AF and beginning a civilian career appeared to have adversely affected veteran mental health as many reported difficulties securing a civilian job and experienced redundancy, contributing towards financial concerns and feelings of worthlessness. Similarly, non-veterans experienced redundancy and subsequent difficulties finding a new job which contributed to comparable anxieties. Veterans who had held a senior rank reported that it was challenging to work in a more junior, civilian job with limited authority. Many veterans also described difficulties getting along with civilian colleagues, as they were considered to have poorer work ethic and less training or experience.

Veteran 10 (no mental disorder diagnosis): I did miss the Army...It took me about eighteen months to settle. The reasons for that I guess is that when I left, I left as someone in a position of authority... I joined an organisation and ended up bottom of the pile again and you've got to sort of work your way back up... It's very difficult... you know, in your mid-forties to be dealing with a boss or a senior grade who's only twenty-one or twenty-two!

Non-veteran 7: [I] couldn't find a decent job, I was in and out of jobs...I think there should have been something in place whereby an individual can get sort of support and advice on how to deal with it properly...Instead of that we[are] left [with]... 'How am I going to pay my rent now?' 'What are we going to do?' 'Where am I going to find a job in this one-horse derby?' You know what I mean?

Retirement: While for most participants retirement was felt to be a positive experience, several veteran and non-veterans reported experiencing psychological adjustment difficulties linked to their retirement from the workforce (at approximately 65 years old), as they often perceived they now had no purpose in life. Many felt a loss of social support because of less contact with colleagues. Several participants from both groups experienced anxiety, including concerns they might develop a chronic health problem (e.g. dementia, cancer, etc) or whether they would have sufficient funds for their retirement. Close companions highlighted that preventing the development/worsening of serious health conditions had become a key priority for both veterans and non-veterans in retirement. Veteran and non-veteran anxiety was particularly pronounced in those who had retired on physical health grounds. Notably, financial concerns were less common in veterans, with most feeling they had successfully planned financially for their retirement. Poor psychological adjustment in retirement was also evident in both veterans and non-veterans who had debilitating physical health conditions that meant they were unable to participate in activities or easily spend time with friends and family (e.g. housebound, extreme fatigue, unable to walk, etc).

Non-veteran 8: All I know is work...I’ve got a pair of hands, they still work...If I don’t find something [to do] in the near future I think I will go mad! You can’t sit and, you know, watch TV... I need to be doing something, doing something constructive...Something I can pass on I guess and make sure that [my wife] is provided for.
Social functioning

Both groups reported several implications of occupation on their social networks. In some cases, occupation could be a central source of social support and comradery. In others, occupation negatively impacted family connectedness and support from family members was required in response to work-related stressors. Moreover, the impact of occupation on social relationships continued to be felt into retirement.

Camaraderie. Camaraderie and good relationships with colleagues were central to job satisfaction in both veterans and non-veterans. This was particularly evident for veterans who reported that having strong friendships with colleagues was important as colleagues provided social support, a sense of belonging and respect, and encouraged physical exercise. Participants from both groups who reported difficulties making friends at work, often described similar difficulties building relationships with others as children. Poor relationships with others at work often made participants feel lonely and they reported lower job satisfaction.

Veteran 11 (no mental disorder diagnosis): People encouraged you... if you were doing any of the physical stuff... you would drag your pal along. You know, if he was fading or you were fading somebody would drag you along and take your kit and help you.

While both veterans and non-veterans missed interacting with colleagues on retirement, this effect was very pronounced in veterans both on retirement and leaving the AF. This feeling of social isolation in veterans and non-veterans was also confirmed by their close companions.

Non-veteran Close Companion 1: Oh, he used to be [in touch with colleagues], but not now, it seems to have dropped off... he did miss [work].
Interviewer: What did he miss about it?
Non-veteran Close Companion 1: I think the people...the interaction between people and talking to other people...
Interviewer: So that social life at work?
Non-veteran Close Companion 1: Yeah. He did, he misses [it], still misses it.

Continuing contact with military colleagues and being involved in military-affiliated associations or organisations (e.g. SSAFA, Royal Naval Association, etc.) was considered a key factor in maintaining good wellbeing after leaving the military as it provided opportunities to feel understood and that they mattered to others. Participants with a limited social life in retirement, particularly those with few military-connected friendships, often reported poorer quality of life compared to those who had a strong social network and ongoing contact with veterans.
Veteran 12 (no mental disorder diagnosis): The thing about the Army... is the fact that... it becomes very much a brotherhood. And when you leave that environment... when you go back to Civvy Street, it’s not the same... you don’t have that same oneness, you don’t have that same cohesiveness. And suddenly finding yourself back in that environment is very, very helpful... because all these people [at the Breakfast Club] have been there. They know what you feel, they know what you think, they know what you’re saying.

Familial support. Spouses and parents were often key sources of support for veterans and non-veterans in response to workplace stressors, particularly for those experiencing mental health difficulties. Experiences of familial support, such as encouraging formal help seeking, providing financial support if the participant felt unable to return to work, and simply listening, were considered helpful in coping with distress. For veterans, close companions were often aware of the high-levels of occupational stress experienced and were understanding of veterans spending time with colleagues outside of work for social support, and, in severe cases, encouraged them to leave the AF.

Veteran Close Companion 1 (no mental disorder diagnosis): He was very, very low... he’s a bit of a depressive. But we try and jolly him along and I try and tell him not to keep moaning... He just needs a bit of help probably from me at times to sort of buck him up and do things you know.

Familial connectedness. Most non-veterans reported that, unless they did shift work, they were able to see their family often and their occupation did not have a substantial impact their relationship with their spouse or children. Conversely, many veterans felt that their AF career adversely affected the amount of time they could spend with their family due to deployment and long hours. A military career was thought to have negatively impacted family connectedness and parenting in some cases, with veterans reporting having weaker relationships with their children or engaging in stricter, more authoritarian parenting practices.

Veteran 13 (mental disorder diagnosis): The main this is... you lost a lot of seeing your children growing up... I was there when my first child was born, but I didn’t see my second child until... over two months after he was born... When you’re there, you could be what they call a ‘proper parent,’ you’re looking after, playing with the children. But when you’re not it’s... virtually a one parent family.

While spouses of both veterans and non-veterans did the majority of the housework and childcare, non-veterans often assisted with these activities after work. On the other hand, spouses of veterans were reportedly solely responsible for the housework and childcare as the veteran was deployed, largely operating as a single-parent family until the veteran returned. Close companions described how this could be an overwhelming and anxiety provoking experience and they often had little support from their own extended families as they had moved far from home when the veteran was relocated.

Interviewer: So how did work and family life fit together for [your husband]?
Non-veteran Close Companion 2: Yes, very good indeed really... he would come home from work and we always made sure we had our meals together and then I would go off in the evening because I taught further education and he would look after the children... for a couple of hours... he was a very good father.

Whilst children reportedly received a good education in military-connected schools, a number of veterans reported leaving the military to ensure their children had a more stable upbringing (i.e. fewer relocations) and to reduce pressure on their spouse. On leaving the AF, and extending into retirement, it appeared that spending time with family members and developing stronger links with children was an important priority as veterans often regretted missing key moments in their children’s upbringing. In such cases, veterans and their close companions described how their lives in retirement largely revolved around family commitments. Poor relationships with children, and divorce, was often thought to be due to spending little time together during the course of the veteran’s AF career and these veterans often described having a lower quality of life and feeling isolated in retirement as a result.

Veteran 14 (mental disorder diagnosis): My wife had been running the house, bringing the children up... paying the bills, everything. And I came back [from sea] and suddenly wanted to be [the] man of the house... and I think that is what a lot of the guys in the Navy did, and that’s where a lot of problems with naval marriages [start] and my marriage slowly... broke down over a few years [and] because I was away over on the other side of the Atlantic... I missed out a lot on my children growing up [and] they missed out on me... we didn’t really grow up knowing each other...[and] that caused a bit of a problem, you know, with the children.
Experiences of veterans with mental health diagnoses

Robust physical health. Most veterans with mental health diagnoses were reportedly in good physical health. Veterans and their close companions believed this was because of the high volume of exercise and frequently being outdoors in fresh air in the AF. The few veterans who experienced physical health problems perceived that these were caused by a lack of protective equipment or repetitive strain injuries either in the AF or in later civilian roles requiring manual labour (e.g. dock workers, cleaner, etc.), or were a direct result of their mental health problems (i.e. psychiatric medication has caused weight gain; depression has caused a reduction physical activity leading to musculoskeletal problems, etc.).

Veteran Close Companion 2 (mental diagnosis): His physical health? It was always quite good...I mean, now he’s diabetic, he also has an underactive thyroid... he started putting on weight and also one of the medications he was on can cause that too...

Interviewer: Why do you think in the last few years he’s been putting on weight, he doesn’t exercise. Why do you think that is?

Veteran Close Companion 2 (mental diagnosis): No motivation. The medication keeps him - I was going to say numb, but that’s not quite the right word. Keeps him down if you like... So he’s got no energy.
### Summary of main findings

<table>
<thead>
<tr>
<th>Similarities</th>
<th>Veterans</th>
<th>Non-veterans</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of protective equipment and workplace accidents in the AF can cause ongoing physical health problems.</td>
<td>Health issues due to heavy lifting, contracting illnesses or standing for extended periods.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Differences</th>
<th>Veterans</th>
<th>Non-veterans</th>
</tr>
</thead>
<tbody>
<tr>
<td>High levels of exercise in AF are often continued in civilian life, facilitating good health.</td>
<td>Physical activity in the workplace is less common. Long-term health advantages of exercise not reported.</td>
<td></td>
</tr>
</tbody>
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<th>Veterans</th>
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<td>Workplace trauma and stress more common and can cause psychological problems which worsen in older age.</td>
<td>Workplace trauma and occupational stress less common, although bullying and discrimination were most reported, contributing to depression and anxiety.</td>
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<th>Veterans</th>
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<td>Developed resilience, self-confidence, and social skills during AF career.</td>
<td>Gained social skills from career. Ability to cope with stress attributed to childhood adversity, not career.</td>
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<td>Continuing contact with veteran colleagues and AF-affiliated organisations important for wellbeing in retirement.</td>
<td>Theme not found in non-veterans</td>
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<td>AF career negatively impacts familial connectedness.</td>
<td>Family connectedness largely not impacted by civilian career.</td>
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Responding to physical health problems. A reluctance to seek medical attention for any physical health problems that did arise was also reported by close companions of this sub-sample of veterans, and close companions often had to encourage veterans to access treatment. In cases of more severe psychological problems, close companions had to provide considerable informal care and remind veterans to self-care (e.g. change clothes, personal hygiene, etc.), ensure they ate regular meals, and take necessary medication.

Veteran Close Companion 3 (mental diagnosis): The drugs normally make you put on weight, but [his] metabolic rate went crazy. So, we have to make sure that he has something to eat every two hours...Otherwise he will just fade away. As long as I’m feeding him…you know, a sandwich, a pasty, a pie, a sausage or what’s available...because otherwise... he’d be like he’d come out of a concentration camp. It is like a fuel, I’ve got to keep refuelling him.

Veteran Close Companion 3 (mental diagnosis): I got depression when I was about sixty...I think that was the fear of getting old, I think that was... because the time going on and approaching my sixtieth birthday and thinking, God, then it’s going to be seventy, then it’s going to be, you know. And sort of fearful of the future, if you like.

A second frequent pattern was the development of mental health difficulties during AF service as a result of high levels of trauma exposure which co-occurred with non-AF-related stressful events (e.g. serious injury, death in the family, divorce, etc.). These veterans reported not enjoying their AF service as they felt they were treated insensitively or differently by colleagues because of their mental health problems. Veterans reportedly had few friends during AF service, and experienced many challenges finding and retaining civilian employment on leaving the AF which put them in significant financial difficulty. Notably, retirement was felt to be a particularly positive experience as they no longer had to worry about holding a job and there was greater financial security via AF and old age pensions. Mental health difficulties in this group were often treated via inpatient care and medication.

Veteran 16 (mental diagnosis): I flew down to the Falkland Islands on the same day as [my mother] died. I got there, turned round, came back, two weeks later I was back down in the Falkland Islands again! And that’s what, after a couple of months down there, I just cracked up... But all they were concerned about was getting me back to work. And it was a case of you will go back to work tomorrow! And I was forced to work, feeling very ill, in charge of a whacking great big [Army] depot. And it just did me in. I’ve never been the same ever since.

Finally, less commonly experienced was the development of mental health problems during later civilian roles as a result of bullying or discrimination. These veterans reported they had enjoyed their AF service, despite experiencing military-related stressors, but the occupational challenges they faced in civilian jobs led to depression, anxiety, or self-harm. As a result of their experiences, retirement from the civilian workforce was experienced as a relief. Mental health difficulties in this sample were primarily treated by veteran’s local GP with medication as an outpatient.

Veteran 17 (mental diagnosis): There was this little guy, a little inspector in a big man’s world, he was not very nice. I thought I can’t do this. I can’t work with this...The doctor assessed me, and he said, ‘I think you need a break’ he said, ‘otherwise you will break’ and I never went back... [the inspector] was vile to the point that you couldn’t complain because every time he took you aside and gave you a rollicking, there was never any witnesses. It was always behind closed doors with him.... He wasn’t nice... [but]really in them days, if you’d complained it wouldn’t have done you any favours. You know, your life would have been sheer hell because at the time there weren’t many female officers that were gaining rank.

Development of mental health problems. Three patterns to developing mental health problems were observed in this sample. One common pattern was that while high levels of stress and trauma exposure were experienced in the AF, AF service was overall experienced as enjoyable. Veterans had strong friendships with colleagues and felt they could cope well during this time. Mental health problems for this group instead developed around retirement, often following a stressful life event (e.g. death of a spouse, burglary, etc.) or by a sense of advancing age or purposelessness on leaving the workforce. Such mental health problems were reportedly treated with medication by their local GP as an outpatient.

Veteran 15 (mental diagnosis): I got depression when I was about sixty...I think that was the fear of getting old, I think that was... because the time going on and approaching my sixtieth birthday and thinking, God, then it’s going to be seventy, then it’s going to be, you know. And sort of fearful of the future, if you like.

Veteran Close Companion 3 (mental diagnosis): The drugs normally make you put on weight, but [his] metabolic rate went crazy. So, we have to make sure that he has something to eat every two hours...Otherwise he will just fade away. As long as I’m feeding him…you know, a sandwich, a pasty, a pie, a sausage or what’s available...because otherwise... he’d be like he’d come out of a concentration camp. It is like a fuel, I’ve got to keep refuelling him.

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facilitate veteran recovery. Moreover, close companions often had made plans with the veteran for their lives together, including plans for activities in retirement (e.g. overseas travel, hiking, etc.), and felt disappointed or frustrated that these plans were no longer possible as veterans’ psychological difficulties meant they felt unable to cope with these activities (i.e. felt unable to go outdoors, be in crowded places, etc).

Veteran Close Companion 4 (mental diagnosis): Really all our retirement he’s suffered with quite bad depression, which is sad because we planned to do quite a lot of things, but we couldn’t do it... I think it’s all just got to him, I mean he hasn’t been out of the house except to go to the doctors or the dentist for about a year.

Interviewer: And how does that impact you?

Veteran Close Companion 4 (mental diagnosis): It’s difficult because I don’t do as much now because we used to do so much together. It was really nice walking and we’d go up to [London] and we’d go round the museums and what have you... I used to do a lot of stuff with guides and brownies and holidays with them. But now I can only go for the day because I don’t like to leave him overnight. Because I’ve done that before and come and found him on the floor or unable to get upstairs or he’s been unable to go and get himself a drink or something like that. So, I just go for the day now or half a day, you know, just to make sure he’s ok.

In cases of serious mental illness, close companions reported that receiving more support from the veteran’s clinical care team would have been helpful. Desired support included guidance about what veteran symptoms the family could expect, advice on how to best support the veteran with their mental health problems and knowing who the close companion could contact for additional support during mental health crises was perceived as especially useful.

Veteran Close Companion 5 (mental diagnosis): I think if someone had explained what we could expect...because at one point he was trying to get us out of the house because he couldn’t cope with us in [there] because he couldn’t understand what was going on and I think if we’d had someone to talk to properly, that would take us both you know and talk to us both and say ‘this is what’s happened it’s going to be slow recovery and you may feel like this’. Then I think that would have helped because then we could say you know ‘remember what they said?’ And you’re not out in the wilderness.

Figure 9. Summary of key findings for veterans with mental diagnoses

Experiences of veterans with mental diagnoses key findings

- Good physical health related to exercise in AF service.
- Workplace accidents or injuries caused by lack of protective equipment or repetitive strain, both in AF and later civilian roles. Physical health problems could also be caused by psychiatric medication.
- Veterans reluctant to seek medical treatment and close companions are central in encouraging their access to healthcare.
- Mental health problems commonly developed in retirement, during AF service, or in later civilian roles.
- Close companions could find providing support to veterans overwhelming, often putting the veteran’s needs ahead of their own.
- Close companions wanted more advice and guidance to support veterans, including information about what symptoms they could expect, how to best support the veteran, and knowing who to contact for additional help during mental health crises.
Discussion
Overview

This study’s objective was to better understand the impact of military service on wellbeing later in life and whether it is different compared to those who had non-military occupations. Whilst this topic has been examined in previous research studies of individuals who have more recently left AF service, few studies have examined this topic in veterans over the age of 65. Fewer still have incorporated the viewpoint of veterans themselves and directly compared their experiences to non-veterans. As a result, prior to this research, whether health issues experienced by older veterans can be attributed to UK military service or a normal feature of ageing was poorly understood. This gap in knowledge is unfortunate as it is essential to understand the implications of military service on wellbeing to ensure UK AF veterans are at no disadvantage compared to their non-veteran peers, in line with the Armed Forces Covenant.

This study examined wellbeing as a function of three domains: physical, psychological, and social functioning. The results of this investigation detail the significant implications of varying and distinct workplace practices on wellbeing later in life, including chronic physical health problems due to a lack of protective equipment, mental health difficulties, and poor familial connectedness. Our findings also illustrate the considerable benefits of occupation on wellbeing, particularly for those who served in the AF, such as improved self-confidence and resilience, as well as long-term good physical health as a result of physical exercise.

Physical functioning

The majority of research examining occupational health in military and civilian roles has focused on the negative effects a workplace can potentially have on physical health. This study makes an important contribution to the literature by illustrating the positive benefits of occupation on physical functioning. Specifically, we found that high levels of physical activity in the AF was considered by veterans to be a key reason for their ongoing good health later in life. Physical exercise in middle age is associated with lower risk of health problems later in life, including dementia, depression and cardiovascular issues. This may mean veterans are at an advantage, as opportunities for occupational physical activity were limited in non-veterans and long-lasting health benefits of occupational exertion in this group were not reported. It should also be noted that some veterans reported difficulties continuing physical exercise on leaving the AF due to logistical barriers or more sedentary civilian jobs. This is consistent with previous research in working age US and UK veterans and provides insight into why veterans may be particularly vulnerable to developing obesity on leaving the AF.

Nonetheless, previous research into the impact of military service on physical health has highlighted that, compared to the general population, veterans are more likely to experience hearing difficulties, musculoskeletal problems and arthritis on leaving service. The findings of the present research provide support for these results and offer insight into why such physical health problems potentially occur. For example, in this study, veterans self-reported considerably more hearing difficulties compared to non-veterans due to a lack of ear defenders in loud engine rooms or during gun fire. As ongoing health problems linked to lack of protective equipment were found in both veteran and non-veteran groups, this may be reflective of occupational health and safety standards of the time (e.g. 1950-1990’s). Previous studies have observed that musculoskeletal problems are a leading reason for AF discharge, and our findings add to this work by detailing the long-term effects of such injuries. The present study also documents that long after leaving the military, veterans are more reluctant than non-veterans to seek medical treatment for physical health problems or accept informal care - reportedly due to embarrassment or an AF instilled need to be ‘tough.’ As delaying access to necessary medical care can negatively impact wellbeing, this behaviour is particularly concerning. Efforts have been successfully made to encourage psychological help-seeking in personnel/veterans experiencing mental health difficulties, and a similar approach for promoting treatment for physical health may also be beneficial.

Psychological functioning

The media often portrays AF veterans as more vulnerable to psychological difficulties compared to the general population. However, we found that more non-veterans met criteria for likely PTSD (based on their questionnaire responses) compared to veterans. This supports our recent meta-analysis which found US older veterans were not more likely to have PTSD than the general population. It is possible that the greater prevalence of PTSD in non-veterans was because those meeting criteria for PTSD reported more recent, interpersonal trauma, whereas the majority of veterans reported military-related trauma exposure which happened a considerable time ago. Nevertheless, the recent worsening of post-trauma psychological difficulties reported by some veterans in our qualitative interviews does represent a concern. Such symptoms may potentially reflect experiences of cognitive aging, where PTSD re-emerges in old age due to age-related decreases in attention and memory function. As it stands, the trajectory of PTSD over the lifespan remains poorly understood and robust longitudinal studies are needed to elucidate the course of PTSD throughout life and the risk and protective factors that may be involved.

Older veterans in this study did report significantly more alcohol consumption than non-veterans, and this is consistent with research in working age UK personnel/veterans who have been found to consume higher levels of alcohol compared to those who have never served. A recent study by Murphy et al. found that,
compared to the non-veterans, UK AF veterans referred for NHS alcohol support were more likely to be older, retired and male. It is possible that the high levels of alcohol consumption found in older veterans reflect a lasting effect of military employment, where alcohol is commonly used to alleviate stress and facilitate unit cohesion. As veterans may be unaware that their alcohol intake is harmful, increasing veteran awareness of the potential hazards of excessive alcohol consumption and encouraging veterans to seek alcohol support services sooner may be beneficial. However, there is little available literature examining the long-term alcohol consumption patterns in UK AF veterans and our findings highlight the importance of longitudinal studies which continue examine veteran wellbeing long after leaving service.

Despite more non-veterans meeting likely case criteria for PTSD, study interviews found that veterans more commonly reported high levels of workplace stress and trauma exposure. Although psychological difficulties were experienced by a minority of veterans, when such challenges were positively appraised, veterans reported increased resilience, self-confidence, and improved ability to cope with stress and adversity. This improvement in confidence, stress management and resilience were not reported to the same degree in non-veterans, suggesting a unique advantage of military service on wellbeing. These findings are consistent with previous research that the majority of UK AF veterans cope well and indicates that further investigations how resilience is built in the AF may be useful for future interventions.

Social functioning
Previous studies have highlighted the importance of social support, good familial connectedness and strong social networks in retirement for an individual’s positive psychological wellbeing. The results of this study reinforce the importance of these factors for wellbeing both throughout one’s career and also after leaving the workforce in both veterans and non-veterans. This study found that, particularly for veterans/non-veterans with mental health problems, social support, including encouraging formal help-seeking and financial support, was experienced as very beneficial. Our research also builds on existing studies that stress the importance of maintaining strong social networks for successful ageing by highlighting the particular benefit of ongoing relationships with veteran colleagues or AF-affiliated organisations for veteran wellbeing later in life. Finally, these findings contribute towards the results of previous research conducted with spouses of active service personnel that military service can negatively affect familial connectedness and mean that spouses take on most of the childcare responsibilities, which can be isolating and overwhelming for spouses in some cases. Poor familial connectedness was associated with lower quality of life and isolation in retirement, illustrating the long-term importance of good work-life balance.

Summary
In summary, this research builds on the existing literature in several key ways:

This evidence helps to identify the most important occupation-related features to target to improve UK AF veteran, as well as non-veteran, wellbeing later in life. This study has identified key factors contributing towards physical and mental health difficulties during the course of and following military service which will be explored further in the Path Forward section.

Evaluation of research
As with any research project, this study has several strengths and limitations.

Strengths
Large sample size. Most qualitative studies include between 5-25 participants. The sample size utilised within this research study represents a high number of participants for a piece of qualitative research (n=120). The collection of data from this large sample ensures we can be confident that thematic saturation was reached, meaning we have included and incorporated the views of the impact of occupation on wellbeing within the population sampled. The inclusion of a sub-sample of veterans with previous diagnoses of mental health problems also ensures our data incorporates their unique experience.

Inclusion of close companions. The inclusion of close companions (e.g. spouse, child, close friend) served to triangulate, or verify, the findings and allowed us to examine the impact of occupation from another perspective, resulting in richer, more reliable data.

Limitations
Response bias. This research is based only on those veterans and non-veterans who agreed to contact by the research team or chose to self-refer and participate in response to study advertisements. This may mean that participants had particularly salient occupation-related issues they wished to discuss. Although study advertisements were widely placed in
a number of services (e.g. several GP surgeries, walk-in centres, support groups, etc.) and a diverse recruitment strategy was used (Appendix 1), there is no way to know to what degree, if any, this may have potentially skewed the results.

**Mental health of non-veterans.** A final limitation of this study is that we only included a sub-sample of veterans with self-reported diagnoses of mental health problems. Future studies should include investigations of non-veterans with diagnoses of mental health difficulties to further understand how occupational experiences may affect wellbeing in this group.

**Path forward**
The results of this research project have considerable implications for the ways in which employees (both military and non-military) can be supported to ensure optimal wellbeing later in life. We explore the key clinical and policy implications of our findings below.

**Clinical implications.**

Sensitivity to the needs of older veterans. Considerable efforts have been made to understand the mental health of recently serving veterans and better address their treatment needs.\(^{79,80}\) Our results highlight that military service can have long-term implications for the wellbeing of older veteran and indicate that this population may also benefit from additional support. Many innovative attempts have been made to encourage veteran help-seeking and improve access to signposting information online (e.g. the Veterans’ Gateway) or possibly by mobile phone apps\(^{81}\) if evaluation shows them to be a useful method of improving help-seeking. However, such efforts may not be appropriate for older veterans, who may not have internet or mobile phone access.\(^{82}\) Therefore, it is suggested that when designing future interventions to improve veteran help-seeking or access to treatment, veteran-affiliated organisations and NHS services should continue to consider the accessibility and appropriateness of such efforts for older veterans.

Moreover, while veteran-affiliated organisations and NHS older person’s mental health (OPMH) services have made significant headway in providing treatment and support for those older people with dementia, including veterans,\(^{1,2}\) our findings highlight that dementia is not the only mental health difficulty experienced in this population. We found that older veterans can have a complex range of psychological problems, such as the emergence of trauma-symptoms later in life, and needs which should also be reflected in the support offered by veteran organisations, NHS veteran services and OPMH services.

Finally, providing physical care and emotional support to veterans was found to be challenging and distressing for close companions in some cases. Particularly when veterans were experiencing mental health difficulties, additional guidance and support was needed by close companions to improve their understanding of and responses to veteran symptoms. While various NHS services and veteran-affiliated organisations have made considerable efforts to ensure the carers of working age veterans with mental health difficulties and older veterans with dementia receive appropriate advice and guidance,\(^{1,2}\) comparatively little tailored support is routinely offered to carers of older veterans with non-dementia related mental health problems.\(^{83,84}\) Our findings highlight the need for support and guidance to be provided not only to carers of veterans with dementia, but also to carers of older veterans with other significant mental health problems.

**Policy and practice implications.**

Emphasis on physical activity. As veterans reported several long-term benefits of physical exercise in the AF, these findings reinforce the potential importance of physical activity in the workplace. Additional steps could be taken to ensure that non-veteran workplaces encourage physical activity, such as promoting walking in the workplace and active travel.\(^{85}\) Moreover, as difficulties continuing physical activity on leaving the AF were experienced, additional support for veterans focusing on encouraging and facilitating physical activity may be beneficial. For example, raising awareness of the discounted gym memberships available to AF veterans and providing further sponsorship for local veteran sports clubs may be worthwhile.

Supporting familial connectedness. This study supports previous investigations of the potentially negative impact of AF service on familial connectedness, with active service personnel unable to spend as much time with their spouse and children as those in non-military occupations due to deployment and shift-work.\(^{78,86}\) In the present study, limited time with family during AF service could lead to poorer family cohesiveness and weaker bonds with children, contributing towards poorer quality of life and feelings of isolation in later life. Moreover, spouses themselves often felt overwhelmed with managing the responsibilities of childcare and the household on their own. Steps could be taken to address this, both during the course of a military career as well as during a veteran’s transition from the AF, potentially utilising a unified approach which incorporates support from several military stakeholders (e.g. medical, youth coordinators, chaplains, family advocates) to foster family cohesion.\(^{33}\) For example,
some veteran affiliated organisations currently offer support to assess family’s needs (e.g. in cases of dementia, health problems, etc.) as well as provide family respite and holidays. Our results indicate additional areas of support that may be beneficial to families, such as assessing family needs more broadly, providing assistance with childcare, offering respite for spouses, and support to facilitate good familial relationships.

Figure 11. Summary of key clinical and policy implications

## Path forward

- Efforts to improve help-seeking and access to treatment for older veterans must use accessible and appropriate approaches for this population.

- Veteran services should be mindful that older veterans experience mental health difficulties beyond dementia. Support for carers of older veterans with mental health problems should also be available.

- Need to promote physical activity in non-military workplaces.

- Need to encourage and facilitate veteran physical exercise after leaving the AF.

- (Ex-)military families may benefit from additional support to support familial connectedness, such as programs to foster cohesion.

## Conclusion

Understanding the potential implications of military service on wellbeing later in life is essential for ensuring those who serve in the UK military are at no disadvantage compared to their non-veteran peers, in keeping with the Armed Forces Covenant. This line of research is also critical as only by understanding the needs of older veterans and their families can we ensure adequate provisions are made to support them and effective changes to clinical practice and policy are made.

This study is an important first step in exploring the impact of military service on physical, psychological and social functioning later in life as compared to age and gender matched non-veterans. We delineate the ways in which both military and non-military occupations are understood to impact later wellbeing. This study identified several broadly similar challenges both veterans and non-veterans can experience in later life as a result of their occupation, as well as distinct differences, both positive (i.e. perceived resilience linked with AF service), and negative (i.e. some concerns of lower family connectedness due to AF service). We illustrate that workplace practices can have long-lasting health effects, and that provisions should be made by employers to ensure adequate protection and support is available for employees. By exploring the impact of occupation on mental health, we provide insight into the unique health and psychosocial needs of UK geriatric veterans and highlight the gaps to be addressed in future research. As such, our findings have several implications for the support that veteran services provide to older veterans and their families, such as ensuring support is appropriate and accessible for this age group.
References


76 Jones E, Fear NT. Alcohol use and misuse within the military: a review. International Review of Psychiatry. 2011 Apr 1;23(2):166-72.
Acknowledgements

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Appendices

Appendix 1
List of recruitment sites for the present study:
• Solent NHS Trust GP Surgeries (Adelaide GP Surgery, Nicholstown Surgery, Portswood Solent Surgery)
• Solent NHS Trust Homeless Healthcare Team
• Veterans Outreach Support
• Veteran Breakfast Clubs
• Royal Chelsea Hospital

The study was also advertised via:
• Social media (e.g. Facebook, Twitter, KCMHR website)
• KCMHR mailing lists
• Royal Airforce Association
• Royal Marine Association
• Royal Naval Association

Appendix 2
The analysis involved six broad steps, as shown in Figure 12. Firstly, transcripts were read multiple times, then initial codes were then systematically applied to all transcripts. These codes were then collated into relevant codes and then into potential themes. Themes were then grouped into categories, or key themes, selected according to their prevalence, richness and importance placed upon them by participants. Throughout data collection and analysis, memos were kept recording reflections and thoughts about emerging themes. Additionally, a record was kept by the primary researcher in order to recognise any bias or premature interpretations of the data. By interviewing a close companion of all participants, multiple data sources were used to examine a single life course, as opposed to just the perspective of one individual. This increased the scientific rigour of the analysis. For further information about Thematic Analysis, please see Braun & Clarke.

Figure 12. Thematic analysis process adapted from Braun & Clarke

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<td>Step 1: Transcribe interviews</td>
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<td>Step 3: Create initial codes</td>
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<td>Step 4: Develop themes</td>
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<td>Step 5: Merge and refine codes and themes</td>
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<td>Step 6: Final themes defined and labelled</td>
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