2022

Summary of cannabis use among Aboriginal and Torres Strait Islander people

Australian Indigenous HealthInfoNet

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Australian Indigenous Health*InfoNet*

The mandate of the Australian Indigenous Health*InfoNet* (Health*InfoNet*) is to contribute to improvements in both Aboriginal and Torres Strait Islander peoples' health by making relevant, high quality knowledge and information easily accessible to policy makers, health service providers, program managers, clinicians and other health professionals (including Aboriginal and Torres Strait Islander Health Workers) and researchers. The Health*InfoNet* also provides easy-to-read and summarised material for students and the general community.

The Health*InfoNet* achieves its commitment by undertaking research into various aspects of Aboriginal and Torres Strait Islander peoples' health and disseminating the results (and other relevant knowledge and information) mainly via the Australian Indigenous Health*InfoNet* website (https://healthinfonet.ecu.edu.au), the Alcohol and Other Drugs Knowledge Centre (https://aodknowledgecentre.ecu.edu.au), Tackling Indigenous Smoking (https://tacklingsmoking.org.au) and WellMob (https://wellmob.org.au). The research involves analysis and synthesis of data and other information obtained from academic, professional, government and other sources. The Health*InfoNet*'s work in knowledge exchange aims to facilitate the transfer of pure and applied research into policy and practice to address the needs of a wide range of users.

Recognition statement

The Health*InfoNet* recognises and acknowledges the sovereignty of Aboriginal and Torres Strait Islander people as the original custodians of the country. Aboriginal and Torres Strait Islander cultures are (in the main) persistent and enduring, continuing unbroken from the past to the present, characterised by resilience and a strong sense of purpose and identity despite the undeniably negative impacts of colonisation and dispossession. Aboriginal and Torres Strait Islander people throughout the country represent a diverse range of people, communities and groups, each with unique identities, cultural practices and spiritualities. We recognise that the current health status of Aboriginal and Torres Strait Islander people has been significantly impacted by past and present practices and policies.

We acknowledge and pay our deepest respects to Elders past and present throughout the country. In particular, we pay our respects to the Whadjuk Noongar peoples of Western Australia on whose Country our offices are located.

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Tell us what you think

We welcome and value your feedback as part of our post-publication peer review process. Please let us know if you have any suggestions for improving this Summary.

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Further information

This *Summary* is part of a resource package including the full review, a fact sheet and a short video. These resources and more information about cannabis use among Aboriginal and Torres Strait Islander people can be viewed at: aodknowledgecentre.ecu.edu.au/cannabis

Cover artwork

Ngapa Jukurrpa (Water Dreaming) - Puyurru
by Chantelle Nampijinpa Robertson

Featured icon artwork

by Frances Belle Parker

The Health*InfoNet* commissioned Frances Belle Parker, a proud Yaegl woman, mother and artist, to produce a suite of illustrated icons for use in our knowledge exchange products. Frances translates biomedical and statistically based information into culturally sensitive visual representations, to provide support to the Aboriginal and Torres Strait Islander workforce and those participating in research and working with Aboriginal and Torres Strait Islander people and their communities. Frances came to prominence winning the Blake Prize in 2000, making her the youngest winner and the first Indigenous recipient over the 65 year history of the prize.

"Biirrinba is the Yaygirr name for the mighty Clarence River (NSW). It is this river that is the life giving vein for the Yaegl people. And it is this river which inspires much of my artwork. I am deeply inspired by my Mother's land (Yaegl land) and the Island in the Clarence River that my Mother grew up on, Ulgundahi Island. The stories which are contained within this landscape have shaped me as a person as an artist and most recently as a Mother. This is my history, my story and it will always… be my responsibility to share this knowledge with my family and my children."

Contents

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Introduction

Cannabis is the most used illegal drug in the world, used by an estimated 200 million people [1, 2]. Although laws vary between states and territories in Australia, it is illegal to grow, possess, supply, use or drive under the influence of cannabis [3]. In South Australia and the Australian Capital Territory (ACT) it is legal to have small amounts of cannabis for personal use [3].

There are three main cannabis products: the dried leaf and bud material (marijuana), cannabis resin (hashish) and cannabis oil [4]. In Australia, cannabis is known by many slang terms including gunja, ganja, weed, grass, pot, dope, mull, yarndi, hydro, Mary Jane, and choof [3].

The main chemical in cannabis that affects how the brain works and can cause changes in mood, behaviour and thoughts is delta9-tetrahydrocannabinol (THC) [2]. Most people use cannabis to feel the effects of THC, which produces a high, commonly known as being 'stoned'. Another chemical found in cannabis is cannabidiol (CBD). CBD does not produce a high like THC [5]. In this *Summary*, 'cannabis use' relates to the use of THC-containing products used for recreational purposes, and does not discuss the use of cannabis extracts, medicinal cannabis or synthetic cannabis.

Cannabis is mainly smoked, eaten or drunk. Smoking is the most common way of using cannabis, typically using a pipe, cigarette (joint, blunt) or bong. Hashish and hashish oil are sometimes added to leaf material and smoked [4]. Tobacco is also often added to cannabis when it is being smoked [6]. Using cannabis via e-cigarettes or vaporisers is increasing in popularity. Vaping cannabis can include both vaporising cannabis extracts or dried herb matter [7]. There is a lack of research regarding recreational smoking of cannabis via e-cigarettes and its consequences [7, 8]. Cannabis can also be added to and consumed in foods such as brownies, and drinks such as tea.

The effects of THC will change depending on how much a person consumes [9]. However, the amount of THC in cannabis can vary greatly. In the last two decades, advancements in how cannabis is grown has led to an increase in the strength of cannabis, with the average THC concentration in cannabis flower products being 20% and some have been identified as being as high as 60%-80% [2, 10].

Data limitations

It is important to note the challenges in researching the recreational use of cannabis. These challenges include:

1. The difficulty in measuring cannabis use due to the varying rates of THC concentration, the different ways it can be consumed and the impact of mixing tobacco with cannabis [11].
2. The focus of research into cannabis use has been limited, with most studies looking at either lifetime or past year use of cannabis, meaning that the frequency, quantity or pattern of use is not assessed.
3. Some people may not want to disclose their cannabis use because it is illegal.
4. Much of the research into cannabis use among Aboriginal communities has been conducted in remote communities or specific populations such as people involved with the justice system. This means that findings are not always generalisable and cannot be considered representative of all Aboriginal people.

This *Summary* is based on the *Review of cannabis use among Aboriginal and Torres Strait Islander people*. The review summarises the evidence from journal publications, government reports, national data collections and national surveys accessed through the **Health*InfoNet*'s database of publications**. Please note that statistics presented do not always include all states and territories, see sources for details.

The context of cannabis use among Aboriginal and Torres Strait Islander people

Historical, social and cultural factors related to cannabis use among Aboriginal and Torres Strait Islander people

It is important to acknowledge the historical, social and cultural context within which cannabis use occurs. As a result of both historic and ongoing colonisation; dispossession of land, language and culture; child removal; and entrenched systemic racism, Aboriginal and Torres Strait Islander people have greater exposure to social disadvantage. This includes life stressors, traumatic events and lack of adequate service provision which are all factors associated with alcohol and other drug (AOD) use and challenges to social and emotional health [12]. This social disadvantage occurs in the context of racism against Aboriginal and Torres Strait Islander people which still exists, and happens at a cultural, institutional, and individual level [13-15]. AOD use, including cannabis, can then also become a risk factor for further marginalisation and ill-health.

These factors are important to consider to:

1. understand prevalence and patterns of cannabis use among Aboriginal and Torres Strait Islander people
2. review research undertaken and develop appropriate prevention and intervention approaches.

The challenges which face Aboriginal communities also impact on the available human and financial resources that can be allocated to reducing cannabis use.

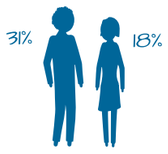
Extent of cannabis use among Aboriginal and Torres Strait Islander people in Australia

Cannabis use prevalence

Even though cannabis is the most used illegal drug in the world, in Australia there is limited data about cannabis use and its harms among Aboriginal and Torres Strait Islander people. Most of the current available data are from large national surveys. It is important to note, that these national level surveys tend to underestimate actual consumption, and adequate sampling from remote areas is not always possible [16, 17].

The 2018-19 National Aboriginal and Torres Strait Islander Health Survey (NATSIHS) showed that for respondents aged 15 years and over [18]:

- 25% reported using cannabis within the previous month



- more males (31%) than females (18%) reported using cannabis

- there was an increase between 2008 and 2018-19 in the proportion of people who had used cannabis in the last 12 months:
  - from 14% to 25% in remote areas (although reliability of remote area data is limited)
  - from 18% to 24% in non-remote areas [18, 19].

Cannabis use among young people

There is limited data available for first time cannabis use and the lifetime course of cannabis use. Data from the 2017 Australian Secondary School Alcohol and Drug Survey (ASSAD) showed that cannabis use starts in school for some young Aboriginal people. Among the Aboriginal students who responded [20]:

- 19% of those aged 12-15 years reported they had used cannabis
- 43% of those aged 16-17 year reported they had used cannabis.

Cannabis use during pregnancy

Pregnant women are a priority group for addressing cannabis use because of the potential harm that it can cause to unborn babies, and the high levels of cannabis and tobacco being used together. In a study involving 344 mothers of Aboriginal babies, it was found that around one in five (21%) had used cannabis during pregnancy [21, 22]. Similarly, in a study of 257 pregnant Aboriginal women, it was identified that 15% had smoked cannabis during pregnancy [23]. Almost half of the women in the study did not smoke cannabis, drink alcohol or smoke tobacco during pregnancy [23]. It is important to note that the samples from these studies are not representative, and the findings cannot be generalised to all Aboriginal mothers.

Cannabis use among people involved in the justice system

Several studies have found high rates of cannabis use among people involved with the criminal justice system.

Studies among this population have found:

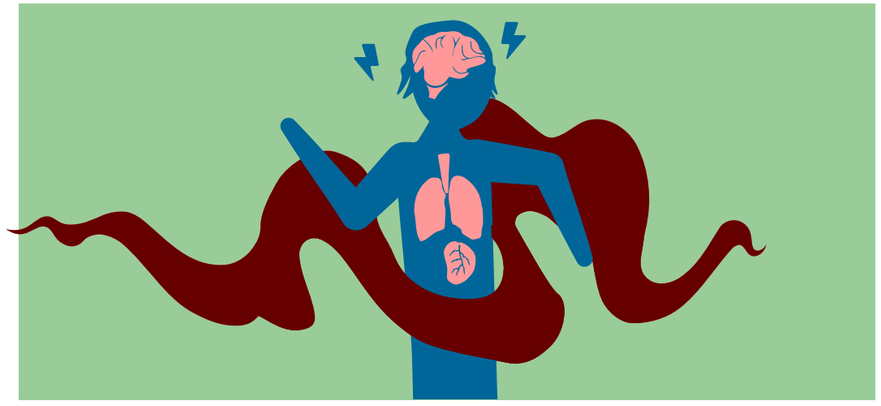
- 46% of Aboriginal males in prison used cannabis daily prior to incarceration [24]
- 20% of males and 26% of females in a study conducted among 419 Aboriginal prisoners in Queensland were identified as being cannabis dependent [25]
- 79% of justice involved young people (aged 14-17 years) had ever used cannabis and 70% had used in the previous year [26]
- high levels of cannabis use were noted among Aboriginal police detainees as part of the Drug Use Monitoring in Australia program, with detection levels ranging from 52% in Sydney , NSW to 72% in Perth, WA [27].

Polydrug use

Cannabis is often used alongside other drugs. Current users of cannabis have been found to be more likely to be heavy alcohol drinkers and tobacco smokers than people who do not use cannabis [28, 29]. One study found that while Aboriginal school students who smoked tobacco were more likely to also smoke cannabis, they were not more likely to use alcohol [20].

The use of cannabis with tobacco is very common, with a recent study among Aboriginal adults who identified as smokers finding that 8 in 10 (81%) cannabis smokers also smoked tobacco [30]. Co-use of tobacco with cannabis can have serious health effects, including increasing the risk of dependence to both substances [31-33].

Cannabis is potentially a risk factor for other illicit drug use [34]. Cannabis use has been shown to be high in the general Australian community [19] and among Aboriginal people who use illicit drugs [23]. In one study, over half (57%) of Aboriginal participants who used methamphetamine had also used cannabis in the previous month (a similar proportion to non-Indigenous study participants) [35].



How cannabis use affects health and wellbeing

Cannabis toxicity is considered to be very low and a recent review of cannabis related deaths in Australia recorded no known cases of cannabis toxicity leading to death. However, there are short and long term cannabis related harms. Research is still establishing the potential and parameters for low risk use. Much of the following information is international literature and not specific to Aboriginal and Torres Strait Islander people.

Physical Health

Airways

Smoking cannabis can expose a person to more tar and certain harmful chemicals (polycyclic aromatic hydrocarbons) than smoking tobacco [11]. In the short term, smoking cannabis can cause coughing and throat irritation. Potential long term effects include ongoing inflammation of the tubes that go to the lungs (chronic bronchitis), wheezing, and waking up with chest tightness [36-38].

Effects of cannabis on the airways happen without tobacco use but using both cannabis and tobacco can make the effects worse [11].

Heart and blood vessels

Cannabis use can result in problems to the heart and blood vessels, including sudden, reduced blood flow to the heart (acute coronary syndrome), blood vessels tightening and go into spasm (vasospasm) and irregular heartbeat (arrhythmias) [39], particularly among naïve users [40]. It can also lead to an increased risk of chest pain caused by reduced blood flow to the heart (angina) for those with heart disease [40].

A review of global case reports and studies has highlighted the need to recognise cannabis as a contributing cause of sudden unexpected death, especially due to issues relating to the heart and blood flow in the brain [41].

Attention and memory

Cannabis use has been found to have a negative impact on brain function that persists after someone is no longer 'stoned' [37]. Sustained cannabis use has been found to impact a person's memory, ability to plan, focus attention, and learn. Using cannabis over several decades has been found to produce differences in brain function that may not be completely reversible, particularly for those who started using cannabis in adolescence [42].

Movement and coordination

Immediately after use, cannabis can cause impaired movement and coordination [40, 42]. This, combined with impaired brain function, can lead to an increased risk of accidental injury and motor vehicle accidents [43].

Maternal and child health

Emerging evidence in research for the total population suggests that cannabis use during pregnancy has an impact on maternal and child health. Research in this area is highly challenging for many reasons including the co-use of tobacco, under-reporting of cannabis use and complex social determinants.

There is evidence that cannabis use during pregnancy is linked to:

- low birth weight [37, 40, 42, 44, 45]
- birth complications and increased risk of admission of infant to neonatal intensive care units [37]
- potential behavioural problems and developmental delays in children (however, the evidence is not yet clear, and multiple factors may contribute to this) [46, 47].

Cancer

The relationship between using cannabis and an increased risk of cancer is not clear cut. It has been found that cannabis smoke can cause cancer [40], but it is complicated by cannabis and tobacco often being used together. There is evidence to support that smoking cannabis may increase a person's risk of developing lung cancer and, for males, testicular cancer [37].

Sleep

Cannabis use can lead to poor quality sleep [48].

Social and emotional wellbeing (including mental health)

Research has consistently demonstrated a relationship between cannabis use and mental ill-health [37, 40].

Mood disorders

Cannabis use may be a risk factor for depression, especially among people who use cannabis heavily [37]. This relationship may be stronger among people who also use tobacco [49]. Cannabis use is also a risk factor for developing bipolar disorder, with greater risk related to higher levels of use [37]. Cannabis use may worsen symptoms in those experiencing depression or bipolar disorder [50-52].

Psychosis

Cannabis use is a risk for psychosis (delusions, hallucinations and disordered thinking) and the diagnosis of schizophrenia [5, 37, 53-55].

Anxiety

The short-term effects of using cannabis can include anxiety and paranoia (feelings of suspicion or mistrust of others). In the long term, cannabis use is also a risk factor for developing anxiety disorders [37].

Suicide and self-harm risk

Cannabis is considered a risk factor for death by suicide [37] and having suicidal thoughts [56]. Weekly cannabis use has also been linked to a five-fold increase in self-harm among females [33].

Cannabis dependence

Cannabis dependence is defined as 'a problematic pattern of cannabis use leading to clinically significant impairment or distress' [59]. Dependence is debilitating and impacts on how people function in everyday life, with significant time and resources spent on accessing, using and recovering from cannabis use at the expense of other aspects of their lives. It has been noted that increases in THC content in cannabis are related to increasing rates of dependence [9].

Around one in ten people who use cannabis will become dependent [60]. The risk of becoming dependent is greater for people who [37, 40, 49, 61]:

- started using cannabis in adolescence
- use cannabis daily or weekly
- use cannabis with tobacco.

People who are cannabis dependent may experience withdrawal if they quit or attempt to quit using cannabis.

Symptoms of cannabis withdrawal may include [62]:

- depressed mood
- anger, aggression or violence
- headaches
- nausea.

Cannabis related harms among Aboriginal and Torres Strait Islander people

Patterns of use, such as high rates of cannabis use and use starting at a young age have been identified as leading to a greater risk of cannabis related harms for Aboriginal and Torres Strait Islander people. In particular some communities in Northern Australia have identified specific harms such as high rates of dependence [63], and mental health concerns [64] such as psychosis, depression and suicide risk [37, 65].

Cannabis use has also been linked to many social harms. Potential harms which have been identified as being of particular concern by some Aboriginal community members and researchers in previous studies include [28, 29, 63, 66-70]:

- the high proportion of income spent on cannabis
- cannabis use causing relationship issues
- community violence related to cannabis supply in remote communities
- declining participation in community life due to cannabis use
- engagement in the criminal justice system.

Other social emotional and wellbeing harms relating to cannabis use include:

- reporting lower overall health and life satisfaction than people who do not use cannabis [36]
- leaving school early (if used in adolescence) [57]
- using other illicit drugs [58]
- heavy alcohol and tobacco use [58].

Risk and protective factors related to cannabis use among Aboriginal and Torres Strait Islander people

A small number of studies to date have identified risk and protective factors in relation to cannabis use. In 2020, a systematic review of the literature looked at the risk and protective factors for AOD use among Aboriginal and Torres Strait Islander people. The findings from these studies are outlined in Table 1.

Table 1 Risk and protective factors for cannabis and AOD use

Risk factors for cannabis use [71]	**Protective factors for cannabis use** [72]
• Having left school earlier • Being involved with the justice system as a juvenile.	• Never having drunk alcohol • Never smoking cigarettes • Never being diagnosed with anxiety • Having low levels of psychological distress • Being a parent or caring for a child.
Risk factors for AOD use [73]	**Protective factors for AOD use** [73]
• Low socio-economic status • High psychological distress • Polydrug use • Being male • Peer pressure • Family or partner substance use • Availability of drugs • Cultural obligations around sharing • Intergenerational trauma.	• Supportive environments • Availability of positive role models • Cultural connection.

Prevention and treatment for cannabis related harm

Given the lack of overall research into cannabis use among Aboriginal people there is a lack of evidence about effective responses to harmful cannabis use among Aboriginal people. Given the lack of evidence, the information below reflects both cannabis specific and broader relevant best practice approaches to responding to AOD related harm for Aboriginal people.

These principles of best practice include:

Focus on social and emotional wellbeing

Appropriate responses to cannabis use should recognise that substance use is connected to a holistic sense of health and wellbeing. Families and communities should be involved in any drug treatment, and treatment and support should be provided to those supporting family members who may use drugs [74]. To address social and emotional wellbeing there is the need to provide holistic services that can support people who use cannabis to develop in other life areas [82].

Cultural determination, ownership and leadership

AOD treatment requires community ownership and consultation, without this, interventions risk being colonising forces [75]. The role of the Aboriginal Community Controlled Health sector is important to ensure that the needs of the community are properly addressed [76].

Cultural security and cultural responsivity

Culturally secure services for Aboriginal people are essential to best practice. Approaches need to be embedded in Aboriginal ways of knowing and doing [12, 77]. Culturally safe approaches are known to result in better outcomes [76].

Appropriate resourcing

Reviews of the Aboriginal AOD treatment sector have highlighted the need for appropriate planning and resourcing of Aboriginal AOD interventions and recognised the harm of underfunding and non-recurrent funding [76]. Service providers and intervention approaches need to be set up to succeed with adequate and continued funding and evaluation [76].

Demand reduction and harm reduction

Health promotion, education and awareness raising

Given the prevalence of heavy cannabis use, there is a need for health promotion materials to support the prevention of cannabis related harm and informed decision making. However, it is also important to understand that cannabis use may not be a priority harm in many communities (compared to alcohol and tobacco use, for example) and, in turn, approaches need to fit within the community needs and wishes [78].

Community knowledge about the harms of cannabis use is generally low [79], so it has been suggested that investments in locally developed models to improve knowledge around cannabis use and to inform young people about the harms should be priorities. These should be developed and distributed in collaboration with communities [79].

A key component of prevention approaches are school based interventions [80]. These interventions include programs aimed at educating all children and those targeted at high-risk individuals and groups. More recent approaches to prevention focus on harm minimisation messaging and increasing the capacity of young people to make informed choices about drugs rather than abstinence based approaches [81].

Community interventions

Localised approaches to reducing drug related harm are worth further attention. These approaches need to be based on community strengths as well as having effective and integrated strategies [74]. Of particular relevance to cannabis use are approaches which are also linked to mental health and justice involved populations and include programs which address housing, family and domestic violence, and education for Aboriginal people [82].

Screening and brief intervention in primary health and antenatal health

Primary health care services and maternal health services are ideally positioned to provide health promotion, and also screening and brief intervention (with referral if necessary) for those experiencing or at risk of experiencing substance related harm [76, 83-85].

Considering the high rates of cannabis and tobacco co-use, tobacco intervention and quit smoking programs may also provide an avenue for effective cannabis interventions, including health promotion and brief intervention [30].

Given the emerging success of a number of programs targeting tobacco use among Aboriginal mothers and identification of factors which promote success [86, 87], it is possible that similar screening and brief intervention approaches that can target cannabis in addition to tobacco are suited to antenatal settings.

Improving the social determinants

It is widely acknowledged the interventions that target the social determinants of health will result in reductions in drug use, including cannabis, improve quality of life and reduce the life expectancy gap between Aboriginal and non-Indigenous Australians [22, 82].

Youth wellbeing and diversion approaches

Preventing young people from starting to use cannabis is an important factor in reducing cannabis related harm. Due to cannabis use being one component of at-risk behaviour among young people, holistic approaches which focus on social and emotional wellbeing and other influencing factors across different areas of a young person's life are likely to be the most suitable interventions. One example of this is the Clontarf Academy. The Academy uses Australian Rules football as a way to engage Aboriginal and Torres Strait Islander boys in school, improve self-esteem, develop skills, and develop prosocial behaviour. Eight out of ten students in the program finish Year 12, compared to a 45% retention rate for Aboriginal students nationally [88].

Treatment for harmful cannabis use

Treatment approaches for harmful cannabis use and cannabis dependence include various counselling approaches, self-help and peer support programs, the development of social and work skills, residential rehabilitation, and pharmacotherapy.

Treatment seeking for cannabis use among Aboriginal people is low considering the high rates of prevalence. It is important to recognise that evidence based treatments are needed and they need to be easily accessible [89].

Counselling based treatment approaches

Several counselling based clinical approaches have been shown to be useful in treating cannabis and other drug use in non-Aboriginal populations which have an evidence base for Aboriginal people. Evidence based approaches to the treatment of cannabis use include [90,91]:

- cognitive behaviour therapy (CBT)
- motivational enhancement therapy (MET)
- combination CBT and MET, contingency management (CM)
- family therapy.

A CBT based approach which has been shown to be acceptable among Aboriginal clients is the Community Reinforcement Approach (CRA) [92], which uses ideas from CBT and MET to identify alternatives to AOD use and to develop strategies to reward people for not using substances. CRA Family Training (CRAFT) works with the client and their family by supporting the family to remove factors that reinforce substance use and promote factors that support not using substances.

While much of the research to date has focused on the how well certain types of counselling approaches work, often it is the relationship between the client and the service provider, or factors other than the therapy which facilitate change [93]. Due to this, a focus on engagement and relationship building with Aboriginal clients should be viewed with as much importance as the type of therapy used.

Peer support approaches

Peer support programs, such as SMART Recovery (a mutual support group program), are an important component of the treatment mix. Peer support programs offer social support and counselling with peers with lived experience. A recent study investigated the cultural utility of SMART Recovery for Aboriginal people [94]. Results highlighted the importance of Aboriginal consultation and the need for a culturally adapted facilitation handbook for SMART Recovery that included cultural and contextual information and was informed by the lived experience of Aboriginal people who use drugs.

Residential rehabilitation

Residential rehabilitation is another important component of AOD treatment. Research has identified that mainstream residential rehabilitation services can be problematic for Aboriginal people due to cultural differences (different ideas of illness, power imbalances, strict time-tabling) and a lack of Aboriginal staff [95].

One study reported on cannabis use outcomes of an Aboriginal program which included a one to three month residential program that involved holistic treatment incorporating life skills, case management and therapy within a drug free environment [96]. The majority of clients using cannabis at intake were still using cannabis at three months after treatment (64%), however there was a significant reduction in frequency of cannabis use. It was also found that self-harm and justice involvement had significantly decreased among participants [96]. The results illustrate the importance of treatment approaches which target a range of determinants of health and are culturally appropriate.

Pharmacological approaches

There are no current evidence based pharmacological approaches for the treatment of cannabis use approved in Australia, although a number of recent trials have shown promise [97-100]. Potential pharmacological approaches include medications to reduce cravings and to address the symptoms of withdrawal.

Co-morbidity and Mental health services

Considering the relationship between cannabis use and mental ill-health and high rates of the two occurring together (co-morbidity), there is need for:

- mental health services to have capacity to address cannabis use
- drug treatment services to have capacity to address mental health presentations
- services which address co-morbidity.

There is limited evidence regarding best treatment approaches in cannabis co-morbidity for Aboriginal people. In a small sample of Aboriginal people in remote communities with AOD and mental health co-morbidity, brief MET was found to reduce symptoms of mental health and AOD use disorders [101].

Policy approaches to cannabis use

Cannabis and Health Policy

There are no national policies relating specifically to cannabis use among Aboriginal people. Community organisations have emphasised the need for a health policy and health response to cannabis use as holding better potential than current policies, which focus on the legal status of cannabis use as a deterrent [102].

The health policy frameworks relevant to cannabis use and cannabis related harms include:

- the National Drug Strategy (NDS) [103]
- the now expired National Aboriginal and Torres Strait Islander Peoples' Drug Strategy (NATSIDPS) which was a sub strategy of the NDS. Although cannabis is mentioned in the NATSIPDS, it does not have any associated policies or priorities.
- the national Closing the Gap targets and outcomes, in which reduction in substance use is embedded [104].

Approaches to cannabis regulation

In Australia cannabis use has traditionally been illegal, yet the regulation of laws around cannabis varies between states and territories. the three main approaches to governing the use and supply of cannabis are [105]:

- full prohibition (use, possession and supply are criminal offences)
- depenalisation (use and possession are still criminal offences but with lighter penalties such as education and/or treatment)
- decriminalisation (use and possession are not criminal, criminal penalties are replaced with civil penalties, and drug supply remains a criminal offence).

Globally there is a trend towards decriminalising and legalising cannabis use, and changes are being discussed in Australia. The ACT legalised the possession and cultivation of cannabis as of 31 January 2021 [106] and the legislation of cannabis for recreational use is also being considered in Victoria [107]. The criminalisation of recreational cannabis use can result in negative consequences, such as incarceration and fines. It is also resource intensive and can limit people's willingness to engage in treatment, prevention and research participation [78, 108].

Selected evidence on fully commercial legal cannabis markets

Australia can learn from countries which have legalised cannabis use, such as the United States and Canada. Research from the United States and Canada on fully commercialised cannabis markets has found:

- large and rapid reductions in cannabis related convictions as a result of cannabis legalisation [109]
- young people are often excluded from the legalisation provisions and there appears to have been some refocussing of police resources towards young cannabis users [110]
- possible increases in favourable attitudes towards cannabis use and reduced perceptions of harm.

Evidence that has been collected from these fully commercialised cannabis legalisation models in North America suggests Australia should be wary about taking a similar approach. Many of the observed problems of commercial cannabis markets have parallels with the tobacco and alcohol markets that have caused considerable harm to Australians in general and Aboriginal people in particular, such as:

- industry lobbying against public health regulations [111]
- industry targeting heavy users [112]
- cannabis retailers tending to locate in areas with more racial and ethnic minority residents, greater poverty, and more alcohol outlets [113].

Middle ground options

A number of researchers have pointed out that there are a range of 'middle ground' policy options for cannabis between strict prohibition with severe penalties at one end, to full profit-driven commercialism at the other [114]. These include [115]:

- home cannabis cultivation
- cannabis social clubs
- non-profit cannabis companies
- cannabis community trusts.

Future directions

High prevalence of cannabis use, along with a lack of available resources to address cannabis related harms, deserves further attention from researchers, health practitioners and policy makers. There is a need for more detailed research into cannabis use, its social context of use and related harms among Aboriginal people. There is also a need for more investment in existing structures and services to better address cannabis related harms.

Community consultation is required to identify suitable approaches to regulation that minimises the risks of legislation which criminalises those who use cannabis and legislation based on profit-driven commercialisation of use.

Conclusion

Around the world there has been an increase in the strength of cannabis. This increase has coincided with a reduction in the perception that cannabis use is harmful. These developments highlight the need for ongoing research and further investment in health based approaches to minimise cannabis related harm more broadly. International research shows that cannabis use, particularly when commencing in adolescence, has potential to cause harms to the physical and mental wellbeing of individuals and communities.

The current research shows that among Aboriginal people cannabis use prevalence is high, and among some communities cannabis use is normalised. Of particular concern is the high prevalence of cannabis use among young Aboriginal and Torres Strait Islander people, as well as the use of cannabis with tobacco. The co-morbidity of cannabis use and mental health disorders has been noted in this summary and has implications for the prevention and treatment of cannabis related harms. Harmful cannabis use is likely to arise from social disadvantage and perpetuates it. Cannabis is related to a range of social harms including engagement in the criminal justice system, violence, early withdrawal from education, and lack of employment.

There is a lack of an evidence base to identify or review best practice approaches in cannabis prevention and treatment at the individual, family and community level. There is also a lack of programs and resources with community ownership or co-design, highlighting a clear need for the development of culturally safe prevention and treatment resources that can address cannabis related harms. A range of promising opportunities exist including school based prevention, health promotion resources, and increasing capacity in mental health and AOD services to better meet the needs of cannabis related presentations. These opportunities can be maximised if the best practice principles of focusing on social and emotional wellbeing, cultural safety, self-determination and adequate resourcing are followed, alongside broader approaches to improving the social determinants of health.

Cannabis related harms and the prevalence of cannabis use receive limited attention, yet they are concerning and are an important item on the Aboriginal health agenda.

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