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# Understanding the wellbeing characteristics of ex-serving ADF members

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## About

The nature of military service makes understanding the wellbeing of those who have served of vital importance. This report examines wellbeing outcomes such as employment status, income, education qualifications, housing circumstances, and social support for ex-serving Australian Defence Force (ADF) members and their families. Using linked data, this report expands information on the Veteran-centred model as part of an ongoing body of work in partnership with the Department of Veterans' Affairs. This report is based on ex-serving ADF members who had served at least one day of service on or after 1 January 2001 and were ex-serving as of 31 December 2015 and uses the 2016 Census data as the primary source of data to inform wellbeing outcomes.

Cat. no: PHE 303

- [Infographic](#)
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### Findings from this report:

- [Ex-serving ADF females were 1.4 times more likely to hold a bachelor degree or higher than Australian females](#)
- [Over three quarters of ex-serving ADF members were employed in 2016 \(78% males and 76% females\)](#)
- [Ex-serving ADF members were more likely to earn \\$800 or more a week than the Australian population](#)
- [Ex-serving ADF members owned \(including those paying mortgages\) their homes at similar levels to Australian population](#)

## Summary

This report contributes to the understanding of ex-serving ADF members and families' wellbeing needs after their separation from the Australian Defence Force (ADF).

Findings from this report show that the majority of ex-serving ADF members were doing well in 2016. Many had attained higher education qualifications, were employed, earned higher incomes than the Australian population, owned their own homes (including those paying mortgages), and were socially connected by living in a family type household. It is important to note however this was not the case for everyone. Those who separated from the ADF involuntarily for medical reasons experienced wellbeing challenges such as higher unemployment rates, had lower levels of education qualifications, and were receiving lower incomes in 2016 than those who separated for any other reason. Those who served fewer years or who separated from the Navy experienced similar wellbeing challenges as mentioned above when compared to those who served longer or who served in the Army or Air Force.

Ex-serving members of the ADF are an important group of people for wellbeing monitoring, as the nature of military service means their needs and outcomes can differ from those of the general population.

The unique nature of ADF service can enhance a person's health and wellbeing; a phenomenon known as the 'healthy soldier effect'. Military personnel are generally physically and mentally fit, receive regular medical assessments, and have access to comprehensive medical and dental treatment as a condition of service. Selection processes also mean they may be fitter than people in the broader Australian population when they enlist. However, ADF service increases the likelihood of exposure to trauma (either directly or indirectly) and affects support networks, for example, separation from family during deployment (Daraganova et al. 2018; Lawrence-Wood et al. 2019). These experiences mean some ex-serving ADF members may encounter challenges in everyday living above those of the Australian population, especially those who discharge involuntarily.

Australia's veterans may experience physical and mental health needs, outcomes and challenges that are different from the rest of the Australian population, including increased risks of mental illnesses, poorer physical health and impacts to general wellbeing following separation (or transfer) from the regular ADF service (Sadler, 2019). This can affect some people during the transition phase and their success of re-integration and employment after transition, and in the longer term with the later onset of chronic health conditions (Van Hooff et al. 2019).

In 2016:

- Nearly 2 in 5 (38%) ex-serving ADF females had a bachelor degree or higher, a rate 1.4 times higher than Australian females (26%)
- Over three-quarters of ex-serving ADF males and females were employed in 2016 (78% and 76% respectively). This compares with 67% of Australian males and 57% of Australian females being employed at the same time
- More than 7 in 10 (76%) ex-serving ADF males and 6 in 10 (60%) females earned a weekly personal income of \$800 and above, rates 1.5 times the male and 1.8 times the female Australian populations (52% and 34% respectively)
- The majority of ex-serving ADF members lived in a home they owned (including those paying mortgages) (70% for males and 68% for females) at rates similar to the Australian population (69% for both Australian males and females).

## Introduction

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### The Veteran-centred model

As part of the [Strategic Partnership](#) between the Department of Veterans' Affairs (DVA) and the Australian Institute of Health and Welfare (AIHW), the Veteran-centred model was developed in 2018 and supports the person-centred approach to understanding the experiences and outcomes of Australian's veterans and their families (AIHW 2018b).

The term 'veteran' has been used in a variety of ways, ranging from describing former Australian Defence Force (ADF) personnel who were deployed to serve in war or war-like environments to more recently describing people who have any experience in the ADF including permanent, reserve, and former (ex-serving) personnel (Tehan 2017).

The Veteran-centred model is made up of seven domains across the health and welfare sector: Health, Housing, Social support, Education and skills, Employment, Income and finance, and Safety and justice (Figure 1). The domains in the model can be monitored in the context of individual factors, influences of the community and environment, and social determinants of health and wellbeing. More information on the veteran-centred model is available from the [Development of a Veteran-centred model: a working paper](#).

Figure 1: The Veteran-centred model



To date, AIHW has used this model to inform the AIHW's veterans analysis work program, with analysis predominantly exploring the Health and Housing domains. Through data linkage, analysis of four additional domains has been undertaken to investigate factors that influence the wellbeing of ex-serving ADF members and their families, including the Education and skills, Employment, Income and finance, and Social support domains. These domains align closely with high-level wellbeing factors currently in use by DVA, as described in their [Veteran Mental Health and Wellbeing Strategy and National Action Plan 2020-2023](#).

### About the research project

This data integration project was funded by DVA as part of the [Strategic Partnership](#) work program and aims to describe the wellbeing status of ex-serving ADF members and their family members against domains in the Veteran-centred model. It is one of the first data integration projects to use Linkage Spine Interoperability (von Sanden 2020) that enables the Department of Defence (Defence) personnel data held at AIHW to be combined with data held at the Australian Bureau of Statistics (ABS) from the Multi-Agency Data Integration Project (MADIP) data asset without the need to share personal identifying information between each organisation. Linkage Spine Interoperability increases efficiency in creating integrated data products between two agencies, reduces risks of sharing personal information, and facilitates better use of person-centred data enabling the expansion of research to be undertaken (PMC 2022).

Both the AIHW and ABS are accredited Integrating Authorities, being responsible for ensuring data integration projects are conducted in sound, ethically approved and secure ways, and that researchers are provided safe and secure access to the integrated data. This data integration project was approved by both the AIHW Ethics Committee and Departments of Defence and Veterans' Affairs Human Research Ethics Committee (DDVA HREC).

The ABS is trusted as the accredited Integrating Authority for MADIP. The ABS collects and combines the data, provides access to authorised researchers, and protects individual privacy and keeps the information available in MADIP secure at all times. More information on MADIP is available from the [ABS website](#).

## About the data

The main source of data for this report was the 2016 Census of Population and Housing (Census) data available from the MADIP data asset. The 2016 Census has been used in this analysis to provide baseline information about the wellbeing of ex-serving ADF members. Future work will investigate the wellbeing of ex-serving ADF members in the 2021 Census as well as other datasets in the MADIP and will provide insights into how the situation has changed over time. MADIP is a secure data asset which combines data from various government agencies on health, education, government payments, income and taxation, employment, and population demographics (including the Census) over time.

For each domain, the demographic and wellbeing characteristics of ex-serving members and their families (spouses and children) have been explored by sex and age, with comparisons with the Australian population provided for context. Further breakdowns by service characteristics at the time of separation from the ADF have been analysed to understand the relationship and possible impacts serving in the ADF has on a veteran's and their families wellbeing. Defence personnel data provides insights based on various service characteristics including:

- Service (Navy, Army, Air Force)
- Rank (Commissioned Officers, and Other Ranks)
- Overall length of service (less than 1 year, between 1 year and less than 5 years, between 5 years and less than 10 years, and 10 years or more)
- Time since separation (less than 1 year, between 1 year and less than 5 years, between 5 years and less than 10 years, and 10 years or more. The reference point for the time since separation is up until 31 December 2015)
- Last reason for separation from the ADF is also included in its own section and represents the reason recorded for leaving the last engagement with the ADF.

There are some limitations to both the data and analyses in this report. Only a small range of service characteristics were available for analyses, so it was not possible to examine the associations between occupations within the military or deployments and wellbeing in post-service life. Also, the Census only obtains data from those who were in Australia on Census night, so those ex-serving ADF members who were not in Australia were not able to be linked to Census. There are also instances where there is insufficient information on a person's Census record to allow their record to be linked. Additionally, small counts limited the analyses that could be conducted in some cases.

## Who is included in this report?

This report is based on ex-serving ADF members who had served at least one day of service on or after 1 January 2001 and were ex-serving as at 31 December 2015 to ensure they were ex-serving, alive and aged 17 years or over at the time of the 2016 Census.

Of these 88,100 ex-serving ADF members, over 4 in 5 (83%) linked to the 2016 Census which resulted in an in-scope population of 72,700 ex-serving ADF members for this report.

Of the ex-serving ADF members represented in the MADIP linked data, 84% were males and 16% were females. The age structure for the ex-serving ADF members was different to the Australian population with a higher proportion aged between 25-44 and lower proportions aged 17-24 and over 55 years (Figure 2). Consequently, adjustments for age (aged-standardised) have been undertaken, where possible, for all analyses that compare ADF members to the Australian population. Data comparisons between different service characteristics have not been age-standardised due to small cell counts. As the age differences between the different service characteristics are not large, this does not alter the comparisons except where specifically stated.

### Figure 2: Age distribution of populations in 2016

The interactive data visualisation shows the age distribution of ex-serving ADF males, ex-serving ADF females, Australian males, and Australian females in 2016. Age has been grouped into 17-24 years, 25-34 years, 35-44 years, 45-54 years, and 55 years and over. The age structure for the ex-serving ADF members was different to the Australian population with a higher proportion aged between 25-44 years and lower proportions aged 17-24 and over 55 years.

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In line with the distribution of ADF members across the three Services, the majority (62%) of ex-serving ADF members in the MADIP linked data had separated from the Army. The proportions who had separated from the Navy and Air Force were 20% and 19% respectively. Higher proportions of ex-serving ADF females had separated from the Navy (26%) and Air Force (22%) compared to ex-serving ADF males (19% and 18% respectively), while 53% of ex-serving females and 63% of ex-serving males had separated from the Army.

Almost 1 in 5 (19%) were Commissioned Officers and just over 4 in 5 (81%) were Other Ranks at the time of separation from the ADF. These proportions were similar for males and females.

Nearly half of ex-serving ADF members separated from the ADF with 10 or more years of service (49% for males and 43% for females). The next most common length of service was between 1 and less than 5 years of service with the ADF, with 23% of ex-serving ADF males and females serving for this length of time.

The average time since separation was just over 7 years for both males and females. Just under 2 in 5 (37%) ex-serving members separated 10 or more years ago (from 31 December 2015), followed by close to a third (30%) between 5 and 10 years ago. Around 6.9% separated less than 1 year ago. Rates were similar for males and females.

Queensland was home to the highest proportion of ex-serving ADF members in 2016, with 31% living there. A further 24% lived in New South Wales, with Victoria and Western Australia home to 17% and 11% respectively (Figure 3). Almost two-thirds (64%) of ex-serving ADF members lived in major cities, while a further 23% lived in inner regional areas. Outer regional areas were home for 11%, while 1.9% of ex-serving ADF members lived in remote and very remote areas of Australia. In comparison 71% of Australians lived in major cities, while 18% resided in inner regional areas and 9% lived in outer regional areas in 2016.

**Figure 3: Proportion of the population in 2016, by State and Territory**

The interactive data visualisation shows the highest proportion of Australians at 31.5% lived in New South Wales, whilst the highest proportion of ex-serving ADF members at 31.0% lived in Queensland.

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## Employment status of ex-serving ADF members

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### **Majority of ex-serving ADF members were employed**

ADF service provides secure and stable employment, and after separating from the ADF, many ex-serving ADF members aim to transition into the civilian workforce (Van Hooff et al. 2018). Skills learned in the ADF can include project management, IT, administration and logistics, which are also widely used in the civilian workforce. However, for veterans managing symptoms of poor mental health, transitioning to civilian life and employment outcomes can be challenging as these symptoms may affect their ability to secure and maintain employment (Palumbo, 2019). For these reasons, employment following separation from the ADF has been identified as an issue of particular importance among the veteran community (DVA 2015).

An individual's labour force status is influenced by their choices and life circumstances as well as by broader conditions of the labour market. Three categories of labour force status have been explored in this report including employed (those who have a job), unemployed (those who do not have a job, but who are actively looking for one) and not in the labour force (those retired, those permanently unable to work, and those not looking for work) (ABS 2018).

Over three quarters of ex-serving ADF males and females (78% and 76% respectively) were employed in 2016, compared with 67% of Australian males and 57% of Australian females. After adjusting for age, ex-serving ADF females remained to be employed at a higher rate than Australian females, while ex-serving ADF males were employed at a similar rate to Australian males (Figure 4).

Female ex-serving ADF members were more likely to be working part-time (26%) than their male counterparts (10%), but at the same rate as Australian females. This pattern remained after adjusting for age.

Factors that were associated with an increased likelihood of ex-serving ADF members being employed in 2016 were:

- separating voluntarily from the ADF compared with separating involuntarily for medical reasons,
- serving 10 years or more compared with those who had served less than 1 year,
- being a Commissioned Officer at the time of separation from the ADF,
- being male, and
- separating from the Air Force or Army compared with separating from the Navy.

Age was also statistically significant in predicting whether an ex-serving ADF member was employed in 2016. These results are similar to those from international studies involving Canadian veterans (MacLean et al. 2014) or British veterans (Iversen et al. 2005).

Ex-serving ADF males and females who separated from the ADF less than 1 year ago had lower proportions of being employed in 2016 (72% and 70% respectively), compared with 81% ex-serving males and 77% ex-serving females who separated between 5 and less than 10 years ago (from 31 December 2015).

Ex-serving ADF males and females aged 55 years and over had the lowest proportions of being employed in 2016 (50% and 55% respectively), compared with other ex-serving ADF members. However, for this age group, ex-serving ADF males and females had higher proportions of being employed compared to Australians of the same age (40% and 30% respectively). These findings are likely to be confounded by the lower proportion of older ex-serving ADF members in the linked data in MADIP.

In 2016, the proportions of ex-serving ADF members employed were relatively similar across the states and territories of Australia.

For ex-serving ADF males employed, the Public administration and safety industry was the most common industry of employment in all states and territories (ranging from 16% in Queensland to 48% in the Australian Capital Territory) except for Western Australia where Mining was the most common industry (17%). These figures were higher than the 7.0% of employed Australian males working in the Public administration and safety industry and 2.7% in the Mining industry.

For ex-serving ADF females employed, the Health care and social assistance industry was the most common industry of employment in all states and territories (ranging from 20% in Western Australian to 28% in South Australia) with the exception of the Northern Territory and Australian Capital Territory where being employed in the Public administration and safety industry was the most common (32% and 52% respectively). While the proportion of employed Australian females working in the Health care and social assistance industry was similar (22%), employed female Australians were less likely to be working in the Public administration and safety industry (6.7%).

### **Figure 4: Proportion of ex-serving ADF members employed in 2016, by service characteristics**

The interactive data visualisation includes total employed, employed full-time, employed part-time, and employed but away from the workplace. It shows over three quarters of ex-serving ADF males and females (78% and 76% respectively) were employed in 2016, compared with 67% of Australian males and 57% of Australian females.

### **Ex-serving ADF members experienced lower unemployment rates than the Australian population**

A person's wellbeing, mental and physical health, relationships and their families can be affected by not having a job or not enough work (Beyond Blue 2022). Transitioning from ADF service to civilian life can be challenging, with some having difficulty finding work or having their skills recognised to improve employability (AIHW 2021a). There are many initiatives and programs available to serving and ex-serving ADF members to support with their transition journey (Defence 2022).

In 2016, there were 4.0% ex-serving ADF males and 3.6% ex-serving ADF females who were unemployed, which was similar to Australian males (4.8%) and females (3.9%). Similar patterns were observed after adjusting for age.

The unemployment rate is the percentage of people in the labour force who are unemployed. The unemployment rate for ex-serving males was 4.9% and 4.5% for ex-serving females, compared to 6.6% for Australian males and 6.3% for Australian females in 2016.

Factors that were associated with an increased likelihood of ex-serving ADF members being unemployed in 2016 were:

- being a rank other than Commissioned Officer at the time of separation from the ADF,
- separating involuntarily from the ADF (regardless for medical reasons or other reasons) compared with separating voluntarily,
- separating from the ADF more recently,
- serving for 5 years or less compared with those who had served 10 years or more,
- being male, and
- separating from the Navy compared with separating from the Air Force or Army.

While the modelling results showed that sex and all service characteristics are statistically significant in predicting whether an ex-serving ADF member was unemployed in 2016, age was not significant in predicting whether someone was unemployed. However, younger ex-serving ADF members aged 17 to 24 years had the highest unemployment rate at 9.5% for ex-serving males and 6.7% for ex-serving females in 2016 (Figure 5). Nevertheless, these unemployment rates were lower than those for Australians of the same age who experienced the highest unemployment rates in 2016 at 15% for Australian males and 12% for Australian females.

Those ex-serving ADF males and females who separated as Commissioned Officers experienced lower unemployment rates in 2016 (3.6% and 2.2% respectively) compared to those who separated at Other Ranks (5.2% and 5.1% respectively).

Those who separated from the ADF with less than 1 year of service experienced an unemployment rate of 7.1% for males and 6.4% for females in 2016, compared to those who served 10 years or more (4.0% and 3.4%).

Those who separated from the Air Force experienced the lowest unemployment rates in 2016 for both males (3.8%) and females (4.0%) compared to those who separated from the Army (5.1% for males and 4.1% for females) and Navy (5.4% for males and 5.8% for females).

#### **Figure 5: Unemployment rates for ex-serving ADF members in 2016, by service characteristics**

The interactive data visualisation includes total unemployed; unemployed, looking for full-time work; unemployed, looking for part-time work; and unemployment rate. It shows the unemployment rate for ex-serving males was 4.9% and 4.5% for ex-serving females, compared to 6.6% for Australian males and 6.3% for Australian females in 2016.

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### **Not all ex-serving ADF members were in the labour force**

There are many reasons for why a person may choose to not be in the labour force. This may be due to study commitments, household and caring responsibilities, retirement, or other reasons such as long-term ill-health. Others may want to be in the labour force and want to work, however they do not satisfy the criteria for being employed or unemployed (actively searching and available to start work) (ABS 2018).

In 2016, there were 11,000 (18%) ex-serving ADF males and 2,400 (20%) ex-serving ADF females who were not in the labour force, compared with 2.2 million (28%) Australian males and 3.3 million (39%) of Australian females respectively.

While similar proportions of ex-serving ADF members and the Australian population not in the labour force were observed for those aged between 25 to 54 years, differences occurred in the younger and older people. While those ex-serving ADF members who were aged 17 to 24 years and 55 years and over were less likely to be not in the labour force than those of the same age in the Australian population, it should be noted there are low numbers of ex-serving ADF members in these age groups in the data available.

The proportion of ex-serving ADF males and females being not in the labour force increased as length of service increased, ranging from 7.0% of ex-serving ADF males and 17% of ex-serving females with less than 1 year of service to 27% of ex-serving ADF males and 24% of ex-serving ADF females who separated with 10 or more years of service being not in the labour force in 2016 (Figure 6).

#### **Figure 6: Not in the labour force rates for ex-serving ADF members in 2016, by service characteristics**

The interactive data visualisation shows the proportion of ex-serving ADF members not in the labour force. It shows the proportion of ex-serving ADF males and females being not in the labour force increased as length of service increased, ranging from 7.0% of ex-serving ADF males and 17% of ex-serving females with less than 1 year of service to 27% of ex-serving ADF males and 24% of ex-serving ADF females who separated with 10 or more years of service being not in the labour force in 2016.

Factors that were associated with an increased likelihood of ex-serving ADF members being not in the labour force in 2016 were:

- separating involuntarily from the ADF for medical reasons,
- being female,
- separated at a rank other than Commissioned Officer, and
- separating from the Navy, compared with separating from the Air Force or Army.

Age and the number of years since they left service were also statistically significant in predicting whether an ex-serving ADF member was not in the labour force in 2016. The odds of being not in the labour force increased with age.



## Income of ex-serving ADF members

### Ex-serving ADF members generally had a higher weekly personal income than the Australian population

Income is defined as an amount an individual can earn, derive or receive for their own use or benefit, profits, or regular payments as an allowance (SA 2021). As financial wellbeing is connected to wellbeing across a number of areas of a person's life, such as ability to access education and health services, it is important to understand the income circumstances of the ex-serving ADF population. Weekly personal income is a self-reported income measure sourced from the 2016 Census. Each person was asked to indicate the range within which their total income from all sources placed (rather than their exact income) (ABS 2016b).

Two personal income ranges have been used to investigate ex-serving ADF member's income circumstances. These are the \$800 and above per week range, depicting the median weekly personal income of Australian males in the linked dataset, and the \$2,000 and above per week range representing those earning a personal income of over \$100,000 per year, being the closest income range to represent the top 10% of Australian weekly personal income earners.

In 2016, ex-serving ADF males and females generally had a higher weekly personal income compared to the Australian male and female population. More than three quarters of ex-serving ADF males earned a weekly personal income of \$800 and above (76%), compared to around half of Australian males (52%) in 2016. Three in five ex-serving ADF females earned a weekly personal income of \$800 and above (60%), compared to just over one third of Australian females (34%).

Almost one quarter of ex-serving ADF males earned \$2,000 and above per week (24%), compared with 13% of Australian males. Just under 1 in 8 ex-serving ADF females earned \$2,000 and above per week (12%), compared with 4.9% of Australian females.

Factors that were associated with an increased likelihood of ex-serving ADF members earning a high income in 2016 were:

- being a Commissioned Officer at the time of separation from the ADF,
- separating voluntarily from the ADF compared with separating involuntarily for medical reasons,
- serving 10 years or more compared with those who had served less than 1 year,
- being male, and
- separating from the Air Force compared with separating from the Army or Navy.

Age was also statistically significant in predicting whether an ex-serving ADF member was earning a high income in 2016.

Ex-serving ADF males were more likely to be earning \$800 or more per week (82%) and \$2,000 or more per week (42%) if they separated from the ADF as Commissioned Officers than those who separated as Other Ranks (75% and 20% respectively). Ex-serving ADF females were also more likely to be earning \$800 or more a week (72%) and \$2,000 or more a week (27%) in 2016 if they separated as Commissioned Officers than those who separated as Other Ranks (57% and 7.9% respectively).

Those who separated from the Air Force were likely to earn more per week in 2016 than those who separated from the Navy or Army (Figure 7). Of those who separated from the Air Force, 79% of males and 63% of females earned \$800 or more per week, compared with 76% of males and 55% of females who separated from the Navy, and 75% of males and 61% of females who separated from the Army. Nearly 1 in 3 ex-serving ADF males who separated from the Air Force were earning \$2,000 or more per week (30%), compared to 25% who separated from the Navy, and 22% who separated from the Army. The rates halved for females, with 14% of ex-serving ADF females who separated from the Air Force earned \$2,000 and above, compared to 13% who separated from the Army and 8.0% who separated from the Navy.

For ex-serving ADF males and females, as their length of service increased so did their income, noting that this pattern is confounded by age, with income (and wealth) typically increasing as a person's age increases (AIHW 2021c). Of those who had served less than 1 year, 64% of males and 47% of females earned \$800 a week or more, compared with 80% of males and 65% of females who served 10 years or more. Similarly, of those who had served less than 1 year, 9.8% of males and 3.9% of females earned \$2,000 a week or more, compared with 31% ex-serving ADF males and 16% ex-serving ADF females who served 10 years or more.

### Figure 7: Proportion of ex-serving ADF members in 2016, weekly personal income by service characteristics

The interactive data visualisation includes weekly personal income levels from negative income to \$3,000 or more. Ex-serving ADF males were more likely to be earning \$800 or more per week (82%) and \$2,000 or more per week (42%) if they separated from the ADF as Commissioned Officers than those who separated as Other Ranks (75% and 20% respectively). Ex-serving ADF females were also more likely to be earning \$800 or more a week (72%) and \$2,000 or more a week (27%) in 2016 if they separated as Commissioned Officers than those who separated as Other Ranks (57% and 7.9% respectively).

Select service characteristic:  
Service

Sex:  
Males

## Service | Males

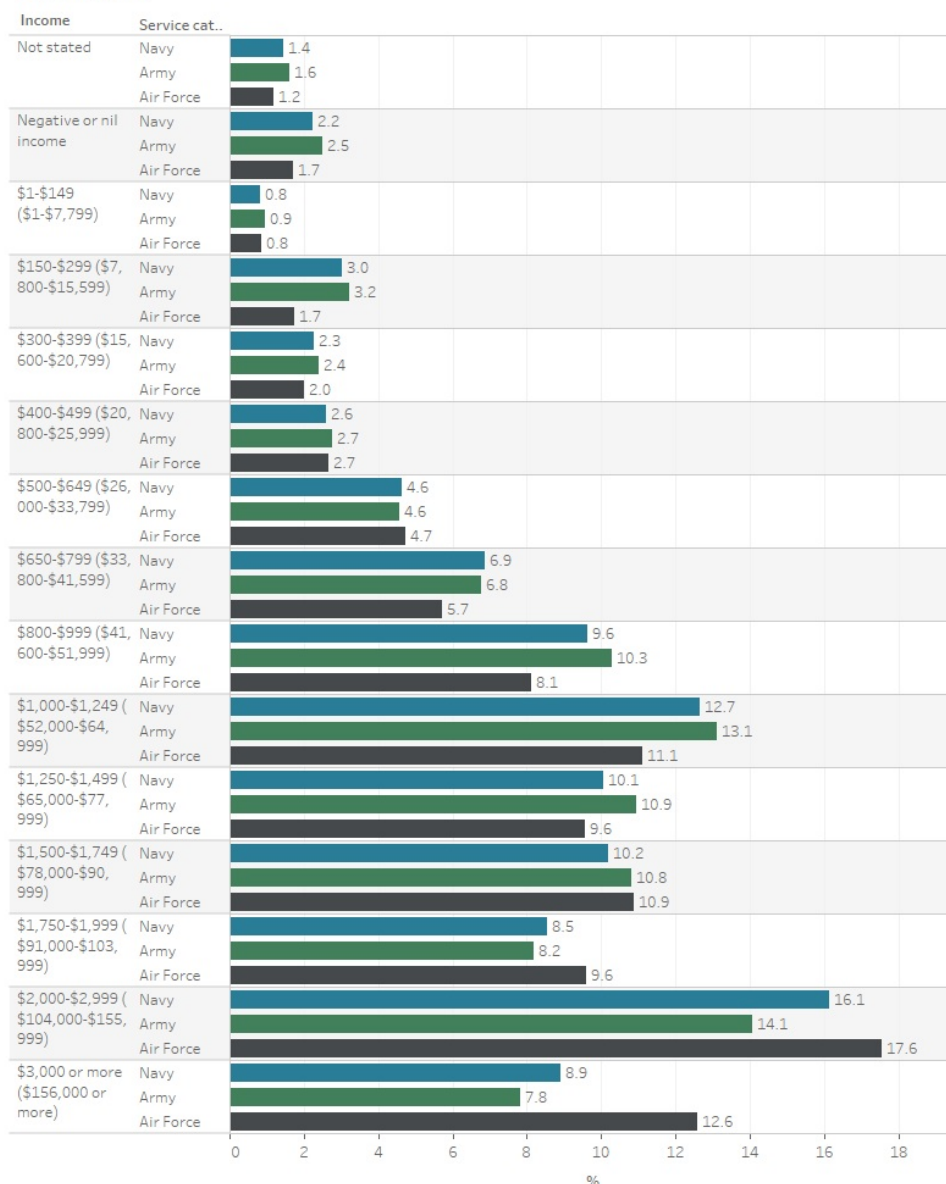


Figure 7: Proportion of ex-serving ADF members in 2016, weekly personal income by service characteristics.

### Notes:

- Null values not available for publication but included in totals where applicable
- At home on 2016 census night.
- Weekly personal income indicates the total income that the person usually receives each week. Equivalent annual amounts appear in brackets.
- Negative income reported in the census includes people who own their own business and report negative income due to losses or negative gearing of rentals.
- Excludes individuals who were an overseas visitor.
- All ranks other than commissioned officer include missing values.
- Last separation reason: analysis is presented only for ADF members who separated from the ADF between 1 January 2003 and 31 December 2015 inclusive; missing values included in totals.
- Queensland includes records where states were unknown, other territories and missing values

Source: AIHW analysis of linked PMKeyS 2001-2019 data to MADIP - 2016 Census, as of August 2016.

<http://www.aihw.gov.au>

## Educational qualifications of ex-serving ADF members

### More ex-serving ADF females held a bachelor degree or higher than the Australian population

Educational qualifications and skill recognition are important factors in how well ex-serving ADF members are able to transition to civilian life (DVA, 2011). Higher levels of education are associated with better health and wellbeing outcomes in the general population (AIHW 2021a).

Factors that were associated with an increased likelihood of ex-serving ADF members having a bachelor degree or higher in 2016 were:

- separated as a Commissioned Officer,
- separated voluntarily from the ADF compared with separating involuntarily for medical reasons,
- being female, and
- separated from the Army or Air Force compared with the Navy.

Age, the number of years since they left ADF service, and overall length of service were also statistically significant in predicting whether an ex-serving ADF member had a bachelor degree or higher in 2016.

In 2016, nearly 2 in 5 (38%) ex-serving ADF females had a bachelor degree or higher, a rate 1.4 times higher than Australian females (26%). In comparison, one quarter (25%) of ex-serving ADF males had a bachelor degree or higher, which was similar to Australian males (22%).

Four in five (81%) ex-serving ADF females who were Commissioned Officers at the time of separation held a bachelor degree or higher in 2016, which was 3.1 times the rate of ex-serving ADF females who were Other Ranks (26%). More than two-thirds of ex-serving male Commissioned Officers (68%) held a bachelor degree or higher, which was 4.5 times the rate of ex-serving ADF males who separated from the ADF as Other Ranks (15%).

Nearly half ex-serving ADF females who separated from the Army (44%) held a bachelor degree or higher in 2016 compared with over a third who had separated from the Air Force (36%), and a quarter (25%) who separated from the Navy (Figure 8). In comparison, just over 1 in 4 ex-serving ADF males who separated from the Air Force (27%) or Army (26%) held a bachelor degree or higher, compared with 17% who had separated from the Navy.

### Figure 8: Highest educational attainment of ex-serving ADF members in 2016, by service characteristics

The interactive data visualisation includes education levels ranging from postgraduate to Year 12 or equivalent or below. It shows nearly half ex-serving ADF females who separated from the Army (44%) held a bachelor degree or higher in 2016 compared with over a third who had separated from the Air Force (36%), and a quarter (25%) who separated from the Navy (Figure 8). In comparison, just over 1 in 4 ex-serving ADF males who separated from the Air Force (27%) or Army (26%) held a bachelor degree or higher, compared with 17% who had separated from the Navy.

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## Home ownership of ex-serving ADF members

### Majority of ex-serving ADF members owned their home, at rates similar to the Australian population

Housing plays a major role in people's health and wellbeing, by providing shelter, safety and security. Poor housing has been linked to adverse physical and mental health outcomes as well as negative effects on employment, education, and social relationships (AIHW 2018a). A person's housing needs and preferences change as they progress through different stages of their lives. These needs or preferences may change as a result of factors such as changes in employment, family structures, health and mental wellbeing and financial situations (ABS 2016a). While serving ADF members have access to subsidised housing and rental assistance, once members transition out of the ADF, they are no longer able to access this support (Defence 2017).

Over 90% of ex-serving ADF members were living in private dwellings (for example owning a home or renting) rather than non-private dwellings (3.3%) (hotels, hospitals and accommodation facilities) in 2016. This pattern was similar to the Australian population and observed across all age groups for males and females.

In 2016, of those living in private dwellings, 7 in 10 (70%) ex-serving ADF males lived in a home they owned (including those paying mortgages), which was similar to the proportion for Australian males (69%). Rates were similar for females with 68% for ex-serving ADF females and 69% for Australian females owning their own home.

Close to 4 in 5 (79%) ex-serving ADF males who separated from the Air Force owned their own home (including those paying mortgages) in 2016, compared to those who separated from the Navy (70%) and Army (67%). For ex-serving ADF females the proportions were slightly less than males for those who separated from the Air Force (72%) and Navy (62%), while those who separated from the Army were as likely to own their home (69%) as their male counterparts.

Those who separated as Commissioned Officers were more likely to live in a home they owned or were paying off with a mortgage (males 80%, females 76%) in 2016 compared with those who separated as Other Ranks (males 68% and females 66%).

Western Australia had the highest rate for ex-serving ADF males living in non-private dwellings (7.1%) compared with other states and territories which ranged from 2.4% in Victoria to 3.7% in Queensland and 3.2% overall for the Australian population. The higher proportion of non-private dwelling occupants in Western Australia may be associated with the higher proportion of ex-serving ADF males working in the mining industry and living in mining accommodation facilities.

## Family and household makeup of ex-serving ADF members

On this page:

- [Ex-serving ADF members lived in similar household types as the Australian population](#)
- [Family members of ex-serving ADF members](#)
- [Civilian spouses living with ex-serving ADF members had similar or higher rates of education qualifications and employment than Australians living in a couple family](#)

### **Ex-serving ADF members lived in similar household types as the Australian population**

Social support from other people and services can be vital in times of need and can contribute to connectedness through interactions between people. Social support comes in many forms, but broadly covers ‘support accessible to an individual through social ties to other individuals, groups, and the larger community’ (Lin et al. 1979).

Having a positive and reliable social support system can enhance resilience to stress, help protect against developing trauma-related psychopathology, decrease the functional consequences of trauma-induced disorders such as post-traumatic stress disorder (PTSD), and reduce medical morbidity and mortality (Ozbay et al. 2007). However, the nature of ADF service can make it difficult to develop and maintain social connections outside of the military, as ADF members often need to spend periods away from home for deployment and/or training (Open Arms, 2021). Understanding the living situation of ex-serving ADF members can provide insights on the informal social support provided by family, friends and those they live with. The level of informal support available to an individual often mediates their need for formal support services through programs provided by government and non-government organisations, designed to enhance wellbeing (AIHW 2017).

A household is broadly defined as a person, or group of people aged 17 years or over who occupy a private dwelling. The composition of people living in the household may contribute to a person’s feelings of safety, and social and community connectedness (AIHW 2018a). For the purpose of this report, household compositions are divided broadly into family households, group households and lone person households.

In 2016, the majority of ex-serving ADF members were living in family households. Higher proportions of ex-serving ADF males who were Commissioned Officers at the time of separation lived in family households compared to those of Other Ranks (87% and 83% respectively). However, ex-serving ADF females who were Commissioned Officers were less likely to live in family households compared to Other Ranks (80% and 85% respectively). For Australian males, 81% lived in family households compared to 82% Australian females.

Ex-serving ADF males and females who had been separated from the ADF between 1 and 5 years ago (from 31 December 2015), were most likely to live in a group household (6.4% and 6.3% respectively), compared with those who were separated for 10 or more years who were the least likely (2.8% and 2.3% respectively). For Australian males, 5.4% lived in a group household compared to 4.1% Australian females.

In 2016, ex-serving ADF males and females lived alone (11% and 12% respectively), similar to the rates for Australian males and females (11% and 13% respectively). Ex-serving ADF females aged 55 years and over had 3.2 times the rate of living alone compared to those aged under 55 (30% and 9.3%, respectively). A similar pattern was observed for the Australian population with 26% of Australian females aged 55 years and over living alone, while 6.3% aged under 55 were living alone. For ex-serving ADF males aged 55 years and over, 12% lived alone, while 17% of Australian males aged 55 years and over lived alone (Figure 9).

### **Figure 9: Proportion of the ex-serving population in 2016, household type by age and service characteristics**

The interactive data visualisation includes the household types of family, group, and lone persons households as well as unrelated individuals. In 2016, ex-serving ADF males and females lived alone (11% and 12% respectively), similar to the rates for Australian males and females (11% and 13% respectively). Ex-serving ADF females aged 55 years and over had 3.2 times the rate of living alone compared to those aged under 55 (30% and 9.3%, respectively). A similar pattern was observed for the Australian population with 26% of Australian females aged 55 years and over living alone, while 6.3% aged under 55 were living alone.

Visualisation not available for printing

### **Family members of ex-serving ADF members**

Service in the ADF is a unique occupation. This service affects the lifestyle of the ADF member, with flow on effects for their family life. For example, moving regularly for operational requirements might make it difficult for members and their families to form enduring relationships within a community (Tan 2020).

DVA provides a range of support services for ex-serving ADF members and their eligible family members (DVA 2021). For these services to be relevant to DVA clients, it is important to understand the family household structures common among ex-serving ADF members.

The term spouse refers to the husband, wife, partner or de facto partner in a couple family present in a family household on Census night. Family households are further broken down by:

- Couple family with children where children includes dependent children (under 15 years of age, dependent students studying full-time aged between 15 and 24 years, and non-dependent children aged 15 years and over who are not studying full-time).
- Couple family without children. It is worth noting that a couple family without children household can include those couples whose children have left home and not present in the household on Census night, not just those couples who have not had children.
- Single parent family with children where children is as above.

Based on the representation of households on the 2016 Census night, there were 48,100 civilian spouses<sup>1</sup> and 60,300 children who lived in a house with an ex-serving ADF member. This equated to 83% of ex-serving ADF males and 84% of ex-serving ADF females living in a family household. More than four in five (86%) ex-serving ADF members in family households lived with a civilian spouse, with 99% being an opposite sex spouse and 1.1% a same sex spouse.

Of all children living with ex-serving ADF members in 2016:

- 74% were under the age of 15
- 14% were dependent students aged between 15 to 24 years who attend full-time study
- 12% were non-dependent children aged 15 years and over, and who were not a full-time student aged 15-24 years.

Ex-serving ADF males and females who had children, had a higher rate of children under the age of 15 (74%) compared with the Australian population (62%). This is likely to be confounded by the higher proportion of persons aged between 25-44 represented in the ex-serving ADF population in the linked data.

In 2016, the median age of children living with an ex-serving ADF member under the age of 15 was 6.5 years, similar to the Australian population at 6.9 years.

<sup>1</sup> Civilian spouse is a partner of an ex-serving ADF member who was not included in the Defence Personnel records as having separated from the Australian Defence Force (ADF) by September 2020.

### **Civilian spouses living with ex-serving ADF members had similar or higher rates of education qualifications and employment than Australians living in a couple family**

ADF members often need to move around to meet operational needs. This can be disruptive to their family members' education and employment opportunities (Tan 2020). Defence makes information and support available to families before, during and after deployments or absences to help them address these challenges.

In 2016, civilian spouses of ex-serving ADF members were more likely to have an educational attainment that was higher than a school qualification (Year 12 or equivalent or below), regardless of whether they had children or not compared with Australians living in a couple family with and without children. A Certificate III/IV was the most common highest level of educational attainment for male spouses of ex-serving ADF members with and without children (32% and 29% respectively). In comparison, the most common highest level of educational attainment for Australian males in a couple family with or without children was Year 12 or equivalent or below (36% and 34% respectively).

For female spouses of ex-serving ADF members with and without children, the most common highest level of educational attainment was a bachelor degree or higher (36% and 34% respectively). Like Australian males, the most commonly reported highest level of educational attainment for Australian females in a couple family with or without children was Year 12 or equivalent or below (39% and 44% respectively). After adjusting for age, similar proportions of females with a bachelor degree in 2016 were observed between female spouses of ex-serving ADF members without children and Australian females in a couple family without children.

Civilian spouses of ex-serving ADF members with children were equally likely to be employed (75%), when compared to the Australian population in a couple family with children (74%). For civilian spouses of ex-serving ADF members without children, nearly 7 in 10 (69%) were employed compared to 55% of Australians in a couple family without children. After adjusting for age, similar proportions of employment were observed for ex-serving ADF members without children and Australians in a couple family without children.

In 2016, for civilian spouses of ex-serving ADF members with children, 2.5% were unemployed, which was nearly half the rate when compared to Australians in a couple family with children (4.3%). After adjusting for age, this pattern remained to be observed. For civilian spouses of ex-serving ADF members without children 2.5% were unemployed, which was similar to Australians in a couple family without children (2.4%). After adjusting for age, the proportion of civilian spouses of ex-serving ADF members without children unemployed was at a rate 1.2 times lower than Australians in a couple family with children. In terms of unemployment rates, civilian spouses of ex-serving ADF members with or without children experienced lower unemployment rates (3.2% and 3.5%) compared to Australians in a couple family with or without children (5.4% and 4.1%).

A similar proportion of civilian spouses of ex-serving ADF members with children were not in the labour force (22%) as Australians in a couple family with children (21%). Almost 3 in 10 (28%) of civilian spouses of ex-serving ADF members without children were not in the labour force compared to 43% of Australians in a couple family without children. After adjusting for age, similar proportions of civilian spouses of ex-serving ADF members without children were not in the labour force as Australians in a couple family without children. Note that civilian spouses labour force status results by sex breakdowns are not available due to small numbers.

## Separations from the Australian Defence Force

Data insights from this report show the majority of ex-serving ADF members were doing well and often better than their Australian counterparts in 2016. However, some ex-serving ADF members were facing wellbeing challenges. One such group was those who have separated from the ADF involuntarily for medical reasons.

Reason for separation represents the reason recorded for leaving the last engagement with the ADF. Due to a change in the way the reasons for separating the ADF was recorded during 2002, analysis on last reason for separation is presented only for ADF members who separated from the ADF between 1 January 2003 and 31 December 2015 inclusive. In the data available, reasons for separation were defined as:

- Voluntary
- Involuntary for medical reasons, and
- Involuntary for other reasons
- People with no reason for separation available, have been included in totals.

Between 1 January 2003 and 31 December 2015, just under 60,000 ADF members had separated from the ADF. About 2 in 5 ex-serving ADF members voluntarily separated from the ADF (40%), with the proportions similar for males (39%) and females (41%). A higher proportion of males separated involuntarily for other reasons (37%) compared to females (29%). Nearly 1 in 7 (14%) separated from the ADF involuntarily for medical separation. The proportion of ex-serving ADF males who separated involuntarily due to medical reasons (14%) was similar to females (16%).

Voluntary separations occurred most commonly amongst those with less than 1 year of service (58%), with the proportion dropping to 42% for those who served 1 to 5 years. In contrast, separations for involuntary medical reasons occurred most commonly amongst those who had served 5 to less than 10 years (23%) and were least likely to occur amongst those who had served less than 1 year (4.8%). Separations for involuntary other reasons were highest amongst those who served 1 to less than 5 years (39%) and lowest amongst those who served 10 years or more (33%).

Those ex-serving ADF members who separated voluntarily from the ADF were more likely to have attained a higher education qualification, be more likely to be employed, earn more, and own their own home (including those paying mortgages) in 2016, while those who separated involuntarily for medical reasons were more likely to have a Certificate III/IV qualification, be not in the labour force, earn less and own their own home (including those paying mortgages) but to a lesser extent.

Ex-serving ADF members who separated from the ADF involuntarily due to medical reasons had lower rates of having attained a bachelor degree or higher (13% for males and 27% for females) in 2016 compared to those who separated from the ADF involuntarily for other reasons (25% for males and 40% for females) and voluntarily (31% for males and 45% for females). For ex-serving ADF males who separated involuntarily for medical reasons, the most common highest education attainment was Certificate III/IV in 2016 (32%). While bachelor degree or higher was the most common highest education attainment in 2016 for ex-serving females who separated involuntarily for medical reasons (27%), this was closely followed by those who had a Certificate III/IV qualification (25%).

Ex-serving ADF males and females who separated involuntarily for medical reasons were less likely to be employed (56% and 57% respectively), compared with those who separated voluntarily (84% and 81% respectively) and those who separated involuntarily for other reasons (79% and 78% respectively). Of those who separated from the ADF involuntarily for medical reasons, a higher proportion were not in the labour force (39% for both males and females) in 2016 compared to those who separated from the ADF involuntarily for other reasons (16% for males and 19% for females) and voluntarily (13% for males and 16% for females).

While ex-serving ADF males and females were earning \$800 or more a week in 2016 at similar rates across the different reasons for separation, those who separated involuntarily for medical reasons were less likely to earn \$2,000 or more a week. Of those who separated from the ADF involuntarily for medical reasons, a lower proportion were earning \$2,000 or more a week (13% for males and 7.6% for females) in 2016 compared to those who separated from the ADF involuntarily for other reasons (22% for males and 13% for females) and voluntarily (25% for males and 12% for females).

The majority of ex-serving ADF males and females who separated voluntarily from the ADF owned their own home in 2016 (70% and 67% respectively). Those who separated involuntarily for medical reasons were less likely to own their own home with 63% of ex-serving ADF males and 60% of ex-serving females owning their own home. Similar proportions of ex-serving males and females who separated from the ADF involuntarily for other reasons owned their own home (66% and 67% respectively).

## Future analysis directions

As noted at the beginning of this report, analysis of the wellbeing characteristics of ex-serving ADF members using data available in the MADIP data asset has enabled four additional domains from the Veteran-centred model to be investigated. This linkage project has complemented previous analysis of the Health and Housing domains and expanded to the Education and skills, Employment, Income and finance, and Social support domains, such that analysis on 6 of the 7 domains have been undertaken. Opportunities for data analysis relating to the Justice and safety domain are being considered.

The MADIP data asset is a rich data resource, with many different datasets available to explore the Veteran-centred model domain topics in further detail. Future analysis will explore the Personal Income Tax data from the Australian Tax Office and Government Payment Benefits data from the Department of Social Services to complement the income data in this report. This will help to understand veterans' incomes and those in need of financial assistance. Health service and medication use can also be investigated from the Medicare Benefit Scheme and Pharmaceutical Benefit Scheme datasets available in the MADIP data asset. The 2011 and 2021 Census data in the MADIP data asset will also support more up to date analysis on veterans' wellbeing circumstances and allow for data comparisons over time. More detailed analysis of the employment and income data from the Census will also be feasible.

In collaboration with Defence and DVA, analysis of ex-serving ADF members linked to MADIP will expand to a broader ex-serving ADF population, to include those who served between 1 January 1985 to the most recent available data. This expansion will help to address some of the limitations noted in this report such as the under-representation of younger and older ADF members in the post-2001 ex-serving ADF population analysed in this report. This future data linkage and analysis will complement and expand the analysis on the post-1985 ex-serving population presented in the [\*Serving and ex-serving Australian Defence Force members who have served since 1985: population characteristics 2019\*](#) web report. The expansion of data on ex-serving members will also enable more granular analysis to be undertaken on topic areas such as families of ex-serving ADF members and ex-serving ADF members at risk.

Further breakdowns of data such as whether a veteran is a DVA client or information on their ADF service deployment experience could also provide valuable insights into their wellbeing outcomes.



## Technical notes

### Data sources

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#### Department of Defence personnel solution data

Information on ex-serving ADF members was obtained from the Personnel Management Key Solution (PMKeyS). PMKeyS is a Department of Defence staff and payroll management system that contains information on all people with ADF service on or after 1 January 2001 (when the system was introduced). The data supplied for this project included records for those who separated from the ADF between January 2001 and September 2020.

#### Multi-Agency Data Integration Project (MADIP)

The Multi-Agency Data Integration Project (MADIP) is a partnership among Australian Government agencies to develop a secure and enduring approach for combining information on healthcare, education, government payments, personal income tax, and demographics (including the Census) to create a comprehensive picture of Australia over time (ABS 2018). More information about the MADIP can be found at [Multi-Agency Data Integration Project \(MADIP\) | Australian Bureau of Statistics \(abs.gov.au\)](#). The key MADIP data sets used in this analysis were:

- MADIP Person Linkage Spine (Australian Bureau of Statistics)
- Core demographic dataset (Australian Bureau of Statistics)
- 2016 Census of Housing and Population (Australian Bureau of Statistics)

### Linkage approach

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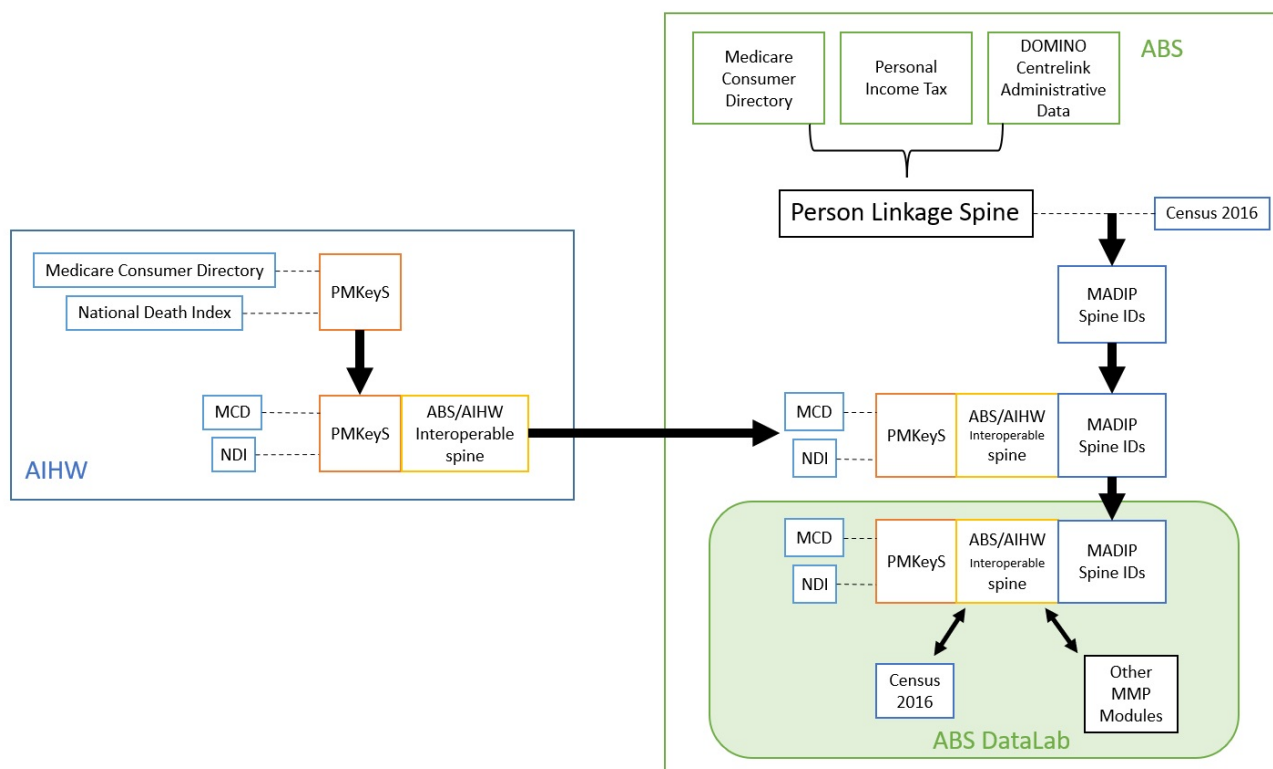
Data linkage, also known as data integration, is a process that brings together information relating to an individual from more than one source. This report utilised deterministic and probabilistic linkage between two data sets: Defence-held Personnel Management Key Solution (PMKeyS) data and the 2016 Census of Population and Housing.

After undergoing data checking and cleaning, the PMKeyS data set was linked using a probabilistic data linkage to the AIHW/ABS interoperable spine. This spine allows data held by both organisations to be linked without the need for sharing any identifiable information. The data was linked to the spine by matching by name, sex and date of birth. The linkage procedure involved creating record pairs—one from each data set—by running a series of passes that allow for variation in full name information and demographic data. There were over 129,000 links found in the ABS/AIHW-interoperable spine linkage. This linkage was carried out by the Data Linkage Unit at the AIHW. Using unidentifiable PINs, shared between the AIHW and the ABS, this data set was then securely transferred to the ABS to be linked to the MADIP spine. ABS staff, using the ABS' data linkage environment were subsequently able to link the PMKeyS data to 2016 Census records using the linkages of both data sets to the MADIP spine. After removing the records of those ADF members who were out of scope, this resulted in an in-scope population of 72,700 links who were 17 years and over, alive, and ex-serving ADF members at the time of the 2016 Census, who had served at least one day of service between 1 January 2001 and 31 December 2015.

Strict separation of identifiable information and analytical content data is maintained within the Data Linkage Units at both AIHW and the ABS, so that no one person or organisation will ever have access to both. Summary results from the linked data set are presented in aggregate format. Personal identifying information is not released, and no individual can be identified in any reporting.

Figure 10 illustrates the linkage process undertaken for this report.

#### Figure 10: Linkage process



Note: ABS - Australian Bureau of Statistics, AIHW - Australian Institute of Health and Welfare, DOMINO - Data Over Multiple Individual Occurrences, ID - Identification, MCD - Medicare Consumer Directory, NDI - National Death Index, PMKeyS - Personnel Management Key Solution

## How populations are scoped

### Age

The minimum age of both the ex-serving ADF and Australian populations was capped at 17 years.

### Termination date

As we only had approval to include year of termination date from the PMKeyS data in MADIP, the ex-serving ADF population has been capped at those who terminated before 2016 to ensure ex-serving ADF members had separated from the ADF at the time of the 2016 Census. Termination date is used to calculate length of service and time since separation. The reference date for these service characteristics is 31 December 2015.

### Age-standardised percent proportions

Age-standardised rates are rates standardised to a specific standard age structure to facilitate comparison between populations and over time. In this report, they are directly age-standardised rates adjusted using the Australian standard population, that is, the Australian estimated resident population (ERP) as of 30 June 2001. This standard population was used for the ex-serving ADF members and the Australian population. Analysis based on service characteristics has not been age standardised.

### Rate differences

Rate differences (RD), also referred to as absolute differences are presented in data tables that accompany this report. They are a measure the magnitude of the gap between populations without respect to how big or small the individual rates are. RDs are subject to volatility when used with small numbers, and so should be used with caution when comparing ex-serving ADF member results to the Australian population.

The RD is calculated by subtracting the incidence rate of an unexposed population from the incidence rate of the exposed population (LaMorte 2018a).

For the purpose of this report, 'exposure' refers to those who have separated from the ADF, i.e., ex-serving. As such, the Australian population is the unexposed population, while the ex-serving ADF member population is the exposed population (Figure 11).

**Figure 11: Formula for calculating rate differences**

$$RD = \text{Incidence rate}_{\text{Ex-serving ADF population}} - \text{Incidence rate}_{\text{Australian population}}$$

### Rate ratios

Rate ratios (RR), also referred to as relative rates, measure the degree of inequality between populations. Unlike RDs, RRs are sensitive to the scale of the rates, and are typically more stable than RDs. Similarly to RDs, RRs are subject to volatility when used with small numbers, and so should be used with caution when comparing ex-serving ADF member results to the Australian population.

The RR is calculated by dividing the incidence rate in an exposed group by the incidence rate in an unexposed group (LaMorte 2018b).

As with RDs, the Australian population is the unexposed population, while the ex-serving ADF member population is the exposed population (Figure 12).

**Figure 12: Formula for calculating rate ratios**

$$RR = \frac{\text{Incidence rate}_{\text{Ex-serving ADF population}}}{\text{Incidence rate}_{\text{Australian population}}}$$

When a RR is greater than 1, it suggests an increased risk of the outcome in the exposed group. When a RR is less than 1, it suggests a reduced risk of the outcome in the exposed group. If a RR is 1 or close to one, it suggests no difference or little difference in risk (the incidence in each population group is the same).

**Interpreting binomial logistic regression model results**

Estimates from the regression model are presented as odds ratios for the group of interest compared with a reference group for each service and demographic characteristic in the data tables attached to this report. An odds ratio (OR) indicates how many times higher the probability of an event is in one group of people with a particular characteristic than in another group without that characteristic, after adjusting for other factors in the model. The size of the reported odds ratio indicates the strength of the association or relationship a service or demographic characteristic has to wellbeing circumstance (for example, having a bachelor degree, being employed, unemployed or not in the labour force in 2016), relative to the reference group. The odds ratios inform the direction of association with odds ratios greater than 1 showing the outcome was more common than the reference outcome, while odds ratios less than 1 show it is less likely.

Ninety-five per cent (95%) confidence intervals are also presented to indicate the statistical precision and significance. The result is interpreted as having a statistically significant association (that is, not due to chance) if the confidence interval does not cross the value of 1.

**Limitations of the population**

The study population does not include ADF members who separated from the ADF before 1 January 2001.

**Small sizes**

When disaggregating the ex-serving ADF member population by age, sex and wellbeing domains, small populations have been encountered. This has meant occasionally limiting the analysis further, e.g., presenting just person totals, broader age groups or confidentialising small cell counts. This has also limited the utility of RRs and RDs in a couple of areas. Such treatments have been footnoted in the data tables accordingly.

**Linkage**

The linkage processes only provide data for those ex-serving ADF members who had a 2016 Census record. Reasons why a person may not have a 2016 Census record include they were overseas at the time of the 2016 Census, or they may not have completed a Census form. Some ex-serving ADF members could not be linked to a Census record due to the 2016 Census record not being available in MADIP or the required information was not available in the MADIP to support the linkage.

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**Abbreviations**

ABS	Australian Bureau of Statistics
ADF	Australian Defence Force
AIHW	Australian Institute of Health and Welfare

DVA	Department of Veterans' Affairs
PMKeyS	Personnel Management Key Solution

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## More information

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Comprehensive data tables from this analysis are available online. See [Data](#) under the Veterans topic.

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# Data

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## Related material

### Resources

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