# Estimating the proportion of prisoners in England and Wales who are ex-Armed Forces - further analysis

DEFENCE ANALYTICAL SERVICES AND ADVICE



MINISTRY OF DEFENCE

INTRODUCTION

1.     On 25 January 2010 Defence Analytical Services and Advice (DASA) published its initial estimate of the proportion of prisoners in England and Wales who are ex-Armed Forces. The study involved matching the personal details of adult prisoners against DASA's Service leavers database. The initial report published on 25 January 2010 reported that 2,207 records of Service leavers matched against the 81,071 prisoner records supplied by the Ministry of Justice (MoJ) (a snapshot taken on 06/11/09).  From this it was estimated that 2.7% (rounded up to 3%) of prisoners were veterans of the UK Regular Armed Forces. The report describing the methodology and results is available on the DASA website[1]. The initial report committed the Ministry of Defence to three areas of further analysis.  These three components are described in detail in this report which is divided into the following sections:

2.     **Section A: Revising the estimate of the proportion of prisoners in England and Wales who are ex-Armed Forces**. The estimate of the number of Regular veterans in prison has been revised up to 2,820 (3.5% of prisoners) to account for the incompleteness of DASA's Service leavers database.  The additional 613 prisoners will be older veterans who exited the Regular Armed Forces prior to 1979 (if in the Naval Service), 1973 (if in the Army) or 1969 (if in the RAF).  We do not have a record for these individuals on the Service leavers database, and therefore could not match them to the MoJ database of prisoners. We could not identify which specific individuals in prison these are, and therefore have no information on their personal characteristics or offence group.  We have calculated that, of the estimated 2,820 Regular veterans in prison, 15% are ex-Naval Service, 77% are ex-Army and 8% are ex-RAF. Half of all veterans in prison are aged 45 or above. More detailed results and an explanation of the methodology used to revise the estimate are given in Section A.

3.     **Section B:  Describing the characteristics of the prisoners in England and Wales who were identified as ex-Armed Forces.**  As the precise characteristics of the additional 613 Regular veterans estimated to be in prison cannot be determined, this section describes the characteristics of the 2,207 veterans that were originally identified as being in prison.  Of these, 99.6% were male, 96.7% were British nationals and 88.7% were sentenced. 1% were recorded as officers (6.8% had missing rank). 22% began their current prison sentence within 5 years of being discharged (information on any earlier prison sentences is not available). The most common offence groups for veterans in prison were violence against the person (33%), and sexual offences (25%).

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[1] http://www.dasa.mod.uk/index.php?pub=VETERANS_IN_PRISON_INITIAL_REPORT

4.     **Section C:  Comparing the proportion of ex-Armed Forces identified as being in prison with the proportion of the general population in prison, overall and by offence group.** The additional 613 Regular veterans estimated to be in prison are not included in this analysis since their offence group cannot be determined. As the estimated 613 will be in the older age groups (55 years and above), these groups have been excluded from this comparison to avoid under-estimating the proportion of veterans in prison. Females are excluded due to the very small number of female veterans in prison. For males aged 18-54, these comparisons show that the proportion of the general population in prison is 43% greater than the proportion of Regular veterans in prison.

## SECTION A: Revising the estimate of the proportion of prisoners in England and Wales who are ex-Armed Forces

5.     The MOD database of Service leavers used for matching with prisoner records was compiled from administrative data sources available to DASA. Reliable records were not available for those who left the Armed Forces prior to 1979 (Naval Service), 1973 (Army) or 1969 (RAF). This means the matching process will have missed some older veterans in prison and underestimated the proportion of prisoners who are ex-Regular Armed Forces.

6.     In order to quantify the effects of the incompleteness of the Service leavers database, we first validated the reliable data against the MOD's Statement on the Defence Estimates (1975 to 1995) and UK Defence Statistics (1996 onwards). The validated data was then extrapolated to estimate the number of leavers in earlier years. The extrapolation was done separately for each year of birth to allow for cohort effects (for example recruits born at a certain time being likely to leave Service after a standard length of service).

7.     This process gave us an estimated number of leavers (by Service and age).  In order to adjust the totals for each Service, we calculated the proportion of leavers from each Service over the period where data was available for all 3 Services (1975-1999). These proportions were then combined with historical data (back to 1952) on total numbers leaving the RAF[2] to estimate the total numbers of leavers by year for the Naval Service and Army. These totals for each Service were used to adjust the extrapolated numbers of Service leavers for each year before 1979 (Naval Service), 1973 (Army) and 1969 (RAF).

8.     The estimated number of veterans in prison was revised by applying the proportion of prisoner records matched in the initial analysis (by age and Service) to the updated number of Service leavers. The estimate of the proportion of prisoners in England and Wales who are ex-Regular Armed Forces has risen from 2.7% (2,207) to 3.5% (2,820).

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[2] *Annual Digest of Royal Air Force Statistics*, Ministry of Defence (1952 to 1968)

9.      The revised estimate of the number of veterans in prison can be broken down by Service.  We estimate that of the 2,820 veterans in prison, 15% are ex-Naval Service, 77% are ex-Army and 8% are ex-RAF. By way of comparison, a Royal British Legion report states that 13% of Regular veterans are ex-Naval Service, 59% are ex-Army and 29% are ex-RAF[3]. However, the comparatively large proportion of veterans who are ex-RAF according to the Royal British Legion include National Service veterans who served in the RAF during and after the Second World War – the analyses of Regular veterans presented in this report do not include National Service veterans.

10.      The revised estimate of the number of veterans in prison can also be broken down by age group. Table 1 below shows that half of all veterans in prison are aged 45 years or above.

**Table 1.** The age distribution of veterans in prison

| Age group (years) | Veterans Number (%) |
|---|---|
| 18-25 | 268 (10%) |
| 26-34 | 577 (20%) |
| 35-44 | 534 (19%) |
| 45-54 | 619 (22%) |
| 55-64 | 473 (17%) |
| 65-74 | 307 (11%) |
| 75-84 | 42   (1%) |
| 85+ | 0   (0%) |
| **Total** | **2,820 (100%)** |

## SECTION B:  Describing the characteristics of the prisoners in England and Wales who were identified as ex-Armed Forces

11.      As the precise characteristics of the additional 613 Regular veterans estimated to be in prison cannot be determined, this section describes the characteristics of the 2,207 veterans that were originally identified as being in prison. These characteristics cannot be assumed to apply to the revised number of 2,820 veterans in prison, as the group described here are younger and may well be different in other ways e.g. older veterans may have different patterns of offending than younger veterans.

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[3] *Profile of the Ex-Service Community in the UK.* The Royal British Legion (2005), Figure 4.10, p21

12.     Almost all (2,198; 99.6%) veterans in prison were male, compared to an estimated 84% of the total veteran population[3]. Almost all (2,135; 96.7%) veterans in prison were British nationals: 41 (1.9%) were foreign nationals and the nationality of the remaining 31 (1.4%) was not recorded.  The majority (1,957; 88.7%) of veterans were sentenced; the rest were on remand. Only 21 (1.0%) veterans in prison were recorded as Officers; 2,036 (92.3%) were Other Ranks and Officer/Rank status was not available for 150 (6.8%).  The proportion of all veterans who were Officers is not known so by way of comparison, the proportion of serving Regular Armed Forces who are officers was 14% in 1975[4] and 17% in 2009[5].

13.     For veterans in prison, the time between discharge from the Armed Forces and the start of their current prison sentence ranged from 0 to 41 years; 142 (6%) of veterans in prison began their current prison sentence within 1 year of being discharged, 480 (22%) within 5 years and 907 (41%) within 10 years of leaving the Armed Forces. Some veterans may have served previous prison sentences, however the analysis in this report has been confined to their current prison sentence, as data were not available on earlier sentences.

14.     Table 2 shows the number of veterans in prison by offence group. The most common offence groups were violence against the person[6] (33%), and sexual offences (25%). Drug offences accounted for 11% of veterans in prison and 'Other offences'[7] for a further 9%.

**Table 2**. Offence groups for veterans in prison

| Offence group | Number (%) |
|---|---|
| Violence against the person[6] | 725 (32.9%) |
| Sexual offences | 546 (24.7%) |
| Drug offences | 236 (10.7%) |
| Robbery | 158  (7.2%) |
| Burglary | 87  (3.9%) |
| Theft and handling | 52  (2.4%) |
| Fraud and forgery | 30  (1.4%) |
| Motoring offences | 15  (0.7%) |
| Other offences[7] | 198  (9.0%) |
| Offence not recorded | 160  (7.3%) |
| **Total** | **2207 (100%)** |

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[4] *Statement on the Defence Estimates* (1979). Annex H. The National Archives, ref CAB 129/205/3
[5] *UK Defence Statistics* (2009). Chapter 2: Personnel. Available at: www.dasa.mod.uk
[6] 'Violence against the person' ranges from assault to murder
[7] 'Other offences' covers a wide range of offences including arson, criminal damage, kidnapping, affray and breach of court orders

SECTION C:  Comparing the proportion of ex-Armed Forces identified as being in prison with the proportion of the general population in prison, overall and by offence group

15.     The additional 613 Regular veterans estimated to be in prison are not included in this analysis since their offence group cannot be determined. As the estimated 613 will be in the older age groups (55 years and above), these groups have been excluded from this comparison to avoid under-estimating the proportion of veterans in prison. Restricting the age range in this way improves the validity of comparisons between those identified as veterans and the general population. Females are excluded because there are so few female veterans in prison (our matching only identified 9). The analysis below compares the proportion of Regular veterans in prison with the proportion of the general population in prison, overall and by offence group.

16.     The number of prisoners in England and Wales, by offence group, was taken from the MoJ data which included all prisoners aged 18 or over on 06/11/09.

17.     The numbers of male veterans in England and Wales by age were based on estimates for 2005 published by The Royal British Legion[8]. Although The Royal British Legion figures relate to the whole of the UK, we were able to estimate the male veteran population in England and Wales (using data which showed that England and Wales accounted for 84% of all 16-44 year old and 83% of all 45-54 year old veterans in the UK)[9]. The figures were also adjusted to account for the fact that The Royal British Legion estimate 83% of the veteran population to be ex-Regulars[3].

18.     Office for National Statistics population estimates for England and Wales in 2007 (by gender and individual year of age)[10] were used to estimate the size of the male general population by age group.

19.     Table 3 shows estimates of the number (per 100,000) of Regular veterans who are in prison and the number (per 100,000) of the general population in prison on 06/11/09 – all figures are for males aged 18 to 54 only. These rates have been calculated by offence group and overall. The ratio of these crude rates has been calculated, indicating the relative proportions in prison, comparing the general population with veterans. For example, a ratio of 2 indicates that the proportion of the general population in prison is double the proportion of the veteran population in prison. A ratio of 1.2 indicates that the proportion of the general population in prison is 20% higher, and a ratio of 0.80 indicates it is 20% lower than the proportion of the veteran population in prison. The adjusted ratio takes into account the different age structure of the veteran and general populations, providing a better estimate of the relative

[8] *Future Profile and Welfare Needs of the ex-Service Community.* The Royal British Legion (2006). Figure 3.1, p15.
[9] *Profile and Needs: Comparisons between the Ex-Service Community and the UK Population.* The Royal British Legion (2006). Table 2.6, p15
[10] Office for National Statistics. *Mid-2007 population estimates for England and Wales, Scotland and Northern Ireland.* Available at: http://www.statistics.gov.uk/statbase/product.asp?vlnk=15106

proportions. 95% confidence intervals are given to provide a measure of uncertainty for the adjusted ratios.

**Table 3.** Number in prison per 100,000 for veterans and for the general population, males aged 18-54 years

| Offence group | Number in prison per 100,000 | | Ratios of general population to veterans | | |
| | General population[a] (N=14,620,000) | Veterans[a] (N=651,235) | Crude ratio[b] | Age-adjusted ratio[c] | 95% confidence interval[d] |
|---|---|---|---|---|---|
| Overall[e] | 496.3 | 298.4 | 1.66 | 1.43 | 1.37, 1.49 |
| Burglary | 53.4 | 13.2 | 4.05 | 3.23 | 2.62, 3.98 |
| Fraud and forgery | 11.6 | 3.8 | 3.03 | 3.06 | 2.07, 4.72 |
| Theft and handling | 19.9 | 7.2 | 2.76 | 2.33 | 1.75, 3.11 |
| Motoring | 5.9 | 2.3 | 2.55 | 2.07 | 1.26, 3.70 |
| Drug offences | 71.7 | 32.7 | 2.19 | 2.05 | 1.79, 2.35 |
| Robbery | 62.2 | 23.8 | 2.61 | 1.79 | 1.53, 2.10 |
| Violence against the person | 134.6 | 100.6 | 1.34 | 1.16 | 1.07, 1.25 |
| Sexual offences | 51.5 | 63.1 | 0.82 | 0.87 | 0.79, 0.96 |

[a] Veteran population estimates were not available for individual years of age so the age groups 16-24, 25-34, 35-44, 45-54 were used for the calculation of rates in both the veteran and general population
[b] The rate in the general population divided by the rate in the veteran population
[c] The rate in the general population divided by the rate in the veteran population, adjusted for differences in the age distribution of the two populations
[d] Provides a measure of uncertainty around the age-adjusted ratio. If it excludes 1.00 it indicates statistical significance
[e] 'Overall' includes 'offence not recorded' and 'other offences'

20.     For men aged 18 - 54, we estimate that the proportion of the general population in prison at the given point in time (06/11/09) is 43% greater than the proportion of Regular veterans in prison. The 95% confidence interval for the difference ranges from 37% to 49% which, since this doesn't include 0%, indicates that the proportion of the general population in prison is significantly higher than the proportion of the veteran population in prison.