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Journal of Military and Veterans' Health

Australasian Military Medicine Association

STATEMENT OF OBJECTIVES

The Australasian Military Medicine Association is an independent, professional scientific organisation of health professionals with the objectives of:

- Promoting the study of military medicine
- Bringing together those with an interest in military medicine
- Disseminating knowledge of military medicine
- Publishing and distributing a journal in military medicine
- Promoting research in military medicine

Membership of the Association is open to doctors, dentists, nurses, pharmacists, paramedics and anyone with a professional interest in any of the disciplines of military medicine. The Association is totally independent of the Australian Defence Force.

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Editorial

Transformation of War

In 1991, Martin van Creveld, in 'The Transformation of War', speculated on what the character of war would be in a post-Cold War era.[1] His assessment focused on who would be fighting, the reasons for and the aim of the conflict, and how and why war would be fought in the future.[1] van Creveld correctly anticipated the growth and spread of low intensity conflicts or hybrid warfare, the compromise of national sovereignties and borders, and the blurring of lines between military and civilians, and public and private organisations.[1] Other assessments, particularly those on the abolishing of conventional interstate war, the demise of nation states, new conventions of war, post-Clausewitzian strategy, and the retirement of powerful weapons, have partially or not been met, or have evolved in unexpected ways.[1]

The expectation, however, that conventional interstate war would be in the 'final stages of abolishing itself' has not eventuated.[1] While the number of interstate conflicts have declined over the last 30 years, major wars between states have continued, as highlighted by the 2003 Gulf War and the current Russo-Ukrainian War.[2,3] As such conflicts are likely in the future, with the possibility of conflicts in Asia, Europe and the Middle East, albeit at lower frequency, many nations continue to maintain conventional combat capabilities.[4-6] Major militaries, including the United States, Russia, China and Iran, as well as a range of non-state actors, are enhancing their capability to use or respond to hybrid warfare in future conflicts. The preservation and strengthening of many nation states, sometimes with associated nationalist political movements, and the continued evolution of a range of powerful weapons, were also not anticipated.[1] Nuclear weapons continue to remain a factor, at least among the countries that possess or seek to acquire them, like Iran.[1-3] While this has not resulted in nuclear war, Russia's threats to use tactical nuclear weapons in the Ukraine in 2014 and 2022 highlight that these weapons continue to be used to place limits, such as no direct intervention by other states, on interstate conflicts.[3,7] As we move into 2025, the ongoing importance of our defence forces, and the role of military health within them, remains paramount.

Our first issue of 2025 contains a range of articles on diverse topics spanning alcohol misuse, mental health, military health capability, psychological screening, spiritual injuries, and military health history. We continue to attract a good range of articles, including from overseas. Other military and veterans' health articles, however, are always very welcome, and we would encourage all our readers to consider writing on their areas of military or veterans' health interest. We would particularly welcome papers based on presentations from the 2024 ICMM conference in Brisbane but welcome any articles across the broader spectrum of military health.

Dr Andy Robertson, CSC, PSM
Commodore, RAN
Editor-in-Chief

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Fundamental Inputs to (ADF Health) Capability: Overview

N Westphalen

Introduction

This paper—and the series to date and to follow—is based on conclusions reached in a previous series by the author regarding occupational and environmental medicine in the ADF.[1,2,3,4,5,6,7,8,9,10,11] The previous series describes why high workplace illness and injury rates confirm the need to improve the management of hazards associated with ADF workplaces, with better emphasis on prevention. To this end, a submission by the Royal Australasian College of Physicians to the 2019 Productivity Commission inquiry into veterans' health advocated that this would be best achieved by premising the ADF's health services on a systems-based occupational health strategic model.[12]

Doing so would require reassessing the Fundamental Inputs to Capability (FICs)[13] for both Joint Health Command (JHC) and Defence's Work Health and Safety Branch. The previous series explained how the current state of the ADF's occupational and environmental health services and the small number of civilian specialist practitioners within the Australasian Faculty of Occupational and Environmental Medicine (AFOEM) indicate that implementing a mature holistic and sustainable model would take 10–15 years' sustained effort. To that end, this new series explains how the ADF's FICs should be adapted to support health services founded on a systems-based occupational health strategic model. In so doing, it refers extensively to the previous series.

This paper aims to provide an overview of the three elementally distinct yet intrinsically interlinked missions of military health services, the functions and roles necessary to conduct these missions, and the FICs required to enable these functions and roles.

The elemental missions of military health services

A previous paper describes what the distinguished WWI veteran and medical historian Colonel Arthur Graham Butler referred to as the three 'allegiances' of military health services and how and why these would now be referred to as their elemental and enduring 'missions':

1. The 'alleviating suffering' allegiance, or what we would now call the 'treatment services' mission
2. The 'command' allegiance, or what we would now call the 'enabling operational capability' mission
3. The 'national' allegiance, what we would now call the 'civilian reintegration' mission.[14]

Military health services have three missions rather than one because of how they interact with each other. This explains why the functions and roles of *all* health personnel at *all* levels within military health systems entail *managing* patients—not just *treating* them.

For example, consider LSET Bloggs, who presents with ear pain and discharge. The tasks to be conducted by her primary health care provider are not limited to taking a history, examining the ear, diagnosing her burst tympanum and prescribing her antibiotics; were that the case, a *military* health service would not be required. Rather, the healthcare provider also needs to think about the impact of Bloggs' diagnosis on her ability to do her job and the effect of her job on her diagnosis and treatment. This is problematic unless the healthcare provider comprehensively understands what her job entails. Although this can be straightforward, matters rapidly start becoming complicated if Bloggs' ship is sailing in an hour's time, which is where the second mission—enabling operational capability—becomes relevant, especially if her job (such as maintaining an obscure combat subsystem), renders her a 'ship-stopper'. The relevance of the third mission—facilitating her eventual return to the civilian community—pertains to documenting the work-relatedness of her otitis, such as having recently undertaken her secondary ship's diver job in filthy water.

For another example, let us consider an Air Force aeromedical evacuation team that has just landed in a remote part of Vanuatu to evacuate an injured civilian as part of a humanitarian aid/disaster relief mission. They only have 20 minutes to prep and load him—and his wife they know nothing about, who

refuses to leave him—before their aircraft becomes fuel-critical. Although their treatment mission comes first, and their clientele's status renders the civilian reintegration mission moot, the operational *constraints*—as opposed to *capability*—make matters more challenging.

As a final example, consider a surgeon working out of a tent, debriding a patient's lower limbs following a mine incident. The surgery to save their life is technically somewhat different to the motor vehicle multi-traumas she usually deals with; these wounds are dirtier, the amount of viable tissue to work with is reduced, and she lacks comparable resources. Hence, the additional *clinical* training she received before deploying would prove exceedingly useful. Even so, operational pressures (e.g., holding policies and intensive care bed states) will likely influence the surgery she performs. Furthermore, she also needs to think ahead regarding her patient's rehabilitation and probable civilian transition, not just regarding the surgery itself but also comprehensively documenting what it entails.

The fact that military health services have three separate but inextricably linked missions has three implications:

1. The existence of the operational capability and civilian reintegration missions explains why military health services have to contend with rather more documentation than most civilian practices.
2. Enabling operational capability—in particular (but not limited to) ensuring that a member's job will not exacerbate their medical condition(s), and vice versa, that is, their medical condition(s) does not unduly impede job performance—explains why the ADF's health services have three different coloured uniforms. Previous articles explain why health staff with the same environmental experiences as their clientele are more likely to successfully employ a risk management approach to uncertain cases—not only to *prevent* those from deploying who should *not*, but also to *allow* those to deploy who *can*—compared to those without such experience.[15,16]
3. The issues of 'work-relatedness', per the operational capability and civilian reintegration missions, explain why military health services should be based on a systems-based occupational health strategic model.

Military health service functions and roles

Previous papers have described the following military health service functions and roles necessary to conduct these missions. These are summarised as follows, in ascending priority order, based on the level of military expertise they require:

- **Treatment services.**[17] At the bottom of the list is treatment services: this acknowledges the extent to which the expertise acquired in civilian practice—however, distinguished—still only constitutes a baseline for undertaking this function in the military setting. Furthermore, as in civilian settings, military treatment services should be based on the demographics of the target population: who they are, where they serve, what they do and why they do it. Pending better data, for now, the ensuing clinical presentations can most likely be characterised as musculoskeletal injuries split between workplace accidents and sports injuries, and mental health disorders split between people for whom joining the ADF has not been a wise career move, and people who heretofore have been fine working in Defence, but are struggling in their current job. This has two implications: first, the ADF should be considered a discretely different population compared to the general Australian civilian community, somewhat analogous to the indigenous and LGBTIQ+ populations. Second, although most service medicine lacks *clinical* interest, it is the *context* that makes it challenging, in particular, juggling patient needs against the other two missions in a way that—among others—is honest, ethical, transparent, empowers them as far as possible and complies with the Law of Armed Conflict (LOAC).
- **Health promotion.**[18] The ADF needs to maximise its personnel's general health and wellbeing: this reduces the number requiring treatment, enables operational capability and reduces the civilian transition workload. However, the scope of *military* health promotion is far broader than civilian practice: the RACGP 'Red Book' only provides a *baseline* for what ADF members need. Besides ensuring compliance with the *Work Health and Safety Act*, the ADF's health services must also provide targeted military- and mission-specific vaccination programs, effective field and shipboard hygiene, and vector-borne infectious disease prevention. They should also provide military health education programs on first aid, personal hygiene and dental care, heat and cold stress management, sun exposure and insect bite prevention,

alcohol and other drug awareness, and diet and weight control. There is also a need to provide military workplace mental health promotion programs that, besides enhancing mental resilience during deployments, enable mentally healthy, *non*-deployed workplace and personnel management practices. A pivotal consideration to all these interventions is that healthy lifestyle interventions—such as those in the 'Red Book'—should *not* prevent personnel from deploying if they are elective and/or do not prevent them from performing their regular duties. Another consideration is that military workplace physical fitness programs should not create preventable new injuries or exacerbate old ones.

- **Occupational and environmental health.**[19] The ADF population is medically selected, mostly young working age, geographically highly mobile, has high turnover rates, and—for now—is still predominantly male. That means, rather than reflecting a typical civilian dependency, the ADF is, first and foremost, a *workforce* population. Furthermore, ADF members are probably exposed to the broadest range of physical, biological, chemical, ergonomic and psychosocial workplace hazards of any Australian workforce, even before considering the operational hazards posed by weapons designed to cause harm, such as small arms, grenades, mortar and artillery rounds, sea-, land- and air-launched missiles, sea and land mines, and torpedoes, to which can be added chemical, biological, radiological and nuclear (CBRN) weapons. Although it also pertains to all the other functions and roles per this list, this bespoke occupational and environmental health component enables the operational capability mission by preventing people from getting injured in the first place; it also provides targeted workforce treatment services and actively facilitates the civilian transition mission.[20,21]
- **Assessing medical suitability for military service.**[22] Ensuring that personnel managers, commanders and supervisors are aware of the health status of their personnel pertains to the operational capability and civilian reintegration missions. However, finding a clinically or operationally significant *new* medical condition at a *routine* medical usually implies a reasonably egregious failure regarding the patient's primary health care. As previously described, medical suitability determinations are *intrinsic* to that care, from recommending light or excused duties to conducting Medical Employment Classification Reviews. Even so, this does not preclude bespoke periodic and targeted occupational health assessments, even if they only need to entail health record audits regarding vaccinations, cervical screening and the like.
- **Military medicine capabilities.**[23] These capabilities include aviation, underwater and CBRN medicine. The need for these services not only pertains to preventing or treating casualties caused by the unique physiological hazards to which aircrew, divers and submariners are exposed, but also to giving them an operational capability edge vis-a-vis their opponents. Hence, the ADF health services provide these services in-house because they do not otherwise exist in forms that facilitate this mission. It also complicates the military health support function referred to below, noting that aircrew, divers and submariners *each* constitute subpopulations (totalling about 12.5%) that the ADF medical services must plan for. The same applies to ADF members who may have to perform their duties in CBRN environments.
- **Humanitarian Aid/Disaster Relief (HA/DR).**[24] A previous paper explains why HA/DR should not be a primary role for the ADF's health services: their focus should be on conducting its missions to support ADF members and other entitled personnel. That does not mean they have no HA/DR role; it is, however, a subset of military health support (see below). First, this is because, unlike other operations where *they* support *other* ADF agencies, the ADF health services may be *the* ADF agency being supported *by* these assets. Furthermore, HA/DR operations require different medical assets for vulnerable populations such as women, children, seniors and people with disabilities, who will most likely get better healthcare from Non-Government Organisations (NGOs) and other agencies. This means the ADF health services can be expected to liaise with such agencies far more during HA/DR operations.
- **Medical evacuation.**[25] The fact that ADF personnel end up in odd places means that the ADF health services must be able to evacuate them from wherever they are ill or injured within a clinically and operationally suitable timeframe. While this has typically only been considered relevant for deployed personnel, the ADF's need to insert its patients into the civilian health system necessitates appropriately holistic and targeted elective and emergency patient transport services. Examples include getting

patients to and from specialist appointments; using civilian ambulance services in major population centres; or service vehicles, civilian aeromedical services or military aircraft for bases in remote locations; or civilian helicopter services for ejected aircrew or ships at sea; or civilian aircraft for interstate patient transfers; or military aircraft for mass casualty events within Australia.

- **Military health support.**[26] As previously described, ADF members' health support must reflect the population(s) being supported, their location and their activities. For example, the population at a particular base may include trainees, headquarters or support staff and/or members of one or more operational units. The latter might be working up to deploy, reconstituting after deploying or performing operational roles that do not entail deploying. Such bases may be overseas, at a remote location within Australia, where access to civilian health services may be problematic, or at a major urban centre where access is not an issue. The resources (i.e., FICs) that *every* ADF health element needs to conduct their missions depend on *all* of the above, which takes some planning and forethought. As examples, the health services for a remote operational base like Tindal will differ from those for a remote training base like Kapooka, or a support base for deployed units at a major urban centre like *Stirling*. Assessing, planning, implementing and monitoring these services against the FICs they require to conduct their missions is a health function for which *military* (including environmental) expertise becomes at least as important as *clinical* expertise.

Fundamental Inputs to (health) Capability

FICs refers to a standardised list used by the ADF to identify the resources required—except for the finances to pay for them—to undertake government-directed tasks.[27] However, the ADF applies its FICs either as a whole or by elements within; at present, there is no publicly available evidence suggesting that its health services does so. While future papers will describe these in more detail, fulfilling the aforementioned functions and roles would arguably include the following considerations regarding each ADF health services FIC:

- **Organisation.** This paper explains why military health services are far more complex than similarly-scaled civilian counterparts, whose only remit is to treat patients. Although having a relatively young and highly medically selected population helps, ADF members' locations, what they do and why exacerbates this complexity, in the context whereby the ADF's health services are part of a larger organisation for which health care is *not* the primary focus. Future papers will explain why this complexity is best managed—especially in a resource-constrained environment—by basing their organisational structure on an occupational health systems model.
- **Personnel.** ADF health staff recruiting and entry training needs to reflect the functions and roles they are required to undertake, which begin with providing care within their scope of clinical practice in, at times, exceptionally remote and/or austere situations where casualty evacuation may be delayed. This refers to the skills, knowledge, expertise and currency to *manage* (not just *treat*) clinical conditions that are usually only encountered overseas, as well as being beset by mass battle casualties and/or disease and non-battle injuries. However, this paper also explains why these clinical skills only constitute a baseline: ADF health personnel need additional military skills as part of their career progression to conduct *all* the aforementioned functions and roles. These considerations also explain why the ADF's health services *must* be based on its uniformed staff.
- **Collective training.** Like the rest of the ADF, its health personnel need their clinical and military skills to be shaped into teams for broader integration into the units (whether deployable or non-deployable) in which they serve. It should also be noted that they may have to train for a discrete health subunit or unit or a *non*-health unit for which they provide the health component.
- **Civilian industry support.** Notwithstanding the previous assertion that uniformed health personnel *must* be the bedrock of the ADF health services, the support they provide is complicated by the extent to which the technological health advances over recent decades have led to increasing levels of specialisation.[28] As this precludes the ADF from organically providing the full range of health services, its services are utterly dependent on the clinical skills and expertise available only from the civilian health system. However, this does *not* mean the ADF can entrust the military aspects of managing its sick and injured members to these providers.

Health reservists in particular, therefore, have an essential bridging role between the civilian and military health settings.[29]

- **Other support.** Besides the support provided by civilians, the ADF health services also require various forms of *non*-clinical health support that they cannot provide in-house. Examples include ships' first aid parties, patient catering and laundry services for Navy, engineering support to provide electricity or piped water for Army, and providing aircraft for Air Force AME teams.
- **Facilities.** All ADF health services need facilities to work from, including fixed health centres in the base setting, deployable facilities in ships, on the ground or in the back of aircraft, down to the ship's messdeck, half-demolished building or fighting pit, in which they can set up to treat patients with whatever they have available in a backpack or bumbag. Although the purposes they are needed for are broadly similar, these facilities need to reflect the supported clientele and the environments they work in; for example, divers and submariners, in particular, need their own additional deployable and non-deployable hyperbaric facilities.
- **Supplies.** The scope of this FIC extends beyond pharmaceuticals and other consumables to instruments and equipment. The complexities inherent in getting the right amounts of the correct items (and their spares) to the right place(s) at the right time(s) while ensuring they are properly serviced, maintained within the cold chain, remain sterile and/or in-date, indicate the need for a bespoke medical supply system. It also means personal equipment preferences are not likely to be met.
- **Major systems.** The ADF typically uses this term to refer to large and/or expensive items such as ships, planes and vehicles, which is less applicable regarding skill-based than equipment-based capabilities such as health services. However, this FIC in this setting arguably refers instead to health information technology systems for tasks such as patient records, telehealth, casualty regulation and medical store management. The biggest constraint in the operational setting is bandwidth; even without emission control limitations, it will never be sufficient, even without jamming or other forms of cyber warfare from opponents whose compliance with LOAC may be marginal or non-existent.
- **Command and management.** Finally, the ADF health services require structured health command and administrative processes that interact with each other and the relevant commanders consistent with their advisory roles. As previously described, this also explains why those in health leadership roles need escalating levels of *military* expertise as part of their career progression.

Finally, it is essential to note that, as all of these FICs are *finite* and *limited*, the ADF health services *must* employ a risk management approach to conduct their missions, to do the greatest good for the most significant number with the resources allocated, as part of an organisation for which healthcare is *not* its primary purpose. The need for a risk management approach in this setting is entirely consistent with a systems-based occupational health strategic model.

Conclusion

There has been a longstanding misperception within Defence (including elements within its health services) that, as they only exist to provide treatment services, its health services are an obvious exemplar of something that can be easily unified or contracted out. This fails to recognise the other two missions of health services that support military workforces rather than civilian populations, enabling operational capability and facilitating their eventual transition to the civilian community.

The previous series of papers explained why excessive workplace illness and injury rates confirm the need to improve the management of hazards associated with ADF workplaces, with better emphasis on prevention. This is summarised in Figure 1, which shows the relationships between ADF operational capability, the three health service missions necessary to enable that capability, the eight health service functions and roles to enable those missions, and the nine FICs needed to conduct them. It also demonstrates how occupational health is intrinsic to *all* the holistic military healthcare system components.

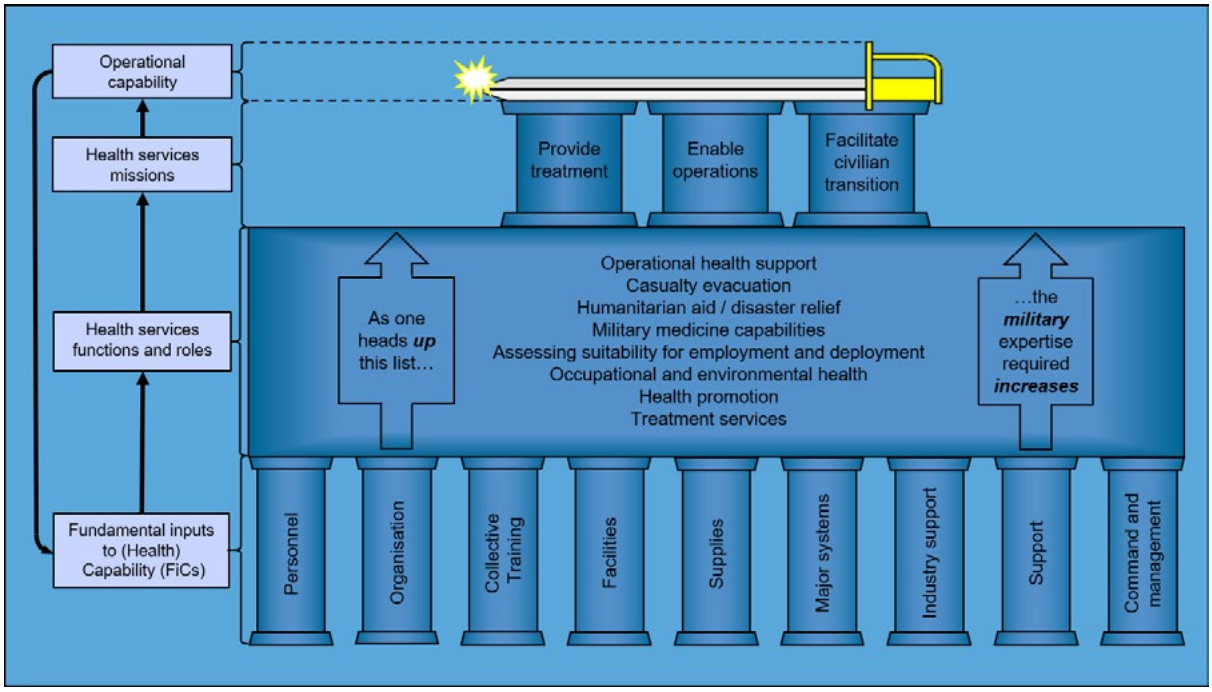

Figure 1: Operational capability and its relationship to military health services missions, functions and roles, and FICs

It is also suggested that, as applied to the ADF health setting, Figure 1 is consistent with the meaning of the word 'joint' as defined by the then CDF in 2017:

'I look at where we've come to now from back then [1999] and we are well ahead, with a far better understanding that joint isn't doing everything the same. Joint is about bringing the best of the three services and the public service together to get the best combination you can for that particular operation.' [underlining added].[30]

Disclaimer

The views expressed in this article are the author's and do not necessarily reflect those of the RAN or any other organisations mentioned.

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Mauled by a Lion – How Spiritual Wounds and Injuries Present

M J Davies

Abstract

The mauling that some veterans suffer as a result of issues such as shame, anger, self-abuse and depression are very real, lasting and painful aspects of their lives. For a Religious/Spiritual Practitioner (RSP), or indeed any treating practitioner, to make a meaningful contribution towards treating a Spiritual Wound and Injury (SW&I) they must determine how this condition presents. The paper follows previous arguments by the author that a SW&I starts with a break in an individual's relationship with their concept of God. The manifestation of the SW&I may then follow a pathway such as the Principal Conditions, Behaviours and Red Actions Model (PCB&RA Model).

This paper acknowledges that, in some respects, the behaviours of a SW&I may seem very similar to many mental health or general wellbeing issues. Indeed, in many cases, the treatment of SW&I may utilise similar treatments and management approaches to moral injury (MI) or mental illnesses. However, the elements discussed in the PCB&RA Model are all predicated on seeing these conditions, behaviours and actions through a spiritual lens.

Keywords: SW&I, spirit(ual, uality), military, wound, defence(se), veteran

Introduction

St Longinus was a Roman Centurion who commanded the crucifixion party at Golgotha, where Jesus died. According to the Acts of Pilate in the Gospel of Nicodemus, he purportedly pierced Jesus' side with his spear either to confirm that he was dead or perhaps to hasten his death.[1] As a result, Jesus then,

> *Yielded up the ghost. And, behold, the veil of the temple was rent in twain from top to bottom; and the earth did quake, and the rocks rent, And the graves were opened, and many bodies of the saints which slept arose, And came out of the graves after his Resurrection, and went into the holy city, and appeared unto many. Now when the centurion, and they that were with him, watching Jesus, saw the earthquake and those things that were done, they feared greatly, saying, 'Truly this was the Son of God'. Matthew 27:54 (King James Version).*[2]

Although there is an argument that the actions of St Longinus were part of a much larger spiritual narrative, there is no doubt that he feared greatly at the time and perhaps suffered for a long time afterwards. The author has argued that due to his actions that day, St Longinus suffered a Spiritual Wound and Injury (SW&I).[3] This was described as like being 'mauled by a lion every night, only to have his body restored during the day in preparation for another night's agony'.[4] This metaphorical mauling would seem very much like the doubt, shame, guilt, and other issues afflict any veteran whose experiences with trauma have caused a break or change in their relationship with God and, in turn, led to a SW&I.

This paper aims to highlight how a SW&I may present to help spiritual, religious, medical, psychological and other practitioners manage the spiritual health of veterans who have experienced trauma. As previously argued, a SW&I has different causes and needs different approaches to a MI or a mental health illness.[5] It is therefore critically important that treating practitioners of whatever ilk can recognise and understand the potential symptoms or presentations of an SW&I.

Principal Conditions, Behaviours and Red Actions Model

In some respects, the behaviours of a SW&I may be very similar to many mental health or general wellbeing issues. Similar is not, however, the same. There are three important issues to note:

- **Cause.** A SW&I occurs as a result of a break in the relationship between a veteran and

their concept of God or a Divine figure. As a result, the individual displays different types of undesirable behaviours. While a physical event such as a Thin Place Event (TPE) may be the initiating incident, the source or cause of the SW&I and how it is presented may be difficult to prove as it will relate to how the individual perceives God.[5]

- This is a fundamentally different circumstance to a MI or mental health and general wellbeing incident, where a traumatic event such as a potentially morally injurious event (PMIE) will leave a series of medical, moral and scientific indicators. While the actual event—TPE or PMIE—may be the same, the individual's relationship is not to another human or society's rules, laws and morals. It is a relationship to an unmeasurable and vapours concept of a supreme guiding being or entity. Engagement with this entity will be either through human facilitation by a priest, minister, rabbi or some other Religious and Spiritual Practitioner (Head Spirituality) on behalf and guided by God or directly through some form of seen, felt or heard individual interaction with God (Heart Spirituality).[5]
- **Continuance.** Accordingly, the subsequent course and treatment of the SW&I will then follow these circumstances. A Religious/Spiritual Practitioner (RSP) working with a veteran suffering from a SW&I will follow that individual's journey through each stage of the SW&I Transition Path Model.[5] Importantly, this model acknowledges that a SW&I is more than just the aftermath presentation and includes recognising predisposing factors and the specific nature of the event.
- **Collegiate.** Equally important is that although a SW&I may be the specific focus of an appropriately trained and accredited RSCP, there may be significant involvement from medical and psychological practitioners. This is because a traumatic event is unlikely to leave a single scar, and there may be a multiplicity of physical, spiritual moral injuries.

That a condition such as shame or guilt may cause an individual to lose faith in God is not the SW&I; it is the effect that this loss of faith has on some individual's mental health and overall wellbeing and how that might present in behaviours such as substance abuse, depression or anger. Not every individual has a religious or spiritual belief system. For those that do, however, threats to this schema can significantly affect their lives. Although further study and analysis are required, this paper argues that some presentations of a SW&I can be modelled based on Principal Conditions, Behaviours and Red Actions (PCB&RA Model).

Conditions

The presentation of a SW&I lies in the relationship between a condition and behaviours. For this discussion, the following definition of a condition will be used:

- A logical antecedent on which a conclusion is dependent or an empirical antecedent on which

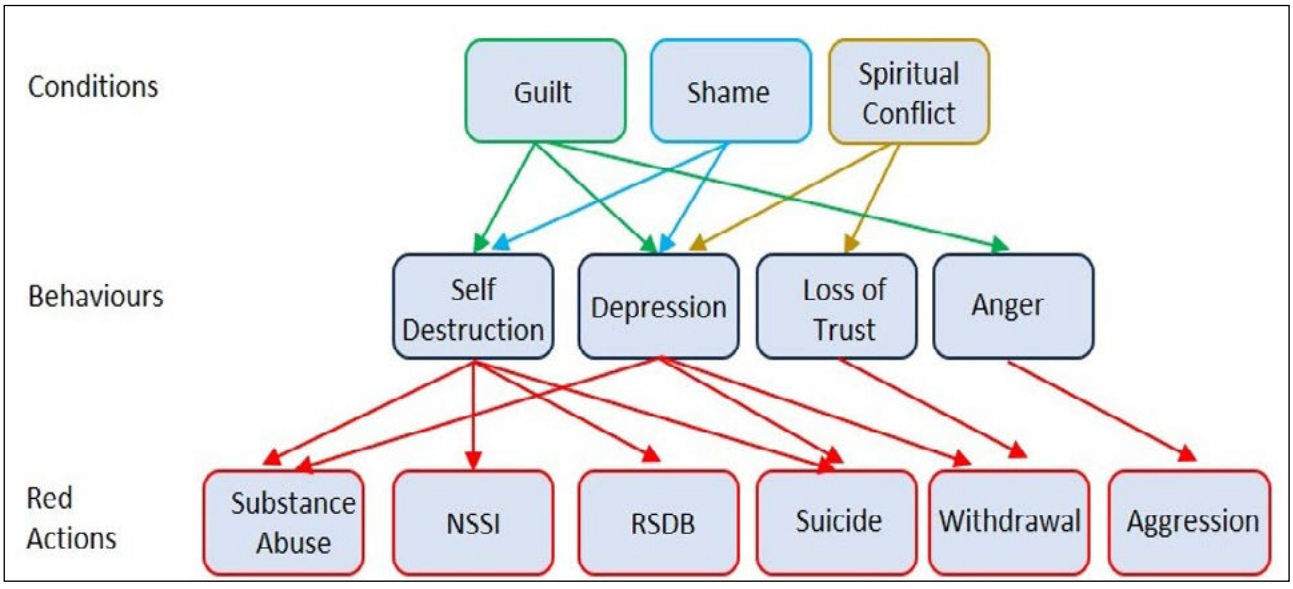

Figure 1: Principal Conditions, Behaviors and Red Actions Model

an event or state is dependent. A necessary condition is one without which the idea would not logically follow, or the event would not occur. A sufficient condition is one that directly entails a particular conclusion or that has the power to produce a particular event regardless of other conditions.[6]

- This paper will examine three conditions based on Jeremy Jinkerson's description of MI: Guilt, shame and spiritual or existential conflict.[7]

Condition 1: Guilt

Guilt is an ancient and powerful force in humanity that crosses most boundaries of culture and religion. Feelings of guilt can be powerful and the basis for many behaviours. Many veterans carry significant feelings of guilt, which do not necessarily fade after they leave the military. In a *British Journal of Clinical Psychology study*, trauma-related guilt significantly predicted DSM-5 post-traumatic stress disorder (PTSD) severity among US veterans and military members.[8]

The American Psychological Association (APA) defines guilt as 'a self-conscious emotion characterised by a painful appraisal of having done (or thought) something that is wrong and often by a readiness to take action designed to undo or mitigate this wrong'.[9] Within this definition, the word 'emotion' implies that the perception of guilt may not be necessarily based on what a person, be it the individual, a leader or even a RSCP, did, but instead on a feeling or personal interpretation of what they thought they did. While the nature of the guilt is conceptualised as remorse, regret or self-condemnation in this way, it is most often linked to an event.[10] Granted, 'wrong' is a subjective term; however, it indicates that the action or event has been judged somehow and found to disagree with the standards of an individual, a belief system or a community. A 'painful appraisal' indicates that the perpetrator pauses to think deeply about the event. Furthermore, thinking deeply about guilt is also 'an uncomfortable, even viscerally disturbing condition'.[11]

Spiritual legacy

Which behaviour a veteran demonstrates based on these conditions will be significantly influenced by their spiritual predisposition and background. One young soldier who had shot two insurgents wondered whether God still loved him and yet does not appear to have felt any sense of legal or moral guilt over his actions; instead, he felt guilty before God.[12]

Most faiths have a rich language and dogma when it comes to guilt. It also has a powerful spiritual dimension and the relationship along a guilt-sin-punishment-redemption-forgiveness spectrum, a feature of many religions and faith groups. Exodus 34:7 states that the Lord 'does not leave the guilty unpunished'.[2] Similarly, the Qur'an states that 'Allah loveth not the impious and guilty' (Al-Baqarah, Q.2:276), and the Hindu Vedas proclaim, 'Let me not suffer for the guilt of others!'.[13] It is interesting to note that in all three examples, there is a real sense of guilt as a feeling that is to be feared and dreaded. The intensity of this fear and dread is such that people may display some behaviours that they use to either express or, conversely, numb and repress their feelings.

At the same time, guilt can also be adaptive and lead to spiritual growth. A response to a transgression might motivate the person to take reparative action (e.g., going to confession, asking God for forgiveness), and this may then relieve the distress associated with feelings of guilt and a stronger conceptualisation of other aspects of the person's life.[14]

Familial guilt

A veteran's family is not immune to the impact and influence of spiritual guilt. Veteran 20210503 was an Australian Army medic deployed on several overseas missions.[15] After their return from another deployment, their partner killed themselves. This veteran felt genuine guilt over this event and stated that,

> *I should be locked up with all of the Godless rapists and murderers. Where was my loyalty to the one person who had stood by me since I was eight? I was so wrapped up in my career and wanted to show everyone that I was good enough to be in the Army.*

Condition 2: Shame

Shame is a curious thing for veterans. On the one hand, every veteran can share vaguely humorous stories of a drill or physical training instructor who publicly used their inability to perform a given task to the same standard as the group as a humorous example or a teaching point. Sadly, there are stories, such as the British Army instructor who reduced a female recruit to tears during bayonet practice with a vicious tirade on how she was not a 'killer'.[16] In both cases, shame is used almost as a training tool designed to punish and correct a soldier whose performance has not lived up to or met the group's standards. It can also be used by the group members against another member to punish or correct behaviour and performance they feel fails to meet the required social standard of their group.

Shame is a powerful influence on veterans' mental health and overall wellbeing. Shame is a principal factor of MI. There is also credible evidence pointing to shame as being one of the main contributors to the development of PTSD, as it has a high-level influence on suicidal ideation that reduces the veteran's capacity or willingness to seek help.[17] Shame also has many possible spiritual aspects. It was one of the first human emotions expressed in *The Bible*. In *Genesis*, chapters 2 and 3 talk of Adam and Eve's shame at being naked and hiding from the Lord after eating from the 'Tree of Knowledge of Good and Evil'.[2] A spiritually vulnerable veteran can either be ashamed of their behaviour in front of God and feel that makes them unlovable in the eyes of their creator or conversely ashamed they ever believed in a God who would 'let bad things happen' to their friends or the innocent.

In many respects, it is often difficult to separate the concept of shame from its twin emotion, guilt. The *APA Dictionary* highlights this by noting that guilt is 'distinct from shame, in which there is the additional strong fear of one's deeds being publicly exposed to judgment or ridicule'.[9] The APA separately discusses shame in more detail, saying it is a 'highly unpleasant self-conscious emotion arising from the sense of there being something dishonourable, immodest or indecorous in one's own conduct or circumstances'.[18]

Elements

There are many general concepts about shame as a condition of SW&I that are relevant:

Unpleasant and self-conscious. Ultimately, shame develops when a person's 'dishonourable, immodest or indecorous actions' are exposed to some form of public view and then internalised to become evidence of themselves as being intrinsically bad. As one author says, 'I'm a failure, or I'm a monster'.[8] Shame can have a single or a series of starting points or TPE. There may be a definable moment or a series of moments leading to a growing awareness wherein the individual realises they have done something shameful.

- **Internal and external.** Shame has a distinct pattern, Awareness, Reinforcement and Acceptance (ARA Pattern). The individual must be aware that they have committed what might be a shameful action. The existence of shame is undoubtedly unpleasant, but it indicates that the person has a level of self-consciousness. Sometimes referred to as 'internal shame', it is where the individual devalues themselves in their own eyes against the norms of the group. The individual's sense of shame is *reinforced* when it receives external validation when they perceive others look down on them and see them as inferior or inadequate in some way. As the psychiatrist Judith Lewis Herman notes, 'it is, an acutely self-conscious state in which the self is "split", imagining the self in the eyes of the other'.[19]

  The depth and extent to which internal or external shame penetrates and is accepted, therefore, depends on the degree of acceptance by the individual. An individual cannot be forced into a state of shame. Many people have committed terrible acts and feel no sense of guilt or shame for their actions; however, those individuals in Herman's state of acute self-consciousness often accept that both their actions were shameful and their perception of others' feelings towards them is accurate.
- **Evolutionary influence.** Shame may have developed as a necessary survival tool. Throughout human history, group membership and adherence to specific codes of group behaviour and practice were necessary for survival. Shame may have evolved as an effective signal to non-conforming individuals and those who may think of straying from the group path that they posed a social threat. The Holy books, such as *The Bible*, foster this idea. The books of the *Pentateuch (Torah*), for example, are primarily devoted to the establishment of laws (and penalties) that are devoted to establishing an identity and structure for the Israelites after they left Egypt. As such, shame, social exclusion and rejection may have evolved to ensure the larger group's survival.[20] Given the team and group nature of the environments most veterans come from, this aspect of culture may also be a significant factor.

Spiritually, shame as a condition of SW&I has two possible aspects. The first is that the individual is ashamed of God. For example, an Australian Army Officer who committed a negligent discharge blamed God for allowing him to be 'so stupid'. In another Australian example, an Army logistician whose speciality meant he could not be deployed responded to a well-meaning civilian compliment, 'Thank you for your service,' with, 'God didn't let me serve, so don't thank me'.[12] Closely linked is the idea that an individual may feel ashamed if they believed an omnipotent God could have stopped them from being in a particular situation and being shamed or exposed to potential shame. As one US veteran from the Vietnam War later wrote, 'I cannot believe in a God who would permit what I have just lived through'.[21]

In some cases, an individual may feel they have offended, angered or disappointed God and are ashamed accordingly. An example of this can be seen in the confession of one US Special Forces operator in Cambodia during the Vietnam War. He would vomit for hours and 'beg God to forgive us for what we are doing'.[22] To these veterans, God is a very real and all-knowing feature of their lives, and when they feel they have failed to live up to their expectations of what God thinks, they feel ashamed. Another example is the US soldier who wrote of his experiences in Afghanistan and how God knew he was an 'imposter' and that he could not 'fool God'.[23]

Condition 3: Spiritual or existential conflict

Several commentators suggest that a spiritual or existential crisis or conflict may occur in the aftermath of a MI. These authors include Drescher et al.,[24] Jinkerson[7] and Brémault-Phillips et al.[25] Although highly credible authors, this is an example of the poor use of spiritual concepts, language and terminology that is common in much of the broader MI-based discussion on spirituality.[26] At no point do any of these or other authors explain the term spiritual or existential conflict. It appears to be an assumption on their behalf that this term is understood or common.

Likewise, it is important to remember that SW&I is not limited to the aftermath of an event or that it occurs concurrently or following a MI. As discussed, a PMIE and TPE can occur concurrently or separately. Regardless, a spiritual or existential conflict needs further exploration if its impact on a veteran's SW&I is to be considered further.

The terms spiritual and existential need to be separated. Although a convenient conflation, such as spirituality and MI, these terms have separate meanings. An existential conflict or crisis is any psychological or moral crisis that causes an individual to ask 'fundamental questions about human existence'.[27] Spirituality essentially rests on the existence of a God or gods or some other universal guiding force. An individual's existential conflict relates to their experience with humanity and does not necessarily include this Divine guiding force. Thus, an existential crisis/conflict sits in the domain of MI, and a spiritual crisis/conflict relates to SW&I.

Cognitive dissonance

The idea that a spiritual conflict relates to an individual's conflict with their beliefs implies that they have some existing religious or spiritual belief that underpins or shapes their thinking. Such belief may be unformed and lacking detail or highly developed and mature. The conflict comes when an event, a TPE, occurs that causes them to ask why and what. Shay's question, why 'in an ethical universe run by a just, loving and all-powerful God…' is a good example of this.[28] Such questions then prompt that person to consider, 'What does this mean for me?' Asking that question does not indicate a lack of faith or belief but a perfectly rational response to an event that has created a degree of dissonance or confusion between the truth and what people want to believe. In 2009, Litz argued that, in a MI context, such circumstances cause 'dissonance and conflict because it violates assumptions and beliefs about right and wrong and personal goodness'.[29]

Psychologically, this is referred to as *cognitive dissonance*. Cognitive dissonance is the state of psychological discomfort that occurs when an individual is confronted with an unequivocal truth that contradicts a strongly held previous belief.[30] Psychologist Leon Festinger first proposed the theory behind this in his 1957 book, A *Theory of Cognitive Dissonance*. Festinger argued that individuals experience discomfort when confronted by conflicting beliefs or when their actions contradict their beliefs. As such, their goal is to reduce dissonance to relieve their discomfort. The resolution process is known as the 'principle of cognitive consistency'. It may entail either seeking out what is true or avoiding the situation and its circumstances.[31]

Cognitive dissonance is not an automatic or instinctive reaction for individuals facing circumstances that may challenge previous beliefs.[32] Some individuals may have a higher tolerance to uncertainty and inconsistency and may, therefore, experience a reduced cognitive dissonance, as opposed to those who require consistency. It can be more prevalent in the case of those who have made an 'irrevocable commitment'. This might be a contract, agreement vow or some other form of significant undertaking to do something or act in a certain way. This is most clearly relevant to most military organisations requiring individuals to sign or agree to some form of oath or attestation upon enlistment. Such a circumstance resonates with those whose spirituality may have a heart basis and is more aligned with the doctrines and commandments of a faith group.[33]

Behaviours

The previous set of conditions are the gateways for the behaviours that affect some individuals' mental health and overall wellbeing and how this might present in harmful behaviours. A behaviour

is 'an organism's activities in response to external or internal stimuli, including objectively observable activities, introspectively observable activities (… covert behaviour), and nonconscious processes'.[34] The SW&I concept is that spiritual wounds and injuries result from an antecedent condition and subsequent behaviour. Of course, it will not necessarily be neatly separated, and it is more than likely that aspects overlap and link. Likewise, many behaviours might be included in this area; however, these can be grouped under three main categories. Each term in these categories is shared across the medical and psychological spectrum, although only the potential head and heart spiritual aspects will be considered.

Behaviour 1: Self-destruction/sabotage

A typical behaviour that spans MI and mental health issues, such as PTSD and SW&I, is when a veteran behaves in a way that is harmful or potentially harmful to themselves or others. Humans are not predisposed towards self-harm; their base instincts lie in self-preservation. Nevertheless, many veterans may undertake a range of behaviours that run against this ancient instinct. These behaviours include Non-Suicidal Self-Injury (NSSI), Reckless and Self-Destructive Behaviours (RSDB), suicidal ideation or death by suicide.

Non-suicidal self-injury (NSSI)

NSSI is also known as intentional self-harm, self-injury, self-mutilative behaviour or parasuicide. It refers to individuals purposefully engaging in acts that cause physical pain or harm to themselves. Burke argues that 'guilt is intensely painful, and a person thus stricken will seek a cure at any cost… the cure will occur only through some form of "victimage", for someone or something must suffer if the world is to be set right'.[35]

Typically, NSSI may include cutting, burning, head-banging and severe scratching.[36] One study of US veterans suggested that 22% of veterans will engage in NSSI at some stage.[37] A supporting Scottish study noted of its base of 57 000 veterans that the highest risk of NSSI was in veterans with the shortest service, especially those who did not complete training or minimum engagement. Older birth cohorts and those who had served longer were at reduced risk.[38]

The causes and treatment of NSSI are subject to a growing body of secular scholarship. From the spiritual perspective, NSSI may be an act of mortification. 'Mortification of the flesh' refers to an act or acts by an individual to mortify, deaden or atone for a sin or a sinful nature. It is seen as a part of the process of sanctification and redemption. It has a scriptural Hebrew *Bible* in Zechariah 13:6 and 1 Kings 18:28–29 and the *New Testament* in Romans 8:13 and Colossians 3:5.[2] Historically, mortifying the flesh was a physical action such as flagellation or wearing hair shirts or chains.

There is evidence of self-mortification experiences related to the Vietnam Veteran's Memorial in Washington. While not further specified, Cheree Carlson and Hocking argue that veterans visiting the memorial undertake minor acts of mortification, an act that,

> *requires self-abnegation. The individual has internalised the imperfections and can obtain purification only through some private punishment. Although the victims differ, the result is the same. Guilt is purged, and order is restored. Unfortunately, the redeemed state is brief, for there is always something wrong in the world, always a new source of guilt.*[39]

Reckless and self-destructive behaviours (RSDB)

This self-abnegation or self-denial may also manifest as self-destructive behaviour, such as veterans being unwilling to seek spiritual care as they feel either that they are not worthy or that there is a benevolent God able to help. This may also cause them to be unwilling to seek help in another medical or psychological area. RSDB typically presents as self-initiated actions such as dangerous alcohol or drug use, drunk driving, gambling and aggression/anger.[40] On one level, it is seen as a symptom of PTSD, with a 2017 survey on behalf of the US Department of Veterans Affairs (DVA) finding that 74.4% of a sample of veterans displayed RSDB-related acts. Of the sample, 61.3% engaged in multiple forms of RSDB. The most common behaviours include alcohol/drug abuse (42.8%), driving while intoxicated (29.4%), gambling (24.7%) and aggression (23.1%).[41] RDSB has also been similarly linked to MI.[42]

Although there is limited information and analysis regarding RSDB and spirituality, it is likely that given the shared linkages to PTSD and MI, there would be similar spiritual damage. Accordingly, as a SW&I, RSDB may display in a very similar way. However, the critical issue that will fundamentally shape how this is managed and approached relates to the individual's relationship with God. For example, a condition such as shame may lead to behaviours such as excessive drinking or drug abuse. This may include an individual with a heart-based spirituality trying to drown out or deaden the voice of God. A shame condition may be linked to Red Actions or behaviour, such as drunk driving or aggression may

relate to an individual who rejects higher authority and the rules of society. It may also be a case where an individual is 'testing' God to prompt a reaction or 'proving' that God does not exist by tempting fate.

Suicide

It is a sad fact that suicidal ideation and death by suicide are a growing trend internationally among veterans. The Australian Institute of Health and Welfare (AIHW) annual suicide monitoring report revealed that at least 1600 serving and ex-serving ADF members died by suicide between 1997 and 2020. There were also a further 79 deaths by suicide in 2020.[43] Such was the scale of this issue that Australia created a Royal Commission in 2021 with Letters Patent that directed an investigation into, among other areas, 'systemic issues and any common themes among defence and veteran deaths by suicide, or defence members and veterans who have other lived experience of suicide behaviour or risk factors (including attempted or contemplated suicide, feelings of suicide or poor mental health outcomes)'.[43]

Interestingly, nothing to date in the Royal Commission's reports or material mentions religion or spirituality. Some submissions have been from individuals and organisations with a faith agenda, but this has yet to translate into recommendations or proposed actions.[43]

Most faiths and religions do not support suicidal acts, including assisted suicide. In the case of Judaism and Christianity, while there is no explicit biblical prohibition on suicide, rabbinic authorities derived a prohibition that was later taken on by Christian theologians from the verse in Genesis 9:5, 'And surely your blood of your lives, will I require'.[2] Islam is more proscriptive, and in Chapter 4, Verse 30 of the *Qur'an*, God says: 'And kill not yourselves. Surely, Allah is Merciful to you'.[44] At the same time, there is significant evidence that religious and spiritual beliefs and counselling can positively reduce the provenance of suicidal action. Important work in this area includes Smigelsky,[45] Carey and Hodgson,[46] and Brandt.[47]

Despite this and the various spiritual and religious conventions and prohibitions, many veterans with religious or spiritual beliefs will take their lives. This area will hopefully be addressed in the Royal Commission's final report and deserves much more specific study and analysis. Meanwhile, there are likely to be some conditions and behaviours that might indicate or present as suicide ideation. For example,

- **Failure and guilt.** A condition such as guilt may lead to veterans developing a sense of failure and worthlessness and believing their only release is extreme punishment. Intense shame may cause veterans to withdraw and conceal physically or through numbing substance abuse.
- **Withdrawal and guilt.** A sense of guilt often leads to withdrawal, The ultimate withdrawal being suicide. For some veterans, that may even be the return to a loving God/father who will protect them.

Behaviour 2: Anger

A DVA publication discussing veterans and anger uses a case study of a twice-deployed veteran named Darren. After returning from the deployments left the Army and commenced a downward spiritual, which involved excessive drinking, physical abuse of his spouse and others, and depression.[48] The case study described that:

> *Darren struggled on his own and found himself reacting to the slightest things. People in the street who looked at him the 'wrong way' or walked too slowly, anyone really was at risk. Risky, it was because Darren had no doubt of his strength and how quickly his anger could appear like a flash out of nowhere. He was terrified that the two made a deadly combination.*[48]

The trope of the angry veteran spans several themes. It often relates to the 'Government' and its perceived failures regarding conflict and general actions. It is especially prevalent in areas of veterans' affairs and access to benefits. For example, a 2023 ABC News Story was headlined, 'Veterans say they are white hot with anger, as new data shows some waiting times blowing out at the Department of Veterans Affairs'.[49] Phoenix Australia notes that statistics from the *Australian Transition and Wellbeing Program* show that 31% of veterans and 16% of current-serving military personnel experience anger at a problematic level.[50] As a reference point, it notes that among those impacted by disasters, such as bushfires, 10% experience problematic anger. Findings such as these show us that anger is a significant issue that needs attention—other studies, such as Varker et al.,[51] show similar results.

The *APA Dictionary* defines anger as 'an emotion characterised by tension and hostility arising from frustration, real or imagined injury by another, or perceived injustice'.[52] The term emotion is important here. There is no suggestion of irrationality behind the veterans' feelings but, rather, that it is a deeper,

almost primal aspect of their behaviour. Some of this relates to how they feel society perceives them.[53] The treatment of Vietnam Veterans in Australia and the US is a case in point here. Part of the source of the anger also comes from a common feeling among veterans that no one' understands what we went through and that those who seek to help cannot, as "If you've never been there, you wouldn't understand'.[54] There is also substantial evidence pointing to anger as a symptom or comorbidity of PTSD.[55] Sadly, longitudinal assessment has also provided evidence that anger and PTSD can be a catalytic precursor to suicidal actions.[53]

From a spiritual perspective, there needs to be more research to establish the nature of the relationship between spirituality and anger. Given the previous discussion in this thesis, however, it is likely that the conditions and behaviours of a SW&I may present as follows:

- **Spiritual conflict – Anger at God**. Simply put, the individual feels that God failed them by not acting in a way they feel met their needs or desires. Their spiritual heart perceives God failed to protect them, a mate or the innocent. This sense that God failed them when they had previously placed trust, faith and belief in the Divine can be overwhelming and create significant anger and possibly aggression issues—especially when exacerbated by Red Actions such as excessive and dangerous consumption and use of alcohol or drugs.
- **Shame – Anger at self.** One result of this conflict may be that the individual may feel stupid or immature at having ever believed in God and any sense of power or benevolence they could rely upon. They may also feel anger and a sense of shame and embarrassment for having thought or trusted that God would let him serve. The condition of shame and the behaviour of anger in this circumstance may present rejection of authority, withdrawal and avoidance.
- **Guilt – Anger at God's representatives.** The Australian company commander in the Vietnam War thought the Methodist padre attached to his battalion was 'hypocritical' because he spoke of killing and forgiveness in the same breadth.[56] Likewise, a civilian RSCP, when asked how they would work with a veteran who had killed someone, replied that they would make the veteran 'spend the rest of his life on his knees begging forgiveness for the heinous sin they have committed…' would be judged as guilty of hypocritical.[57] This would have undoubtedly turned the individual away from the church and caused them to reject any further spiritual support.

Behaviour 3: Depression

Damien Thomlinson was an Australian Army infantryman, a veteran of tours in East Timor, the South Pacific and Afghanistan. He lost both legs in an Improvised Explosive Devise (IED) explosion in 2009. Reflecting on his depression following life after the military, he said,

> *You know, in the military, you're proud of how you look; you're proud of how you served. And all of a sudden, I couldn't serve in the way that I wanted to, as a commando in the special forces. That was it. That was my job, and to me, my identity… The enemies that I faced when I got home were a lot worse than the enemies that I faced on the battlefield, you know? For the simple fact that you're not ready for it. When you come back, it's the shock factor, thinking: 'Wow, I didn't really expect this. Is it me?'*[58]

For many veterans, depression is a real and palpable feeling that can dominate their lives. While it is gaining growing understanding within the community, it is a common condition among veterans across many conflicts. In a 2007 study, veterans from the Korean War displayed higher levels of depression over 50 years after the war.[59] Similar findings can be seen in Australian Gulf War veterans, with the prevalence of depression at 9.7% against 7.7% in a comparison group. Importantly, veterans reported slightly more severe symptoms (and were more likely to have been dispensed antidepressant medication).[60] In 2022, the AIHW assessed that 12% of males who ever served in the ADF reported having had depression or feeling depressed. Those who had ever served in the ADF were almost twice as likely to report having an anxiety-related disorder as those who had never served (21% compared with 11%).[61]

The *APA Dictionary* defines depression as 'a negative affective state, ranging from unhappiness and discontent to an extreme feeling of sadness, pessimism and despondency that interferes with daily life'.[62] Depression can present in various ways: feeling sad or having a depressed mood, loss of interest or pleasure in activities once enjoyed, trouble sleeping or sleeping too much, feeling worthless or guilty and ultimately, thoughts of death.

From a spiritual perspective, depressive symptoms and behaviour may be linked to cognitive dissonance when an individual finds their faith in God or a Divine figure is threatened or broken. In this sense, the conditions and behaviours of a SW&I may present as follows:

- **Guilt – Depressed at failing God.** The soldier who felt God did not love him as he had killed two men was demonstrating a guilty condition and depressive behaviour. How this specifically manifested in terms of his behavioural change is unknown, but the individual felt that he had done the 'wrong thing' in the eyes of God. As a result, he reached out literally and deliberately to the first RSCP (an Army padre) that passed by.
- **Spiritual conflict – Depressed now *knowing* that God is not real.** The result of a TPE that may cause an individual to perceive (heart of head) that God is not real must be devastating for those with any faith or spiritual background. Whether suddenly or over incidents or years, concerns regarding the existence and nature of God may make an individual feel that a foundational aspect of their lives is missing. They may, in turn, seek ways to withdraw so as not to be placed in a position to seek Divine help or try to manage depression through Red Actions such as various forms of substance abuse.

Behaviour 4: Loss of trust

One of the first areas to be included in studies of MI was the suffering of soldiers whose leadership, political, military and moral had failed them. This included battlefield blunders, tactical errors and cases where soldiers felt they had been lied to and deliberately misled. As Litz et al. noted in 2009, 'among those affected by MI, the capacity for trust is believed to be lost, impaired or even destroyed'.[29]

The importance of trust in operational circumstances cannot be overstated. This military service dynamic pushes the issue of trust to the forefront and has no limits. Accordingly, policy and culture seek to ensure individual and organisational safety is inherently dependent on trust between soldiers to adhere to a shared culture of accepted practices, principles, values, beliefs and behaviour.[63] Within an Australian context, this is exemplified by the universally accepted statement that 'you don't let your mates down'.[64] When trust is abused, it can significantly hamper access to social capital and supportive services, contributing to a downward spiral of increasing social isolation and difficulty accessing vital services.[63]

Spiritually, when an individual experience experiences a TPE, their perception of God may change. Their Spiritual Arc may grow, be restored or degrade.[5] Depending on the nature of the TPE, a degrading arc may lead some individuals to a crisis of faith or spiritual conflict in which their perception of God is significantly sullied to the point where they may feel that God does not exist. The state of cognitive dissonance that this engenders can be overwhelming, particularly if they have preconditioning factors such as a long faith history or close familial ties to a church or religious group.

In some cases, trauma may lead veterans to believe that God has betrayed their trust'. As such, a TPE becomes the catalyst for all the evil in the world that God has failed. When an individual experiences this and the true evil it represents, it provides an enormous challenge for veterans who were taught to believe in a good, caring and all-powerful God. For those who believe that God is a being who brings order from this may create a sense of invulnerability and continuity that is shattered by traumatic events. In the face of such hardship, to make sense of the universe, some veterans may conclude that God can no longer be viewed as all-powerful, completely loving and involved in the salvation of humanity. When the absence of God is experienced most extremely, some views of God may no longer be possible, and religious teachings may be seen as good theories, although essentially meaningless. Such a crisis can test those with the deepest and firmest faiths. This includes supporting RSCP. One US Army Chaplain in Iraq in 2003 membered thinking that,

> *I couldn't stand to hear that phrase any longer—'God was watching over me….' He wasn't watching over the good men I knew in Iraq. Faith was the centre of my life, yet it failed to explain why I came home, and those soldiers did not. The phrase was a Christian nicety, a cliché that, when put to the test, didn't fit reality… What kind of God would allow people to sink to the depths we here in this world had sunk?*[65]

In this sense, the conditions and behaviours of a SW&I with a loss of trust will principally result in withdrawal. Withdrawal in this circumstance may have some different aspects.

- **Withdrawal from spirituality.** Depending on the individual's background, this might range from no longer attending religious services to avoiding anyone or anything connected to their spiritual path. The likely thinking is that if they cannot trust God, who can trust his representatives on earth? The danger is that it can altogether remove the veteran from meaningful engagement and support.
- **Withdrawal from society.** Linked to this is a withdrawal from society in general. Like a spiritual withdrawal, this removes the veteran

from human contact to one degree or another. In this case, the failure of trust is extreme, and the veteran rejects both the spiritual and secular world. An aspect of this is that veterans may also reject the authority of secular leaders, military or civilian, as they are symbols of the Divine leadership, which they feel is no longer trust.

- **Withdrawal from treatment.** If a veteran has withdrawn from a previous spiritual scheme, it is unlikely that they will seek or respond to the spiritual aspect of treatment for their SW&I. This may also manifest in distrusting other practitioners and health professionals. This is particularly the case if the practitioner acts with undue authority and acts with what Shay and Munroe describe as the sometimes 'unallocated, God-speaking' voice of health professionals.[66]

Conclusion

Unlike St Longinus, the mauling that many veterans suffer as a result of issues such as shame, anger, self-abuse and depression are genuine, lasting and painful aspects of their lives. For a RSCP, or indeed any treating practitioner, to make a meaningful contribution to the treatment of an SW&I they must put aside their own unallocated, God-speaking voice and make a determined understanding of the particular nature of an SW&I. A SW&I starts with a break in an individual's relationship with their concept of God. The manifestation of the SW&I may then follow a pathway such as the PCB&RA Model.

This paper acknowledges that, in some respects, the behaviours of a SW&I may seem very similar to many mental health or general wellbeing issues. Indeed, in many cases, the treatment of SW&I may well utilise similar treatments and management approaches to MI or mental illnesses. The elements discussed in the PCB&RA Model are; however, all predicated on seeing these conditions, behaviours and actions through a spiritual lens.

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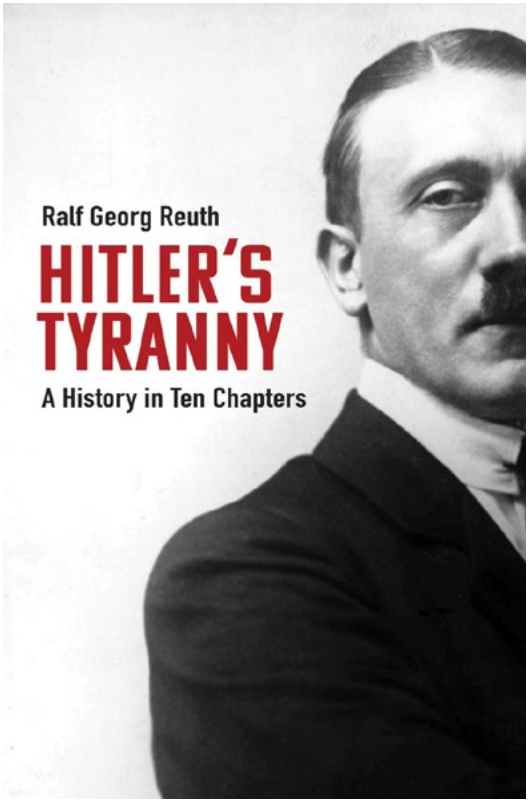
Book Review: *Hitler's Tyranny: A History in Ten Chapters:* The Last Adventurer-Conqueror

R Kaplan



The last adventurer-conqueror: A review of Hitler's Tyranny: A history in ten chapters

By Ralf Georg Reuth, Translated by Peter Lewis

Reviewed by Robert M Kaplan

The 20th century was the most murderous period in history. Between them, Mao Zedong, Josef Stalin and Adolf Hitler killed millions of people. While the first two are relatively neglected compared to Hitler (only third on the list, but the figures are still horrifying), 77 years since he killed himself in the Berlin bunker the tide of books on his life shows no signs of abating.

It started with Alan Bullock's *Hitler: A Study in Tyranny*, describing him as the last of the adventurer-conquerors. Books that followed gave various explanations for Hitler's rise to power and his tyrannical rule. Not all could be taken seriously. *The Hidden Hitler* portrayed him as a raging queen, seducing soldiers in the trenches, cross-dressing and intimate with Rudolf Hess.

There was something of a furore in the 1960s with the *Historikerstreit*, a dispute with those German historians who portrayed Hitler as a mere puppet manipulated by the forces around him. This did not last; however, one consequence was the 1968 revolutionaries, notably Baader-Meinhof, reacting to the denial of culpability of German citizens in the Holocaust. Germany had the best historians in the world, but some lost their objectivity after World War 1. Had they done their job properly, the 'stab in the back' myth on which Hitler capitalised would never have had the effect it did.

Over time, the focus of Hitler studies changed, reflecting trends in sociology, culminating in the highly regarded two-volume work by Ian Kershaw. Influenced by Max Weber, Hitler was portrayed as the ultimate charismatic leader who left it to his followers to 'work towards the Führer', anticipating his wishes. Interestingly, Weber died in 1920 when Hitler was still an obscure figure.

The archives have been saturated and no new information will emerge until the Russian archives are fully opened (? post-Putin). If there has been one trend in studies, it has been regarding Hitler's intentions towards Great Britain, a country he regarded as racially acceptable and a potential ally against the unreliable and indulgent Latins (he had few illusions about his Italian ally), as well as the Jewish Bolshevik threat. In Hitler's view, the ideal situation was an alliance that left the British their empire while allowing him to colonise Europe (for example, see *Hitler's American Gamble: Pearl Harbor and the German March to Global War* by Brendan Simms and Charlie Laderman).

This is debatable. As long as Britain remained an enemy island off Europe, Hitler faced the prospect of a two-front war, regarded as the cause of Germany's

failure in World War I. He had not counted on Britain's obdurate refusal—for which Churchill must take some credit—to settle for peace and, after evacuating 380,000 troops at Dunkirk, then winning the Battle of Britain, it remained a permanent threat. Hitler decided that as long as America stayed out of the war, he was safe to follow his primary strategy: the destruction of the Jewish Bolshevik Soviet Union to provide *Lebensraum*, the Eastern colony for German expansion, and, in the process, elimination of Jews for all time.

One school of thought is that he deliberately soft-pedalled the attacks on Britain, holding back from destroying the troops at Dunkirk, hoping that some arrangement could still be made. It is an easy conclusion to draw, but the issues surrounding the Dunkirk decision are not as simple as that.

Now we have *Hitler's Tyranny: A History in Ten Chapters* by Ralf George Reuth,[1] translated from the German original. This thought-provoking study takes aim at the prominent norms of Hitler scholarship over the last 40 years. Reuth challenges a range of orthodox views on such topics as how mainstream politicians facilitated Hitler's rise to power, the Führer's pact with Stalin, and the complicity of ordinary Germans in genocidal tyranny.

Reuth's account courts controversy on several points and offers a fascinating counterpoint to recent scholarship. Following a thematic rather than a chronological approach, Reuth examines 10 questions covering the dictator's rise to power and his rebarbative role in the war. These include: Was anti-Semitism more pronounced in Germany than elsewhere? Was Versailles responsible for Hitler's rise, and why did the Germans follow a racial fanatic like him? How did his war differ from all others before it?

The contrary answers Reuth provides show Hitler was not as much the inevitable consequence of the perturbations of German history but rose to power by capitalising on the chaos with opportunism, deception, and, where necessary, seduction. Analysing Hitler's actions as chancellor and military commander, Reuth portrays him as the antithesis of a specifically German strain of militarism and imperialism, shifting the focus back to Hitler's mindset and modus operandi. In all the situations examined, the finding is clear: while the precipitous circumstances following the war led to the chaotic conditions permitting the rise of the dictator—the same circumstances, albeit more protracted, led to Stalin's rise to power.

The myths Reuth sets out to demolish are well known and have received extensive analysis. Hitler intended to go to war at an early stage and was undoubtedly not inexorably drawn into it by the other powers. Britain and France, ducking, weaving and denying, did everything they could to avoid the conflict. While France led, Britain came late to rearming. As predicted by Marxist philosophy, Stalin, for his part, believed the capitalist powers would destroy themselves, leaving Europe open to be taken by the Soviet Union. In this, he was to be quite wrong; gritting their teeth, they were even prepared to have him as an ally to put an end to the German peril.

The problem was one of timing. Hitler aimed to have Germany fully armed for war by 1942–3 but knew that America could not be depended on to stay isolationist. The plan was to strike before the Allied powers were ready. For Hitler, the ultimate gambler, this was no problem. What caught everyone by surprise (possibly even Hitler) was the speed at which France fell, leaving him the undisputed master of Europe. It was a wake-up call for Stalin, who now had no buffer between him and Germany. The Molotov–Ribbentrop Pact ultimately proved to be worthless. Soviet rearmament sped up, and the lessons learned from the disastrous campaign against Finland began to apply. As events were to show, this was barely enough to hold on during the first months of the German invasion.

Reuth makes the case that Hitler, from an early stage, intended to go to war with Russia. Where Britain had colonies spanning the globe, Germany needed to expand eastwards, providing them with land and resources to eventually challenge America. What held him back was Britain's survival. *They* could not be a serious threat, Hitler decided, until America joined the war. Once he had conquered Russia, there would be no option but for Britain to surrender.

A much-debated issue was why the German generals ignored the lessons of Napoleon's disastrous failure in the Russian winter in supporting Hitler's decision to invade. Reuth has it right. They were massively overconfident after the fall of France in six weeks. Those who had serious reservations kept it to themselves. Here, we see a characteristic feature of dictatorships. The leader surrounds himself with sycophants who only tell him what he wishes to hear. Any dissenters are expelled or face an even worse fate. It is an astonishing but predictable turn of history for Putin to reprise the same scenario in his failed attempt to invade Ukraine.

Another issue clouding the historical record was Hitler's suicide, removing him from the scene and leaving the generals to hide behind the same excuse: it was all Hitler's fault, and they had no way of resisting his reckless leadership. But the generals had much more to answer for and, in many ways, got away with their collusion in the destruction of the Jews, aside from the few token figures who were called to account.

Another issue is the vaunted efficiency of the German military. They did have the best generals in the war (Zhukov notwithstanding). However, there were surprising deficiencies lower down, and it is underestimated how often they only succeeded by profiting from their opponents' ineptitude. Their intelligence was often poor, explaining how they were surprised by the counter-attacks at Moscow and Stalingrad. This was not helped by Hitler's refusal to accept any information that countered his view of an inexorable surge towards victory.

Reuth removes any doubts about how the appalling fate of the Jews was decided. The idea that this was primarily an impromptu decision arising from the invasion of Poland and Russia, bringing several million more Jews into the Reich, cannot be sustained. From an early stage, Hitler made it clear that he intended to eliminate the Jews and constantly repeated this. Every step of the war, he insisted, was to be blamed on the Jews who, in his delusional belief, not only controlled Bolshevik Russia but capitalistic America (a paradox that never seems to strike anti-Semites). In this, the hieratics around him, to say nothing of the German military and public, were complicit—the result a stain on human history for all time.

Considering the door-stopper books that have preceded his work, the author has adopted a concise approach, which leads to easier reading that some will welcome. However, it requires a degree of faith to accept findings that can appear superficial, if not thin. That Reuth's Hitler is a murderous fantasist and political opportunist consumed by the most extreme ideology of racial superiority in history is not a difficult conclusion to reach, but there is much more to it. For many, Reuth will have explained the deluded Fuhrer that fits with their view. Whether it can be allowed to pass without consideration of the deeper issues is something each reader will have to decide. What cannot be denied is that Reuth takes us back to an early Hitler: Alan Bullock's adventurer-conqueror, the most malevolent fanatic in history. Memories fade, but already the killing fields of Ukraine remind us that such myrmidons have only been hidden and are ever waiting to emerge.

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Alcohol Misuse Among Military Veterans with Subjective Cognitive Decline

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Abstract

Although binge drinking has been identified as a significant risk factor for the development of cognitive decline, much less attention has been paid to binge drinking among patients already experiencing cognitive decline. Given that military veterans in the general population are more likely to engage in unhealthy alcohol consumption, we hypothesised that veteran–nonveteran disparities in binge drinking may also extend to patients with subjective cognitive decline (SCD). We analysed data on alcohol misuse from the 2016–2018 Behavioral Risk Factor Surveillance System on a sample of veterans and nonveterans (aged ≥78 years) with and without SCD (n = 10 063). In a logistic regression model adjusting for relevant covariates, an interaction term showed that the odds of binge drinking were higher for military veterans with SCD than nonveterans with SCD, nonveterans with SCD and veterans without SCD (aOR = 2.19 [95% CI = 1.04, 4.71]). Given the prevalence of binge drinking (5%) among military veterans with SCD, there is a need to simultaneously screen for binge drinking and SCD among older military veterans in healthcare settings.

Keywords: veterans; cognitive decline; alcohol

Introduction

Subjective cognitive decline (SCD), which is a self-reported condition of worsening memory loss or confusion within 12 months, has been described as an early symptom of Alzheimer's disease.[1] Individuals with SCD may perceive a decline in their cognitive abilities, such as memory, attention or problem-solving skills. Unlike objective measures of cognitive decline, which are typically measured through standardised neuropsychological tests or imaging, SCD relies on an individual's own assessment of their cognitive functioning.

SCD can be an important early indicator of potential cognitive impairment or the onset of neurodegenerative conditions like Alzheimer's disease. While it's essential to recognise that SCD does not, by itself, confirm cognitive impairment, it serves as a valuable starting point for further evaluation and intervention. Healthcare professionals often use SCD assessments to better understand a patient's cognitive concerns, track changes over time and decide whether more comprehensive cognitive testing is necessary.

Taylor and colleagues[2] found that military veterans are at greater risk for SCD than nonveteran civilians, a disparity that may be due—in part—to certain SCD risk factors that are especially akin to military service, such as traumatic brain injury.[3] Other behavioural risk factors for SCD, such as binge drinking, cigarette use and frequent mental distress, are also more common among military veterans.[4-6]

Although binge drinking—due to its neurotoxicity[7]—has been validated as a significant risk factor for dementia in systematic reviews,[8] binge drinking among individuals who are already experiencing SCD is less studied. As suggested by Berntsen et al.,[9] little work has looked at the alcohol use behaviours of individuals who exhibit cognitive decline. To the extent that brain function could be changed due to the interaction between disease-related processes and alcohol use, many of the deficits that accompany cognitive decline may become exacerbated in the event of intoxication, including greater memory and learning deficits, as well as lethargy and problems concentrating.[10] Furthermore, Heymann and colleagues[11] found that alcohol consumption may hasten the rate of cognitive decline once it begins.

Given the possible adverse effects of binge drinking on individuals with cognitive decline, it is important to identify groups of cognitively declining individuals with high rates of binge drinking. Identification of at-risk groups could guide the implementation of screening and intervention programs for these populations. Because little is known about disparities in binge drinking among veterans and nonveterans

with cognitive decline, and veterans have been shown to have higher rates of binge drinking than the general population,[12] this study aimed to determine differences in binge drinking among older military veterans and nonveterans with and without SCD between 2016 and 2018.

Materials and methods

Data collection and study sample

In this cross-sectional study, we obtained and merged data from the 2016 to 2018 Behavioral Risk Factor Surveillance System (BRFSS) surveys.[13] The Centers for Disease Control and Prevention's BRFSS is conducted yearly with adults via landline or cellular telephones in all 50 states in the United States, as well as in the District of Columbia, Puerto Rico and Guam. In 2016, 2017 and 2018, respectively, landline-based interviews resulted in 48%, 45% and 53% response rates, while cellular telephone-based interviews resulted in 46%, 45% and 43% response rates. Each state/territory used a disproportionate stratified sampling design in order to collect data from landlines, with state/territory respondents divided into two groups: high density and medium density, where the number of listed households in an area code determines density. A simple random sampling design was used to gather data via cellular telephone.[14]

Individuals included in this study were survey respondents ≥78 years old (a key age at which Alzheimer's is diagnosed)[15] who provided an answer to the following question, designed to assess SCD: 'Have you experienced confusion or memory loss that is happening more often or is getting worse?' Data from a total of 10 063 participants were collected in the 2016–2018 BRFSS surveys.

Measures

Numerous studies have documented the validity and reliability of questions asked in the BRFSS survey.[16] In this study, we used information about each respondent's age in years (≥78 years), race/ethnicity (white, black and 'other' race/ethnicity), sex (male or female) and urban/rural dwelling location (urban/metropolitan statistical area or rural/not in a metropolitan statistical area). We determined military service status (civilian or military member) with the following question: 'Have you ever served on active duty in the United States Armed Forces, either in the regular military or in a National Guard or military reserve unit (yes or no)?'

Mental distress was measured by: 'Now thinking about your mental health, which includes stress, depression and problems with emotions, for how many days during the past 30 days was your mental health not good?' Although some research has dichotomised responses to this question,[17] we left the variable as a continuous measure of mental distress. We also obtained the CDC BRFSS calculated variable for the current use of combustible cigarettes.

The dependent variable in this study was binge drinking. Binge drinking was defined as self-reported consumption of five or more drinks of alcohol on one occasion for males and four or more drinks of alcohol on one occasion for females (i.e., coded dichotomously). These thresholds are consistent with US Centers for Disease Control and Prevention guidance.[18]

Data analysis

We used the BRFSS complex survey design weights, the methodology for which is described elsewhere,[19] in all analyses. Weighted prevalence estimates with 95% confidence intervals for binge drinking were developed. We also calculated weighted prevalence estimates of binge drinking by veteran and SCD status. To examine adjusted differences in binge drinking by veteran and SCD status, we estimated a logistic regression model. In this model, we controlled for age, race/ethnicity, sex, rural/urban location, mental distress and smoking status. Adjusted odds ratios with 95% confidence intervals are presented.

Results

Demographic characteristics of the study sample can be found in Table 1. Participants were aged 78, 79 or 80 years, which helps to control for lifetime cumulative exposures and risk factors in the current study. White was the predominant self-reported race, followed by black and other individuals. Females were more represented in the nonveteran sample than the veteran sample. Cigarette use was reported by approximately 4% of the sample among veterans and nonveterans. Among veterans and nonveterans, approximately one-third of participants lived in a rural area. Participants reported approximately 2 days of poor mental health, on average, in the previous month. The following is a list of 20 states in which respondents reported living, all of which garnered sample sizes ≥100: Alaska, Delaware, Georgia, Hawaii, Idaho, Indiana, Kentucky, Massachusetts, Mississippi, Missouri, Montana, New Hampshire, New Jersey, New Mexico, North Carolina, Oregon, Pennsylvania, Tennessee, Vermont and Washington. This study included 1125 (19.86%) military veterans.

Table 1. Demographic characteristics of veteran and nonveteran participants aged ≥78 years (n = 10 063)

	Nonveteran (n = 7646)		Veteran (n = 2417)	
Variable	n	%	n	%
Race				
White	6698	87.60	2174	89.95
Black	386	5.05	65	2.69
Other	562	7.35	178	7.36
Sex (female)	6693	87.54	99	4.10
Rural	2605	34.07	766	31.69
Current Cigarette use	340	4.44	97	4.01
Subjective Cognitive Decline	926	12.11	440	18.20
	M	SD	M	SD
Days of poor mental health	2.04	6.13	1.83	6.21

Regarding binge drinking, results showed that those with SCD had higher binge drinking rates (2.69% ± 0.74) than those without SCD (1.94% ± 0.19), ignoring veteran status. Veterans had higher binge drinking rates (3.19% ± 0.01) than nonveterans (1.64% ± 0.01), ignoring SCD status. The introduction of the veteran status variable with SCD added additional variability in binge drinking rates. Binge drinking rates were highest among veterans with SCD (4.98% ± 0.16), followed by veterans without SCD (2.81% ± 0.04), nonveterans without SCD (1.65% ± 0.01), and nonveterans with SCD (1.58% ± 0.08).

Results of logistic regression models for binge drinking by veteran and SCD status are shown in Table 2. After adjusting for confounding factors, such as race/ethnicity, age, sex, rural/urban location, mental distress and smoking status, results showed that an interaction term for veteran status and SCD status was significantly associated with binge drinking (aOR = 2.18 [95% CI = 1.04–4.71]). The results of the model reinforce the differences in binge drinking rates described in the previous paragraph.

Table 2. Adjusted odds ratios for risk factors for binge drinking among veterans and nonveterans with and without subjective cognitive decline, 2016–2018

Variable	aOR	95% CI	aOR	95% CI
Race/ethnicity				
White	Ref		Ref	
Black	1.78	1.04–2.89	1.81	1.06–2.93
Other	1.67	1.10–2.45	1.68	1.11–2.46
Sex (female)	0.27	0.19–0.42	0.27	0.18–0.39
Rural location	0.86	0.63–1.17	0.86	0.63–1.17
Days of poor mental health	0.99	0.97–1.02	0.99	0.97–1.02
Current use of cigarettes	3.39	2.17–5.11	3.41	2.19–5.13
Subjective Cognitive Decline (SCD)	1.26	0.85–1.82	0.85	0.46–1.46
Veteran	0.78	0.54–1.15	0.68	0.45–1.01
Interaction: Veteran x SCD			2.18	1.04–4.71

Note. aOR = adjusted odds ratio; Ref = reference category

Discussion

The primary finding of this study concerns the identification of a disparity in binge drinking behaviour among military veterans and nonveterans who have SCD. Specifically, the results of this study showed that veteran and SCD status, combined, was associated with a greater likelihood of binge drinking. The disparities discovered in this report mirror disparities in populations of veterans and nonveterans without SCD.[20]

Because (a) Taylor et al.[2] found that veterans are at greater risk for SCD and (b) binge drinking following a diagnosis of cognitive decline can accelerate mental deterioration, including worsening memory loss or confusion, there is a need to identify heavy alcohol consumption or binge drinking and SCD early among military veterans. Some research has shown that identification of early cognitive decline can be done using screening tools, such as the Short Blessed Test, in emergency departments.[21]

Brief interventions to improve memory function in positively screened SCD patients may also be efficacious.[22] Because screening and brief intervention (SBI) programs have been successful in identifying and treating behavioural health issues in military veterans,[23,24] adapted SBI programs for cognitive decline may also be beneficial. For example, Cahn-Weiner et al.[22] found that a brief intervention for mildly impaired Alzheimer's disease patients resulted in modest gains in recognition of test material and recall of test material from training sessions over 6 weeks.

Binge drinking can accelerate natural brain aging and exacerbate underlying biological mechanisms known to contribute to cognitive decline. The following discussion provides a speculative mechanism underlying the hypotheses tested in this study and the implications of the results. Binge drinking causes sleep disturbances that perturb the glymphatic clearance of neurotoxic proteinopathies, leading to their accumulation and aggregation.[25] Furthermore, chronic alcohol consumption increases the chance of cardiovascular disease,[26] which is a midlife risk factor for cognitive decline.[27] When mental health issues are coupled with binge drinking, such as in the case of military veterans, cognitive deficits are often the long-term neurological consequences of inadequate interventional strategies. As such, a multimodal approach that addresses heavy alcohol consumption or binge drinking coupled with a combination of pharmacotherapeutic approaches may be needed to ameliorate cognitive decline.

Given the relatively high prevalence of binge drinking among military veterans with SCD, there is a need to screen for binge drinking and SCD simultaneously among military veterans. SBIs for binge drinking have been efficacious in reducing alcohol consumption among military veterans.[23] However, access to such interventions is limited in rural areas of the United States.[24] Implementing telehealth care delivery methods in screening and brief intervention programs for military veterans living in rural areas may provide a means of overcoming access issues.[28]

Some limitations accompanied the analysis of data in this study. First, data in this study were self-reported by individuals who testified to their experience of cognitive decline. As such, the results of this study may suffer from recall bias. Second, the cross-sectional nature of this report's study design precludes the possibility of making conclusions about causal relationships. Future longitudinal research is needed to see if alcohol use behaviours change over time differently between veterans and veterans as they move from full cognitive function to a state of cognitive deterioration. Third, given that the survey questions in this report concerned sensitive topics (i.e., alcohol consumption at unhealthy levels, potential cognitive decline), it is possible that social desirability bias resulted in underreporting of problematic alcohol consumption or SCD. Fourth, although we were unable to confirm, it is possible that the same participant could have taken the BRFSS survey over multiple years. Fifth, we were unable to ascertain the lifetime or cumulative consumption of alcohol. Sixth, the BRFSS did not include a variable about the length of military service.

To conclude, based on a search of articles indexed in PubMed, this is the first study to examine veteran–nonveteran disparities in binge drinking among individuals with SCD. The results of this study showed that veteran and SCD status was associated with a greater likelihood of engaging in binge drinking. Screening and brief interventions are needed to identify and rapidly treat SCD and binge drinking in this population. Future research, especially projects that seek to identify reasons for binge drinking among veterans with SCD, is needed to better tailor interventions. Furthermore, studies that examine the experience of women veterans,[29] the role of psychological resilience on health behaviours,[30] and other reintegration outcomes,[31] may provide additional insight on the matters explored in this study.

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Acute Schistosomiasis: The 'Fluke' That Saved Taiwan

G D Shanks

Abstract

Acute schistosomiasis is rarely of military concern, but epidemics have disrupted tropical operations. Acute schistosomiasis is particularly challenging to diagnose because it presents as a non-specific febrile disease, often with an urticarial rash before parasites appear in the stool. US Army combat engineers were infected during bridge construction on Leyte in the invasion of the Philippines, requiring mass evacuation to the USA (n=1300) in 1945. An entire RAAF airfield construction squadron became ineffective, with a 40% infection rate from 16 days of exposure around the Bislig River on Leyte. The Chinese People's Liberation Army's planned invasion of Taiwan was indefinitely delayed when 38% of the infantry assault force became acutely infected with *Schistosoma japonica* following amphibious training in the Yangtze River delta. In febrile epidemic situations, great diagnostic efforts are often required to determine the prevention and prognosis for affected units to reassure soldiers against rumour and disinformation.

Keywords: acute schistosomiasis, South China Sea, disease casualties

> *The importance of full medical intelligence of newly entered tropical areas is obvious from this outbreak, also the need for certainty of pure water supplies.*[1]
>
> *This tiny worm defied even the greatest physicians!; Hundreds of villages choked with weeds. Men wasted away.* Mao Zedong[2]

Schistosomiasis is a trematode (fluke) infection with a complex life cycle involving snails and skin-penetrating parasites. It rarely impacts military operations, but it was familiar to the ANZACs of the First World War in Egypt because of the haematuria caused by *Schistosoma haematobium* after swimming in the Nile River.[1] Acute schistosomiasis or Katayama Fever is a relatively rare syndrome occurring soon after exposure to contaminated fresh water and is primarily observed in modern adventure tourists in Sub-Saharan Africa.[3] Symptoms include nocturnal fever, cough, myalgia, headache and abdominal tenderness from the migrating parasites following skin penetration. It is often difficult to diagnose as the symptoms predate finding parasites in the urine or stool and may depend on a high index of suspicion based on an exact travel history with freshwater exposures. Although great progress to eliminate schistosomiasis has been made recently, it still exists in parts of South-East Asia and China particularly in isolated rural river valleys.[4,5] Historical aspects of schistosomiasis in military populations are reviewed to give perspective to this tropical disease that military physicians are unlikely to encounter except during operations in poorly sanitised rural areas in the Indo-Pacific Region.

The schistosomes native to Southeast Asia are usually speciated as *Schistosoma japonica*, which generally produces more eggs and acute symptoms than *S mansoni* or *S haematobium*, usually found in Africa and Latin America.[6] Parasite eggs excreted in the stool or urine hatch in water to form miracidia, infecting freshwater snails as the intermediate host. Free-swimming cercaria from sporocyst rupture in the snails can penetrate the skin of humans, which completes the parasite's life cycle. Poorly sanitised rural areas where people occupationally contact fresh water, such as rice farmers and fishermen, are typical of remaining foci of schistosomiasis. Mass chemotherapy with modern oral drugs such as praziquantel has greatly reduced the disease burden in many places but schistosomiasis remains a zoonosis in some parts of China and Southeast Asia.[4,7,8]

The US military of the Second World War had little experience with schistosomiasis even with its colonial history in the Philippines. An outbreak of *Schistosoma japonica* in late 1944 was unexpected and remained largely geographically limited to Leyte despite the eventual capture of all the Philippine Islands by the US military. Combat engineers engaged in bridge building/repair were particularly affected, but the common exposure was freshwater contact in areas regardless of the type of military personnel involved. Attack rates included up to a majority in engineer

companies but were usually in the 10–20% range. Screening of whole units often found asymptomatic cases, creating a dilemma in handling highly infected groups.[9] Due to the potentially toxic nature of the then-current therapy (antimony injections) and the public health aspects requiring long follow-up periods, the US Army Surgeon General ordered known cases (n=1300) of schistosomiasis to be evacuated to two specialist tropical disease hospitals in the USA for evaluation.[9] Most soldiers were not acutely ill in the USA, and the antimony treatments were better tolerated than expected.[10] Three months was the usual period to determine relapses, defined by the reappearance of ova in stools. A majority of those medically evacuated were only mildly ill, and only a few deaths (n=2) occurred due to neurological complications.[11] Although there were some concerns, particularly that prisoners of war might become public health risks of re-establishing infectious foci of schistosomiasis outside of the Philippines (e.g. Hawaii), this did not occur.[9]

Similar events occurred in one Australian military unit, the Number 3 Airfield Construction Squadron RAAF (Figure 1). This squadron was on Leyte for only 16 days, staging for its onward movement to Mindoro; however, almost all of the infections were traced to freshwater contact in the Bislig River in Leyte[1] (Figure 2). The epidemic of febrile disease with arthralgia and urticaria starting two weeks later on Mindoro was originally thought to be sand-fly fever but was eventually recognised as Katamaya Fever from schistosomiasis once parasite eggs were found in stools.[1] The entire squadron was eventually repatriated for evaluation in Australia, where 226/565 (40%) airmen were found to be infected with schistosomiasis.[12] Most of the men were asymptomatic, but >100 continued to excrete schistosome eggs for up to a year. Treatment with injectable antimony appeared only loosely connected to any clinical outcome.[12] Eosinophilia was a useful laboratory marker that persisted even after one year. The major outcome of the Allies encountering schistosomiasis in Leyte was the removal of a few highly infected units (50th US Army Combat Engineers, RAAF No 3 Airfield Construction Squadron) from theatre for public health purposes due to difficulties in treatment and diagnosis.[1,9]

Katayama Fever demonstrated an important political impact in 1949 when it delayed and then removed the threat of invasion of Taiwan by the Chinese People's Liberation Army (PLA).[2] The Nationalist Republic of China Army had lost the civil war with the PLA in 1949 and had largely retreated to offshore islands, including Taiwan and Hainan. A PLA field army near Shanghai was designated for amphibious training to capture Taiwan, which involved teaching thousands of soldiers to swim since no specialised landing craft existed to take them directly to the invasion beaches 180 km across the Formosa Strait.[13] The risk of *Schistosoma japonica* in the coastal waters of the Yangtze River delta was unappreciated. It resulted in a large outbreak of Katayama Fever involving at least 38% of the invasion force (n=37 000). This delayed the invasion plans by at least six months, by which time the Korean War had started, and the US Navy's 7th Fleet had deployed to deny PLA access

Figure 1: No 3 Airfield Construction Squadron RAAF was one of the few Australian units involved in the invasion of the Philippines. In December 1944, they landed briefly (16 days) on Leyte where they encountered schistosomiasis before moving on to Mindoro. Australian War Memorial (AWM) photo HOB/56/0661/MC, now in the public domain.

Figure 2: Nearly 40% of the men in No 3 Airfield Construction Squadron RAAF were acutely infected with *Schistosoma japonica* during water contact on Leyte, similar to that shown in AWM photo OG1830, now in the public domain.

to the waters around Taiwan.[13] The PLA eventually captured Hainan Island in 1950, only 30 km from the mainland; however, it was unable to manage an amphibious assault on Taiwan due to delays forced by schistosomiasis (Figure 3). *Schistosoma japonica* thus became the 'fluke' that saved Taiwan.[14] Schistosomiasis remains endemic to some of the impoverished sections of China primarily because of the zoonotic nature of the disease and difficulties in removing animal reservoirs. Ironically the schistosomiasis on Taiwan is animal-adapted, such that little, if any, human disease has ever existed on the island.[7]

Figure 3: Chinese propaganda poster showing the 1950 liberation of the island of Hainan in southern China, which was supposed to have been the model for the similar invasion of Taiwan, which Katayama Fever disrupted due to Schistosoma japonica. Note the Chinese People's Liberation Army forces using wooden junks fighting against the Republic of China's steel naval ships. From http://www.commonprogram.science/poster.html#images2-37

The Australian Defence Force has no current intention of deploying into areas with known foci of schistosomiasis, but that was also true during World War II. The challenge for medical planners is anticipating what exotic tropical infections might become necessary in our Indo-Pacific Region without becoming paralysed by fear of footnotes in a tropical medicine textbook. History is a reasonable screen for risk; if it happened once, it could happen again is the rough logic one can apply to what is recorded in the Official Medical Histories of the War.[1] The infectious agents proven to disrupt military operations include malaria, dengue, scrub typhus, influenza and diarrhoeal disease, with minor contributions from filariasis and schistosomiasis. More than the geography, however, it depends on what soldiers are doing in the area. Very few Allied soldiers on Leyte got schistosomiasis in 1944 unless they were swimming in fresh water contaminated by snails. Such a nuanced and thoughtful approach to disease epidemiology will be needed in future campaigns, especially given the near certainty of dealing with internet-generated disinformation from any outbreak of non-specific illnesses.

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Psychological Screening in the Australian Defence Force: An Historical and Contemporary Analysis of what Works

K Tuppin, B W Morrison, J K Earl

Abstract

With a rapid and significant rise in psychological screening within the Australian Defence Force (ADF) over the past 20 years, ambiguity has developed between a psychological screen and a psychological assessment used for pre-employment and pre-deployment selection purposes. Additionally, confusion persists around what constitutes a mental health or psychology screen and when it should be used. To provide greater clarification, the origins and purpose of screening for selection for pre-employment and pre-deployment in the ADF and its current uses are explored in this article. A review of contemporary and historical literature examined the use of screening for military selection. It was concluded that screening for selection is useful when estimating traits such as intelligence in pre-employment selection and identifying current mental illness for pre-employment and pre-deployment selection. However, screening is not—and has never been—successful in identifying those who may be predisposed to developing mental distress in the future. The review, therefore, suggests a more nuanced approach to psychological screening for selection in the ADF. Recommendations are made to better understand and standardise the purpose of screening and to consider using different screening tools in a selection versus a mental health support context.

Keywords: psychological screen, selection, mental illness, mental distress, military

Introduction

The psychological selection of people into the ADF, and for deployment to warlike or peacekeeping activities once in the ADF, has been a topic of interest for decades. This is due to a need for the right people to be selected to ensure a successful mission and minimise the psychological harm to those deployed individuals. The military has historically used both psychological screening and psychological assessment processes for selection purposes, with advances in both processes often rapidly occurring during periods of conflict to meet the necessary expanding processing volume. These changes have incorporated the evolution of the psychological and psychiatric theories underpinning the selection processes, concurrently advancing the tools used in screening and assessment. Both processes have had varying levels of success. However, the use of psychological screens has multiple purposes and thus have tended to be used across several different purposes, often using the same screening tools, which can confuse the understanding of that purpose by those being screened. It has been some time since the ADF comprehensively reviewed its psychological screening program and its tools, with changes made incrementally in the last 10–15 years after an initial rapid expansion in response to multiple military commitments and concurrent government demands. As a result, there has been some blurring of both the intent and process of psychological screening in selection, which may have impacted screening's current overall 'fit for purpose' for the ADF.

In this article, the origins and purpose of screening for selection for pre-employment and pre-deployment in the ADF, as well as its current uses, are explored to better understand the possible uses and misuses of psychological screening in a military selection context and to provide future considerations for psychological screening in military selection. A blend of historical and contemporary approaches has been incorporated due to past military screening protocols and practices' strong influence on current practices within the ADF.

Method

A review of contemporary and historical literature, including journal articles, book chapters, and 'grey' literature that examined the use of screening for military selection, was conducted using the databases of Google Scholar, EBSCO, Ovid, ProQuest, ScienceDirect and Taylor & Francis. Terms used included 'psychological selection', 'armed force*', 'military personnel', 'military leader*', 'recruit*' and 'selection criteria'. Literature was selected for inclusion according to topic relevance (noting the focus on both historical and contemporary references), with a strong preference for empirical research, systematic reviews, and policy/procedural analysis. A secondary search was conducted within the reference lists of selected literature for material, particularly grey literature, not identified in the original search. Literature that focused only on screening for mental health issues in a military population, with no selection context, was not included as it was outside the scope of psychological screening for selection purposes.

The literature for psychological 'screening' and 'assessment' was found to be moderately confounded due to generally poor or missing definitions around what constituted a screen and an assessment for psychological selection purposes. Therefore, definitions were established to determine which literature would be considered within this review. The definitive definition for 'screening' is provided by the World Health Organization,[1] as '… the presumptive identification of unrecognised disease or defect by the application of tests, examinations or other procedures that can be applied rapidly'. The key point is that screening for indications of disease or similar in an otherwise well population is a quick process. Within psychology, screening is often conducted as a series of questions or via a standardised questionnaire or test and may be used for various functions.[2]

Screening is different to an 'assessment'. When used in psychology and mental health, an assessment evaluates an individual in a particular situation so that the information derived from the assessment can help make a decision or diagnosis.[3] An assessment may use some of the same questions and tools that a screen uses but generally goes into much more detail and is more multifaceted than a screen.[3] Both an assessment and a screen may be used for different purposes or contexts. Therefore, this purpose must be clearly articulated whenever a screening or assessment tool is used.[4] Characteristics of a psychological screen vs psychological assessment are outlined in Table 1.

The difference between the terms 'screening' and 'assessment' is important, as this dictates what tools can be used, the time taken to apply those tools and what the information could or should be used for. This has an impact on the relative understanding by those individuals, groups, and populations they are being used on, and potentially affect informed consent and stigma, both within selection contexts and within a mental health context.[4] The use of psychological assessment in a selection context is beyond the scope of this article, with our review limited to screening.

History of psychological screening for military – World War I

Much of Australia's early understanding of psychological screening comes from the British and the American systems used during World War I (WWI) and World War II (WWII). In both countries, screening was used to address a critical issue of people's capability in a large-scale conflict with a very short time frame and, therefore, was initially not evidence-based. The British traditionally approached their military as an extension of their social class system due to assumptions around hereditary being linked to good mental health and morality;[5] therefore, those of higher social standing were automatically assumed

Table 1: Characteristics of psychological screening and psychological assessment

Screening characteristics	Assessment characteristics
· Screening sorts out apparently well persons who probably have a disease from those who probably do not. · A screen is not intended to be diagnostic; however, it may be so if done rapidly. · Persons with positive or suspicious findings must be referred for assessment, diagnosis and necessary treatment. · May include verbal questions, physical examination and questionnaires.	· Administration and interpretation of psychological tests for the purposes of diagnosis and treatment. · Conducting structured and unstructured interviews. · Observations of interpersonal interactions. · Behavioural observations, including in natural settings. · May include neuropsychological assessment and/or behavioural assessment.

to be able to better cope with military demands. WWI challenged these assumptions, most notably because it swiftly became apparent that 'shell-shock' (now recognised as an early iteration of post-traumatic stress disorder [PTSD]) could affect both soldiers and officers.[5,6] The subsequent focus of the military was to understand the new war 'neuroses' as quickly as possible and find ways to treat them to get soldiers back to the front line. This was made ever more urgent with the increasing attrition rate and corresponding rush to replace recruits, which overwhelmed the medical officers in charge of their examinations.[7] Hence, due to other priorities, the pre-employment psychiatric screening of recruits was not approached systematically.

Similarly, in the United States of America (USA), screening was recommended to exclude those who were 'insane, feeble-minded, psychopathic and neuropathic'.[8] This screening only happened if the soldier came to the attention of their commander during training, resulting in a referral to a psychiatrist for pre-deployment screening or, if time was available, a psychiatric assessment. However, when this approach did not translate into lower psychiatric battle casualties, the USA began to attach psychiatrists to their induction centres to conduct pre-employment psychiatric screens rather than wait until they were in training. This did not significantly change the outcomes, as the screens were typically very brief, taking only a few minutes, due to the significant number of recruits that needed to be processed,[9] and lack of agreement on what screening criteria should be used for selection purposes.[10] This again points to the rapid expansion of screening due to the sheer volume of people taking priority over establishing consistent screening processes based on evidence and psychiatric theory, resulting in poor outcomes for the military, particularly around psychiatric casualties from the battlefield.

At about the same time, psychologists in the USA were considering how they could help with the war effort. Robert Yerkes, an American psychologist, was influenced by the prevailing contemporary social norms of equality, deciding that America could be more equitable and efficient if people could find their place in society based on their abilities, as determined by scientific testing.[11] He and his committee subsequently trialled and refined individual and group tools and procedures for the psychological screening of military recruits, aiming to identify recruits whose intelligence levels were insufficient for understanding military training.[12] The intelligence screening tools were used for mass pre-employment screening and later as part of assessments during training. The screens were also useful for identifying people suitable for officer training, senior non-commissioned officer selection, and specialised jobs,[12,13] contributing to his ideals of a meritocracy.[11] These screens successfully reduced military training failure rates,[14] and provided the foundation of many of the psychometric tests for intelligence and aptitude used by the military and the psychology profession today.

Australia did not use either mental health or intelligence screening for recruits during WWI. Instead, most of the soldiers who would be deemed psychologically unsuitable were identified by their commander during training prior to deployment overseas.[15] At the time, Australia still subscribed to a 'moral' (right vs wrong behaviour) concept of mental illness popular with the asylums in the previous century and closely linked to our convict history; thus, categories such as 'delinquent conduct' were included as psychiatric considerations.[16]

History of psychological screening for military – World War II

The sheer number of people being diagnosed with a type of war neurosis at the end of WWI set the scene for WWII, where there was an increase in interest in screening potential recruits for psychiatric vulnerabilities. WWII brought more nuance to the debate around the abilities of screening for pre-employment and pre-deployment, although its application continued to lack any standardisation. It was generally accepted that a recruit with *existing* psychiatric concerns could be detected through either their medical board (despite it lasting for only one to two minutes) or their conduct and behaviour during training. However, there was considerable debate about whether it was possible to *predict* who would break down in combat,[17] mainly as there was still doubt about what factors contributed to such breakdowns.[18] Thus, the factors used for psychiatric screening continued to lack evidence. An examination of some of the psychiatric questions and techniques used by both American and British psychiatrists during their examination of recruits reveals propensities in the approaches, which potentially screened out numerous otherwise suitable candidates for military service. For example, numerous psychiatrists ensured recruits were naked for their psychiatric examination, believing it gave clues into their personality and that they would be less likely to tell a lie.[19,20] During the psychiatric interview, the recruit would be marked down if they admitted to any topics in Table 2.

Table 2: Psychiatric interview topics*

The psychiatrist would mark down the recruit if they admitted to any of the following:
Stammering
Enuresis
Insomnia
Neurotic fears (such as the dark, loneliness, closed spaces)
Unsatisfactory record at work or school
Comparative lack of interest in sports
Fainting at the sight of blood
Visceral responses to such things as exams
Family background (including being from a 'broken home')
Temperament (whether they were sociable, obsessional, hysterical, psychopathic, depressed, anxious or narcissistic)

(Vernon and Parry, 1949: 151–2)
* Terms within the topics are those used during WWII

A closer look at some of the screening questions used by psychiatrists with recruits reveals a mix of traditional beliefs, such as the importance of hereditary factors in psychiatric predisposition to break down in combat and newer ideologies based on aptitude. This resulted in the psychiatric screening process being very subjective and heavily reliant on the interviewer's skill.[19] Therefore, to try and standardise the psychiatric interview, several attempts were made in the USA to create an effective neuropsychiatric screening tool[21,22] resulting in the Neuropsychiatric Screening Adjunct (NSA) to aid in the psychiatric interview.[23] Unfortunately, the tool was introduced too late in the war to have any real impact,[10] although incidentally, one of these psychiatric screens[21] was later adopted by the Australian Army Psychology Service for use on its recruits in the Korean War.

Use of the brief psychiatric screens that were being trialled in the USA at the time does not appear to have occurred in either Britain or Australia. Reasons for this varied; however, the countries appeared concerned about the lack of evidence for psychiatric screening and its predictive outcomes (as opposed to current mental disorders). One group of contemporary authors[24] argued that many screening outcomes could be related to educational achievement, suggesting socioeconomic factors rather than psychiatric factors and inadvertently supporting Yerkes' original intent for meritocracy. Another group concluded that the information gathered in a psychiatric interview for selection could be more reliably found and measured in psychometric testing,[25] providing evidence for the brief questionnaires being established by the USA, although too late for the WWII effort. Instead, both countries shifted towards an evolved screening process for intelligence and related training aptitudes established by Yerkes in WWI. These proved largely successful in reducing training failure rates[14,26] and were extended into psychological assessment procedures for selection into officer training and high-risk jobs.[14]

These historical studies all suggest that the screening for predisposition to psychiatric issues was not successful at either the pre-employment or pre-deployment stages and, in fact, rejected a vast number of people who probably would have provided adequate service at a time when the military was desperate for troops.[10,23] It also failed to recognise many of the issues we now know are equally important in retaining good mental health during and after deployment that are out of the individual's direct control but can be managed by the military itself, such as leadership, military training and unit culture.[27] Instead, these studies highlight the importance of looking for enduring traits unrelated to ideologies of morality or socioeconomic factors, such as intelligence and the importance of looking for current mental illness, where it impacted their ability to adapt to either training or even to society prior to joining the military. It also emphasises the importance of establishing an evidence base when rapid expansion of psychological selection is required in the military in order to not include or exclude people unnecessarily.

Contemporary approaches to psychological screening in the military

As a result of these findings, the unstandardised approach to psychiatric screening for military selection was largely abandoned after WWII. Screening for aptitude and significant current psychiatric disability continued as a result of their previous success, including through periods of conscription such as the Vietnam War, where recruits were observed during basic training and sent for psychiatric evaluation if they were unable to adapt.[28] However, despite a long history of failure, attempts also continued to identify soldiers and other workers who might face psychological difficulties in combat or high-stress situations in the future.

With the recognition of PTSD in the *Diagnostic and Statistical Manual of Mental Disorders* (*DSM-III*) in 1980 and the rise of peacekeeping missions across the world in the 1990s, the focus on screening within the military shifted to align more with the WHO definition of screening—rather than using screens to try and identify *future* behaviour for pre-employment and pre-deployment, it instead started to be used for identifying those with a *current* mental health concern or illness. As a result, attention turned to developing a more contemporary understanding of the use of screening in a military context. Acknowledging the importance of the original WHO definition of screening,[1] Rona, Hyams and Wessely[29] outline six criteria for implementing screening for psychological morbidity in the military in Table 3.

Bliese, Wright and Hoge[30] expanded on these criteria further, arguing the importance of distinguishing between whether the screen is intended to find the *potential* of something vs the *actual* presence of something, whether it is intended to be given in a group or an individual context, and clearly defining the purpose of the screen. They also considered whether the symptoms being captured by screens infer a disorder is present (highlighting the importance of setting appropriate cut-offs on screening tools), whether the population understands the questions being asked (particularly if they are tired or worried about the outcome in a selection context), and the setting of where the screen questions are being asked. They stated that these processes can be used in both a selection and mental health context.

Within the ADF, psychological screening continues to be used in a pre-employment selection context that is largely consistent with how screening was used in WWII. Validated psychometric screens that provide a broad estimate of an individual's cognitive aptitude and current or previous mental illness are administered to all would-be recruits to determine the presence or absence of specific traits and to guide the allocation of recruits to specific roles.[31] The tools used for the screens for would-be recruits have evolved to reflect contemporary approaches to aptitude and mental illness. Similarly, recruits are monitored closely during their training and individually referred by their commander to a psychologist or psychiatrist for assessment if there are concerns about their ability to assimilate training or cope with the military environment.[31]

The ADF has also largely abandoned the concept of psychological screening in a pre-deployment context for potential vulnerability, instead restricting the mental health screening to detecting the current presence of mental illness as part of a broader pre-deployment health check. The current literature supports this approach including recent systematic reviews.[32] However, one systematic review[33] found emergency service workers with pre-existing mental illnesses or trauma were no more vulnerable than those without a comparable history to developing mental illness. Opie and others[32] suggested this may be due to specific procedures in place for the groups under consideration, such as different recruitment processes, training or types of stressors they are

Table 3: Criteria for implementing screening for psychological morbidity in the military

No.	Criteria
1.	Identified conditions should be important health problems.
2.	Screening tests should be clinically, socially and ethically acceptable.
3.	Screening tests should be simple, precise and validated.
4.	High-quality research evidence should demonstrate the effectiveness of screening in reducing psychiatric morbidity.
5.	Adequate staffing and facilities for all aspects of psychological screening programs are critical.
6.	Benefits of the screening program should outweigh the potential harm.

exposed to. The military context and its training processes are therefore crucial in determining the success or otherwise of psychological screening programs.

The approach to using psychological screening for targeted groups who are more likely to experience mental illness has resulted in the timing of the screens being shifted from per-deployment to end of deployment, or to those who have experienced a potentially traumatic event, to find individuals who may be experiencing symptoms of trauma-related concerns.[34] Early practices in Australia followed the Critical Incident Stress Management (CISM) model developed by Mitchell,[35] where psychologists would fly to the deployed location and conduct the CISM process just before troops returned home or directly after a potentially traumatic event. However, it did not involve questionnaires or other screening tools, and screening was conducted as part of a larger group with which many troops expressed dissatisfaction, feeling uncomfortable sharing their experiences in such a format.[36] In 2002, as the commitment to supporting East Timor in establishing independence became enduring and Australia rapidly became involved in several other global warlike and peacekeeping operations, screening shifted to the conduct of individual psychological screens using questionnaires. While some of the screening questionnaires have changed over time, they have tended to cover the identification of trauma exposure, PTSD symptoms, alcohol use and general psychological distress, and are validated either internal to the ADF or externally by international experts.[31] In recognition that psychosocial factors, social resources, and military leadership are important in developing longer-term psychological illness,[36,37] questionnaires covering stressors and organisational responses have also been utilised within some of these screens. This is an important development in how screening has evolved since the two World Wars, as it provides a standardised approach to screening and recognises the importance of context for the development of mental illness and mental distress. However, the screening process for end of deployment was also rapidly developed; it was used at least twice with virtually everybody leaving their deployed location regardless of their experience, and established low cut-off rates resulting in some people being referred for further assessment unnecessarily. It also was not applied to those who did not deploy, missing a significant part of the population that later research showed were more likely to experience mental illness than their deployed counterparts.[2] Subsequent processes ensured a more even and routine approach to screening for all ADF personnel; however, it highlights how rushing military psychological screening programs can result in either poor practice or missed groups.

The approach to screening has also expanded into use in a wide range of other contexts. Currently, many of the same mental health screens used in pre-deployment contexts are also used in sizeable organisational climate surveys. While this provides good information for commanders, it risks the individual confusing the survey with a screen used in a selection context, thus not answering truthfully for fear of career reprisals. It also runs a risk of 'screen fatigue', where individuals may refuse to answer the questions if asked the same ones repeatedly across different contexts.

Conclusions

Screening is an essential part of military selection for pre-employment and pre-deployment. Its attraction is evident, particularly given the volume of people the military needs to process at any given time. However, three key aspects come from analysing the history of psychological screening in a selection context. First, it is crucial to understand and standardise *what* you should be screening for and to take time to establish the evidence for its use. Screening for traits such as intelligence has demonstrated validity in predicting subsequent training success. Screening for current symptoms of psychiatric disorder also has some validity in predicting subsequent adjustment in a military environment. However, screening for the *potential* to develop future symptoms has been unsuccessful for over one hundred years and remains elusive. The military is better served by conducting targeted screens or assessments of those who have been identified as of concern rather than using an overly broad and mandated approach with its application to all military members. Psychological assessments for military selection are a valuable and logical expansion to the use of screening in a selection context, and a focus on how the two interact and complement one another in military selection is a potential area for future research and development.

Second, it is essential to establish when these screens should take place. The application of screening tools at the pre-employment stage is an accepted aspect of selection when processing significant numbers of people, particularly for sorting into groups for further training aptitude. Its use at the pre-deployment phase has limited validity beyond looking for current significant disorder or distress and depends heavily on the individual being honest and open when responding to the screen. Instead, psychological

screens are better placed after a deployment or potentially after significant events that may cause the development of mental illness, thus remaining consistent with the original WHO definition of a screen.

Thirdly, the validity and reliability of the psychometric screens used in military selection are paramount to their usefulness, allowing individuals to be assessed fairly and consistently across different times and environments. However, some consideration should be given to whether using the same screening questionnaires in a selection context inadvertently alters the honesty of individuals when they are provided with the same screen in a deployment context, as individuals may believe (rightly or falsely) that a mental health screen will contribute to a future selection decision, given its use in a past selection context. Different screens should be used in a selection vs a mental health support context to ally confusion and concerns.

In summary, the use of psychological screens in a military selection context has occurred since at least WWI and has evolved significantly. Psychological screening has utility with many candidates when estimating individual traits linked to likely training success in pre-employment selection. It can also be valuable in identifying current mental illness when considering selection for pre-deployment. The use of screening for the prediction of developing future mental illness, however, has never been successful and is unlikely to evolve to a point where it may be helpful in such scenarios in the near term, with a more targeted, nuanced and detailed psychological assessment being more appropriate in such circumstances. Incorporating any potential new uses of psychological screening requires the best understanding possible of its history and the screening contexts to be successful, otherwise history will potentially repeat itself with the rapid adoption of 'new screens' without reference to the evidence base to support it. Therefore, future research and endeavours in this field are best directed to using screens within a selection context for actual traits or concerns.

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