



Rapid Evidence Assessment to identify strategies to support and sustain healthy behaviour as part of active ageing in Australian veterans

Summary Report

February 2022

Prepared for Department of Veterans' Affairs by N Warren, B Barbosa Neves, K Hutton Burns, D Colón-Cabrera and L Johnstone, Monash University

Acknowledgements

This project was funded by the Department of Veterans' Affairs (DVA).

We acknowledge the work of staff members from Monash University who were responsible for conducting this project and preparing the report.

Associate Professor Narelle Warren (Project Lead), Dr Kate Burns (Project Manager), Dr Barbara Barbosa Neves, Dr David Colón-Cabrera and Lewis Johnstone assisted in developing the search strategy, undertaking title, abstract and full-text screening, completing quality assessments and data extraction of the included peer-reviewed studies, and preparation of the project reports.

The authors acknowledge the traditional custodians of the unceded lands on which this work was undertaken. We recognise their continued connections to the land and waters and thank them for caring for Country for thousands of years. We acknowledge that they never ceded sovereignty. We pay our respects to First Nations Elders past and present, and honour their unique cultural and spiritual relationships to the land, and their rich contribution to society.

Table of contents

Executive summary.....	4
Introduction	10
Active ageing.....	10
Physical and mental health and wellbeing.....	12
The current scope of research	13
Design of the REA.....	14
Evaluation of the evidence	14
Findings.....	16
Active ageing.....	16
Successful interventions and programs	16
Factors instrumental in intervention/program success	20
Barriers to intervention/program success.....	22
Interventions that work to address physical, mental illness and/or low social participation	23
Gaps and limitations	25
Active ageing.....	25
Healthy behaviours for midlife and older adults	25
Veterans.....	26
Implications.....	28
Diversity	28
Social connectedness.....	28
Veteran-led supports	29
Healthy behaviours in middle and later life.....	29
Sleep.....	29
Conclusion.....	31
References	33

Executive summary

Veterans have unique health needs, outcomes, and challenges (AIHW, 2020; Brewin, et al., 2011; Finlay et al., 2019). This is particularly pronounced for veterans in middle- and later life (Wells, 2018), and may differ distinctly from non-veteran peers. These unique health needs are central to this rapid evidence assessment (REA).

While serving, veterans may generally have good physical and mental health with the support and structure provided by the Australian Defence Force (ADF) (AIHW, 2020). As veterans transition out of service, re-establishing and maintaining civilian life can be undertaken successfully. Indeed, the nature of service in the ADF may promote protective factors, such as employment, maintaining physical fitness, and accessing health and welfare services, 'that can lead to improved health and welfare outcomes' (AIHW 2018: 2). Furthermore, military values such as a sense of service and giving back to the community may promote positive social engagement and wellbeing for veterans in their civilian life (Barnett et al. 2021). However, the experience is varied, and for some veterans, civilian life may present social, financial, health, and wellbeing challenges (Transition Taskforce 2018).

For some veterans, adjusting to civilian life after service can be difficult and they may face an elevated risk of mental illness, alcohol, and drug use (Elbogen et al., 2012). Links have been found between veterans and justice involvement, suicide, homelessness, post-traumatic stress disorder (PTSD), and traumatic brain injury (Finlay et al., 2019). These issues can persist throughout the life course, including into older age. Veterans may use drugs and alcohol to address trauma received from serving, other mental health conditions, interpersonal stress and difficulty adjusting to civilian life (Canada & Peters, 2017). By identifying existing interventions to support and sustain healthy behaviours in individuals as they move through the middle and later life stages, this research can assist in the design, implementation, and planning of interventions to encourage healthy behaviours in Australian veterans throughout their life course. The concept of 'active ageing' may offer insights as to how best to achieve this.

Aims and objectives

The REA project addressed the following research questions:

1. What interventions and programs have been successful in encouraging the adoption and continuation of healthy behaviours in adults belonging to the following groups: 45-64; 65-90; the general population; and veterans (in Australia or overseas)?
2. What factors and characteristics are instrumental in the success¹ of the identified healthy behaviour interventions?
3. What are the barriers to accessing successful interventions that have been identified?
4. Which interventions work well with people aged 45-64 and 65-90 experiencing physical, mental illness and/or low social participation?
5. What are the gaps and limitations of current research available for diverse veteran populations?

Definitions: Active ageing, veterans, and healthy behaviours

We employed operational definitions for the following key concepts:

Active ageing

The research adopts the World Health Organization's (2020) definitions of active and healthy ageing, which highlight the need to focus on supportive environments and the creation of opportunities for middle- and older adults to maintain functional capacity, social participation and wellbeing as they grow older. Active ageing emphasises the *process* of ageing, not a fixed state.

Veterans

A veteran is a person who served in *military* service, regardless of the length of service and whether they had been deployed. The current REA includes research on veterans in Australia and overseas.

Healthy behaviours

A consideration of healthy behaviours includes both a prevention and promotion focus. This raises questions of access, the social determinants of health (SDOH), ability to make good choices, and then the capacity for reducing risks.

Methods

The literature review was conducted utilising DVA's Rapid Evidence Assessment (REA) protocol. This approach is well suited for the time frame of this project and the specificity of the research questions. Each research question was addressed using the methodology provided in the protocol. As a methodology, REAs are employed to provide the results of a systematic search focused on interventions and selected studies, which is focused in terms of a specific or limited scope and over a shorter period of time (O'Donnell et al., 2016).

Research Questions 1, 2 and 4 were expected to be answered through clinical trial and program intervention studies with veteran and non-veteran populations. We expected that, to respond to Research Question 3, observational and qualitative studies would be examined, and that Research Question 5 would require attention to all study types in order to identify gaps and limitations of existent research.

Findings

Findings from the REA demonstrate that programs and interventions linking broader dimensions of healthy and active ageing can assist older veterans to have a positive later life. The research suggests that interventions that promote an active physical and cognitive lifestyle not only help prevent and combat mental and physical health decline as they also increase quality of life and well-being in later life. When integrated with the descriptive (non-intervention) article findings, further strategies to promote healthy and active ageing are identified (Caspi & Cojocaru, 2021; Fogle et al., 2020; Gao et al., 2015). These include promoting protective psychosocial characteristics (e.g., purpose in life), social connectedness (e.g., meaningful social connections), and social engagement, as well as healthy physical, mental and cognitive health behaviours. Below, we first outline the intervention-related findings before contextualising these through an integrative analysis of intervention and descriptive studies identified during the REA.

Findings suggest that successful and healthy ageing interventions should be informed by a set of core priorities, namely: 1) address social isolation and loneliness, 2) promote movement and physical exercise, 3) cognitive functioning, 4) quality of life and well-being, 5) consider veteran identity, and 6) reduce risk behaviours and mitigate risk factors.

Address social isolation and loneliness

- The REA results show the need to consider social isolation and loneliness in healthy or active ageing interventions for both veteran and non-veteran populations (Bartlett et al., 2013; Yeung et al., 2019).

Movement and physical activity

- Exercise provides a wide range of physical, cognitive, mental, and other health benefits for midlife and older people. Many of the intervention articles contained in the REA supported maintaining physical movement as an important aspect of active ageing.

Cognitive functioning

- Cognitive functioning is a central aspect of active ageing and can be linked, in some cases, to physical wellbeing and activity. Different types of physical exercise have been shown to benefit cognitive function in older people. Interventions that promote cognitive functioning through a holistic approach have reported successful outcomes.

Quality of life and wellbeing

- Much of the contextual literature in the REA highlighted the importance of understanding and harnessing older people's perceptions of healthy ageing (e.g., Rozanova et al., 2015; Cernin et al., 2011). A key point articulated in the contextual literature is about empowering older people to make decisions about their health, wellbeing, and quality of life.

Consider veteran identity

- A military identity can contribute to a sense of connection among veterans. It can change over time and result in both positive and negative outcomes (Barnett et al., 2021; Brewster et al., 2020).
- Those who can combine a military and civilian/family social identity have more stable transitions and civilian re-integrations characterized by a heightened sense of belonging (Barnett et al., 2021).
- Studies suggest that veterans may be more likely to take part in peer support programs run by veterans than in non-veteran programs (Barnett et al., 2021; Brewster et al., 2021).

Reduce risk behaviours & mitigate risk factors

- The review literature in the REA demonstrates that targeting risk factors, such as smoking or physical inactivity, can help prevent and mitigate illnesses and diseases in later life, contributing to healthy or active ageing (Krivanek et al., 2021; LaCroix et al., 2016).

Implications

Overall, the findings have the following implications for program development and research:

- Consider broader definitions of healthy and active ageing that include middle and later life perspectives (e.g., older people's understandings).
- Employ a strengths-based or capability model that is not based on a deficit approach to ageing and health.
- Involve veterans in co-design and implementation of interventions.
- Incorporate peer-led interventions and programs that enhance the needs, identity, and aspirations of veterans.

- Personalise interventions, integrating psychosocial contexts and overcoming a one-size-fits-all model.
- Develop 'comprehensive' or holistic interventions, engaging with more than one component of healthy or active ageing.

The articles included in the REA cover: understandings of active ageing; healthy behaviours for midlife and older adults; and core issues concerning active ageing of veterans. By identifying interventions to support and sustain healthy behaviours in individuals, this REA can inform the design, implementation, and refinement of interventions to assist veterans to age actively. Findings demonstrate that programs and interventions drawing on a strength-based approach that links broader dimensions of healthy and active ageing – from active physical and cognitive lifestyle to purpose in life – can support a positive later life for veterans.

Introduction

Veterans have unique health needs, outcomes, and challenges (AIHW, 2020; Brewin, et al., 2011; Finlay et al., 2019). This is particularly pronounced for middle-aged and older veterans (Wells, 2018) and may differ distinctly from non-veteran peers. These unique health needs are central to this research study.

While serving, veterans may generally have good physical and mental health with the support and structure provided by the Australian Defence Force (ADF) (AIHW, 2020). As veterans transition out of service, re-establishing and maintaining civilian life can be undertaken successfully. Indeed, the nature of service in the ADF may promote protective factors, such as employment, maintaining physical fitness, and accessing health and welfare services, 'that can lead to improved health and welfare outcomes' (AIHW 2018: 2). Furthermore, military values such as a sense of service and giving back to the community, may promote positive social engagement and wellbeing for veterans in their civilian life (Barnett et al. 2021). However, the experience is varied and for some veterans, civilian life may present social, financial, health, and wellbeing challenges (Transition Taskforce 2018).

However, for some veterans, adjusting to civilian life after service can be difficult and they face an elevated risk of mental illness, alcohol, and drug use (Elbogen et al., 2012). Links have been found between veterans and justice involvement, suicide, homelessness, post-traumatic stress disorder (PTSD), and traumatic brain injury (Finlay et al., 2019). Veterans may use drugs and alcohol to address trauma received from serving, other mental health conditions, interpersonal stress and difficulty adjusting to civilian life (Canada & Peters, 2017). By identifying existing interventions to support and sustain healthy behaviours in individuals, this research can assist in the design, implementation, and planning of interventions to encourage healthy behaviours in Australian veterans. The concept of 'active ageing' may offer insights as to how best to achieve this.

Active ageing

The research adopts the World Health Organization's (2020) definitions of active and healthy ageing, which highlight the need to focus on supportive environments and the creation of opportunities for middle- and older adults to maintain functional capacity, social participation and wellbeing as they grow older. In Australia, understandings of ageing are largely based on a deficit model in which growing older is associated with

significant declines in physical, mental and cognitive health. This has significant impacts on health promotion programs that seek to enhance health in middle and later life.

Wells and colleagues' (2018) report, 'Healthy and active ageing in the veteran population and factors or interventions that achieve a positive effect,' identified key differences in the experiences of healthy ageing of veterans compared with non-veterans. The authors of the previous REA (Wells et al., 2018) note that, while not all veterans experience the following challenges, they remain significant for some. These include:

- Veterans, particularly those in midlife, experience significant challenges to healthy and active ageing, particularly in relation to physical and mental health, and low social participation and inclusion;
- Issues around social participation and engagement for veterans - and the health effects of these - remain in need of greater exploration, and thus are a potentially important avenue for health programs;
- Psychosocial determinants of poor wellbeing outcomes for veterans differ from those of their non-veteran peers, although the protective factors cohere on education- and access-related factors; and
- The process by which healthy ageing is experienced is likely to differ between veterans and non-veterans.

Following the first co-design workshop with DVA, we further operationalised the concept of active ageing to extend the above definition to include a more holistic and inclusive perspective of the following dimensions:

- Having agency, and being autonomous in decision-making (i.e. having capacity);
- Being proactive and making deliberate decisions about one's life (and having appropriate resources to do that);
- Maintaining social participation and social connectedness; and
- Including an openness to change, which includes adaptability and future orientation.

In this manner, active ageing emphasises the process of ageing, not just a state.

Many of the challenges to active ageing faced by veterans can be addressed by appropriate support not only while in service but also before and after their transition from service, including many years after. However, there remain some key information gaps in relation to the practical strategies, programs and interventions that can support healthy and active ageing within the veteran community. To enhance the current research project,

Australian and international research were examined to identify contemporary interventions and innovations in promoting and supporting active and healthy ageing for the veteran community.

Physical and mental health and wellbeing

Physical health is one dimension of individual and group wellbeing and has an influence on mental health. Dale, Brassington & King's (2014) systematic review examined the effects of healthy lifestyle interventions upon mental health. They concluded that multi-component interventions implementing psychological techniques to improve physical health have positive effects on mental health and should be used to design interventions. Furthermore, they found interventions that target diet and exercise were particularly effective in improving mental health and wellbeing, suggesting that targeting physical and psychological health through the same intervention programs was viable.

Physical health is often subjective but can be tied to autonomy to complete daily tasks and essential exercise. Placing importance on physical health can help maintain a high standard of quality of life and be preventative to obesity and cardiovascular diseases. While health and wellbeing have been largely understood in holistic ways, many programs and interventions are focused on specific lifestyle elements (see Shahnazari et al., 2013). Mode of delivery has also been posited as having an important effect on program and intervention outcomes and is an element that requires consideration at the intervention design stage (Bokhour et al., 2016).

With an ageing population, it becomes imperative to produce and provide interventions to ensure maintenance of physical activity throughout the life course. Ouslander et al. (2005) provided strong evidence of the benefits of rehabilitative interventions to increase continence, mobility, endurance and strength via Functional Incidental Training (FIT) for veterans located in residential homes. While all aspects of physical health and wellbeing were improved, except for mobility, they noted significant implementation barriers when considering factors of staff workloads and care costs.

Social isolation and decreased mental wellbeing are significant concerns for people in later life (Neves et al., 2019). Several interventions have been identified as being of use to improve mental health and wellbeing, which will provide greater generalisability to support the implementation of interventions that may improve mental health within and toward the Australian veteran community. Those focused on creative and social activities have meaningful benefits for participants, primarily to psychological wellbeing and

depression (Greaves & Farbus, 2006; Iasiello et al., 2018). There has been promise shown in interventions focused on the support needs associated with life transitions, as well as those mental health and wellbeing interventions being implemented online.

While remedial interventions have been shown to yield benefits for health and wellbeing, preventative interventions have also been shown to generate improvements. Bartram, Sinclair & Baldwin (2010) emphasised promotion and training to identify and approach mental health issues. They argued that preventative interventions will have lasting impacts on individuals with the potential to change cultural attitudes towards mental health within their (non-veteran) industry. Yet interventions need to be tailored to their populations: Breslin and colleagues (2017) found that localised settings require specific strategies for engaging people in prevention. Considering more egalitarian approaches to knowledge transfer - even peer-led interventions - has been shown to further benefit those people who may be experiencing mental health problems.

The current scope of research

While interventions are being developed for midlife and older adults, several issues remain in terms of the transferability between populations (for example, from a general population to veterans), the ability to address the particular needs of some sub-populations (for example, women veterans), or in terms of the reliability and sustainability of some interventions.

The current research seeks to identify strategies, programs, and interventions aimed at supporting the development of healthy behaviours in people, especially veterans, during their middle and later life. The research focuses on active ageing and healthy ageing through adopting a holistic and contextual approach. Part of this context involves the specific personal, social, and environmental conditions that shape veterans' health and wellbeing. These factors are reflected in the different health profiles of veterans compared with non-veterans.

Design of the REA

The literature review was conducted utilising DVA's Rapid Evidence Assessment (REA) protocol. As a methodology, REAs are characterised for being able to provide the results of a systematic search focused on interventions and selected studies, providing a specific or limited scope of time (O'Donnell et al., 2016). A co-design workshop on 22nd September 2021 acted to refine the scope of the review, including the research questions we have proposed as well as the inclusion and exclusion criteria. The review's specific questions were as follows:

1. What interventions and programs have been successful in encouraging the adoption and continuation of healthy behaviours in adults belonging to the following groups: aged 45-64; aged 65-90; the general population; and veterans (in Australia or overseas)?
2. What factors and characteristics are instrumental in the success¹ of the identified healthy behaviour interventions?
3. What are the barriers to accessing successful interventions that have been identified?
4. Which interventions work well with people aged 45-64 and 65-90 experiencing physical, mental illness and/or low social participation?
5. What are the gaps and limitations of current research available for diverse veteran populations?

For the purposes of this review, Veteran refers to a person who served in a *military* service, regardless of length of service and whether they had been deployed. The REA was not limited to Australian veterans, although we sought to translate the insights from the REA to the Australian context (in the discussion, below).

Evaluation of the evidence

Our review followed the three-component evaluation process outlined by Wells et al. (2018):

- First, we considered the strength of the evidence base. This involved considering the quality of the individual evidence items, the risk of bias, the quantity of evidence, and the study designs used (level of evidence).

¹ For the purposes of this review, 'success' is defined as reported by the authors of the individual study outputs considered in this review.

- Second, we considered questions of consistency (or dependability) of the study results; this was evaluated by comparing each evidence item with others.
- Finally, we evaluated the applicability of the evidence to the Australian context.

All sources were analysed together, as the research questions were closely related. We then subjected the eleven intervention study articles to further analysis, which is described below.

Thirty-three articles were included for further analysis. Of the included articles, 11 had samples consisting of veterans only, 15 were non-veteran samples only, and two addressed both veteran and non-veteran populations. A further five articles were reviews of previously published literature. Most studies were undertaken in the United States (48%; or 16 of 33 studies), which includes the remaining review study. In both Australia (9% of the reviewed articles) and the United Kingdom (9%), three studies each, including two with veteran-only populations, were undertaken. Two studies (6%) were conducted in the Republic of Korea. Other countries included in the selected articles were China, Israel, Malaysia, New Zealand, and Thailand (3% each). One country was not specified.

Findings

Active ageing

Some papers took a critical approach to the concepts of healthy and active ageing, especially those relying on the direct perspectives of older people (e.g., Reich et al., 2020; Romo et al., 2013; Howell, 2020; Black & Dobbs, 2014; Bundy et al., 2008; Parsons et al., 2014; Rozanova et al., 2015; Tohit et al., 2012; Tovel & Carmel, 2014; Williamson et al., 2019; Yeung et al., 2019). The reviewed studies called for a reorientation of these concepts that capture three key elements:

- A. as a set of actions or practices that allow a sense of autonomy, dignity, and efficacy as people move through their life course;
- B. as related to people's inner, social, and environmental resources and their capacity; to use these to deal with stressors and respond to changing life and bodily contexts; and
- C. as part of a lifelong process.

Across all studies, six core priorities for active ageing were identified:

1. Address social isolation and loneliness;
2. Promote movement and physical exercise;
3. Cognitive functioning;
4. Quality of life and well-being;
5. Consider veteran identity; and
6. Reduce risk behaviours and mitigate risk factors.

These are described in full in the Technical Report.

Successful interventions and programs

The findings show that programs and interventions based on a strength-based approach, which link broader dimensions of healthy and active ageing, can assist older veterans in having a positive later life. While our REA sought information on two age groups – 45-64 years and 65-90 years (research questions 1 and 4) – most identified studies focused on people aged 60 and over. Only two of the included intervention papers reported an age group in the 45-60 range: Chao et al. (2021) included participants from 56-84 years, and Kahwati et al. (2011) reported an average participant age of 57.6 years. Both studies were

successful interventions in encouraging the adoption and continuation of healthy behaviours.

The descriptive and intervention articles identified through the REA suggest that interventions and programs that promote protective psychosocial characteristics (e.g., purpose in life), social connectedness (e.g., meaningful social connections), social engagement, and an active physical and cognitive lifestyle can prevent (and combat) mental and physical health decline whilst increasing quality of life and well-being in later life (Caspi & Cojocaru, 2021; Fogle et al., 2020; Krivanek et al., 2021; Yeung et al., 2019).

A total of eleven interventions were identified in the REA. Of these, five reported strong 'successful' outcomes that met the research criteria; however, only four demonstrated sustained success over (varying periods of) time. Only one study (Morey et al., 2018) was a long-running intervention, which was delivered through the US Department of Veterans Affairs (VA). Chao et al. (2021), which was a pilot evaluation, reported strong successful outcomes; further research is required to determine the sustainability of the observed outcomes. These five 'successful' interventions are outlined in Table 1 below.

Table 1: Interventions with demonstrated successful outcomes

Authors	Date	Study design	Nature of intervention	Nature of outcomes
Joung & Lee	2019	RCT; general population; Korea	Creative dance program or stretching program	Improved strength, balance, fitness and mobility
Caspi & Cojocaru	2021	2x2x2 (pre-post; intervention-control; community-residence); general population; Not stated	Self-managed bodily movement (BMSR) program	Improved physical mobility, functional ability, and increased independence
Morey et al.	2018	Pre-post longitudinal intervention; veteran population; US	Personalised exercise and health promotion program (Gerofit)	Improvements in physical functioning, which are maintained over time; high satisfaction
Chao et al.	2021	Pre-post intervention pilot study; veterans with cognitive impairment or dementia; US	Group movement program (PLIE)	Improvements in cognitive function, self-regulation, wellbeing and social participation; <i>pilot study</i>
Clemson et al.	2012	Randomised Parallel Trial; veterans as part of a larger study; Australia	Balance and Strength training (LiFE)	Significantly improved functional capacity in balance and strength outcomes for frail older people.

An additional five studies (summarised in Table 2) demonstrated initial success immediately after the program (short-term) or in the medium term (6-12 months after the program), but experienced waning in effects over time. This waning effect was partly related to the time since intervention delivery (e.g., Gao et al., 2015; Kahwati et al., 2011). The findings from Chung et al. (2020) indicate the need for ongoing interventions to ensure the continuation of benefits, while Luci et al. (2020) report on a pilot study.

Table 2: Interventions demonstrating some success

Authors	Date	Study design	Nature of intervention	Nature of outcomes
Gao et al.*	2015	RCT; overweight or obese veterans; US	Counselling to increase physical activity participation (VA-STRIDE)	Increased activity levels at short- and medium-term; not sustained longer-term
Kahwati et al.*	2011	Program evaluation; overweight or obese veterans; US	Weight management program (MOVE!)	Modest yet beneficial short- and medium-term effects in weight loss and mobility
O'Connor et al.	2018	RCT; general population; US	12-week psycho-educational cognitive rehabilitation program (AgeWISE)	Increased memory contentment and sense of control over memory; differences not statistically significant
Chung et al.	2020	Retrospective intervention study; general population; Korea	Mobile app trial for insomnia self-management	Improved sleep quality after one week; no evidence of long-term benefits.

Luci et al.	2020	Observational qualitative pilot study; veterans at risk of suicide; US	Telephone intervention for people at risk of suicide (SAVE-CLC)	Deemed successful in connecting recently discharged veterans to services
-------------	------	--	---	--

* These papers relate to the same intervention, although they took different evaluation approaches

Table 3 summarises the one intervention study that did not yield any identifiable benefits; however, these results should be interpreted with some caution as the study evaluated three pilot intervention projects.

Table 3: Interventions not demonstrating success

Authors	Date	Study design	Nature of intervention	Nature of outcomes
Bartlett et al.	2013	Pre-and post-evaluation of three pilot intervention studies; general population; Australia	Study 1: Fitness and community program Study 2: Community hub to connect older people Study 3: Delivery of social and leisure activities	No significant outcomes were found, due to the small scale of the projects

Factors instrumental in intervention/program success

The reviewed studies highlight some key elements that play a role in intervention or program success (Table 4). The long-term nature of some interventions, which potentially reflected organisational commitment and resource availability, appeared to play a role in the program's success. The Gerofit program (Morey et al., 2018) is an example of these circumstances.

Equally important was the simplicity of the intervention: the three non-US programs had relatively simple movement and physical activity-based activities as their interventions,

which were easy for participants to follow and maintain. This was the case even when the interventions were self-directed (as in the case of Caspi & Cojocaru, 2021); indeed, this may have itself been a driver for sustainability.

Of the four studies that had short- and medium-term success, similar trends were observed. First, the intervention delivery was time-limited; whether for a matter of weeks or days, this meant that its effects waned as time elapsed following the end of the intervention. For Luci et al. (2020), the pilot intervention may have limited the sustainability of the success, yet it yielded significant benefits in terms of service connection and suicide risk reduction. Second, population characteristics may also have played a role: for example, the VA-STRIDE Program was aimed at a cohort of veterans with specific health needs and who may have had difficulty maintaining healthy behaviour programs in the past; that its effects were not maintained long-term here may have reflected the selection criteria into the program. Finally, the personalised nature of program delivery for the interventions in Table 2 may have played a role, as these require more intense human resources and organisational commitment.

Only one study reported very limited success in the intervention. Bartlett et al. (2013) reported that there were anecdotal improvements in reduced social isolation, but this was not borne out in the empirical data. Their intervention consisted of three similar social inclusion community projects, each of which involved different program delivery elements. Furthermore, the pilot nature of these projects may have also undermined its potential for success.

Table 4: Summary of factors contributing to intervention success

Factors contributing to longer-term success	Factors contributing to medium-term success	Factor involved in short-term success
Organisational commitment (longer-term program delivery)	Limited time program delivery	Pilot intervention projects
Available resources for sustainability (including human resources)	Population characteristics	Variability in program delivery
Simplicity of intervention	Personalised or bespoke programs	
Ability to follow and		

Barriers to intervention/program success

Aspects that are not well reflected in the successful interventions reviewed are the considerations given to the unique and specific health needs, outcomes and challenges attached to veterans (AIHW, 2020; Brewin et al., 2011; Finlay et al., 2019). Veterans' health needs differ distinctly from their non-veteran peers (Wells et al., 2018). As the veteran population ages, there is an increased interest in understanding the types of healthy behaviours and interventions that will promote active ageing and wellbeing of this specific population.

Several factors that may act as barriers to longer-term program success (continuation). Limited access to social resources may make it difficult for participants to continue engaging with programs when formal supports end. The short-term study by Chung et al. (2020) provided a clear illustration of this. Related to this, where there is a lack of standardised procedures, participants may experience reduced self-efficacy in following the program in the longer-term (Caspi & Cojocar, 2021; Tovel & Carmel, 2013). While bespoke programs encourage enrolment in the intervention and can generate medium-term success, they can create challenges for long-term sustainability and ongoing engagement (Morey et al., 2018). These factors underscore the importance of considering continuation and sustainability in program design, to ensure that healthy behaviours can continue even after the intervention ceases, which will further promote active ageing.

Qualitative measures within the intervention studies provide further insight and detail on the barriers to understanding how interventions can enhance active ageing by promoting healthy behaviours. Bartlett et al. (2013) suggested that community-based models, such as fitness and arts programs or buddy support systems, are beneficial in later life.

Nonetheless, they noted that the evaluation of these programs is often limited by methodological issues such as: a lack of planning to include outcome evaluations in the programs' inception, standardised procedures and instruments, as well as adequate training of staff in the data collection process. Likewise, a study with rural older people in England concluded that community initiatives targeting social inclusion ('village services'), including befriending programs, clubs, and warden support, helped address social isolation and loneliness (Dwyer & Hardill, 2011). We found no peer-reviewed studies evaluating the efficacy and effectiveness of specific interventions to address loneliness and social isolation among older veterans.

Interventions that work to address physical, mental illness and/or low social participation

Findings showed strong support for interventions focused on maintaining physical movement as part of active ageing. Various interventions and programs were shown to be beneficial by encouraging movement and physical activity in older people, although this varied between programs. None of the reviewed interventions addressed mental illness as a category distinct from cognitive aspects of ageing; one study addressed sleep, while others included in this category addressed wellbeing in general. These are summarised in Table 5.

Table 5: Nature of intervention compared with targeted outcomes

Nature of intervention	Addresses physical illness	Addresses mental or cognitive wellbeing	Addresses low social participation
Physical activity / movement-based	Creative dance (Joung & Lee, 2019); BMSR program; PLIE program; LiFE program;	PLIE program	BMSR program; PLIE program
Holistic program (movement and wellbeing)	Gerofit program; MOVE! program	Gerofit program	
Psycho-social	VA-STRIDE program Mobile sleep app (Chung et al., 2020)	AgeWISE program SAVE-CLC program	Social inclusion programs (Bartlett et al., 2013)

Gaps and limitations

The articles included in the REA cover the understanding of active ageing; healthy behaviours for midlife and older adults; as well as core issues related to the active ageing of veterans. By identifying several existing interventions to support and sustain healthy behaviours in individuals, this REA can assist in the design, implementation, and planning of interventions to assist veterans to age actively. In the literature search, several research gaps in the active ageing of Australian veterans were identified and are highlighted in the section on research gaps below.

Active ageing

Active and healthy ageing highlights the need to focus on supportive environments and the creation of opportunities for middle- and older adults to maintain functional capacity, social participation and wellbeing as they grow older (WHO, 2020). However, active ageing is related to other concepts and terms such as healthy ageing, successful ageing, positive ageing, productive ageing, and many others (Tohit et al., 2011). In the literature, these terms are sometimes used interchangeably but can also represent divergent concepts. Perspectives on what constitutes healthy and active ageing differ between countries and cultures and between medical professionals and laypeople (Reich et al., 2020). While the understanding of active ageing differs depending on temporal and spatial contexts, in general, the active ageing literature emphasises social connection, physical movement, agency, and cognitive functioning. As such, active ageing can improve wellbeing and quality of life (Caspi & Cojocaru, 2021).

Much of the contextual literature highlights the importance of understanding and harnessing older persons' perceptions of healthy ageing (see, for example, Rozanova et al., 2015; Cernin et al., 2011). Ageing is a process rooted in the sociocultural context and thus there is variation in the way older adults define and experience healthy ageing (Howell & Peterson, 2020). Importantly, active and healthy ageing involves subjective criteria that may not always align with medical or professional views.

Healthy behaviours for midlife and older adults

Healthy behaviours for midlife and older adults have a range of physical, mental, and psychosocial benefits. For example, exercise provides a wide range of physical, cognitive, mental, and other health benefits. Maintaining physical movement is an important aspect

of active ageing. However, despite the strong focus on physical activity in the reviewed studies, there are other important healthy behaviours that should be considered.

Social connectedness is important for overall health and participating in leisure activities may have psychosocial benefits that promote wellbeing in older adults (Ryu et al., 2018). Furthermore, being involved in social activities may encourage physical activity that improves physical mobility and cognitive function.

Cognitive functioning is an important aspect of active ageing and is related to physical wellbeing and activity. In a comprehensive review of cognitive ageing, Krivanek et al. (2021) found that there is growing consensus amongst major health organizations about recommendations to mitigate cognitive decline and promote healthy cognitive ageing, such as regular physical activity and treatment of cardiovascular risk factors.

Furthermore, the evidence for healthy cognitive ageing supports activities such as a heart-healthy diet, smoking cessation, regular social engagement, limiting alcohol use, stress management, and getting adequate sleep (Krivanek et al., 2021).

Veterans

Interventions that support the healthy ageing of veterans have shown some promising results but need to be implemented on a larger scale and with an Australian veteran cohort to understand their efficacy. For example, Luci and colleagues' (2020) telephone-based intervention, integrated mental health care and discharge planning during medical care transitions for older veterans. This intervention was shown to work effectively and could be replicated in an Australian context.

While there is much research about active ageing more generally, less is known about the active ageing of veterans. There are specific health risks and vulnerabilities that are unique to veterans, thus, interventions that promote healthy behaviours in veterans need to be tailored to this specific cohort.

Research has demonstrated that some veterans may not utilise health and social services because they may view seeking help as a sign of personal failure (Rozanova et al., 2015, p. 750). However, veterans may be more receptive to services that are run by other veterans as they have a mutual understanding which may mitigate the resistance. Evidence has shown that veterans are more likely to take part in peer-support type programs than non-veteran programs (see, for example, Barnett et al., 2021; Brewster et al., 2021). The reviewed literature highlighted the importance of veterans connecting with other veterans (e.g., Bundy et al., 2018). This is particularly important as loneliness and social

isolation were identified during the co-design workshop as risks to the active ageing of veterans. These psychosocial factors are critical in understanding veterans' ageing (Stein et al., 2019).

Focusing on the positive aspects of veterans' lives can help improve mental health (Williamson et al., 2019). By taking a strengths-based approach, programs and interventions can assist older veterans to have a good later-life experience. As such, interventions that enhance veterans' sense of purpose in life and social connectedness may result in broader health benefits (Yeung et al., 2019).

Implications

At the first co-design workshop of this project (21/09/2021), the DVA team highlighted several areas of interest regarding the needs of Australian veterans and active ageing interventions. However, the REA did not find appropriate evidence in the literature on some of these key areas of interest. These areas were reinforced as key priority areas for future research at the second co-design workshop (16/02/2022).

Diversity

The Australian veteran community is diverse and with varied needs. There was interest from DVA in understanding the evidence from interventions for healthy ageing that work with diverse cohorts including but not limited to gender, race/ethnicity, and sexuality. While some of the literature (e.g., Brewster et al., 2021) acknowledged the heterogeneous nature of veterans, few of the interventions in the REA targeted at veterans utilised diverse comparative factors in the evaluation. Future Australian research would benefit from exploring active ageing interventions and the impact on diverse cohorts of Australian veterans.

Social connectedness

Social connectedness was a key issue identified in the co-design workshop as loneliness and social isolation are risks to the active ageing of veterans. An evaluation conducted by Bartlett et al. (2013) of Australian programs to tackle these phenomena in later life suggested that community-based models, such as fitness and arts programs or buddy support systems, are beneficial. However, the REA found no peer-reviewed studies evaluating the efficacy and effectiveness of specific interventions to address loneliness and social isolation among older veterans. This gap in the literature highlights the need for further research into specific interventions for Australian veterans that enhance social connectedness (i.e., meaningful social connections).

Veteran-led supports

The literature within the REA highlighted the importance of veterans connecting with other veterans (see, for example, Bundy et al., 2018). As veterans age, there may be more of a need to connect with other veterans (Brewster et al., 2021, p. 1994). The evidence from the literature suggests that peer support programs run by veterans can improve social support and positive community reintegration (Barnett et al. 2021; Brewster et al. 2021). Although the current literature does not include interventions that address the social connection of veterans, future research should look to interventions that specifically address the social connection of older veterans by utilising peer support or veteran operated programs.

Healthy behaviours in middle and later life

The evidence suggests that personalised programs and individualised support may result in successful outcomes in healthy ageing-related interventions. However, many of the interventions, particularly the papers from the U.S., are targeted at cohorts of veterans that are already engaged in veteran healthcare services. There is limited evidence demonstrating techniques encouraging veterans to participate in active ageing programs or evidence outlining what motivates veterans to take part in these interventions or in healthy behaviours when they are not involved in existing healthcare programs. Future research would benefit from exploring what motivates Australian veterans to participate in programs and interventions to improve their health and what techniques can be utilised to advertise these programs through veteran and non-veteran networks. Research into how online capabilities can be utilised to reach veterans who may not be involved in existing veteran networks would be beneficial. However, further research into how and why Australian veterans make choices about healthy behaviours and how they can be empowered to maintain these behaviours in the long-term would create an important evidence base for future health interventions targeted at veterans.

Sleep

Insomnia and inadequate sleep have wide-ranging impacts on health and wellbeing (Perach et al., 2019). Although sleep quality is a concern of older veterans, within the REA, only one paper (Chung et al., 2020) discussed a short-term intervention on a non-veteran population to address it. Research into appropriate interventions to improve the sleep quality of Australian veterans should consider the specific health and lifestyle of veterans, particularly impacts of mental health and disability on sleep.

Conclusion

Active and healthy ageing requires supportive environments and opportunities for middle- and older adults to maintain functional capacity, social participation, and wellbeing as they grow older (WHO, 2020). The concepts of healthy and/or active ageing – and of ‘successful ageing’ – guided our review, but several studies called for their redefinition. Research shows the need to overcome strict biomedical criteria by including social dimensions, such as engagement and connectedness, and more diverse understandings of ageing. For example, older people who live with comorbidities and disabilities feel alienated by concepts that suggest they can’t age well or actively.

The articles included in the REA cover the understanding of active ageing; healthy behaviours for midlife and older adults; and core issues concerning active ageing of veterans. By identifying interventions to support and sustain healthy behaviours in individuals, this REA can inform the design, implementation, and planning of interventions to assist veterans to age actively. For instance, findings demonstrate that programs and interventions drawing on a strength-based approach that links broader dimensions of healthy and active ageing – from active physical and cognitive lifestyle to purpose in life – can support a positive later life for veterans.

In particular, the evidence suggests that interventions should consider the following core priorities: 1) address social isolation and loneliness, 2) promote movement and physical exercise, 3) cognitive functioning, 4) quality of life and well-being, 5) consider veteran identity, and 6) reduce risk behaviours and mitigate risk factors. Through a gaps analysis, we also identified several key areas that would warrant further research to support the active ageing of Australian veterans, from cultural factors to family and community networks (see Figure 1, below). Taken together, the evidence and the existing gaps allowed us to outline a set of implications for program development and evaluation that can assist the DVA in assessing its current initiatives and plan for future programs.

RESEARCH GAPS & FUTURE DIRECTIONS

What is missing?

1. CHOICES

How and why Australian veterans make choices about healthy behaviours & active ageing



2. EMPOWERMENT

How can Australian veterans be empowered to maintain healthy/active ageing



3. ENABLERS/BARRIERS

Motivators & inhibitors to participate & remain in interventions & programs



4. PEER-BASED PROGRAMS

Interventions based on peer support/veteran operated programs



5. DIVERSITY

Research with/for Australian veterans from diverse backgrounds, including First Nations and Culturally and Linguistically Diverse backgrounds, as well as across gender

Figure 1: Research gaps identified from the REA

References

- Australian Institute of Health and Welfare (AIHW) 2020, Health of veterans, viewed 3 May 2021, <https://www.aihw.gov.au/reports/australias-health/health-of-veterans>
- Bartlett, H., Warburton, J., Lui, C.-W., Peach, L., & Carroll, M. (2013). Preventing social isolation in later life: findings and insights from a pilot Queensland intervention study. *Ageing and Society*, *33*(7), 1167-1189. <https://doi.org/10.1017/S0144686X12000463>
- Bartram, D. J., Sinclair, J. M., & Baldwin, D. S. (2010). Interventions with potential to improve the mental health and wellbeing of UK veterinary surgeons. *Vet Rec*, *166*(17), 518-523. <https://doi.org/10.1136/vr.b4796>
- Beck, D., Cosco Holt, L., Burkard, J., Andrews, T., Liu, L., Heppner, P., & Bormann, J. E. (2017). Efficacy of the Mantram Repetition Program for Insomnia in Veterans With Posttraumatic Stress Disorder: A Naturalistic Study. *ANS Adv Nurs Sci*, *40*(2), E1-E12. <https://doi.org/10.1097/ANS.0000000000000144>
- Black, K., & Dobbs, D. (2014). Community-dwelling older adults' perceptions of dignity: core meanings, challenges, supports and opportunities. *Ageing and Society*, *34*(8), 1292-1313. <https://doi.org/10.1017/S0144686X13000020>
- Bokhour, B. G., Fix, G. M., Gordon, H. S., Long, J. A., DeLaughter, K., Orner, M. B., Pope, C., & Houston, T. K. (2016). Can stories influence African-American patients' intentions to change hypertension management behaviors? A randomized control trial. *Patient Educ Couns*, *99*(9), 1482-1488. <https://doi.org/10.1016/j.pec.2016.06.024>
- Breslin, G., Haughey, T. J., Donnelly, P., Kearney, C., & Prentice, G. (2017). Promoting mental health awareness in sport clubs. *Journal of public mental health*, *16*(2), 55-62. <https://doi.org/10.1108/JPMH-08-2016-0040>
- Brewin, C. R., Garnett, R., & Andrews, B. (2011). Trauma, identity and mental health in UK military veterans. *Psychological Medicine*, *41*(8), 1733-1740. <https://doi.org/10.1017/S003329171000231X>
- Brewster, L., McWade, B., & Clark, S. J. A. (2021). A point of connection? Wellbeing, the veteran identity and older adults. *Ageing and Society*, *41*(9), 1984-2005. <https://doi.org/10.1017/S0144686X20000161>
- Bundy, B. C., Daley, R. T., Clark, E. L., Indorewalla, K., & O'Connor, M. K. (2018). Perceptions of Cognitive Aging Among Older Veterans. *GeroPsych*, *31*(4), 185-193. <https://doi.org/10.1024/1662-9647/a000188>

- Canada, K. E., & Peters, C. . (2017). "They Teach You How to Weather the Storm, but They Don't Teach You How to Dance in the Rain:" Veterans' Perspectives on the Pathways to Criminal Justice Involvement. . *Journal of Qualitative Criminal Justice & Criminology*. . <https://doi.org/https://doi.org/10.21428/88de04a1.3acc12f1>
- Caspi, D., & Cojocaru, D. (2021). Intervention of a Physical Movement Program "Body Management in Safe Ranges" Enhances Self-Management in Aging. *Revista de Cercetare si Interventie Sociala*, 72, 248-248. <https://search.proquest.com/docview/2517780981?accountid=12528&bdid=10223&bd=uUeYKIqo5WIsq7N5GaiKehXuTk%3D>
- Cernin, P. A., Lysack, C., & Lichtenberg, P. A. (2011). A Comparison of Self-Rated and Objectively Measured Successful Aging Constructs in an Urban Sample of African American Older Adults. *Clinical Gerontologist*, 34(2), 89-102. <https://doi.org/10.1080/07317115.2011.539525>
- Chang, B.-H., & Sommers, E. (2014). Acupuncture and relaxation response for craving and anxiety reduction among military veterans in recovery from substance use disorder: Acupuncture and Relaxation Response for Reducing Craving. *The American journal on addictions*, 23(2), 129-136. <https://doi.org/10.1111/j.1521-0391.2013.12079.x>
- Chao, L. L., Lee, J. A., Martinez, S., Barlow, C., Chesney, M. A., Mehling, W. E., & Barnes, D. E. (2021). Preventing Loss of Independence through Exercise (PLIÉ): A Pilot Trial in Older Adults with Subjective Memory Decline and Mild Cognitive Impairment. *Journal of Alzheimer's Disease*, 82(4), 1543-1557. <https://doi.org/10.3233/JAD-210159>
- Chung, K., Kim, S., Lee, E., & Park, J. Y. (2020). Mobile App Use for Insomnia Self-Management in Urban Community-Dwelling Older Korean Adults: Retrospective Intervention Study. *JMIR mHealth and uHealth*, 8(8), e17755-e17755. <https://doi.org/10.2196/17755>
- Clemson, L., Fiatarone Singh, M. A., Bundy, A., Cumming, R. G., Manollaras, K., O'Loughlin, P., & Black, D. (2012). Integration of balance and strength training into daily life activity to reduce rate of falls in older people (the LiFE study): randomised parallel trial. *BMJ*, 345(aug07 1), e4547-e4547. <https://doi.org/10.1136/bmj.e4547>
- Cook, J. M., & Simiola, V. (2018). Trauma and Aging. *Current Psychiatry Reports*, 20(10), 93-93. <https://doi.org/10.1007/s11920-018-0943-6>
- Covidence systematic review software, V. H. I., Melbourne, Australia. Available at www.covidence.org.
- Dale, H., Brassington, L., & King, K. (2014). The impact of healthy lifestyle interventions on mental health and wellbeing: a systematic review. *Mental health review journal*, 19(1), 1-26. <https://doi.org/10.1108/MHRJ-05-2013-0016>

- Damschroder, L. J., Lutes, L. D., Kirsh, S., Kim, H. M., Gillon, L., Holleman, R. G., Goodrich, D. E., Lowery, J. C., & Richardson, C. R. (2014). Small-changes obesity treatment among veterans: 12-month outcomes. *Am J Prev Med*, *47*(5), 541-553. <https://doi.org/10.1016/j.amepre.2014.06.016>
- Du, W. J., Tan, J. P., Yi, F., Zou, Y. M., Gao, Y., Zhao, Y. M., & Wang, L. N. (2015). Physical activity as a protective factor against depressive symptoms in older Chinese veterans in the community: result from a national cross-sectional study. *Neuropsychiatr Dis Treat*, *11*, 803-813. <https://doi.org/10.2147/ndt.S80295>
- Dubbert, P. M., Morey, M. C., Kirchner, K. A., Meydrech, E. F., & Grothe, K. (2008). Counseling for Home-Based Walking and Strength Exercise in Older Primary Care Patients. *Arch Intern Med*, *168*(9), 979-986. <https://doi.org/10.1001/archinte.168.9.979>
- Dwyer, P., & Hardill, I. (2011). Promoting social inclusion? The impact of village services on the lives of older people living in rural England. *Ageing and Society*, *31*(2), 243-264. <https://doi.org/10.1017/S0144686X10000851>
- Elbogen, E. B., Johnson, S. C., Wagner, H. R., Newton, V. M., & Beckham, J. C. (2012). Financial well-being and postdeployment adjustment among Iraq and Afghanistan war veterans. *Mil Med*, *177*(6), 669-675. <https://doi.org/10.7205/MILMED-D-11-00388>
- Finlay, A. K., Owens, M. D., Taylor, E., Nash, A., Capdarest-Arest, N., Rosenthal, J., Blue-Howells, J., Clark, S., & Timko, C. (2019). A scoping review of military veterans involved in the criminal justice system and their health and healthcare. *Health Justice*, *7*(1), 1-18. <https://doi.org/10.1186/s40352-019-0086-9>
- Fogle, B. M., Tsai, J., Mota, N., Harpaz-Rotem, I., Krystal, J. H., Southwick, S. M., & Pietrzak, R. H. (2020). The National Health and Resilience in Veterans Study: A Narrative Review and Future Directions. *Front Psychiatry*, *11*, 538218. <https://doi.org/10.3389/fpsy.2020.538218>
- Gao, S., Stone, R. A., Hough, L. J., Haibach, J. P., Marcus, B. H., Ciccolo, J. T., Kriska, A. M., Burkitt, K. H., Steenkiste, A. R., Berger, M. A., & Sevick, M. A. (2016). Physical activity counseling in overweight and obese primary care patients: Outcomes of the VA-STRIDE randomized controlled trial. *Preventive Medicine Reports*, *3*, 113-120. <https://doi.org/10.1016/j.pmedr.2015.12.007>
- Gates, E., & Dyson, L. (2017). Implications of the Changing Conversation About Causality for Evaluators. *The American journal of evaluation*, *38*(1), 29-46. <https://doi.org/10.1177/1098214016644068>
- Gordon, K., Burnell, K., & Wilson, C. (2020). Outside the Military “Bubble”: Life After Service for UK Ex-armed Forces Personnel. *Frontiers in Public Health*, *8*. <https://doi.org/10.3389/fpubh.2020.00050>

- Greaves, C. J., & Farbus, L. (2006). Effects of creative and social activity on the health and well-being of socially isolated older people: outcomes from a multi-method observational study. *J R Soc Promot Health, 126*(3), 134-142. <https://doi.org/10.1177/1466424006064303>
- Hopman, P., de Bruin, S. R., Forjaz, M. J., Rodriguez-Blazquez, C., Tonnara, G., Lemmens, L. C., Onder, G., Baan, C. A., & Rijken, M. (2016). Effectiveness of comprehensive care programs for patients with multiple chronic conditions or frailty: A systematic literature review. *Health Policy, 120*(7), 818-832. <https://doi.org/10.1016/j.healthpol.2016.04.002>
- Howell, B. M., & Peterson, J. R. (2020). "With Age Comes Wisdom:" a Qualitative Review of Elder Perspectives on Healthy Aging in the Circumpolar North. *Journal of Cross-Cultural Gerontology, 35*(2), 113-131. <https://doi.org/10.1007/s10823-020-09399-4>
- Iasiello, M., Bartholomaeus, J., Jarden, A., & van Agteren, J. (2018). Maximising the Opportunity for Healthy Ageing: Online Mental Health Measurement and Targeted Interventions. *Stud Health Technol Inform, 246*, 111-123.
- Joung, Hee J., & Lee, Y. (2019). Effect of Creative Dance on Fitness, Functional Balance, and Mobility Control in the Elderly. *Gerontology, 65*(5), 537-546. <https://doi.org/10.1159/000499402>
- Kahwati, L. C., Lance, T. X., Jones, K. R., & Kinsinger, L. S. (2011). RE-AIM evaluation of the Veterans Health Administration's MOVE! Weight Management Program. *Translational Behavioral Medicine, 1*(4), 551-560. <https://doi.org/10.1007/s13142-011-0077-4>
- Krivanek, T. J., Gale, S. A., McFeeley, B. M., Nicastri, C. M., & Daffner, K. R. (2021). Promoting Successful Cognitive Aging: A Ten-Year Update. *Journal of Alzheimer's Disease, 81*(3), 871-920. <https://doi.org/10.3233/JAD-201462>
- Luci, K., Simons, K., Hagemann, L., Jacobs, M. L., Bower, E. S., Eichorst, M. K., & Hilgeman, M. M. (2020). SAVE-CLC: An Intervention to Reduce Suicide Risk in Older Veterans following Discharge from VA Nursing Facilities. *Clinical Gerontologist, 43*(1), 118-125. <https://doi.org/10.1080/07317115.2019.1666444>
- Marchal, B., Westhorp, G., Wong, G., Van Belle, S., Greenhalgh, T., Kegels, G., & Pawson, R. (2013). Realist RCTs of complex interventions – An oxymoron. *Soc Sci Med, 94*, 124-128. <https://doi.org/10.1016/j.socscimed.2013.06.025>
- Morey, M. C., Lee, C. C., Castle, S., Valencia, W. M., Katzel, L., Giffuni, J., Kopp, T., Cammarata, H., McDonald, M., Oursler, K. A., Wamsley, T., Jain, C., Bettger, J. P., Pearson, M., Manning, K. M., Intrator, O., Veazie, P., Sloane, R., Li, J., & Parker, D. C. (2018). Should Structured Exercise Be Promoted As a Model of Care? Dissemination of the Department of Veterans Affairs Gerofit Program. *Journal of the American Geriatrics Society, 66*(5), 1009-1016. <https://doi.org/10.1111/jgs.15276>

- Moy, M. L., Martinez, C. H., Kadri, R., Roman, P., Holleman, R. G., Kim, H. M., Nguyen, H. Q., Cohen, M. D., Goodrich, D. E., Giardino, N. D., & Richardson, C. R. (2016). Long-Term Effects of an Internet-Mediated Pedometer-Based Walking Program for Chronic Obstructive Pulmonary Disease: Randomized Controlled Trial. *J Med Internet Res*, *18*(8), e215. <https://doi.org/10.2196/jmir.5622>
- Neves, B.B., Sanders, A., & Kokanović, R. (2019). “It's the worst bloody feeling in the world”: Experiences of loneliness and social isolation among older people living in care homes. *J Aging Stud*, *49*, 74-84. <https://doi.org/10.1016/j.jaging.2019.100785>
- O'Connor, M. K., Kraft, M. L., Daley, R., Sugarman, M. A., Clark, E. L., Scoglio, A. A. J., & Shirk, S. D. (2018). The Aging Well through Interaction and Scientific Education (AgeWISE) Program. *Clinical Gerontologist*, *41*(5), 412-423. <https://doi.org/10.1080/07317115.2017.1387212>
- O'Donnell, M., Metcalf, O., & Varker, T. (2016). What are effective interventions for adjustment disorder? A Rapid Evidence Assessment. Report prepared for the Australian Government Department of Veterans' Affairs. Phoenix Australia - Centre for Posttraumatic Mental Health.
- Ouslander, J. G., Griffiths, P. C., McConnell, E., Riolo, L., Kutner, M., & Schnelle, J. (2005). Functional Incidental Training: A Randomized, Controlled, Crossover Trial in Veterans Affairs Nursing Homes. *J Am Geriatr Soc*, *53*(7), 1091-1100. <https://doi.org/10.1111/j.1532-5415.2005.53359.x>
- Parsons, S., Gale, C. R., Kuh, D., & Elliott, J. (2014). Physical capability and the advantages and disadvantages of ageing: perceptions of older age by men and women in two British cohorts. *Ageing and Society*, *34*(3), 452-471. <https://doi.org/10.1017/S0144686X12001067>
- Perach, R., Allen, C. K., Kapantai, I., Madrid-Valero, J. J., Miles, E., Charlton, R. A., & Gregory, A. M. (2019). The psychological wellbeing outcomes of nonpharmacological interventions for older persons with insomnia symptoms: A systematic review and meta-analysis. *Sleep Med Rev*, *43*, 1-13. <https://doi.org/10.1016/j.smr.2018.09.003>
- Reich, A. J., Claunch, K. D., Verdeja, M. A., Dungan, M. T., Anderson, S., Clayton, C. K., Goates, M. C., & Thacker, E. L. (2020). What Does “Successful Aging” Mean to you? — Systematic Review and Cross-Cultural Comparison of Lay Perspectives of Older Adults in 13 Countries, 2010–2020. *Journal of Cross-Cultural Gerontology*, *35*(4), 455-478. <https://doi.org/10.1007/s10823-020-09416-6>
- Romo, R. D., Wallhagen, M. I., Yourman, L., Yeung, C. C., Eng, C., Micco, G., Perez-Stable, E. J., & Smith, A. K. (2013). Perceptions of Successful Aging Among Diverse Elders With Late-Life Disability. *The Gerontologist*, *53*(6), 939-949. <https://doi.org/10.1093/geront/gns160>

- Rozanova, J., Noulas, P., Southwick, S. M., & Pietrzak, R. H. (2015). Perceptions of Determinants of Successful Aging Among Older U.S. Veterans: Results from the National Health and Resilience in Veterans Study. *The American Journal of Geriatric Psychiatry*, *23*(7), 744-753. <https://doi.org/10.1016/j.jagp.2014.09.006>
- Shahnazari, M. P. R. D., Ceresa, C. M. R. D., Foley, S. P. R. D., Fong, A. R. D., Zidaru, E. R. D., & Moody, S. M. D. A. (2013). Nutrition-Focused Wellness Coaching Promotes a Reduction in Body Weight in Overweight US Veterans. *J Acad Nutr Diet*, *113*(7), 928-935. <https://doi.org/10.1016/j.jand.2013.04.001>
- Smeets, R. G. M., Hertroijs, D. F. L., Mukumbang, F. C., Kroese, M. E. A. L., Ruwaard, D., & Elissen, A. M. J. (2021). First Things First: How to Elicit the Initial Program Theory for a Realist Evaluation of Complex Integrated Care Programs. *The Milbank quarterly*. <https://doi.org/10.1111/1468-0009.12543>
- Tohit, N., Browning, C. J., & Radermacher, H. (2012). 'We want a peaceful life here and hereafter': healthy ageing perspectives of older Malays in Malaysia. *Ageing and Society*, *32*(3), 405-424. <https://doi.org/10.1017/S0144686X11000316>
- Tovel, H., & Carmel, S. (2014). Maintaining Successful Aging: The Role of Coping Patterns and Resources. *Journal of Happiness Studies*, *15*(2), 255-270. <https://doi.org/10.1007/s10902-013-9420-4>
- Wells, Y. D. R. (2018). Healthy and Active Ageing in the Veteran Population and Factors or Interventions That Achieve Positive Effect: A Rapid Evidence Assessment. Technical Report. *Report prepared for the Department of Veterans' Affairs. Melbourne: La Trobe University.*
- Williamson, A. K., Riendeau, R. P., Stolzmann, K., Silverman, A. F., Kim, B., Miller, C. J., Connolly, S. L., Pitcock, J., & Bauer, M. S. (2019). An Exploratory Analysis of Self-Reported Protective Factors against Self-Harm in an Enrolled Veteran General Mental Health Population. *Military Medicine*, *184*(11-12), e738-e744. <https://doi.org/10.1093/milmed/usz111>
- World Health, O. (2001). Health and ageing: a discussion paper. In (Preliminary version ed.). Geneva: World Health Organization.
- Worley, M. J., Tate, S. R., & Brown, S. A. (2012). Mediation relations between 12-Step attendance, depression and substance use in patients with comorbid substance dependence and major depression. *Addiction*, *107*(11), 1974-1983. <https://doi.org/10.1111/j.1360-0443.2012.03943.x>
- Yeung, P., Allen, J., Godfrey, H. K., Alpass, F., & Stephens, C. (2019). Risk and protective factors for wellbeing in older veterans in New Zealand. *Ageing & Mental Health*, *23*(8), 992-999. <https://doi.org/10.1080/13607863.2018.1471584>