

Mental health and adolescent cannabis use

This pamphlet summarises *Mental health and adolescent cannabis use*, a report prepared by Susannah O'Brien and Wendy Swift from the National Drug and Alcohol Research Centre, University of New South Wales, for the New South Wales Department of Education and Training.

A copy of this report is available in every school. For further details, including full discussion of the research on which this summary is based and list of references, please refer to the full report.

There has been recent public concern about possible relationships between adolescent cannabis use and mental health problems, such as depression and psychosis. These concerns may have been heightened by an increase in recent decades in the prevalence of cannabis use among young people in Australia and an increase in the suicide rate among young Australian males.

Cannabis is the most widely used illicit drug among young Australians. Just over 40% of 17 year olds reported they had used cannabis at some stage in their lives (*Australian School Students' Alcohol and Drugs Survey 2002*).

Although experimentation is common in adolescence, young people who regularly use cannabis may risk negative effects. Adolescents are particularly vulnerable as this is a time of cognitive and emotional maturation as well as physical development. Heavy drug use at this time may interfere with this development and the successful transition from childhood to adulthood.

The trend among Australian adolescents to begin using cannabis at a younger age is of considerable concern. Adolescents who initiate cannabis use in the early teens or younger are at higher risk of becoming dependent on cannabis, of using other illicit drugs and experiencing adverse health effects. The weight of evidence now shows that people who report regular cannabis use are at increased risk of a range of mental health problems including psychosis, depression, anxiety, and suicidal thoughts and behaviours.

Mental health and adolescence

What is cannabis?

Cannabis is a drug derived from the plant *Cannabis sativa*. The constituent of the plant that is primarily responsible for the psychoactive or mind-altering effects is known as delta-9-tetrahydrocannabinol (THC).

What is cannabis dependence?

Dependence on a drug implies a need for repeated doses of the drug to feel good or to avoid feeling bad. It refers to both physical and psychological factors.

Symptoms of cannabis dependence may include:

- impairment or loss of control over cannabis use
- giving up or reducing important activities
- continuing to use despite being aware of problems associated with use
- tolerance (needing more of the drug to get the same effect)
- withdrawal (unpleasant symptoms such as anxiety, irritability, disturbed sleep, loss of appetite, and tremor, when use is stopped).

The risk of developing dependence increases with frequency of use. This risk is around one in two among those who become daily cannabis users.

Adolescence and mental health

Mental health problems are disturbances that affect a person's thoughts, feelings and behaviour. Signs may include persistent feelings of sadness, anxiety or fear, irrational thoughts, and thoughts of self-harm.

Most young people move from childhood to adulthood without major difficulties. However, one in five adolescents commonly experiences mental health problems such as depression and anxiety.

Nineteen per cent of Australian adolescents aged 13–17 years reported mental health problems within the range reported by adolescent patients of mental health clinics (*2000 Australian National Survey of Mental Health and Well-Being*). As well as greater problems with school and peer activities, these adolescents also reported higher rates of other health-risk behaviours, including tobacco, alcohol and cannabis use.

Suicide is a major cause of death among young Australians aged 15–24 years, second only to motor vehicle accidents. Mental health problems, including depression, substance use disorders and antisocial behaviours are the strongest risk factors for youth suicide.

Is there an association between cannabis use and mental health problems?

A number of studies have compared the mental health problems of people using cannabis with non-users at a particular point in time. Surveys of this kind have found that people who use cannabis regularly are more likely to experience mental health problems such as psychosis, depression, anxiety, and suicidal thoughts and behaviours.

Some of the links which have been established between cannabis use and mental health problems are outlined below.

Depression

Depression is a state in which the affected person experiences abnormally depressed mood, decreased energy and loss of interest or pleasure in nearly all activities.

Cannabis use and depression have been associated in a number of large-scale surveys of adults and adolescents.

One survey of young Australians aged 13–17 years found that those who had used cannabis were three times more likely to be diagnosed as depressed than those who had never used cannabis.

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Cannabis Use

Suicide

A small number of studies have found an association between cannabis use and suicide.

For example, one recent study compared rates of cannabis use among people admitted to hospital for serious suicide attempts with people randomly selected from the general community. Among those who attempted suicide, 16% met the criteria for a diagnosis of cannabis misuse or dependence compared to 2% of the general community. This association persisted even when other possible contributing factors such as social disadvantage, depression and other drug dependence were taken into account.

Another recent survey found the risk for first suicide attempt doubled among cannabis users. This risk increased further for people who misused cannabis or were cannabis dependent.

What is psychosis?

The mental health problem most commonly linked to cannabis use is psychosis.

Psychosis is a state in which there is serious disorganised thinking and loss of contact with reality. It can feature symptoms such as hallucinations (auditory and/or visual) and delusions.

The temporary experience of these symptoms when intoxicated is called a 'drug induced psychosis'. The symptoms generally go away after the drug use is discontinued.

Psychotic disorders are severe mental illnesses which include psychosis. An example is schizophrenia which features chronic disturbances of thought and language, distortions of reality and withdrawal from social contact.

It should be noted that the prevalence of psychotic disorders is much lower than other forms of mental illness such as depression.

Psychotic symptoms

People who use cannabis regularly or are dependent on cannabis may experience psychotic symptoms such as hallucinations and delusional beliefs. Some studies have found that daily cannabis use and cannabis dependence are both associated with a two-fold increase in reporting psychotic symptoms.

Schizophrenia

Evidence from large scale studies suggests that cannabis use increases the risk of developing schizophrenia and other psychotic disorders. And the risk is greater for those who begin at an early age, are regular cannabis users and are vulnerable to, or have a history of, psychotic symptoms.

Cannabis use may also worsen the course of the disorder in people who have already developed it. For example, schizophrenic patients who use cannabis have more frequent hallucinations and delusions and more hospitalisations than patients who do not use cannabis.

In summary, the evidence suggests that regular cannabis use, expressed as a diagnosis of abuse or dependence, and a range of mental health problems, occur together more often than might be expected by chance.

How can the association between cannabis use and mental health problems be explained?

Although associations between regular cannabis use and mental health problems have been reported in a number of studies, there is debate about the best explanation for these links. Surveys conducted at one point in time are unable to establish whether the cannabis use caused the mental problems as it is not possible to determine which came first, the cannabis use or the mental health problem.

It could be that the association is due to common social, environmental or biological factors. That is, social disadvantage may increase the risk of using

cannabis as well as increase the risk of developing a mental health problem.

One way to settle the debate is for researchers to follow groups of young people from childhood into early adult life.

Young people are selected before they begin using cannabis and their personal and social adjustment and cannabis use is assessed at regular intervals over a number of years.

These studies suggest that the young people who were most likely to use cannabis at an early age were the same group who were most likely to have poorer mental health, use other illegal drugs, engage in minor delinquency and do poorly at school *before they began using cannabis*.

This association was partly due to common risk factors such as social disadvantage, psychological vulnerability, school drop-out, unemployment, and affiliation with peers who use substances and engage in antisocial behaviour. However, not all of the relationship between cannabis use and poorer outcomes could be explained by these common factors.

The evidence increasingly suggests that regular, particularly daily, cannabis use by itself increases the risk of poor mental health in young people who are at risk for other reasons.

It is not yet clear whether regular cannabis use increases the risk of mental health problems in adolescents who are not considered at risk or psychologically vulnerable. However, greater than weekly cannabis use among this age group is cause for concern.

What can schools do?

Schools can:

- ensure that all young people receive health messages about the links between regular cannabis use and increased risk for mental health problems by providing cannabis education in PDHPE e.g. *Cannabis: Know the risks!, Cannabis and Consequences*
- promote emotional wellbeing and resilience for all young people by implementing broad-based mental health interventions e.g. *MindMatters*
- provide additional support for children identified as at risk for mental health problems and drug use by implementing student welfare programs e.g. *Adolescents Coping with Emotions (ACE)*, *Resourceful Adolescent Program (RAP)* and *Seasons for Growth*
- provide early interventions for adolescents who experience problems as a consequence of cannabis use e.g. referring to school counsellors, implementing *Marijuana matters: a cannabis intervention program*
- refer students with mental health and drug use problems to health services for specialised assistance. Drug related mental health problems are complex and beyond the scope of schools to manage alone.

For information on specific resources available to schools refer to the Department of Education and Training website: www.schools.nsw.edu.au/learning/yrk12focusareas/druged/index.php

An Australian survey (Rey et al 2002) concerning the mental health of teenagers who use cannabis, concluded:

The association between cannabis use, depression, conduct problems, tobacco smoking, excessive drinking and use of illicit drugs shows a malignant pattern of comorbidity (disorders existing together) that may ultimately lead to further negative outcomes. Preventing this will require more than health education about drug issues, and it will need close involvement of child and adolescent mental health services.

About the National Drug and Alcohol Research Centre

The National Drug and Alcohol Research Centre (NDARC) was established at the University of New South Wales in 1986. The Centre's mission is to contribute to a more effective and efficient Australian treatment system for alcohol and other drug related problems. For further information, visit the NDARC website: www.med.unsw.edu.au/ndarc