Out of the trenches; prevalence of Australian veterans among the homeless population and the implications for public health

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Abstract

Objectives: To examine the prevalence of Australian Defence Force veterans among people sleeping rough and explore their health and social needs relative to non-veteran rough sleepers.

Method: Analysis of responses to the Vulnerability Index – Service Prioritisation Decision Assistance Tool (VI-SPDAT) collected from 8,027 rough sleepers across five Australian States from 2010-2017.

Results: Veterans were found to comprise 5.6% of people sleeping rough in Australia, with veterans reporting having spent an average of 6.3 years on the street or in emergency accommodation (compared with an average of five years for their non-veterans counterparts). Veterans had a higher prevalence of self-reported physical health, mental health and social issues compared with non-veteran rough sleepers.

Conclusions: This is the first study of its kind to elucidate the presence of Australian veterans among people sleeping rough. That they are likely to have spent more years on the street, and have a higher prevalence of health and social issues, highlights the imperative for earlier intervention and prevention of veteran homelessness itself, and its health impacts.

Implications for public health: Veteran homelessness has been comparatively hidden in Australia compared to other countries, and consequently the myriad of health, psychosocial and adjustment issues faced by homeless veterans has also been hidden. With heightened attention on veteran suicide and self-harm, earlier intervention to prevent veterans becoming homeless constitutes sound public health prevention and mental health policy.

Key words: homelessness, rough sleeping, social determinants, veterans, public health

Homelessness among military veterans is a well-documented issue internationally, particularly in the United States (US), where there have been concerted intervention efforts to address the matter.[1-4] There are comparatively few studies, however, of the extent and repercussions of veteran homelessness in Australia. This is largely due to a dearth of robust data and consensus around the magnitude of veterans' homelessness in Australia. However, in the wake of a 13.7% increase in overall homelessness in Australia observed between the 2011 and 2016 Census, along with strong advocacy from non-government organisations, there is renewed attention to the vulnerabilities to homelessness of particular pockets of the community, including veterans.[5]

Related to the interest in veterans' homelessness has been the heightened attention in recent years to the pervasiveness of mental health issues, suicide and self-harm among veterans in Australia.[6,7] This has ignited closer scrutiny of the care, pathways and vulnerability of those exiting the Australian Defence Force (ADF). Findings in a 2017 national report showed that young men who had left the ADF were 1.9 times more likely to die by suicide relative to the general population, highlighting the tension between a defence workforce trained and recruited for toughness, strength and resilience, and the challenges this presents in identifying and managing mental illness and suicide amongst current and ex-defence force members.[6] The risk factors for suicide, self-harm and problematic transitioning back into civilian life mirror some of the well-documented risk factors for homelessness, including trauma, post-traumatic stress disorder (PTSD), untreated mental health conditions, and alcohol and other drug use.[8,9] In the US, homelessness has been described as a risk factor for suicide among veterans.[10] In a large Australian study of veterans who had left the ADF, almost two-thirds of recently homeless veterans reported experiencing at least one instance of suicidality in the 12 months preceding the survey, compared with around one-quarter of their non-homeless counterparts.[11]

Factors contributing to homelessness among veterans

Whilst exposure to traumatic events via combat and subsequent PTSD is one of the factors that can contribute to homelessness

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Submitted: November 2020; Revision requested: June 2021; Accepted: September 2021
The authors have stated they have no conflicts of interest.
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Aust NZ J Public Health. 2022; 46:134-41; doi: 10.1111/1753-6405.13175

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after military service, the literature commonly notes that vulnerability to homelessness among veterans is exacerbated by the challenges of social readjustment when returning to civilian life.[12,13] These can include relationship strain, impediments to meaningful employment, mental health issues, alcohol use and disabilities arising from military service.[12-14] In a recent study by Metraux et al. of homelessness among post 9/11 veterans in the US, it was noted that many of the veterans spoken to saw their homelessness "as rooted in nonmilitary, situational factors such as unemployment and the breakup of relationships"[13,p.229], and to barriers to timely veteran support services, including housing. In the Australian context, findings from a recent AHURI study found that relationship breakdown following transition from service resulted in a sevenfold increase in risk of future homelessness, and unemployment – particularly for longer than three months – was associated with a threefold increase in future homelessness risk.[11]

From a health perspective, mental health and alcohol and other drug issues among veterans frequently cluster with family breakdown, homelessness and suicide attempts for veterans,[15,16] but 'cause and effect' is akin to a tangled web. For example, homeless veterans experiencing mental health and alcohol and other drug issues, which are themselves exacerbated by homelessness, have an increased risk of suicidal ideation and suicide attempts.[12,17] A systematic review found that, while many health and social factors experienced by homeless veterans were similar to those of the general homeless population, there were unique challenges in reintegrating post-service that required further elucidation.[17]

Australia has seen a proliferation over the past two decades of services for veterans, both those delivered directly or funded by the ADF and the Department of Veteran's Affairs, as well as a raft of non-government and community-led services and programs, across areas of psychology, mental health, financial security, employment, family wellbeing and injury rehabilitation to name just some.[6] There are also over 1,620 specialist homelessness services supporting clients on any given day in Australia.[18] However, at present there are only a handful of services or programs that operate specifically at the interface of homelessness and veteran sectors,[18] and it been argued that homeless veterans have additional needs and may require specialist services, including supportive housing, specifically designed with veterans' issues in mind.[19] By contrast, in the US there has been considerable investment for many years in services specifically targeted towards veterans who are homeless or at risk of homelessness (including veteran support services, healthcare and accommodation).[20,21] Indeed, robust data on the prevalence of homelessness among veterans in other countries has been a critical platform for service needs assessment and intervention. Importantly, the existence of veteran homelessness services does not necessarily equate to service engagement, with a US study undertaken using street outreach finding that veterans who were living on the streets or in places not intended for human habitation were particularly vulnerable and more likely to be distrustful or not engaged with conventional social services, including veteran services.[46]

Prevalence of homelessness among veterans in Australia

The paucity of robust data to gauge the magnitude of veterans' homelessness in Australia has contributed to the invisibility of the issue. A report commissioned by the Department of Veterans' Affairs (DVA) in 2009 estimated a figure of 3,000 homeless veterans based on national Census data, but the accuracy of this figure was subsequently disputed by the DVA and the ADF.[22] A recent DVA-funded Australian Housing and Urban Research Institute Inquiry noted that a specific figure of the prevalence of overall veterans' homelessness could not be ascertained due to a lack of accurate data on the total veteran population in Australia and the absence of a single dataset measuring homelessness among veterans.[11]

Extrapolating from the results of the DVA's Transition and Wellbeing Program survey, Hilferty et al.[11] estimated that over a 12-month period, 5.3% or 5,767 of recently transitioned ex-service men and women (those who transitioned from Regular ADF service between 2010 and 2014) will experience homelessness, and a quarter of those will experience chronic homelessness (defined as four or more months of homelessness in a 12-month period).

Since 2016, the DVA has made a concerted effort to include veteran markers in Australian community data,[23] with a field added to the Specialist Homeless Services (SHS) Collection.[18] This SHS data indicated that in 2019-20, around 1,400 current or former ADF members were assisted by specialist homelessness service agencies in Australia.[18]

Recent improvements in routine data collections on homelessness are useful, but reflect only those who are engaging with the DVA or SHS.[18] Individuals experiencing homelessness encounter many barriers to seeking support, ranging from transport and physical access issues, to feelings of distrust or marginalisation from previous experiences with service providers.[24] As found by Hilferty et al.[11] only 39% of recently transitioned veterans who had experienced homelessness in the 12 months prior to their study indicated that they had sought help.[11] Studies relying on service use data will always have this limitation, hence in this study we looked at the issue from an alternative lens, examining the extent to which people who have served in the ADF are present in data collected from people sleeping rough in Australia, and the potential health and psychosocial factors that have contributed to or clustered with this.

This alternative perspective of examining the presence of people with an ADF background among people sleeping rough in Australia is important, as from our experience in homelessness and health research, this is a group often missing in mainstream surveys and data. The data in this study is by contrast, captured 'on the ground' via point-in-time data collection undertaken on foot and in person, using an instrument developed with people with a lived experience of homelessness.[25] Further, it enables the comparison of health, wellbeing and social determinant data to be compared for rough sleepers with and without ADF experience, this is important for adding to the growing evidence for homelessness as a public health issue.[26]

Scope of the present study

The objectives of this study were twofold: first, to examine rough sleeping homelessness among ADF veterans through assessment of the size of the veteran cohort among rough sleepers in Australia and, second, to detail and compare the health and social needs of homeless veterans with the homeless non-veteran population.

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Methodology

This study was based on the analysis of secondary data collected through Registry Week surveys with people who were rough sleeping in major Australian cities and regional areas between 2010 and 2017. Rough sleeping corresponds to what is also often referred to as 'primary homelessness' and includes people living in an improvised dwelling or shelter (e.g. a squat, tent, car), or sleeping in parks, laneways, sidewalks or similar.[5] Secondary homelessness by contrast refers to circumstances in which people frequently move between different types of temporary accommodation (such as couch surfing, crisis accommodation), while tertiary homelessness pertains to staying in accommodation that falls below minimum community standards (such as a poor-quality boarding house or caravan park).[5]

As the Registry Week surveys around Australia use a standardised tool and data collection methodology and the data is stored centrally,[27] the aggregated data collected from people sleeping rough can be analysed at the national level. The research centre of the authors was granted access to the Registry Week data via a Memorandum of Understanding (MOU) with Micah Projects, the organisation acting as data custodian for the Registry Week database.

Ethics approval

Approval to conduct analyses on the Registry Week data was granted by The University of Western Australia Human Research Ethics Committee on 1 December 2016 (Reference RA/4/1/8827).

Survey instrument

The data used in this study was collected using the VI-SPDAT; a merger of two tools, the VI which was developed by Community Solutions based on the work of Hwang and O'Connell in Boston[28] and the SPDAT developed by OrgCode in collaboration with people experiencing homelessness in Canada. The VI-SPDAT contains items categorised into four subdomains: History of Housing and Homelessness, Risks, Socialisation and Daily Functions, and Wellness. The VI-SPDAT is now widely used in the US, Canada and Australia[29,30] as a tool for measuring the vulnerability of individuals and families experiencing homelessness and the level of assistance required for them to exit homelessness.

Data collection

The VI-SPDAT formed the basis of Registry Week data collections across nine cities and regional centres in six states (Queensland, Western Australia, New South Wales, South Australia, Tasmania and Victoria) between 2010 and 2017. Surveys were administered to individuals sleeping rough by trained homelessness support, advocacy, and outreach workers and volunteers.[31] Data from different sites were entered in a central database, maintained by Micah Projects Inc. and the database was primarily used to identify which individuals and families experiencing homelessness were of highest priority for housing and support.[27]

Study population

The study population comprised 8,027 rough sleepers who completed the VI-SPDAT (individual version) between 2010 and 2017 obtained across Australia.[31] For the small number (2.9%) who had completed more than one survey over the data collection period, the respondent's most recent interview was analysed. Veteran status was defined in this study based on the wording of the question in the VI-SPDAT, which asked respondents if they had served in the Australian Defence Force at any time (yes/no). Of those, 452 identified as having served in the ADF at some point in their lifetime.

Data analysis

Analysis of the Registry Week data was conducted using SPSS version 24.0. Testing of significant differences between the veteran and non-veteran cohorts was based on the two proportion z-test, pooled for null hypothesis: p1=p2 (two-tailed at the 99% confidence level).

Results

Demographics

The vast majority (83.7%) of veteran respondents were male, with an average age of 46 years. Just over half (54.9%) had completed schooling of year 10 or less. Comparing the demographics of veterans to the wider cohort of VI-SPDAT respondents who were homeless, a different pattern of age distribution was observed. The average age of non-veteran respondents was lower (38.7 compared with 46.6 years), and there were far fewer aged less than 34 years (17.2% among veterans compared with 39.2% of the non-veteran respondents).

There was a greater proportion of Aboriginal Australians among non-veterans (21.1%) than veterans (16.5%). There were also fewer people of a non-Australian nationality among veterans than non-veterans (7.9% versus 12.3%). Table 1 compares the demographics of the homeless veteran population with the homeless non-veteran population. The variation in sample size between the different variables presented in the tables reflected the respondents' choice to decline from answering questions and/or the choice of the administering organisation to include or exclude particular demographic questions in different iterations and across implementations of the data collection.

Risk-factors, income and housing

The VI-SPDAT has a number of questions relating to life circumstances that often cluster with homelessness in the published literature, such as income level, experiences of the justice system, having been in foster care and having a brain injury or disability.[28,32,33] History of incarceration was more prevalent among homeless veterans (53.3%) than in non-veterans (44.8%). Similarly, the difference between numbers of veterans with brain injuries was again much greater than among non-veterans; 43.1% of veterans self-reported a brain injury, some 15.2% more than the 27.9% of non-veteran counterparts. The prevalence of foster care was similar among veterans and non-veterans (26.7% and 25.9% respectively), while youth detention was reported less among veterans (17.7%) than non-veterans (21.1%). *(See Table 1).*

In terms of income sources, employment rates were low among both veterans (5.1%) and non-veterans (4.2%), and reliance on disability support pensions or other government benefits was high. Notably, only 1.8% of veterans reported receiving DVA income. Compared to non-veterans, a greater proportion of veterans were on disability support (40.6% of veterans versus 31.8% of non-veterans). Roughly 4% of responders in both cohorts reported receiving no income whatsoever. *(See Table 1).*

Looking at duration of homelessness, both groups surveyed had spent similar periods of time without stable accommodation (veterans μ=57.08 months; non-veterans μ=58.31 months). However, veterans and non-veterans differed greatly in the length of time spent on the street or in emergency accommodation. Veterans reported an average of 76.75 months on the street or in

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emergency accommodation, which was just over 16 more months than non-veterans (60.31 months). Similarly, more veterans than non-veterans (60.5% and 51.2%, respectively) reported that sleeping rough was their most frequent accommodation state. *(See Table 2)*.

Self-reported physical and mental health

Nearly three-quarters of the veteran cohort (73.1%) compared with 66.9% of non-veterans reported experience of at least one serious health condition. Similarly, more veterans (61.3%) reported a chronic illness than non-veterans (55.9%). Cancer was also reported by almost twice as many veterans (13.1%) than non-veterans (7.0%), and exposure-related illnesses were reported by almost 10% more veterans (34.2%) than non-veterans (24.9%). Additionally, more veterans (43.1%) reported brain injuries or head trauma compared with non-veterans (36.7%) *(See Table 3)*.

Mental health issues were more prevalent among veterans than non-veterans: 35% versus 29.1% reported that they had experienced involuntary psychiatric treatment and 32.6% versus 25.7% were observed with a mental illness by surveyors. Injecting drug use was reported less by veterans (28.0%) than non-veterans (33.8%), however, drug or alcohol abuse (66.2%), and daily alcohol use (31.2%) were reported more by veterans than non-veterans (64.7% and 27.0%, respectively).

Interaction with the health system, namely the experience of having more than nine hospital admissions in the prior six months, was 5.2% higher among veterans than non-veterans (6.4% of veterans versus 1.2% of non-veterans). Similar proportions of veterans and non-veterans (23.6% and 27.8%) reported use of crisis services more than four times in the six months prior to being surveyed.

With regard to justice system interaction, almost the same proportions of veterans and non-veterans (22.7% and 22.8%, respectively) reported more than four police interactions in the six months prior to being surveyed.

Table 1: Gender, age, and cultural identity of veterans and non-veterans who are homeless.

	Homeless veteran population		Homeless non-veteran population		
Gender (%)	(n=452)	%	(n=7,718)	%	*p*-value
Male		83.7%		64.7%	0.001
Female		15.5%		34.0%	0.001
Other		0.7%		1.1%	0.340
Refused		0.0%		0.1%	0.418
Cultural identity (%)	(n=438)	%	(n=7,304)	%	*p*-value
Aboriginal Australian		16.5%		21.1%	0.050
Non-Aboriginal Australian		75.6%		66.6%	0.001
Other		7.9%		12.3%	0.050
Education (%)	(n=447)	%	(n=7,409)	%	*p*-value
Completed year 10 or less		56.4%		61.2%	------
Completed year 11 or 12		33.7%		32.2%	------
Vocational or tertiary education		9.7%		6.4%	0.01
Declined		0.2%		0.1%	0.694
Income source	(n=429)	%	(n=7,526)	%	*p*-value
Employment		5.1%		4.2%	0.396
Disability support pension		40.6%		31.8%	0.001
Unemployment benefit		4.0%		4.1%	0.872
DVA income		1.8%		0.0%	0.001
Other Government benefit		43.0%		49.3%	0.010
Other income		5.1%		5.1%	0.966
No income		4.0%		4.1%	0.872
Risk Factors		% (Total n)		% (Total n)	*p*-value
Foster care		26.7 (121)		25.9 (7,534)	0.701
Youth detention		17.7 (270)		21.1 (4,466)	0.182
Imprisonment		53.3 (449)		44.8 (7,519)	0.001
Brain injury		43.1 (451)		27.9 (7,525)	0.001
Untreated trauma		51.8 (300)		53.1 (5,042)	0.679

Table 2: Duration of homelessness and rough sleeping location.

	Homeless veteran population		Homeless non-veteran population		
Duration of homelessness	Total (n)	Mean, SD	Total (n)	Mean, SD	*p*-value
Total months spent on streets/in emergency accommodation	395	76.75 (108.06)	6,391	60.31 (85.08)	0.010
Total months without stable accommodation	249	57.08 (92.36)	4,038	58.31 (83.64)	0.838
Most frequent accommodation state	(n=452)	%	(n=7,116)	%	*p*-value
Sleeping rough		60.5%		51.2%	0.001
Not sleeping rough		38.6%		47.1%	0.001
Other		1%		1.7%	------

Discussion

As rough sleeping is sometimes described as the 'tip of the iceberg' and more visible pointy end of homelessness, our finding that one in eighteen (5.6%) of the people sleeping rough reported having served in the Australian Defence Force is of concern, as this does not include other types of homelessness recognised in the ABS census data, such as people living temporarily in boarding houses, hostels, transitional or crisis accommodation or couch surfing.[5] In addition, we found a higher prevalence of self-reported physical health, mental health and social issues among veterans compared with their non-veteran counterparts in this study. This has implications for both the prevention of health issues, and homelessness among veterans.

Three inter-related implications for public health and for wider societal responses to the wellbeing of veterans are discussed below.

Comparative over-representation of veterans among people sleeping rough

Reducing social and health disparities lies at the heart of a 'social determinants of health' lens on public health, and it is encouraging to see sections on both homelessness and on veterans in the determinants of health section in the most recent AIHW report on Australia's Health.[34] The intersect of homeless and veteran populations in these types of reports is, however, precluded by the reliance on different data sources for each, as noted earlier in this paper, people

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sleeping rough are easily under-represented in conventional data collection methods such as population surveys. The data in this study collected literally in streets, parks and places where people sleep rough is thus unique in its insights into veteran homelessness in Australia.

While it is difficult to know with great certainty the number of veterans residing in Australia, using the National Health Survey 2017-18, the Australian Bureau of Statistics (ABS) has estimated there to be 713,600.[35] Given the Australian population at the time (24,105,300 [35]) it is estimated that ADF veterans comprise 2.96% of the general population. This contrasts with 5.6% of people sleeping rough in our data reporting to have served with the ADF, suggesting a disproportional presence of veterans in the rough sleeping homeless population compared with the proportion of veterans among the general Australian population. Examining gender differences, ex-servicemen comprise roughly 5.2% of the Australian male population, and 7.2% of male rough sleepers in this study – an approximate 1.4 times overrepresentation of veteran males among the rough sleeping population. While veteran females represent 0.8% of the general Australian population, they represent 2.6% of the female rough sleeping population in this study, a more than three times overrepresentation.

These figures are important because they contribute to reducing the invisibility of veterans who are sleeping rough in Australia; the antithesis of how many of us might expect 'those who have served our country' to end up. The need for more accurate data on homeless veterans and to be able to monitor this trend over time has been recently recognised with the important addition by the ABS of a question on ADF service (current or previous) to the 2021 ABS census.[36] Indeed the vulnerability of veterans to homelessness is referred to in the ABS rationale for the inclusion of the new ADF service question for the first time in the Australian census.[36]

Physical and mental health issues and social determinants among homeless veterans

Rates of adverse childhood experiences known to increase risk of homelessness, such as foster care or youth detention, were similar among Australian veteran and non-veteran rough sleepers. These experiences occur prior to the age at which one is eligible to join the ADF. Imprisonment and brain injuries are both experiences shown elsewhere to be more likely to occur during or following defence service, respectively,[37,38] were far more common among veteran rough sleepers than non-veteran rough sleepers. In terms of relationships between these outcomes and defence force service, recent studies showed that 1.2% of veterans had a traumatic brain injury at the time of leaving the ADF[7] and 2.9% of all veterans had been arrested within five years of transition from active duty.[7] Therefore, it may be that veterans are at greater risk of brain injury and imprisonment, known correlates of homelessness,[39,40] creating an increased risk of homelessness among veterans.

In terms of health and mental health outcomes, previous studies have shown that mental health disorders and substance misuse, particularly schizophrenia and alcohol use disorders, are most consistently related to veteran homelessness in the US.[17] In line with these findings, this study found that alcohol use issues, mental health issues and occasions of involuntary psychiatric treatment were more prevalent among rough sleepers who had been in the ADF, compared with those who had not. This elevation of mental health related issues is of concern in light of yet another federally instigated review into defence and veteran suicide in Australia.[41]

The higher prevalence of physical health conditions observed among the rough sleepers with ADF experience in this study raises some questions that merit further research. Chronic illness and cancer were more commonly reported by veterans (compared with non-veterans) for example, but whether these existed prior to or subsequent to homelessness is not known. Either way, it has implications for access to both primary care and preventive cancer screening for veterans experiencing homelessness, and adds weight to calls to reduce barriers to healthcare access for people homeless in Australia. That 43% of homeless veterans reported having a serious brain injury or head trauma is frankly alarming, as is the fact that 37% of non-veteran people reported this. As with many health conditions observed in homeless populations, it can be complicated to determine whether health issues (such as head injury) occurred once homeless or prior. In our evaluation of Western Australia's Housing First initiative (50 Lives 50 Homes),[42] we observed both scenarios in client case studies, and sadly instances of further trauma to the head of people who had an acquired brain injury when they were sleeping rough. Preventing people ending up homeless, or supporting them to exit it more rapidly, thus in effect is a form of injury prevention, and the high rates of brain injury and head trauma seen among veterans sleeping rough in this study, suggests that there are gaps in how well veterans in these circumstances are being connected to appropriate services and supports.

While it is unlikely that well-informed veteran agencies and peak bodies are oblivious

Table 3: Physical health, mental health and emergency service use of homeless veterans and non-veterans.

	Homeless veteran population	Homeless non-veteran population	
Physical health	**% (Total n)**	**% (Total n)**	***p*-value**
Chronic illness[a]	61.3 (450)	55.9 (7,512)	0.025
Exposure-related illness[b]	34.2 (450)	24.9 (7,512)	0.001
Mental health	**% (Total n)**	**% (Total n)**	***p*-value**
Involuntary psychiatric treatment	35.0 (451)	29.1 (7,529)	0.010
Observed mental illness	32.6 (432)	25.7 (7,229)	0.010
Brain injury/head trauma	43.1 (451)	27.8 (7,525)	0.001
Drug and/or alcohol abuse	66.2 (452)	64.7 (7,557)	0.540
Intravenous drug use	28.0 (450)	33.8 (7,538)	0.050
Daily alcohol use	31.2 (452)	27.0 (4,455)	0.052
Emergency Service use (last 6 months?)	**% (Total n)**	**% (Total n)**	***p*-value**
>9 times taken to ED	2.3 (298)	3.6 (5,040)	0.010
>9 times been a hospital inpatient	6.4 (298)	1.2 (5,033)	0.502
>4 times used a crisis service	23.6 (296)	27.8 (5,020)	0.116
>4 interactions with police	22.7 (299)	22.8 (5,027)	0.970

Notes:

a: defined as reporting one or more of the following: Kidney disease, liver disease, heart disease, emphysema, diabetes, asthma, or cancer. Not surveyed in Youth VI-SPDAT, Individual VI-SPDAT or Family VI-SPDAT surveys

b: exposure-related illnesses include those related to exposure to the cold (frostbite, hypothermia, and immersion foot) and those related to the heat (heatstroke and heat exhaustion).

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to the pervasiveness of health issues, it is interesting that results from a 2017 online survey of Australian veterans did not include the experience of significant health or social issues among the 10 key barriers to a successful transition to civilian life.[43] Given the difficulty reaching the homeless veteran population and the online administration of the survey, it is probable that many homeless veterans were not able to contribute to these findings.[11]

Implications for prevention and earlier intervention

In the public health parlance of upstream intervention, how can this sequalae to rough sleeping and homelessness be better prevented when people exit the defence forces? And if veterans do find themselves homeless, findings from this study suggest that early intervention to support people to exit homelessness has a long way to go in Australia, with veterans reporting having spent an average of 6.3 years on the street or in emergency accommodation (compared with an average of five years for their non-veteran counterparts). The observed reluctance of veterans to use mainstream homelessness services in Australia plausibly contributes to this,[44] with Evans suggesting that shame and the 'toughing it' culture of military life among factors that contribute to this.[44] This was reflected in a submission to a 2016 inquiry into the mental health of ADF members and veterans, Homes for Heroes (a homelessness and rehabilitation service specifically for veterans) that noted many veterans won't access mainstream homelessness services, "because in the main it is too much of an admission of how far they have fallen."[45] Given the high prevalence of health and social issues observed among the veteran rough sleeper cohort in this study, this disconnection from support services is worrying and warrants further investigation with people with a lived experience of homelessness as a veteran. Even if veterans do seek assistance from general homelessness services, it is unrealistic to expect mainstream homeless services in Australia to be fully aware of veteran services available in the community or be equipped to help clients navigate veteran specific services or veterans' entitlements.

Of particular concern, given our study's focus on rough sleeping, is evidence from US Veterans Affairs data collected through street outreach, that indicated veterans who were living on the streets or in places not intended for human habitation were particularly vulnerable and more likely to be distrustful or not engaged with conventional social services, including veteran services.[46]

It has also been noted in the literature that mainstream health services are not often well equipped to address the mental health issues of homeless veterans.[47] While it is beyond the scope of our study to comment on this, our finding that multiple health issues and hospital attendances were common among veterans who were rough sleeping reiterates the importance of trauma-informed practice in all services that may come into contact with veterans experiencing homelessness.[48] In the US, coupling mental health support for veterans with housing has been the dual focus since 2009 of national efforts to reduce homelessness among veterans[20] and there is merit in Australia following this lead.

While there is a cogent moral and social argument to reduce homelessness among veterans, there is also an economic impetus, with a US paper demonstrating cost savings to government, realised largely through reductions in the number and length of hospital visits, arrests and incarceration that result from stable housing.[21] International studies suggest that the intensity of health and justice system interaction increases with chronicity of homelessness,[49,50] highlighting the significant room for cost savings resulting from addressing veteran homelessness. The cost benefits to the health system of housing people who have been homeless has an expanding portfolio of evidence in Australia[42,51-53] and further research examining this in the context of homeless veterans is warranted.

Although beyond the scope of this paper to propose a comprehensive suite of recommendations pertaining to veteran homelessness in Australia, we summarise below just three recommendations, and it is our hope that our findings more broadly give weight to the imperative to better recognise, understand and respond to the concerning presence of veterans among rough sleeping populations across Australia.

- **Support implementation of recommendations from recent reviews and inquiries into veteran mental health**. Although a Royal Commission into defence force and veteran suicide in Australia has recently been announced,[41] we do not need to wait for its outcomes, as many of the recommendations of prior inquiries and reviews[6,54] are sadly yet to be fully implemented. Ultimately, upstream prevention of homelessness among veterans is about improving the supports for ADF personnel and their families during and after service, and reducing barriers to earlier help-seeking.
- **Recognise barriers to veteran engagement with mainstream homelessness services, and seek lived experience input into alternatives** they are comfortable with. Relatedly, there are a number of promising initiatives in Australia where veterans themselves have instigated programs or accommodation models for fellow veterans without homes, and these could be replicated or scaled up if effective. There is also growing interest in the benefits of peer outreach in the homelessness sector[55] and opportunities to involve veterans with a lived experience of homelessness in outreaching to others warrants exploration.
- **Trauma informed services and ways of engaging with homeless veterans is imperative**. Experiences of trauma are pervasive even in Australia's non-veteran homeless populations, and undiagnosed PTSD is likely to be high,[56] and this compounded when overlaid with veteran experiences. Mainstream homelessness services in Australia have a strong focus on trauma informed practice, but are unlikely to be well equipped to identify and support complex trauma among veterans that can be exacerbated by living on the street, and this is an important gap for intervention and research.

Limitations

Due to the nature of the sample used in this study, such that it only comprises those experiencing primary homelessness (i.e. rough sleeping), the estimated prevalence of veteran homelessness presented is likely an underestimate.

With respect to the instrument used, the VI-SPDAT data is self-reported and there is potential for people to inaccurately answer some questions, particularly if they have a cognitive impairment, or it is a question that asks for frequency recall (e.g. number of times went to Emergency Department in the last month). However, VI-SPDAT measures relating to homelessness risk, global vulnerability, health-related wellness,

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and mental health and substance use-related wellness demonstrated good internal reliability.[57] In addition, though there is a standard training process for those collecting VI-SPDAT data, Registry Week data is reliant on data collection from a variety of agencies and volunteers. A further limitation is that the study is not completely nationally representative as it draws on administrations of the VI-SPDAT in five states/territories, and not every city is included in each year's data collection.

A further limitation lies with the methodology that combined survey data collected over an eight-year period, and thus the estimated prevalence of homelessness among the veteran population is not a point-in-time census as such. However, this yielded a much larger sample size, and the temporal and geographic breadth of data collection does increase the generalisability compared to a single location or single point in time study. We note also that the data is not age and sex standardised, limiting the generalisability of the findings to the general population, and the absence of a control group of housed veterans does make it difficult to untangle the impacts of homelessness from the impacts of ADF service in general.

We also acknowledge that definitions of 'veteran' vary between countries, as do the supports available for veterans, hence this limits the generalisability of our findings to other countries, and vice versa.

Notwithstanding these limitations, given the paucity of other data on homelessness among the veteran community, this data provides significant insight into the prevalence of veteran homelessness and the particular health and social issues facing homeless veterans in Australia.

Conclusion

Whilst homelessness among veterans has gained more prominence in the published literature and government responses in the northern hemisphere, that nearly 6% of people sleeping rough in Australia have been in the ADF is cause for concern. Further, the pervasiveness of health and social issues among veterans who are rough sleeping is grim and significantly more prominent than in the general homeless population.

If we rely on data points from contact with homelessness or health services, there is the risk that those most vulnerable, i.e. those who are not seeking or receiving assistance remain hidden. The unique lens provided by this research is that it comes from data captured on the ground from people sleeping rough in the streets, parks and laneways of Australia.

With suicide and poor mental health more pervasive among both homeless and veteran populations in Australia, unaddressed mental health, alcohol and drug use are worrying markers of risk among homeless veterans that warrant greater attention as a public health issue. Moreover, safe and secure housing is fundamental to health and to hope, that all citizens living in a country without war should have.

Acknowledgements

The Australian Alliance To End Homelessness (AAEH) are the data custodians of the Registry Week data and comprise Mercy Foundation in NSW, Micah Projects in Queensland, Launch Housing in Victoria, and Ruah in Western Australia and. The CEO of Micah Projects Inc, Ms Karyn Walsh is the chair of AAEH. Permission to use the Registry Week data for the present purpose has been granted and supported by the AAEH. We thank AAEH for providing access to the Registry Week data for the present study.

We gratefully acknowledge the research assistance of Sze-Wan Ng, Noah Lester and Angela Gazey.

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