RESEARCH

# Volunteering behaviours among UK military Veterans during the COVID-19 pandemic and associations with health and well-being

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## ABSTRACT

**Introduction:** The COVID-19 pandemic facilitated new methods of and motivations for volunteering and created barriers to participation through social restrictions and lockdowns. The research assessing the volunteering behaviours of ex-service personnel (Veterans) is limited; however, as a group they may be more likely to volunteer because of aspects of military culture that encourage pro-social behaviours. The authors investigated levels of formal and informal volunteering among UK Veterans during the pandemic, factors associated with volunteering, and whether the pandemic affected Veterans' volunteering behaviours. **Methods:** An additional wave of data was collected from a longitudinal cohort study of the UK Armed Forces through an online survey conducted from June to September 2020. Participants were included if they had left the armed forces after regular service and were living in the United Kingdom. Invitation emails were sent to 3,547 Veterans, with a 44% response rate (N = 1,562). **Results:** Overall, 60% of Veterans reported volunteering in the past 12 months. Of those who volunteered, 41% reported formal volunteering, and 44% reported informal volunteering. Veterans reported reducing formal volunteering because of the pandemic (45%), but they also reported increasing informal volunteering (66%). **Discussion:** During the pandemic, UK Veterans volunteered at a level similar to the UK general population. They reported higher levels of formal volunteering and lower levels of informal volunteering compared with the UK general population. Understanding who among Veterans is likely to engage in volunteering could support future strategies to engage volunteers and open more opportunities for participation.

**Key words:** COVID-19, mental health, military, UK Armed Forces, Veterans, volunteering, well-being

## RÉSUMÉ

**Introduction :** La pandémie de maladie à COVID-19 a favorisé de nouveaux modes de bénévolat et de nouvelles motivations pour en faire et a créé des obstacles à la participation à cause des restrictions sociales et des confinements. Peu de recherches évaluent les comportements en matière de bénévolat des ancien(ne)s militaires (vétéran[e]s), mais collectivement, ils et elles sont peut-être plus susceptibles de faire du bénévolat à cause des aspects de la culture militaire qui encouragent les comportements prosociaux. Les auteurs ont exploré les taux de bénévolat structuré et spontané chez les vétéran(s) britanniques pendant la pandémie, les facteurs associés au bénévolat et l'effet éventuel de la pandémie sur leurs comportements en matière de bénévolat. **Méthodologie :** Les chercheurs(ses) ont tiré une vague de données supplémentaires d'une étude longitudinale de cohorte auprès des Forces armées britanniques au moyen d'un sondage en ligne réalisé entre juin et septembre 2020. Les participant(e)s étaient inclus(es) s'ils(si elles) avaient quitté les Forces armées après leur service régulier et habitaient au Royaume-Uni. Au total, 3 547 vétéran(e)s ont reçu un courriel d'invitation, et le taux de réponse s'est élevé à 44 % (N = 1 562). **Résultats :** Dans l'ensemble, 60 % des vétéran(e)s ont déclaré avoir fait du bénévolat dans les 12 mois précédents. Parmi eux, 41 % ont déclaré avoir fait du bénévolat structuré, et 44 %, du bénévolat spontané. Les vétéran(e)s ont déclaré avoir réduit leur bénévolat structuré à cause de la pandémie (45 %), mais ont également affirmé avoir accru leur bénévolat spontané (66 %). **Discussion :** Pendant la pandémie, les vétéran(e)s britanniques ont fait autant de bénévolat que l'ensemble de la population britannique. Ils et elles ont déclaré un taux plus élevé de bénévolat structuré et un taux plus faible de bénévolat spontané par rapport à l'ensemble de la population générale. Si on savait qui sont les vétéran(e)s susceptibles de faire du bénévolat, on pourrait appuyer de futures stratégies pour mobiliser les bénévoles et offrir plus de possibilités de participation.

**Mots-clés :** bénévolat, bien-être, COVID-19, Forces armées britanniques, militaire, santé mentale, vétéran(e)s

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## LAY SUMMARY

The COVID-19 pandemic influenced ways in which individuals volunteered and created barriers for participation because of differing restrictions. The research assessing how Veterans volunteer is limited, but there may be aspects of military culture that encourage service to others. The authors investigated volunteering among UK Veterans during the COVID-19 pandemic and what factors made Veterans more or less likely to volunteer. The study found that 60% of Veterans had volunteered in the past 12 months, a level similar to that among the UK general population. Overall, Veterans volunteered more often through formal organizations rather than on an informal basis, such as helping individuals such as neighbours. However, in relative terms, levels of formal volunteering decreased and levels of informal volunteering increased during the pandemic. Veterans were more likely to volunteer if they were officers or to increase volunteering if they felt lonely. Veterans who reduced volunteering were more likely to have mental health problems. Understanding volunteering among Veterans may open up more opportunities for participation.




## INTRODUCTION

The research assessing the volunteering behaviours of those who served in the armed forces is limited. The U.S. literature suggests that Veterans may be more likely to volunteer in certain circumstances. A study of U.S. student Veterans found that they were more likely to volunteer than their non-Veteran counterparts.[1] Further research from the United States found that Veterans who served during wartime (First and Second World Wars, Vietnam War, Korean War, or the Gulf War period between August 1990 and August 2001) were more likely to volunteer than Veterans who served during peacetime.[2] Many aspects of military life and culture may encourage pro-social behaviours. These include a culture of teamwork and sacrifice for country and are exemplified by military mottos such as Service not Self (Royal British Legion) and Serve to Lead (Royal Military Academy Sandhurst). There are several occasions in UK history in which the armed forces mobilized to help the public good, exemplified by the recent assistance offered to run UK COVID-19 vaccine centres.[3] Hence, it may be that this culture of service continues when individuals leave the military. However, to the authors' knowledge, this has not been investigated before in a UK Veteran cohort.

Since the beginning of the COVID-19 pandemic in March 2020, individuals have had new and different motivations for volunteering activities. Formal activities in the United Kingdom occurred through organizations and groups such as charities, food banks and the National Health Service volunteering scheme,[4] and informal activities involved individuals giving help to others through diverse models of community action, mutual aid groups, or simply neighbour-to-neighbour support.[5,6] Of interest is how the COVID-19 pandemic both encouraged and spurred the innovation of new methods of volunteering and created barriers to participation through restrictions, lockdowns, or individuals reducing volunteering because they feared contracting COVID-19.[5,7,8] During the pandemic, the UK COVID-19 Social Study found that, overall, volunteers were people who fit the typical demographic profiles of volunteers in normal circumstances, such as older individuals, those with higher education, and women.[6] A rapid review of the volunteering literature during COVID-19 also found that food shopping and emotional support were the most common volunteering activities.[5]

Volunteering may have bidirectional effects on individuals' well-being and health. In many studies, volunteers report better self-rated health, reduced levels of depression, and improved quality of life, self-esteem, and well-being.[9,10] However, research has also found that volunteering in disaster situations, or feeling an undue burden of responsibility, can negatively affect individuals' well-being.[11-13] With this context in mind, it is important for government and voluntary organisations to understand who in the Veteran group is most likely to volunteer, what health benefits volunteering could confer in the right circumstances, and how volunteering can continue to be innovative and offer more opportunities to groups who may not currently be engaged.

The aims of the investigation were to assess 1) the level of volunteering in the UK Veteran group during the first phase of the COVID-19 pandemic, 2) what demographic, military, and health and well-being factors were associated with volunteering, and 3) whether COVID-19 affected volunteering behaviours among UK Veterans.

## METHODS

### Study design and participants

Participants were recruited from the King's Centre for Military Health Research, King's College London, Health and Wellbeing Cohort Study, a large-scale, ongoing investigation of the health and well-being of UK Armed Forces personnel from all three services,

including both Regular Force members and reservists. There were three phases of data collection: Phase 1, 2004-2006, Phase 2, 2007-2009, and Phase 3, 2014-2016.[14-16] The study sample included those who took part in an extra wave of data collection for the cohort study as part of the Veterans-CHECK study that assessed the impact of the pandemic on the health and well-being of Veterans.[17] Individuals were invited to take part in the Veterans-CHECK study if they had participated in Phase 3 of the Health and Wellbeing Cohort Study, had left the UK Armed Forces, had regular service, were currently living in the United Kingdom, had consented to follow-up, and provided a valid email address. Invitation emails were sent to 3,547 Veterans; the response rate was 44% (n = 1,562).

## Procedure

Data collection and consent were conducted online. Participants were asked to complete a questionnaire in a secure web survey application (REDCap; https://www.project-redcap.org/). An invitation was emailed to participants in June 2020, with up to three email reminders sent in June, July, and August 2020. Data collection ended in September 2020. The questionnaire sections included socio-demographics, COVID-19 experiences and stressors, and current mental health and well-being measures. Education and military background information (rank, service branch, length of service) were taken from Phase 3 of the cohort study.[16] A full description of the study protocol is available online in Sharp et al.[17]

## Volunteering-related variables

Definitions of volunteering were taken from the Department of Digital Culture Media and Sport Community Life Survey 2018-2019, as was the volunteering question set adapted for this study.[18] The questionnaire asked participants about volunteering behaviours and any impact of the COVID-19 pandemic on the amount of volunteering done. Participants were also asked about formal and informal volunteering. Formal volunteering was defined as any unpaid help given through structured groups, clubs, and organizations. Participants were asked, "In the past 12 months have you given unpaid help to any groups, clubs or organisations?" and were given examples of what these organizations might be (e.g., charities or sports clubs), with yes or no as response options. Informal volunteering was defined as any unpaid help given on a one-to-one basis to individuals who were not relatives. Participants were asked, "In the last 12 months, have you given unpaid help, as an individual, to someone who was not a relative?" Participants were given examples of what this help might be (e.g., doing shopping or cooking for someone), with yes or no as response options. For both formal and informal volunteering circumstances, participants were asked, "Because of the COVID-19 pandemic have you given new or extra unpaid help?" with yes or no as response options, and "Have you had to reduce unpaid help?" with yes, no, or not applicable as response options.

## Mental health and well-being-related variables

Symptoms of common mental health disorders (CMDs) were measured using the 12-item General Health Questionnaire. The cut-off score for probable CMDs was 4 or more (scores range from 0 to 12).[19] The 10-item Alcohol Use Disorder Identification Test was used to measure alcohol use; a cut-off score of 8 or more was used for hazardous drinking (scores range from 0 to 40).[20] The PTSD Checklist for DSM-5 was used to measure probable posttraumatic stress disorder (PTSD), defined as a score of 38 or higher (scores range from 0 to 80).[21] The 3-item UCLA Loneliness Scale was used to measure feelings of loneliness with a cut-off score of 6 or more (scores range from 3 to 9).[22] The health perception question was one item from the Medical Outcomes Study 36-item Short-Form Health Survey that asked, "In general, how would you rate your health?" with response options of excellent, very good, good, fair, and poor.[23] Well-being was measured with the Warwick-Edinburgh Mental Well-being Scale (WEMWBS),[24] which asks about experiences over the past two weeks. For analysis purposes, WEMWBS scores were categorized using cut-points at plus or minus one standard deviation of the sample mean. Low mental well-being was defined as a score of 14 to 39, medium mental well-being as a score of 40-59, and high mental well-being as a score of 60-70.[25]

## Analysis

Response weights were generated to account for non-response and defined as the inverse probability of responding once sampled, driven by covariates shown empirically to predict response. Logistic regression analyses were conducted to assess the associations between the outcomes of interest (formal and informal volunteering) and explanatory variables such as socio-demographic and military characteristics and COVID-19 experiences and stressors. Logistic regression analyses were adjusted for sex, age, education, marital status, rank, and service. All statistical analyses were performed

using Stata (version 17.0; StataCorp, College Station, TX), with survey commands used to account for weighting. The survey command for logistic regression uses a robust variance estimator. Weighted percentages and odds ratios (ORs) are presented in tables to account for response weights, along with unweighted cell counts.

## RESULTS

Just more than 60% of Veterans in the sample (60.1%, n = 940) reported providing formal or informal volunteering in the past 12 months (Table 1). Of those who reported volunteering, 41.0% (n = 652) reported formal volunteering, and 44.3% (n = 684) reported informal volunteering (participants could endorse both formal and informal volunteering). Of those providing formal volunteering, 31.3% (n = 202) reported providing extra help because of the pandemic, 45.1% (n = 297) reported reduced formal volunteering because of the pandemic, and 23.6% (n = 151) reported unchanged formal volunteering. Of those providing informal help to individuals (other than relatives), 66.2% (n = 446) reported increasing help because of the pandemic, 9.0% (n = 64) reported reducing help to individuals because of the pandemic, and 24.8% (n = 170) reported unchanged informal volunteering.

### Formal volunteering

#### *Associations of demographic and military characteristics and formal volunteering*

In unadjusted analyses, volunteering for groups was associated with increased age (test for trend, $p = 0.004$), rank (when in service), educational level, current relationship status, and employment status (Table 2). The oldest age group (those aged 65 y and older) was more likely to engage in formal volunteering, as were commissioned officers compared with non-commissioned officers (NCOs), those no longer in a relationship, and those who had retired. Those of lower rank, compared with NCOs, were less likely to engage in formal volunteering, as were those with lower educational attainment compared with those with a degree. After adjustment, age and employment status were no longer associated. Rank, educational status, and relationship status remained significantly associated, and service in the Royal Air Force became associated with formal volunteering.

**Table 1.** Veterans' formal and informal volunteering levels during the COVID-19 pandemic

| Volunteering | N (%) |
|---|---|
| Formal — unpaid help given to a group, club, or organisation | 1,531 |
| Gave in past 12 months | 652 (40.96) |
| Extra because of the pandemic | 202 (31.29) |
| Reduced because of the pandemic | 297 (45.07) |
| Unchanged because of the pandemic | 151 (23.64) |
| Informal — unpaid help given, as an individual, to someone who was not a relative | 1,529 |
| Gave in past 12 months | 684 (44.33) |
| Extra because of the pandemic | 446 (66.23) |
| Reduced because of the pandemic | 64 (9.00) |
| Unchanged because of the pandemic | 170 (24.77) |
| Combined volunteering — formal and informal — in the past 12 months (N = 1,531) | 940 (60.10) |

Note percentages are weighted

#### *Associations of health and well-being outcomes and formal volunteering*

Formal volunteering was not associated with any mental health or loneliness outcomes (Table 3). There was an association with the perception of general health. Those who perceived their general health to be fair or poor were less likely to formally volunteer than those who perceived their general health to be good to excellent. Those with a low level of mental well-being were statistically significantly less likely to volunteer than those with a medium level of mental well-being, but those with a high level of mental well-being were not statistically significantly more likely to volunteer than those with a medium level of mental well-being.

#### *Association of health and well-being outcomes and change in formal volunteering*

Having reduced or increased formal volunteering because of the COVID-19 pandemic was not associated with either low or high mental well-being, CMDs, PTSD, alcohol misuse, perception of general health, or loneliness (data are available from the authors).

### Informal volunteering

#### *Associations of demographic and military characteristics and informal volunteering*

Rank was associated with informal volunteering in both unadjusted and adjusted analyses, with officers being more likely than NCOs to give unpaid help to individuals (Table 4). Individuals who had children but no parental responsibilities were less likely to report informal volunteering than people with no children. Post hoc analyses found no statistically significant test for trend regarding age (adjusted $p = 0.82$).

**Table 2.** Associations of demographic and military characteristics and formal volunteering (N = 1,531)

| Characteristic | n (%) | | OR (95% CI) | AOR (95% CI)* |
|---|---|---|---|---|
| | Help not given, n = 879 (59.04%) | Help given, n = 652 (40.96%) | | |
| Sex | | | | |
| Male (Ref.) | 784 (89.64) | 572 (88.69) | 1.00 | |
| Female | 95 (10.36) | 80 (11.31) | 1.10 (0.79-1.54) | 1.01 (0.70-1.48) |
| Age band (y) | | | | |
| 25-34 | 30 (6.92) | 13 (5.53) | 0.87 (0.41-1.84) | 1.54 (0.70-3.39) |
| 35-44 | 162 (24.25) | 103 (20.87) | 0.94 (0.69-1.27) | 1.13 (0.80-1.59) |
| 45-54 (Ref.) | 326 (36.96) | 212 (33.94) | 1.00 | 1.00 |
| 55-64 | 288 (26.42) | 224 (29.06) | 1.20 (0.94-1.53) | 0.91 (0.69-1.19) |
| ≥65 | 73 (5.44) | 100 (10.60) | 2.12 (1.50-3.01) | 1.28 (0.87-1.89) |
| Rank | | | | |
| Officer | 183 (17.36) | 287 (39.02) | 2.79 (2.20-3.54) | 2.53 (1.93-3.31) |
| NCO (Ref.) | 603 (67.02) | 333 (53.93) | 1.00 | 1.00 |
| Other rank | 93 (15.62) | 32 (7.05) | 0.56 (0.35-0.90) | 0.48 (0.28-0.81) |
| Service | | | | |
| Royal Navy | 170 (19.62) | 115 (18.83) | 1.00 (0.74-1.35) | 1.02 (0.74-1.41) |
| Army (Ref.) | 497 (59.13) | 359 (56.82) | 1.00 | 1.00 |
| RAF | 212 (21.25) | 178 (24.35) | 1.19 (0.92-1.54) | 1.34 (1.02-1.75) |
| Education level | | | | |
| No qualifications or GCSE/O level | 249 (30.56) | 122 (20.93) | 0.47 (0.35-0.62) | 0.70 (0.52-0.95) |
| A level | 307 (36.41) | 191 (30.91) | 0.58 (0.45-0.75) | 0.80 (0.62-1.05) |
| Degree (Ref.) | 323 (33.03) | 339 (48.16) | 1.00 | 1.00 |
| Current relationship status | | | | |
| In a relationship (Ref.) | 776 (88.25) | 560 (85.39) | 1.00 | 1.00 |
| Single | 40 (5.27) | 28 (5.40) | 1.06 (0.59-1.89) | 1.18 (0.66-2.11) |
| Ex-relationship | 62 (6.48) | 63 (9.21) | 1.47 (1.01-2.15) | 1.53 (1.02-2.28) |
| Length of time since leaving service (y) | | | | |
| ≤5 | 103 (13.38) | 78 (14.10) | 1.05 (0.73-1.51 | 0.96 (0.66-1.41) |
| 5-10 | 290 (34.49) | 208 (33.45) | 0.96 (0.76-1.23) | 0.86 (0.66-1.11) |
| >10 (Ref.) | 486 (52.13) | 366 (52.44) | 1.00 | 1.00 |
| Employment status (before the COVID-19 pandemic) | | | | |
| Employed (Ref.) | 733 (86.39) | 494 (80.24) | 1.00 | 1.00 |
| Retired | 109 (9.31) | 120 (14.07) | 1.63 (1.22-2.18) | 1.03 (0.70-1.53) |
| Economically inactive | 34 (4.31) | 38 (5.69) | 1.42 (0.85-2.37) | 1.29 (0.78-2.11) |
| Who usually live with | | | | |
| Live with spouse or partner (Ref.) | 754 (85.57) | 552 (83.79) | 1.00 | 1.00 |
| Live alone | 94 (10.42) | 72 (11.29) | 1.11 (0.78-1.58) | 1.00 (0.49-2.02) |
| Live with others | 31 (4.01) | 26 (4.91) | 1.25 (0.68-2.31) | 0.98 (0.32-3.00) |
| Children | | | | |
| Have no children (Ref.) | 214 (24.37) | 134 (20.58) | 1.00 | 1.00 |
| Have children but not responsible for them | 376 (42.82) | 284 (43.63) | 1.14 (0.85-1.52) | 0.81 (0.58-1.12) |
| Responsible for ≥1 children age <18 y | 288 (32.80) | 233 (35.79) | 1.24 (0.92-1.68) | 1.32 (0.92-1.89) |

Note: Percentages are weighted. Column ns may not add up to total noted as a result of non-response.
* Adjusted for sex, age, rank, service, education, and marital status.
OR = odds ratio; CI = confidence interval; AOR = adjusted odds ratio; Ref. = reference category; GCSE = General Certificate of Secondary Education; NCO = non-commissioned officer; RAF = Royal Air Force

**Table 3.** Association of health outcomes and formal volunteering (N = 1,531)

| Outcome | n (%) Help not given, N = 879 (59.04%) | Help given, N = 652 (40.96%) | OR (95% CI) | AOR (95% CI)* |
|---|---|---|---|---|
| Loneliness (UCLA score ≥ 6) | | | | |
| Not lonely (Ref.) | 639 (72.35) | 483 (72.96) | 1.00 | 1.00 |
| Lonely | 231 (27.65) | 163 (27.04) | 0.97 (0.75-1.25) | 1.00 (0.76-1.31) |
| Hazardous drinking (AUDIT score ≥ 8) | | | | |
| No (Ref.) | 579 (70.90) | 452 (74.33) | 1.00 | 1.00 |
| Yes | 222 (29.10) | 142 (25.67) | 0.84 (0.65-1.09) | 0.92 (0.70-1.21) |
| Common mental disorders (GHQ-12 score ≥ 4) | | | | |
| No (Ref.) | 660 (73.71) | 506 (75.95) | 1.00 | 1.00 |
| Yes | 219 (26.29) | 146 (24.05) | 0.89 (0.69-1.15) | 0.97 (0.74-1.27) |
| Probable PTSD (PCL-5 ≥ 38) | | | | |
| No (Ref.) | 809 (91.51) | 611 (91.93) | 1.00 | 1.00 |
| Yes | 70 (8.49) | 41 (8.07) | 0.95 (0.61-1.46) | 1.17 (0.73-1.88) |
| Health perception | | | | |
| Good to excellent | 727 (83.40) | 582 (89.28) | 1.00 | 1.00 |
| Fair or poor | 152 (16.60) | 70 (10.72) | 0.60 (0.44-0.83) | 0.66 (0.48-0.92) |
| Mental well-being | | | | |
| Low | 179 (22.44) | 84 (15.09) | 0.65 (0.48-0.89) | 0.72 (0.52-1.00) |
| Medium (Ref.) | 535 (64.55) | 412 (66.84) | 1.00 | 1.00 |
| High | 120 (13.01) | 123 (18.07) | 1.34 (0.99-1.81) | 1.24 (0.91-1.69) |

Note: Percentages are weighted. Column ns may not add up to total noted as a result of non-response.
* Adjusted for sex, age, rank, service, education, and marital status.
OR = odds ratio; CI = confidence interval; AOR = adjusted odds ratio; Ref. = reference category; AUDIT = Alcohol Use Disorder Identification Test; GHQ-12 = 12-item General Health Questionnaire; PTSD = posttraumatic stress disorder; PCL-5 = PTSD Checklist for DSM-5.

### *Associations of health and well-being outcomes and informal volunteering*

Informal volunteering was not associated with CMDs, probable PTSD, hazardous drinking, loneliness, perception of general health, or well-being (see table available in the supplemental information).

### *Association of health and well-being outcomes and change in informal volunteering because of COVID-19*

Reducing or increasing informal volunteering was not associated with mental well-being, hazardous drinking, alcohol misuse, or perception of general health. However, reduced informal volunteering was associated with CMDs and probable PTSD in both unadjusted and adjusted analyses. Increasing informal volunteering was associated with loneliness in both unadjusted and adjusted analysis, but there were no associations with CMD outcomes in the adjusted models (Table 5).

## DISCUSSION

### Volunteering levels, participant characteristics, and impact of COVID-19

Overall, 60% of Veterans reported volunteering in the past 12 months. Of those who volunteered, 41% reported formal volunteering and 44% reported informal volunteering. Veterans reported having to reduce formal volunteering because of the pandemic, but they also reported increasing informal volunteering. Factors associated with formal volunteering included rank, educational attainment, relationship status, service branch, perception of general health, and well-being. Factors associated with informal volunteering included rank and child responsibilities.

During a similar period of the COVID-19 pandemic (June-September 2020 for the Veterans-CHECK study and April 2020-March 2021 for the UK Community Life Survey), Veterans reported volunteering at a level

**Table 4.** Associations of demographic and military characteristics and informal volunteering (N = 1,529)

| Characteristic | n (%) | | OR (95% CI) | AOR (95% CI)* |
|---|---|---|---|---|
| | Help not given, n = 845 (55.67%) | Help given, n = 684 (44.33%) | | |
| Sex | | | | |
| Male (Ref.) | 758 (89.87) | 596 (88.44) | 1.00 | 1.00 |
| Female | 87 (10.13) | 88 (11.56) | 1.16 (0.83-1.62) | 1.15 (0.81-1.64) |
| Age band (y) | | | | |
| 25-34 | 27 (6.09) | 16 (6.69) | 1.17 (0.57-2.37) | 1.23 (0.58-2.61) |
| 35-44 | 148 (23.45) | 117 (22.17) | 1.00 (0.74-1.36) | 1.00 (0.72-1.39) |
| 45-54 (Ref.) | 306 (36.68) | 232 (34.60) | 1.00 | 1.00 |
| 55-64 | 278 (26.99) | 234 (28.20) | 1.11 (0.87-1.42) | 1.00 (0.77-1.30) |
| ≥65 | 86 (6.80) | 85 (8.34) | 1.30 (0.92-1.84) | 1.06 (0.73-1.56) |
| Rank | | | | |
| Officer | 223 (22.65) | 246 (30.69) | 1.52 (1.21-1.92) | 1.46 (1.12-1.91) |
| NCO (Ref.) | 547 (64.79) | 388 (57.75) | 1.00 | 1.00 |
| Other rank | 75 (12.57) | 50 (11.56) | 1.03 (0.67-1.58) | 0.93 (0.58-1.48) |
| Service | | | | |
| Royal Navy | 156 (18.37) | 129 (20.50) | 1.17 (0.87-1.57) | 1.15 (0.85-1.56) |
| Army (Ref.) | 475 (59.46) | 381 (56.68) | 1.00 | 1.00 |
| RAF | 214 (22.17) | 174 (22.82) | 1.08 (0.84-1.40) | 1.09 (0.84-1.42) |
| Education level | | | | |
| No qualifications or GCSE/O level | 228 (28.86) | 143 (23.85) | 0.75 (0.56-0.99) | 0.87 (0.64-1.16) |
| A level | 271 (33.76) | 227 (34.72) | 0.93 (0.72-1.19) | 1.06 (0.81-1.37) |
| Degree (Ref.) | 346 (37.38) | 314 (41.43) | 1.00 | 1.00 |
| Relationship status | | | | |
| In a relationship (Ref.) | 737 (86.87) | 597 (87.31) | 1.00 | 1.00 |
| Single | 33 (5.04) | 35 (5.69) | 1.12 (0.64-1.97) | 1.10 (0.61-1.96) |
| Ex-relationship | 74 (8.09) | 51 (7.00) | 0.86 (0.59-1.27) | 0.85 (0.58-1.26) |
| Length of time since leaving service (y) | | | | |
| ≤5 | 98 (13.45) | 83 (13.99) | 1.03 (0.72-1.48) | 0.97 (0.67-1.40) |
| 5-10 | 282 (34.54) | 216 (33.53) | 0.96 (0.76-1.22) | 0.93 (0.72-1.19) |
| >10 (Ref.) | 465 (52.01) | 385 (52.48) | 1.00 | 1.00 |
| Employment status (before the COVID-19 pandemic) | | | | |
| Employed (Ref.) | 689 (84.81) | 538 (82.83) | 1.00 | 1.00 |
| Retired | 119 (10.55) | 108 (11.99) | 1.16 (0.87-1.56) | 0.99 (0.68-1.43) |
| Economically inactive | 34 (4.64) | 38 (5.18) | 1.14 (0.69-1.90) | 1.09 (0.65-1.84) |
| Who usually live with | | | | |
| Live with spouse or partner (Ref.) | 724 (85.25) | 580 (84.30) | 1.00 | 1.00 |
| Live alone | 89 (10.41) | 77 (11.26) | 1.09 (0.77-1.56) | 1.53 (0.81-2.90) |
| Live with others | 32 (4.34) | 25 (4.44) | 1.03 (0.56-1.90) | 1.33 (0.54-3.29) |
| Children | | | | |
| Have no children (Ref.) | 184 (23.63) | 162 (25.29) | 1.00 | 1.00 |
| Have children but not responsible for them | 377 (38.09) | 283 (34.54) | 0.85 (0.64-1.13) | 0.72 (0.53-0.99) |
| Responsible for ≥1 child aged <18 y | 283 (38.28) | 238 (40.17) | 0.98 (0.73-1.32) | 1.02 (0.73-1.43) |

Note: Percentages are weighted. Column ns may not add up to total noted as a result of non-response.
* Adjusted for sex, age, rank, service, education, and marital status.
OR = odd ratio; CI = confidence interval; AOR = adjusted odds ratio; Ref. = reference category; GCSE = General Certificate of Secondary Education; NCO = non-commissioned officer; RAF = Royal Air Force; COVID-19 = coronavirus disease 2019.

similar to that of the UK general population (60% vs. 62%).[26] When assessing differences in formal and informal volunteering, Veterans displayed a higher level of formal volunteering than the UK general population (41% vs. 30%) and a lower level of informal volunteering (44% vs. 54%). The higher level of formal volunteering may be explained by Veteran preferences or habituation to serving others through institutions and a desire to aid their own transition into civilian life. U.S. research found that post-9/11-era Veterans' ambition to continue serving others was strong after leaving the armed forces, and reasons for volunteering through a civic service program included wanting a sense of purpose, aiding transition, improving employment prospects, and wanting to integrate more into the community.[27] Compared with the general population, UK Veterans may also have many volunteering and membership opportunities available through the armed forces charitable sector (which consisted of 1,843 charities in 2020).[28]

Lower levels of informal volunteering in the Veteran group than in the UK general population may be explained by women generally being more likely than men to participate in informal volunteering; in the study reviewed, the Veteran sample was 89% male.[26] The study also found that, in both formal and informal volunteering, officers were more likely to volunteer than NCOs and those of other ranks. This may fit with literature about volunteering in the general population which indicates that those with higher educational attainment are more likely to volunteer.[5,6] In post hoc analyses, the authors found that only a small amount of the association between officer status and volunteering was explained by officers being more highly educated than NCOs (unadjusted association between rank and group volunteering, odds ratio [OR] = 2.79, 95% confidence interval [CI], 2.20-3.54), which weakened when adjusted for education (adjusted odds ratio [AOR] = 2.50, 95% CI, 1.94-3.20). In addition, most of the association between education and group volunteering was accounted for by rank, with other control variables making little difference (unadjusted association between [low] education and group volunteering, OR = 0.47 [95% CI, 0.35-0.62]; after adjustment for rank, the ratio was eroded to AOR = 0.71 [95% CI, 0.53-0.96]). Hence, there may be a subtle interplay between factors apparent for those of higher socio-demographic or socio-economic status (e.g., higher rank and education), meaning that officers may have more financial resources that allow time for volunteering, may have expanded social networks that increase access to volunteer opportunities, and may live in areas of less social deprivation, providing more community infrastructure and civic norms to facilitate volunteering.[29,30] Officers may also be more likely to volunteer because the nature of formal volunteering fits with their training in leadership and skills of command and control in organizing to achieve set goals.[31]

In the UK COVID-19 Social Study, more respondents reported decreased volunteering during lockdown (23%) than reported increased volunteering (12%).[6] The UK Community Life Survey 2020/2021 also found that formal volunteering levels decreased (from 37% to 30%), and informal volunteering levels remained similar to pre-pandemic levels (from 53% to 54%), displaying an overall downward trend.

Veterans reported having to reduce formal volunteering because of the pandemic, similar to the UK population; however, a large proportion of Veterans reported increasing informal volunteering because of the pandemic (66%), in contrast to the UK general population. Decreases in formal volunteering during the COVID-19 pandemic were unsurprising, considering many groups or organizations had to close activities during lockdowns and

**Table 5.** Associations of health and well-being outcomes and changes in volunteering help to individuals (N = 680)

| | Increased help, n = 446 (66)*† | | Decreased help, n = 64 (9%)*† | |
|---|---|---|---|---|
| Outcome | Unadjusted OR | Adjusted OR | Unadjusted OR | Adjusted OR |
| Loneliness (UCLA score ≥ 6) | 1.65 (1.00-2.72) | 1.79 (1.02-3.13) | 1.86 (0.90-3.83) | 2.02 (0.92-4.46) |
| Common mental disorders (GHQ-12 score ≥ 4) | 1.58 (1.00-2.50) | 1.62 (0.99-2.63) | 2.50 (1.19-5.22) | 2.92 (1.36-6.28) |
| Probable PTSD (PCL-5 ≥ 38) | 1.34 (0.61-2.95) | 1.88 (0.78-4.51) | 3.58 (1.11-11.59) | 6.93 (2.03-23.63) |

Note: Percentages are weighted.
* Adjusted for sex, age, rank, service, education, and marital status.
† Compared with no change (n = 170; 25%).
OR = odds ratio; GHQ = 12-item General Health Questionnaire; PCL-5 = PTSD Checklist for DSM-5.

restrictions, and social distancing requirements stopped some volunteering activities, such as those at sports clubs. Some increases in informal volunteering were expected because of the nature of the COVID-19 crisis, where neighbour-to-neighbour support became a feature of the UK public pandemic response.[5] It is possible that increases in informal volunteering in the Veteran group occurred because some formal volunteering had to cease (as a result of restrictions), and Veterans may instead have engaged in informal volunteering. In addition, officers were more likely to participate in informal volunteering, which again may represent having the social and financial resources to be able to devote time to volunteering compared with others in the UK population.

## Volunteering and health

Across both formal and informal volunteering, the study did not find volunteering, or reported increases or decreases in formal volunteering, to be associated with adverse mental health, hazardous drinking, or loneliness outcomes. This may reflect research showing both positive and negative associations of volunteering with health and well-being outcomes.[32] It may also reflect the specific situation of volunteering during COVID-19, in which individuals may have felt positive effects of volunteering, such as a sense of purpose and social connection, yet at the same time been personally concerned about contracting or spreading COVID-19 or felt distress in helping others who were in difficult situations. Research assessing U.S. and Chinese volunteers during COVID-19 found that they were more likely than control groups to be distressed (depression, anxiety, and somatization) but also reported more happiness.[33]

Alternatively, this finding may reflect the nature of the question asked of Veterans-CHECK participants, in that participants were only asked about volunteering at "any point in the last 12 months" and frequency of volunteering was not measured. Research has found the frequency of volunteering to be pertinent, with weekly volunteering associated with increased life satisfaction, but volunteering less than several times a year having no association with life satisfaction.[34] The authors found that participants who reported poorer perceptions of health and lower mental well-being were less likely to report formal volunteering. In longitudinal panel data across 15 European countries, De Wit et al. found that individuals with higher levels of subjective well-being were more likely to start volunteering; hence, this finding may reflect participants' general perception of their abilities or capacities to volunteer in relation to health and well-being status, with those feeling more unwell being less likely to volunteer.[35]

Those who reported reducing informal volunteering because of the pandemic were more likely to report symptoms of CMDs and probable PTSD. This could, again, reflect the adverse impact of the pandemic on mental health and, subsequently, an individual's assessment of their capacity to volunteer. It could also reflect that those who were more concerned about COVID-19, and displayed traits of neuroticism, were less likely to volunteer in the United Kingdom during the pandemic.[6] The authors note that, regarding probable PTSD, the confidence interval of the AOR was wide and based on only 7 probable PTSD cases out of a total of 47 in this sample that reduced their help. As such, this finding should be treated with caution.

The study found that those who reported loneliness were more likely to report increased informal volunteering because of the pandemic. This may be a response from individuals attempting to combat loneliness and enhance social connectedness when the pandemic may have reduced normal social interactions.

## Strengths and limitations

Strengths of this work include that it is the first assessment of UK Veterans' volunteering behaviours in which measures were based on standard UK general population measures used to understand volunteering. The study is limited to the circumstances surrounding the first phase of the pandemic in the United Kingdom and is limited in its cross-sectional nature. Also, the study did not assess the frequency of volunteering or more context to understand individuals' motivations for volunteering or in-depth changes in their patterns of volunteering. The study did not ask for details regarding different types of volunteering within the formal and informal categories, which may have differing impacts on outcomes, such as any potential differences between activities that provide more or less interpersonal support (e.g., cooking for a neighbour or community gardening compared with being a treasurer for a sports club). Future research would be strengthened by assessing both the frequency and the type of volunteering to better understand Veteran volunteering behaviours.

## Conclusion

Overall, this study found that during the COVID-19 pandemic, Veterans volunteered at a level similar to that in the UK general population. Overall, Veterans reported

a higher level of formal volunteering than informal volunteering; however, during the pandemic levels of formal volunteering decreased and levels of informal volunteering increased. Veterans represent a large group in the United Kingdom that may have predisposing characteristics that lead them to volunteer and may be a group with untapped potential. Understanding who in the Veteran group is likely to engage in volunteering could support future strategies to engage volunteers and help support local community groups and health care systems in planning for future volunteering needs.

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## COMPETING INTERESTS

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## ETHICS APPROVAL

Ethical approval was obtained from the King's College London Research Ethics Committee (Ref. HR-19/20-18626).

## INFORMED CONSENT

N/A

## REGISTRY AND REGISTRATION NO. OF THE STUDY/TRIAL

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## PEER REVIEW

This manuscript has been peer reviewed.

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