Serving and ex-serving Australian Defence Force members who have served since 1985: population characteristics 2019

Web report | Last updated: **11 Aug 2021** | Topic: Veterans

About

This report describes the characteristics of all Australian Defence Force (ADF) members who served between 1985 and 2019. This cohort will be used for further research into permanent, reserve and ex-serving ADF members. As of 31 December 2019, almost 373,500 Australians had served at least one day in the ADF since 1 January 1985. Of these, just over 358,000 were still alive of which 59,000 were permanent, 38,700 reserve and nearly 261,000 ex-serving.

Cat. no: PHE 289

- Infographic
- Data

  Findings from this report:

- More than 4 in 5 (84%) ex-serving members were male and 16% were female

- The average length of service for ex-serving members was 10 years

- The most common separation reason for ex-serving members was voluntary separation (45%)

- Half (50%) of ex-serving members separated from the ADF 20 or more years ago

Summary

As of 31 December 2019, almost 373,500 Australians had served at least one day in the Australian Defence Force (ADF) since 1985. Of these, just over 358,000 were still alive of which 59,000 were permanent, 38,700 reserve and nearly 261,000 ex-serving.

This report describes the demographic and service-related characteristics of the ex-serving population. It is part of a larger project to establish a study population that is more representative of the entire veteran population. It establishes a study population of members who served in the ADF between 1985 and 2019 by using data from historical ADF personnel systems. Previous AIHW studies on veterans were restricted to members who served in the ADF from 2001 and were based on the current ADF personnel system. A limitation is the study population does not include members who separated prior to 1 January 1985.

Key findings

- As of 31 December 2019, more than 358,000 living Australians had served at least one day in the ADF since 1985. This comprised 59,000 permanent, 38,700 reserve and 261,000 ex-serving.
- Of ex-serving members still alive:
  - more than 4 in 5 (84%) were male and 16% were female
  - the average length of service was 10 years
  - the most common separation reason was voluntary separation (45%).

Permanent and reserve members as of 31 December 2019

- The median age for permanent members was 31 and for reserve members was 37.
- The number of permanent members has remained reasonably constant at around 59,000 since 2010.
- The number of reserve members fluctuated year to year from around 36,400 in 2002 to 44,200 in 2008 where it remained until 2015 before dropping to 36,800 in 2016. In 2019, there were around 38,700 members in the reserve.

Ex-serving members as of 31 December 2019

- The number of ex-serving members with at least one day of service since 1985 was approximately 261,000 in 2019.
- The majority were male (84%).
- The majority were aged 40 years and over (79%).
- Consistent with the distribution of members across the three Services during active service, the majority (68%) had separated from the Army. Similar proportions had separated from the Navy and Air Force at 16% each.
- Around 1 in 7 (14%) were commissioned officers at time of separation.
- The average length of service was 10 years with more than one–quarter (28%) having between 1 and 5 years of service, while 1 in 5 (20%) had served over 20 years.
- The most common reason for leaving the ADF was voluntary separation (45%).
- The average time since separation was nearly 19 years.

Introduction

Background

As of 31 December 2019, there were 59,000 permanent Australian Defence Force (ADF) members and 38,700 in the reserves. While the number of permanent and reserve ADF members is known, the exact number and characteristics of ex-serving ADF members in Australia is unknown and veterans are not readily identifiable in many general population health and welfare data sets.

As of 30 June 2018, the Department of Veterans' Affairs (DVA) estimated that there were around 641,000 living Australian veterans who had ever served in the ADF, either full time or in the reserves (DVA 2018). As of 31 December 2019, 205,680 members received a pension or allowance from DVA, or were eligible for treatment or pharmaceuticals paid for by DVA (DVA 2020). However, little is known about the ex-serving members who do not interact with DVA.

In 2014, DVA and AIHW established a partnership to address this knowledge gap and to build a comprehensive profile of the health and welfare of Australia's veteran population. As part of this partnership, AIHW has worked with the Department of Defence to link information from Department of Defence personnel systems to a variety of health and welfare data sources. An aim has been to better understand the characteristics of all veterans including cause of death, health and pharmaceutical usage and use of homelessness services.

The first stage of this work linked information from the Defence Personnel Management Key Solution (PMKeyS) which started on 1 January 2001, to enable understanding of the cohort of ex-serving members who had served at least one day since 1 January 2001. See Veterans reports.

Since that time, DVA and AIHW have explored how to establish a larger cohort which would be more representative of the whole veteran population. The Department of Defence investigated obtaining data from a range of historical personnel systems used prior to 2001 to develop a list of all members who had served at least one day since 1 January 1985. The AIHW and the Department of Defence conducted a number of stages of validation of this list to ensure that it was complete and did not contain duplicates. More information about this process is contained in the Technical notes.

What is included in this report?

This report provides demographic and service-related characteristics of all ADF members who have served at least one day since 1 January 1985 with information current as of 31 December 2019. In this report, the term 'ADF members' collectively refers to the three categories of 'currently serving permanent', 'active and inactive reserves' and 'ex-serving' members (Box 1). These three ADF service status groups will be referred to as; permanent, reserve and ex-serving for the remainder of this report. In previous reports, permanent ADF members were referred to as serving—there has however been no methodological change and the term is comparable to previous reports.

> ### Box 1: Who is included in this report?
> - **Permanent:** ADF members currently serving in a regular capacity in the Royal Australian Navy (Navy), Australian Army (Army) or the Royal Australian Air Force (Air Force) as of 31 December 2019, and still serving in a permanent regular capacity.
> - **Reserve:** ADF members in the active or inactive reserve forces for the Navy, Army or the Air Force as of 31 December 2019, who are still in the reserve forces. Most members leaving full-time service transition to the inactive reserve forces (for a minimum of five years), unless prevented by medical or other grounds. The service status 'Reserve' includes members with a wide range of different experience and relationships to the ADF. For example, it includes both active and inactive reserves, as well as those who have only ever been reservists and those who served full time and then entered the reserves.
> - **Ex-serving:** ADF members who served in the Permanent or Reserve Services between 1 January 1985 and 31 December 2019, but who subsequently separated.

References

DVA (Department of Veterans' Affairs) 2018. Annual Reports 2017–18. Canberra: DVA.

DVA 2020. Executive Summary of DVA Beneficiaries in Receipt of Pension(s), Allowance(s) or Health Care to 31 December 2019 – Australia. Executive Summary December 2019 Aust and States.xlsx (dva.gov.au) Accessed 18 June 2021

Permanent, reserve and ex-serving ADF members

As of 31 December 2019, there were around 373,500 Australians who had served at least one day in the ADF between 1 January 1985 and 31 December 2019. Of these, just over 358,000 were still alive of which 59,000 were permanent, 38,700 reserve and nearly 261,000 ex-serving.

There were more males than females, with males accounting for 84% (or 300,000) of all living ADF members and 16% were female (or 58,600). Within the permanent population, almost 1 in 5 members were female (19%).

Table 1: ADF living members by service status groups, as of 31 December 2019

Service status groups	Males (Number)	Males (Per cent)	Females (Number)	Females (Per cent)	Persons[a] (Number)	Persons (Per cent)
Permanent	47,924	81.2	11,112	18.8	59,045	100.0
Reserve	32,353	83.7	6,306	16.3	38,660	100.0
Ex-serving	219,411	84.2	41,213	15.8	260,624	100.0
Total in all service status groups	299,688	83.6	58,631	16.4	358,329	100.0

(a) The number of persons who were permanent or reserve include persons who have identified as intersex.

Sources: AIHW analysis of linked Defence Historical Personnel data–PMKeyS–NDI data 1985–2019; Defence population snapshots, 2002–2019.
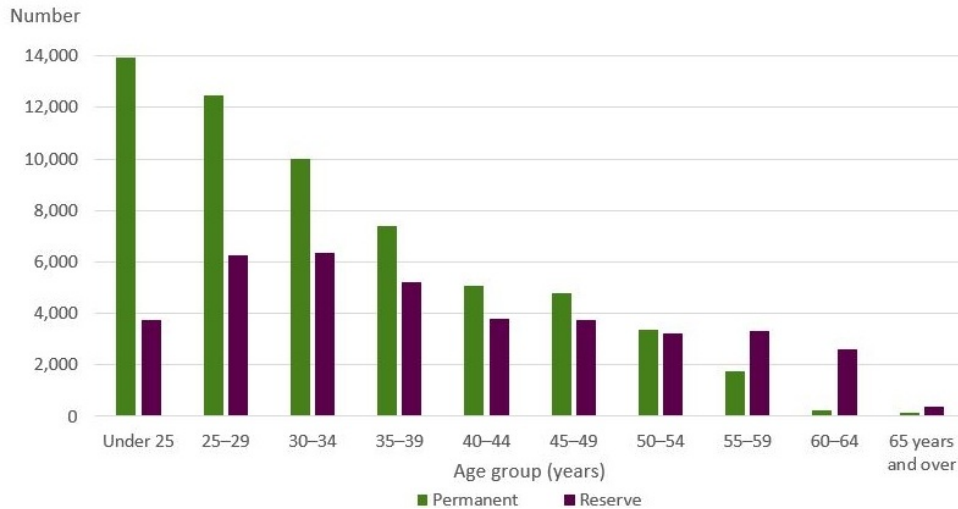
Permanent and reserve ADF members

The majority of permanent ADF members were aged under 40 years (74%) with a median age of 31. Females were slightly younger than males with a median age of 29 compared with 31 respectively.

Overall, as age increases, the number of permanent ADF members decreases, with the largest proportion aged under 25 (24%) and around 9% aged 50 years and over.

Reserve members are generally older than permanent members with a median age of 37 years and are spread more evenly across the age groups. One in ten (10%) were aged under 25, while 25% were aged 50 years and over.

Figure 1: Permanent and reserve members[a] by age group, as of 31 December 2019

(a) The number of persons who were permanent or reserve include persons who have identified as intersex.

Source: Defence population snapshots, 2002–2019.
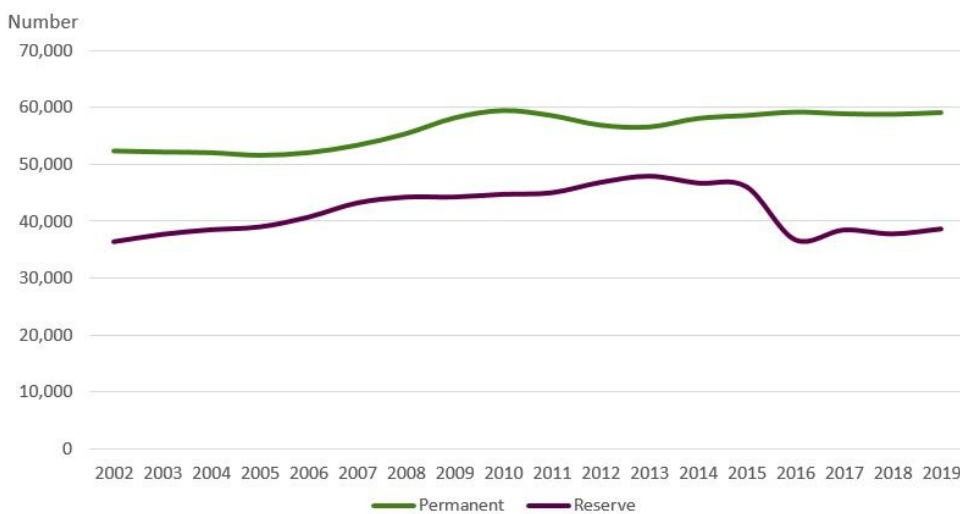
Permanent and reserve ADF members

The total size of the permanent and reserve populations were relatively constant year to year.

The permanent population remained relatively constant at around 52,300 from 2002 to 2006, increased to 59,400 in 2010, and then remained relatively constant to 2019 where it was 59,000.

The reserve population also increased from around 36,400 in 2002 to 44,200 in 2008 where it remained until 2015 before dropping to 36,800 in 2016. This increase of separations by reserve members in 2016 could potentially be due to the transition to the Total Workforce Model (now known as Total Workforce System) at this time (Department of Defence, 2017). In 2019, there were around 38,700 members in the reserve.

Data for the permanent and reserve populations are not available before 2002 due to a change in Department of Defence member management systems at that time.

Figure 2: Permanent and reserve members, 2002-2019[a]

(a) Data for the permanent and reserve populations were not available before 2002 due to a change in Department of Defence member management systems.

Source: Defence population snapshots, 2002–2019.

Reference

Department of Defence 2017. Defence annual report 2016-17. Canberra: Department of Defence.

Ex-serving ADF members

Between 1 January 1985 and 31 December 2019, 274,000 Australians had served at least one day in the ADF and subsequently separated. Of these, nearly 261,000 were still alive as of 31 December 2019 and almost 13,300 had died.

Table 2: Ex-serving members as of 31 December 2019

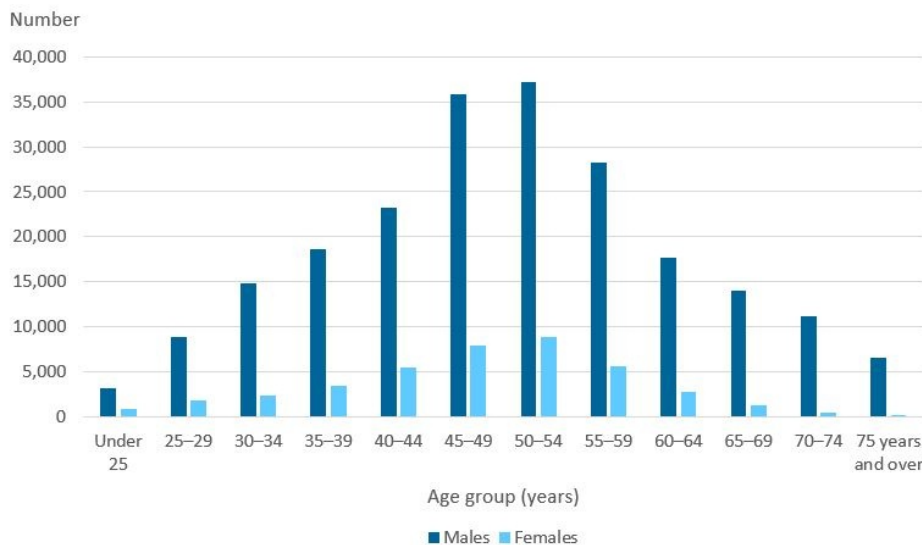| Ex-serving	Males (Number)	Males (Per cent)	Females (Number)	Females (Per cent)	Persons (Number)	Persons (Per cent
Living	219,411	94.7	41,213	97.9	260,624	95.2
Died[a]	12,362	5.3	902	2.1	13,264	4.8
Total ex-serving	231,773	100.0	42,115	100.0	273,888	100.0

(a) Includes all causes of death.

Source: AIHW analysis of linked Defence Historical Personnel data–PMKeyS–NDI data 1985–2019.

The remainder of this report presents more detailed analysis for ex-serving ADF members who were alive as of 31 December 2019.

The average age of ex-serving members was similar for both males and females at 50 years and 48 years respectively. Four in five (79%) were aged 40 years and over. There were higher proportions of males in the older age groups with 15% of males aged 65 years and over compared with 4.8% of females.

Figure 3: Ex-serving members by age group, as of 31 December 2019

Source: AIHW analysis of linked Defence Historical Personnel data–PMKeyS–NDI data 1985–2019.
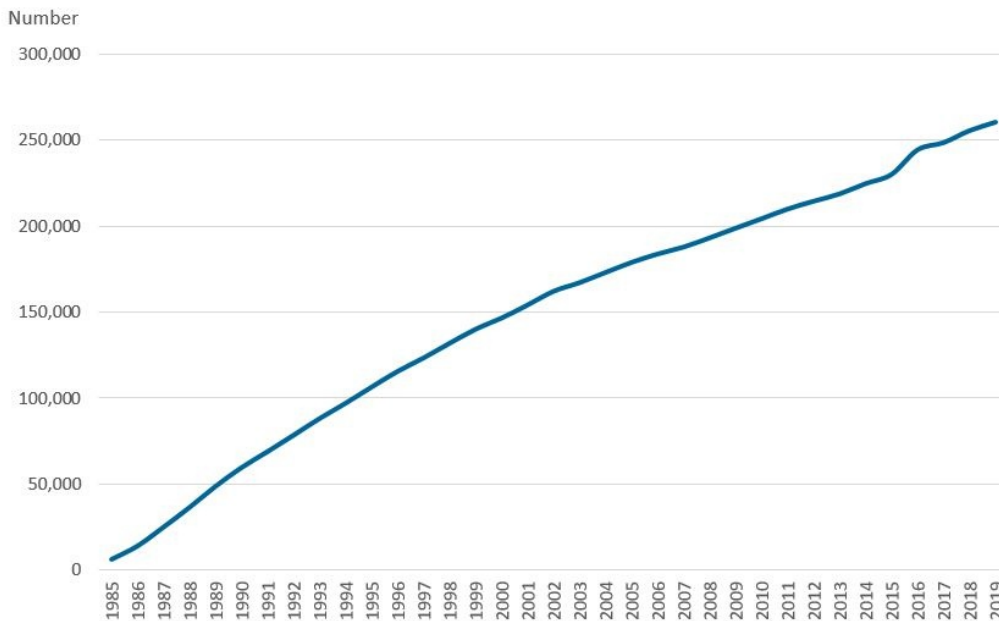
Explore this section:

- Ex-serving population over time
- Service
- Rank
- Length of service
- Time since separation
- Reason for separation

Ex-serving ADF members

A limitation of this research is the study population does not include ex-serving members who separated prior to 1 January 1985. The starting point for this study population is the ex-serving members with at least one day of service since 1 January 1985. At the end of 1985, almost 6,100 members had separated. By the end of 2019, this had grown to comprise nearly 261,000 living members. Due to the method used to assemble the study population, as members leave permanent and reserve service, they are counted as members of the ex-serving study population until they die.

The number of members separating from permanent and reserve service remains relatively stable at an average of around 7,400 each year. There was a larger number of separations of around 14,300 in 2016 driven by an increase of separations by reserve members. This increase could potentially be due to the transition to the Total Workforce Model (now known as Total Workforce System) at this time (Department of Defence, 2017).

Figure 4: Ex-serving members as of 31 December, 1985-2019

Source: AIHW analysis of linked Defence Historical Personnel data–PMKeyS–NDI data 1985–2019.

Reference

Department of Defence 2017. Defence annual report 2016-17. Canberra: Department of Defence.

Ex-serving ADF members

The ADF comprises three Services: the Royal Australian Navy (Navy), Australian Army (Army) and the Royal Australian Air Force (Air Force). An individual can serve in more than one Service during their ADF service and individuals can transfer between Services throughout their career. This section describes the Service at the time of separation.

In line with the distribution of ADF members across the three Services, the majority (68%) of ex-serving members had separated from the Army. The proportions who had separated from the Navy and Air Force were similar at 16% each.

Table 3: Ex-serving members by Service, as of 31 December 2019

Service	Males (Number)	Males (Per cent)	Females (Number)	Females (Per cent)	Persons (Number)	Persons (Per cent)
Navy	35,046	16.0	7,366	17.9	42,412	16.3
Army	150,966	68.8	25,704	62.4	176,670	67.8
Air Force	33,399	15.2	8,143	19.8	41,542	15.9
Total ex-serving	219,411	100.0	41,213	100.0	260,624	100.0

Source: AIHW analysis of linked Defence Historical Personnel data–PMKeyS–NDI data 1985–2019.

Those who had separated from the Air Force were generally older than other members. Almost seven in ten (69%) of ex-serving members of the Air Force were aged 50 years and over compared with 50% of ex-serving members of the Navy and 48% ex-serving members of the Army.

Ex-serving ADF members

Rank describes organisational and workforce structures that determine a member's position, conditions, opportunities and entitlements (such as pay and conditions). The analysis here is based on rank at time of separation. It is presented in two broad groups: commissioned officers and all ranks other than commissioned officer.

Of the ex-serving members, about 14% were commissioned officers and 86% were all ranks other than commissioned officer. These proportions were similar for males and females.

Table 4: Ex-serving members by rank, as of 31 December 2019

Rank	Males (Number)	Males (Per cent)	Females (Number)	Females (Per cent)	Persons (Number)	Persons (Per cent)
Commissioned officer[a]	29,751	13.6	5,832	14.2	35,583	13.7
All ranks other than commissioned officer[b]	189,597	86.4	35,377	85.8	224,974	86.3
Total ex-serving[c]	219,411	100.0	41,213	100.0	260,624	100.0

(a) An appointed Defence member who holds a rank of Midshipman or Officer Cadet, or higher.

(b) A Defence member who holds a Sailor, Other Ranks or Airman/Airwoman rank.

(c) Sum of component items do not equal totals. There were 63 ex-serving males and 4 ex-serving females who did not have a rank.

Source: AIHW analysis of linked Defence Historical Personnel data–PMKeyS–NDI data 1985–2019.

Ex-serving members who were commissioned officers at time of separation were more likely to be aged 65 years and over (32%). In comparison, one in ten (10%) ex-serving members who were all ranks other than commissioned officer at time of separation were aged 65 years and over.

Ex-serving ADF members

Length of service describes the time between joining the ADF and separation. In this report, length of service is presented in five groups (ranging from less than 1 year to more than 20 years).

The average length of service was just over 10 years with more than one quarter (28%) having between 1 and 5 years of service, while 1 in 5 (20%) had served over 20 years.

Overall, 14% of ex-serving members had served less than 1 year. The proportion was slightly higher for females at 18% compared with males (14%) who had served less than 1 year.

Females generally had a shorter length of service with 1 in 10 (10%) having served over 20 years compared with more than 2 in 10 (22%) of males.

The average length of service was higher for males than females (11 years and 7.8 years respectively).

Table 5: Length of service for ex-serving members, as of 31 December 2019

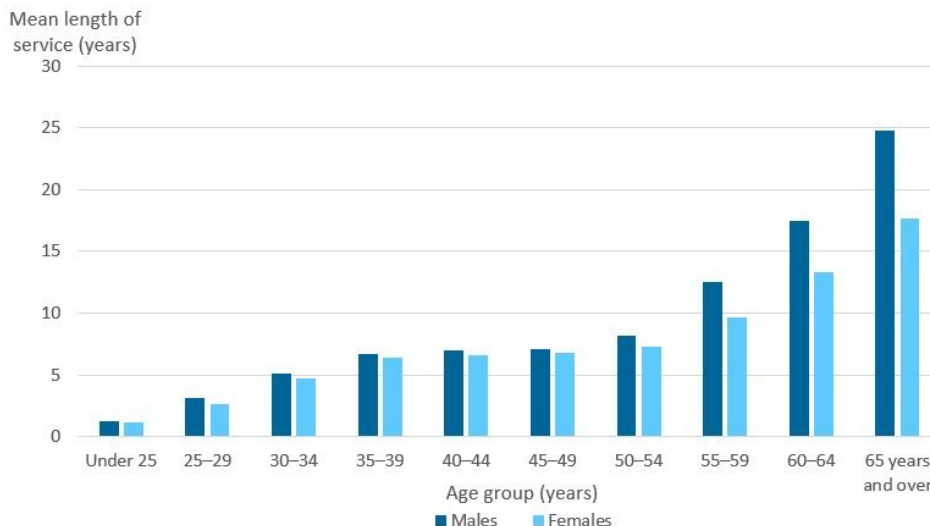| Length of service (years)[a]	Males (Number)	Males (Per cent)	Females (Number)	Females (Per cent)	Persons (Number)	Person (Per cent)
< 1	29,821	13.6	7,210	17.5	37,031	14.2
1 – <5	59,020	26.9	13,230	32.1	72,250	27.7
5 – <10	40,400	18.4	8,772	21.3	49,172	18.9
10 – <20	41,252	18.8	7,743	18.8	48,995	18.8
20 or more	47,802	21.8	4,066	9.9	51,868	19.9
Total ex-serving[b]	219,411	100.0	41,213	100.0	260,624	100.0
Mean length of service (years)	10.9	. .	7.8	. .	10.4	. .

. . not applicable.

(a) The time between the date of hire and date of separation from the ADF.

(b) Sum of component items do not equal totals. For 1,116 ex-serving males and 192 ex-serving females, length of service was unable to be calculated due to not having a hire date for these records.

Source: AIHW analysis of linked Defence Historical Personnel data–PMKeyS–NDI data, 1985–2019.

As expected, as a person's age increases so does the average length of service. Nearly half (47%) of members with over 20 years of service were aged 65 years and over. Older males (over the age of 55) have a longer average length of service than their female counterparts while younger males and females have a similar average length of service.

Figure 5: Average length of service for ex-serving members, as of 31 December 2019

Ex-serving ADF members

For ex-serving members, time since separation is the time between separation from the ADF and 31 December 2019. In this report, time since separation is presented in five groups (ranging from less than 1 year to more than 20 years).

The average time since separation was nearly 19 years and was the same for males and females. Half (50%) separated 20 or more years ago, followed by just under one quarter (23%) between 10 and 20 years ago. Around 2.3% separated less than 1 year ago.

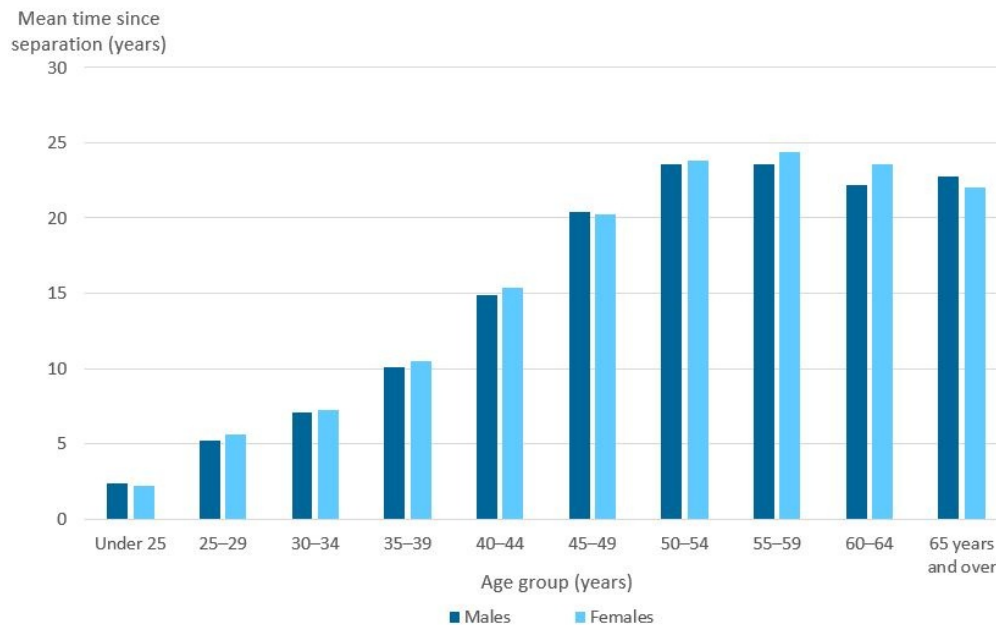Table 6: Time since separation for ex-serving members, as of 31 December 2019

Number of years since separation[a]	Males (Number)	Males (Per cent)	Females (Number)	Females (Per cent)	Persons (Number)	Persons (Per cent)
< 1	4,918	2.2	1,049	2.6	5,967	2.3
1 – <5	29,366	13.4	4,858	11.8	34,224	13.1
5 – <10	24,236	11.1	4,420	10.7	28,656	11.0
10 – <20	50,880	23.2	9,798	23.8	60,678	23.3
20 or more	110,011	50.1	21,088	51.2	131,099	50.3
Total ex-serving	219,411	100.0	41,213	100.0	260,624	100.0
Mean time since separation (years)	18.6	. .	18.6	. .	18.6	. .

. . not applicable.

(a) The period between separation date and extract date (31 December 2019).

Source: AIHW analysis of linked Defence Historical Personnel data–PMKeyS–NDI data 1985–2019.

Figure 6: Average time since separation for ex-serving members, as of 31 December 2019

Source: AIHW analysis of linked Defence Historical Personnel data–PMKeyS–NDI data 1985–2019.

Ex-serving ADF members

The reasons that ADF members separate from the ADF can be categorised into four broad groups:

- voluntary separation
- involuntary medical separation
- contractual/administrative change
- other involuntary separation.

The separation point used in this report reflects full separation from the ADF, that is, when a member is no longer permanent or reserve. Separation reason is therefore 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 is presented only for ADF members who left from 1 January 2003 onwards. These members comprise 41% of the total ex-serving members with at least 1 day of service since 1 January 1985.

The two top reasons for leaving the ADF were voluntary separation (45%), with the proportions similar for males and females and other involuntary reasons (30%), with males (31%) more likely to record this reason than females (25%).

Table 7: Reason for leaving the ADF, ex-serving members, 1 January 2003 to 31 December 2019

Separation reason	Males (Number)	Males (Per cent)	Females (Number)	Females (Per cent)	Persons (Number)	Persons (Per cent)
Voluntary	40,893	45.0	7,375	44.7	48,268	44.9
Other involuntary	28,080	30.9	4,050	24.5	32,130	29.9
Involuntary medical	12,674	13.9	2,818	17.1	15,492	14.4
Contractual/Administrative change[a]	9,300	10.2	2,260	13.7	11,560	10.8
Total ex-serving with a separation reason	90,947	100.0	16,503	100.0	107,450	100.0

(a) Contractual/Administrative change includes contract completed, data migration requirement and separation reasons that include contractual change and/or changes in Defence personnel system (e.g. transitioning of payroll system to PMKeyS introduced from 2001).

Source: AIHW analysis of linked Defence Historical Personnel data–PMKeyS–NDI data 1985–2019.

Of all reasons for separating from active service, the most common separation reason was resignation (28%), followed by separated non-contactable (13%) which are voluntary separation reasons. The most common other involuntary reasons were individual's retention not being in the service's interest (12%) and absence (8%).

Strengthening the evidence base for veterans policy

This report forms a baseline for the AIHW's reporting on the veteran population. This population will be used in ongoing research and reporting into veterans' health and welfare. The *Serving and ex-serving Australian Defence Force members who have served since 1985: suicide monitoring 2001 to 2019* report will be the first report to include information about this expanded cohort. Future analysis on this population will include research into health service and pharmaceutical usage as well as employment, education and families.

Whilst the population base still does not cover the entire veteran population, it is estimated that this covers around half of the population and will continue to build a picture of the health and welfare of veterans.

Future work will include investigating the possibility of expanding this population to include the entire veteran population.

Technical notes

Data sources

Department of Defence personnel system data

The Department of Defence compiled a file of current and historical Defence personnel systems covering ADF members who have served since 1 January 1985. This combines PMKeyS, Core HR system, D1, CENRESPAY (for reservists), ADFPAY (for permanent members) and other historical payment systems. The Department of Defence and AIHW assessed the resulting file for completeness and duplicates. Comparisons were made with records from Department of Defence annual reports and other sources to validate the list. Data from the National Archives was also investigated for its suitability in validation, however as the majority of records are electronic files based on photos of paper records, this was not usable.

National Death Index

The National Death Index (NDI) is managed by the AIHW and contains person-level records of all deaths in Australia since 1980 obtained from the Registrars of Births, Deaths and Marriage in each state and territory. Its use is confined to data linkage studies approved by the AIHW Ethics Committee for health and medical research. NDI records are supplemented with cause of death information from the National Mortality Database (AIHW 2018).

In this report, the NDI is linked with the Department of Defence personnel data to ascertain which members are still alive.

National Mortality Database

Cause of death unit record file data are provided to the AIHW by the Registrars of Births, Deaths and Marriages and the National Coronial Information System (managed by the Victorian Department of Justice) and include cause of death coded by the Australian Bureau of Statistics (ABS). The data are maintained by the AIHW in the National Mortality Database.

Limitation in the study population

The study population does not include ADF members who separated prior to 1 January 1985. Research is constrained by what is technically possible with the systems and information infrastructure in place before 1985.

Abbreviations

ABS	Australian Bureau of Statistics
ADF	Australian Defence Force
AIHW	Australian Institute of Health and Welfare
Air Force	Royal Australian Air Force
Army	Australian Army
DVA	Department of Veterans' Affairs
PMKeyS	Personnel Management Key Solution
Navy	Royal Australian Navy
NAA	National Archives of Australia
NMD	National Mortality Database
NDI	National Death Index

Symbols

<	less than
..	not applicable

References

AIHW (Australian Institute of Health and Welfare) 2018. Canberra: AIHW. Viewed 18 June 2019. About National Death Index.

Notes

Data quality statement

The data quality statement underpinning the NDI can be found at: National Death Index (NDI), Data Quality Statement.

The data quality statements underpinning the AIHW National Mortality Database can be found in the following Australian Bureau of Statistics (ABS) publications:

- ABS quality declaration summary for Deaths, Australia (ABS cat. no. 3302.0)
- ABS quality declaration summary for Causes of death, Australia (ABS cat. no. 3303.0)
- For more information on the AIHW National Mortality Database see Deaths data at AIHW and the National Mortality Database.

Data

Related material

Resources