

From Courtroom to Clinic: How Legal Rulings Shape Cannabis Use Among Adolescents and Young Adults in South Africans

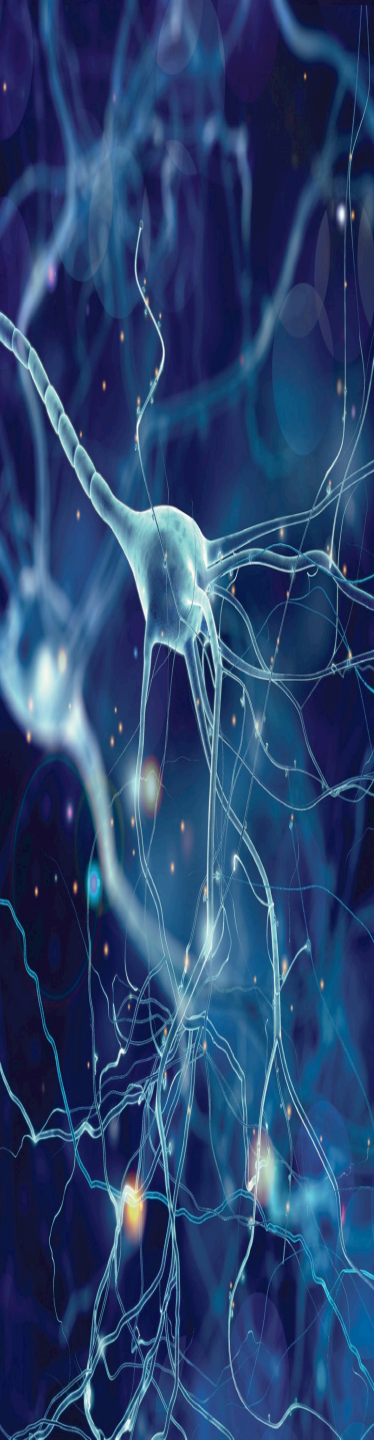
Nadine Harker PhD

Senior Specialist

Scientist/Deputy Director

*Mental Health, Alcohol,
Substance Use, and Tobacco
Research Unit*





TRANSFORMATION STATEMENT

The South African Medical Research Council
recognizes the catastrophic and persisting consequences of
colonialism and apartheid, including land dispossession and
the intentional imposition of educational and health
inequities.

Acknowledging the SAMRC's historical role and silence during
apartheid,
we commit our capacities and resources to the continued
promotion of justice and dignity in health research in South
Africa.

BACKGROUND

Cannabis is the most widely used (illicit) drug globally, with an estimated 219 million users, equivalent to 4.3% of the global adult population.

As countries increasingly legalize recreational cannabis, consumption is expected to rise with increases in cannabis use found from 2002 to 2017 according to a recent synthesis of national population-based household surveys (1.5% to 7.8%).

Among adolescents aged 15 to 19, over 13 million students globally use cannabis.

This reflects an annual prevalence of 4.7%, surpassing the adult population rate (of 4.3%).

In Sub-Saharan Africa, the rate of adolescent cannabis use is estimated to significantly exceed the global average, reaching 15.6%.



BACKGROUND: LEGALIZATION IN SOUTH AFRICA



South Africa is the first country in Africa to have *legalized recreational cannabis use* with the signing into law of the Cannabis for Private Purposes Act on 28th May 2024.

Follows the ConCourt ruling in September 2018 which upheld and extended a Western Cape High Court judgment, which found the criminalization of home use and cultivation of cannabis by adults unconstitutional.

Adult South Africans permitted to grow and consume cannabis except in the presence of children and adolescents.

BACKGROUND: CONCERNS AND IMPACT

- The 2018 ConCourt ruling and policy shift are not without concerns for South Africa.
 - could lead to ↑ cannabis growing, beyond that needed for adult private use and,
 - Concerns around adolescents experiencing negative health consequences and a ↑ burden on health and social services.
 - Regular cannabis use during adolescence is associated with persistent neurological changes, cognitive deficits, and emotional issues.



STUDY OBJECTIVES

The aim of the current study was:

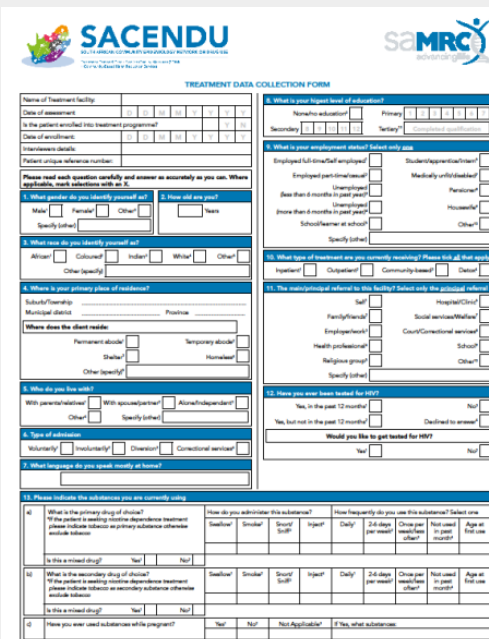
- To assess the impact of the 2018 Constitutional Court ruling on private use of cannabis in South Africa on treatment demand by adolescents and young people.

Specific study objectives include assessing whether the ruling to legalize adult cannabis use in private spaces has:

- Increased the demand for treatment for cannabis-related problems by adolescents ≤ 18 and young people 19-25.
- This resulted in a change in the proportion of treatment demand for cannabis
- treatment demand is associated with age (adolescent vs young person), gender, education, and
- resulted in any changes in the frequency of use of cannabis, prior treatment episodes, the age of initiation.

METHODS

- Treatment admission data collected from the **South African Community Epidemiology Network on Drug Use (SACENDU)** project between 2015 and 2023.
- The data were gathered from ≈ 86 specialist treatment centers, representing 70% of the available treatment sites in the country.
 - *Since SACENDU data are based on episodes of care, individuals may have been represented multiple times in the dataset if they received more than one treatment episode within a year.*



The image shows a screenshot of the SACENDU Treatment Data Collection Form. The form is titled 'SACENDU TREATMENT DATA COLLECTION FORM' and includes the logos for SACENDU and saMRC. It is a structured form with various sections for data entry, including:

- 1. Name of treatment facility**: Fields for facility name, date of assessment, and patient unique reference number.
- 2. What gender do you identify yourself as?**: Radio buttons for Male, Female, Other, and Yes.
- 3. What race do you identify yourself as?**: Radio buttons for African, Coloured, Indian, White, and Other.
- 4. Where is your primary place of residence?**: Fields for suburb/township, municipal district, and province.
- 5. What is your primary place of residence?**: Radio buttons for Permanent, Temporary, Shelter, and Other.
- 6. What is your primary place of residence?**: Radio buttons for With partner, With spouse/partner, Alone, and Other.
- 7. What is your primary place of residence?**: Radio buttons for Voluntary, Involuntary, Outpatient, and Correctional.
- 8. What language do you speak most at home?**: Text field.
- 9. What is your highest level of education?**: Radio buttons for None, Primary, Secondary, and Tertiary.
- 10. What is your employment status?**: Radio buttons for Employed full-time, Employed part-time, Unemployed, and Other.
- 11. What type of treatment are you currently receiving?**: Radio buttons for Inpatient, Outpatient, Community-based, and Other.
- 12. This is the primary reason for referral to this facility?**: Radio buttons for Self, Family/friend, Health professional, Religious group, and Other.
- 13. How long have you been in treatment for?**: Radio buttons for Yes, in the past 12 months, No, but not in the past 12 months, and Declined to answer.
- 14. Would you like to get tested for HIV?**: Radio buttons for Yes and No.
- 15. Please indicate the substance you are currently using**: A table with columns for substance type (Heroin, Cocaine, Cannabis, etc.) and frequency of use (Daily, 2-4 days per week, Once per week, etc.).
- 16. What is the primary drug of choice?**: Radio buttons for Heroin, Cocaine, Cannabis, and Other.
- 17. What is the secondary drug of choice?**: Radio buttons for Heroin, Cocaine, Cannabis, and Other.
- 18. Have you ever used substances with pregnant?**: Radio buttons for Yes, No, Not Applicable, and If yes, what substances.

Measures

- Demographic variables:

The following demographic variables are recorded: age (**-< 18 years and 19-25 years**), gender, race/ethnicity, education completed.

- Cannabis variables: Any cannabis use, *including the cannabis/methaqualone combination, 'white pipe' use*, were recoded as any cannabis use, with alcohol coded as 'alcohol' and all other substances coded as 'other substances'.
- Frequency of use was categorised into *daily use, 2-6 days per week, once a week, or less often, and not in the past month*.
- Treatment variable: we report on only one treatment variable - prior admission to treatment (yes/no).

Data Analysis

- The study analyzed cannabis use trends (including methaqualone) from 2015–2023. Logistic regression models show year-on-year changes in usage rates, comparing each year to the prior one via odds ratios. The eight years were compared chronologically
- Analysis was performed in STATA 17, adjusting for variables except when assessing trends within specific categories (e.g., gender or age).

RESULTS

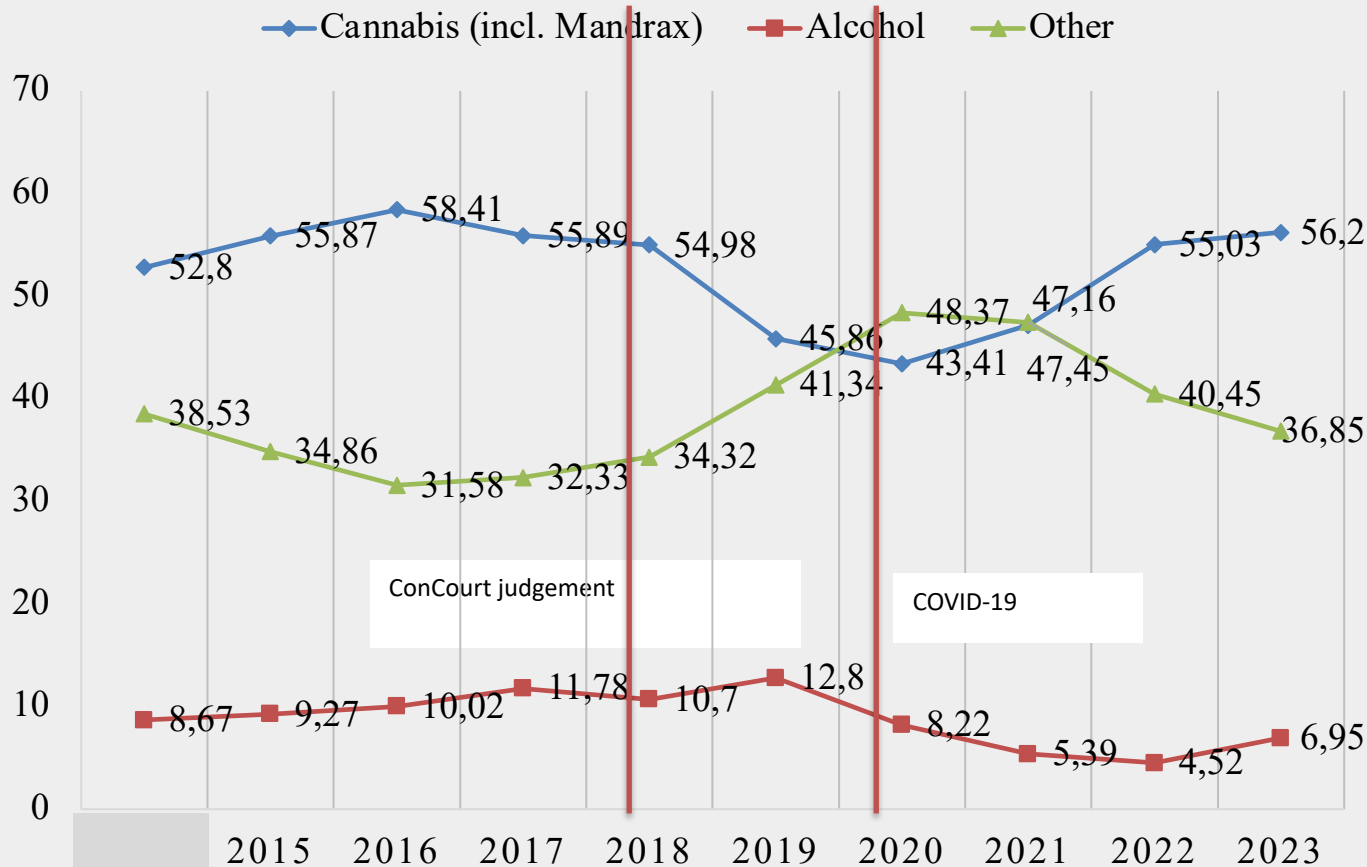
DEMOGRAPHIC PROFILE

77 789 individuals aged between ages 7-25 admitted to specialist substance use treatment for the period 2015-2023



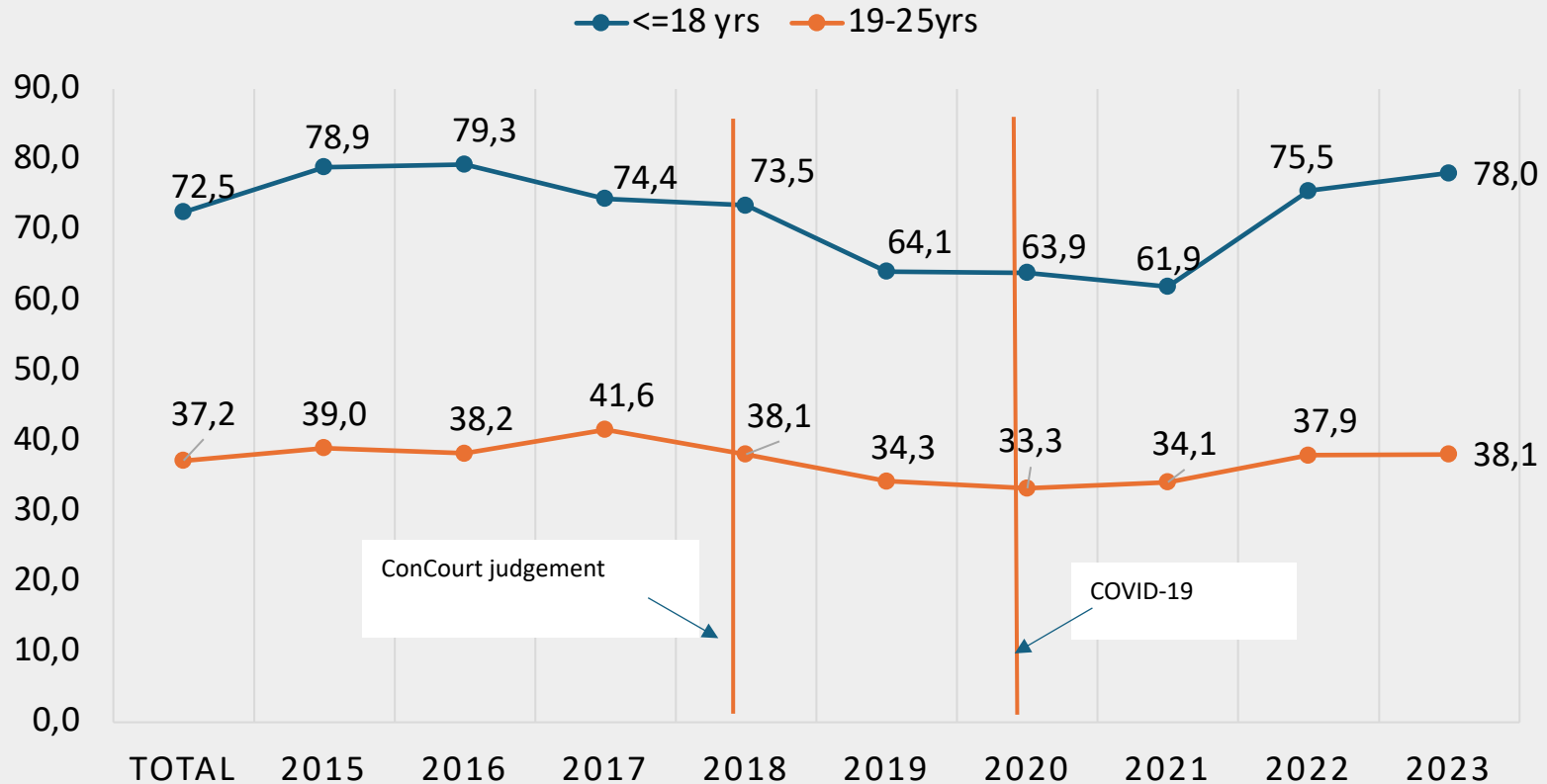
	All the years	
Variable	n (%)	95% CI
Gender		
Male	67014 (86.0)	85.7-86.2
Female	10932 (14.0)	13.8-14.3
Race		
Black African	55830 (71.7)	71.3-72.0
Coloured	16738 (21.5)	21.2-21.8
Indian	1256 (1.6)	1.5-1.7
White	4095 (5.3)	5.1-5.4
Age		
<=18 yrs	34455 (44.2)	43.8-44.5
19-25yrs	43516 (55.8)	55.5-56.2
Education level		
No education	452 (0.6)	0.6-0.7
Primary	6674 (9.1)	8.9-9.3
Secondary	60930 (82.8)	82.5-83.0
Tertiary	5553 (7.5)	7.4-7.7
Prior treatment		
Yes	10500 (13.7)	13.4-13.9
No	66232 (86.3)	86.1-86.6
Frequency of Cannabis use		
Daily	49163 (63.3)	62.9-63.6
2-6 days per week	18161 (23.4)	23.1-23.7
Once per week/less often	7071 (9.1)	8.9-9.3
Not used in the past month	3303 (4.3)	4.1-4.4
Primary substance of use		
Cannabis (incl. Mandrax)	41072 (52.8)	52.4-53.1
Alcohol	6742 (8.7)	8.5-8.9
Other	29975 (38.5)	38.2-38.9

SNAPSHOT - CHANGES IN CANNABIS TREATMENT ADMISSIONS FROM 2015-2023



- Cannabis made up the majority of admissions
- Cannabis admission stable before 2018, dropped after the Constitutional Court judgement and COVID, but has seen a steady increase since.

CANNABIS TREATMENT ADMISSIONS FROM 2015-2023 (>18 AND 19-25)



Sequential regression modeling to analyze year-on-year trends in admissions by category

There were significant changes in several periods, with **notable increases in 2015-2016, 2020-2021, and 2021-2022**, and significant **decreases** in 2016-2017, 2018-2019, and 2019-2020.

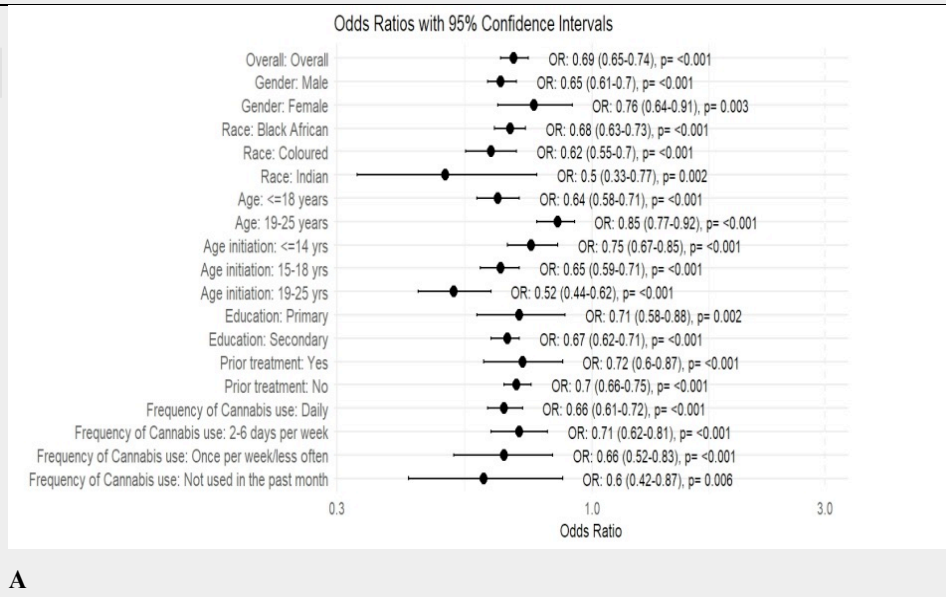
2021 vs. 2022: A significant increase (OR = 1.37, 95% CI: 1.30, 1.45, $p < 0.001$)

	OR [^]	95% CI	P value
Overall			
2015 vs. 2016	1.11	1.05, 1.18	<0.001
2016 vs. 2017	0.90	0.85, 0.96	0.001
2017 vs. 2018	0.96	0.91, 1.03	0.237
2018 vs. 2019	0.69	0.65, 0.74	<0.001
2019 vs. 2020	0.91	0.85, 0.97	0.005
2020 vs. 2021	1.16	1.09, 1.24	<0.001
2021 vs. 2022	1.37	1.30, 1.45	<0.001
2022 vs. 2023	1.05	0.99, 1.11	0.121

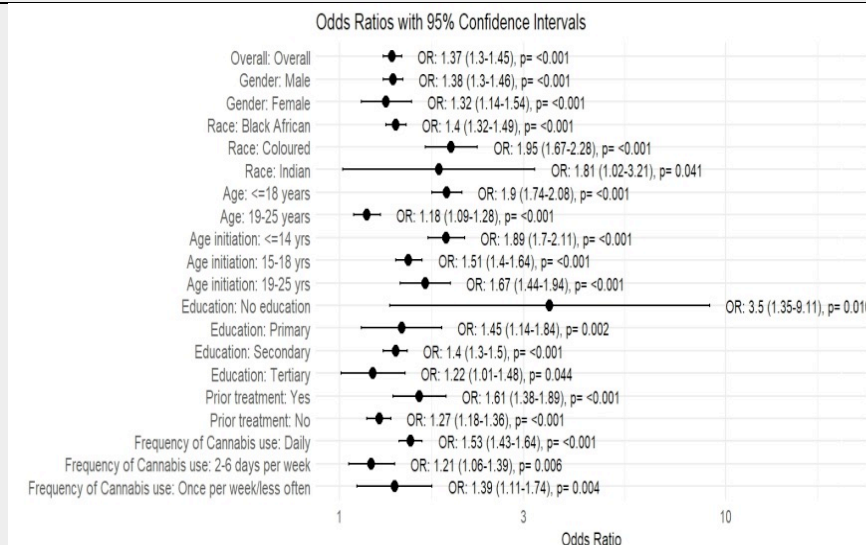
ConCourt
Lag time

Covid

[^]Reference group is the prior period, that is, 2016 versus 2015 (ref); 2017 versus 2016 (ref); 2018 versus 2017 (ref); 2019 versus 2018 (ref); 2020 versus 2019 (ref); 2021 versus 2020 (ref); 2022 versus 2021 (ref); 2023 versus 2022 (ref). p -value < 0.05 were highlighted in bold to show significance. CI, confidence interval; OR, Odds Ratio.



A



B

Graph A: Lower OR levels

Graph B: Upper OR levels

Age-Specific Trends

- **<=18 years:** Significant decreases in 2016-2017 and 2018-2019, and significant increases in **2021-2022 and 2022-2023**.
- **19-25 years:** Significant increases in 2016-2017 and 2021-2022, and significant decreases in 2017-2018 and 2018-2019.

Gender-Specific Trends

Females: Significant increases were seen in 2015-2016, 2017-2018, **2020-2021, and 2021-2022**.

Males: Significant increases in **2015-2016, 2020-2021, and 2021-2022**

Age of Initiation:

- **<=14 years:** Significant increases in 2015-2016, 2021-2022, and **2022-2023**,
- **15-18 years:** Significant increases in 2020-2021 and **2021-2022**
- **19-25 years:** Significant increases in 2020-2021 and 2021-2022, and significant decreases in 2019-2020 and **2022-2023**.

Prior Treatment:

No prior: Significant increases in 2015-2016, 2020-2021, and **2021-2022**,

Frequency of use

Significant increases in all the years except for 2018 - 2019

Education: increases among those with no or limited education - 40.0% to 70.0% (OR = 3.50; p = 0.010).

DISCUSSION AND CONCLUSION: KEY POINTS

- **Treatment for cannabis use increased for ≤ 18 years (post the ruling).**
 - COVID Pandemic - the pandemic created a unique set of circumstances, increased stress, anxiety, and depression; boredom and isolation.
- Among individuals aged ≤ 18 years, significant decreases in 2016-2017 and 2018-2019, and significant increases in **2021-2022 and 2022-2023.**
 - Cannabis use during adolescence can interfere with the normal development of the brain, particularly affecting areas involved in **cognitive functions and emotional regulation.**
 - Regular cannabis use in adolescents is associated with **impairments in attention, memory, and executive functions.** These cognitive deficits can persist even after cessation of use.
 - cannabis use during adolescence can lead to structural changes in the brain
 - higher risk of **developing substance use disorders** later in life
 - poorer **academic performance**
 - cannabis use can increase the risk of developing **psychotic disorders (cannabis induced psychosis)**, particularly in individuals with a genetic predisposition

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NEWS

How does marijuana affect the brain? Psychological researchers examine impact on different age groups over time

New legislation is helping scientists and manufacturers study the effects of cannabis and develop guidelines for use

By Heather Stringer Date created: June 1, 2023 13 min read
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Print version: page 20



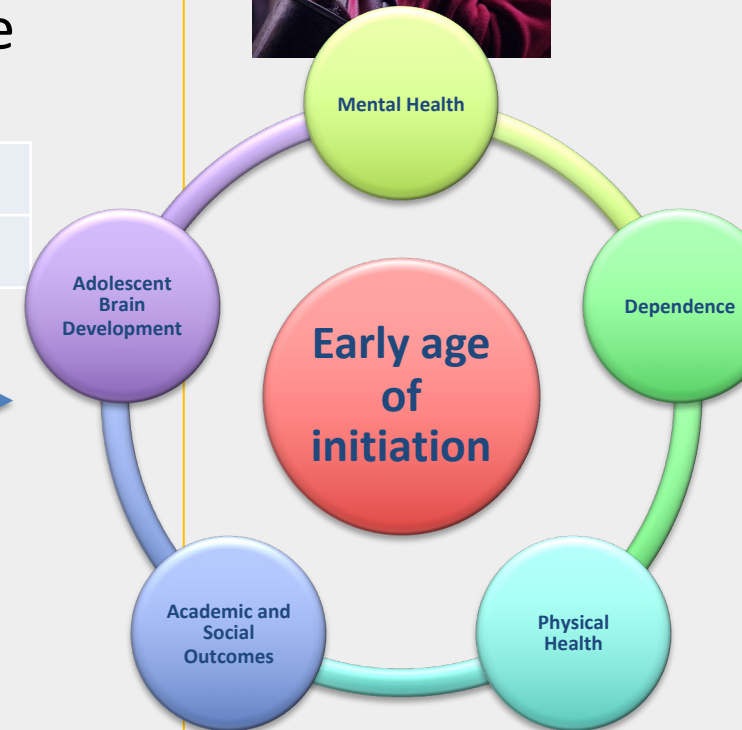
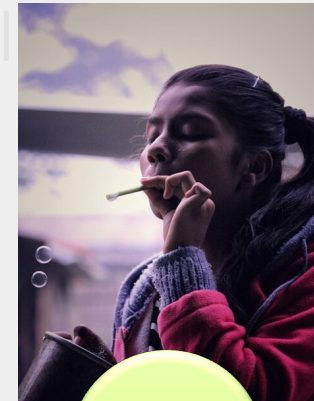
- For **females, significant increases** were seen in **2015-2016, 2017-2018, 2020-2021, and 2021-2022**, highlighting gender-specific patterns in cannabis use and treatment demand.
 - Females experience **more pronounced or distinct outcomes** compared to males.
 - Memory deficits, structural brain changes, and emotional dysregulation, likely due to earlier neurodevelopmental timelines (female brain regions mature earlier) and metabolic differences btw males and females.
 - In SA, access to treatment, poor/ gender-sensitive tx/stigma
- **Poor educational outcomes** associated with cannabis use - 2020 to 2021, where rates went from 40.0% to 70.0% (OR = 3.50; $p = 0.010$).

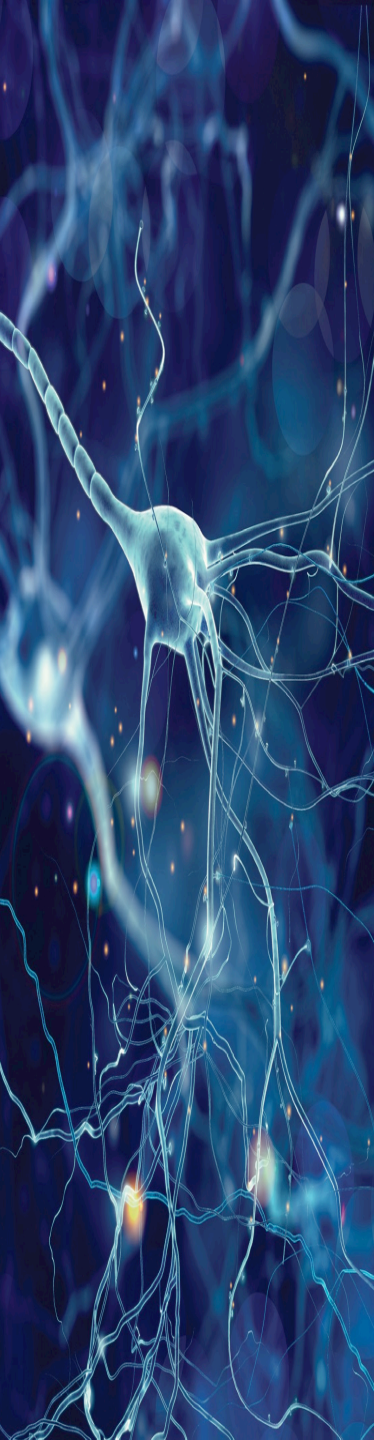


- Significant increases year on year changes in the age of initiation- ≤ 14 years of age

2021 vs. 2022	1.89	1.70, 2.11	<0.001
2022 vs. 2023	1.51	1.33, 1.72	<0.001

- Debut quite young →





RECOMMENDATIONS

- Ongoing Monitoring: Continue tracking cannabis use trends post-policy change and evolving policy space.
- Expanded Research: Conduct longitudinal studies on health outcomes and usage patterns
- Targeted Interventions: Develop gender-sensitive and education-focused prevention strategies.
- Need for universal level prevention programmes, to delay or prevent onset – tailor-made to gender, age, and cultural context.
 - Use popular social media platforms (regulated) to generate
 - Address norms around cannabis use
 - Cannabis infused foodstuffs, no legislative frameworks in SA.
- Improve Access: Enhance availability of adolescent-focused treatment services (SA context).
- Standardized Measures: Use THC units to assess potency across cannabis products.

THANK YOU!
NADINE.HARKER@MRC.AC.ZA

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