

Cannabis use in early adulthood and later prescriptions of antipsychotics, mood stabilizers and antidepressants

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Disclosures

- Nothing to disclose

Outline of the talk

- Background: Relationship between cannabis and mental disorders
- Design and methods
- Results
- Conclusions



BACKGROUND

Cannabis use and mental disorders

- Increased risk for later schizophrenia
 - Dose response relationship
 - Age of onset of cannabis use
 - Frequency of use
 - Proportion of THC
 - Doubled risk for any use compared to no use, and higher risk for heavy users

Marconi et al., 2016; Zamitt et al., 2002; DiForti et al., 2002



BACKGROUND

Cannabis use and mental disorders

- Bipolar disorder starts at younger age for cannabis users
- Cannabis use is associated with worse course of the disease

(Lagerberg et al., 2011; Leite et al., 2015; Lev-Ran et al., 2013; Strakowski et al., 2007; Gibbs et al., 2015)

- Increased risk of first onset of manic symptoms and bipolar disorder by a factor of more than four in some studies...

(Tijssen et al., 2010; Van Laar et al., 2007)

- But non-significant after adjustment for confounders in others

(Blanco et al., 2016)

BACKGROUND

Cannabis use and mental disorders

- Smaller effect sizes for the association between cannabis use and later depression
- Almost only found in heavy users

(Moore, 2007; Degenhardt, 2003; Lev-Ran, 2014; Gobbi, 2019)

- The association between cannabis use and anxiety is inconclusive

(Gobbi et al., 2019; Kedzior et al., 2014)



Cannabis use in early adulthood is prospectively associated with prescriptions of antipsychotics, mood stabilizers, and antidepressants

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Objective: Cannabis is an acknowledged risk factor for some mental disorders, but for others the evidence is inconclusive. Prescribed medicinal drugs can be used as proxies for mental disorders. In this study, we investigate how use of cannabis is prospectively related to prescription of antipsychotics, mood stabilizers, antidepressants, and anxiolytics.

Methods: Data on cannabis exposure and relevant confounders were obtained from 2,602 individuals in the longitudinal Young in Norway Study, providing survey data from four data collection waves between 1992 and 2006. Data were coupled with information about prescriptions for psychotropic drugs from the Norwegian Prescription Database between 2007 and 2015.

Results: Past year cannabis use increased the risk of prescription of antipsychotics (OR = 5.56, 95% CI 1.64–18.87), mood stabilizers (OR = 5.36, 95% CI 1.99–14.44) and antidepressants (OR = 2.10, 95% CI 1.36–3.25), after accounting for sociodemographic variables, conduct problems, additional drug use, mental distress, and prescriptions the year before cannabis use was measured.

Conclusions: In this study of young adults from the general population, past year cannabis use was associated with later prescriptions of antipsychotics, mood stabilizers, and antidepressants.

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Key words: Cannabis; mental disorders; prescriptions; affective disorders; psychotic disorders

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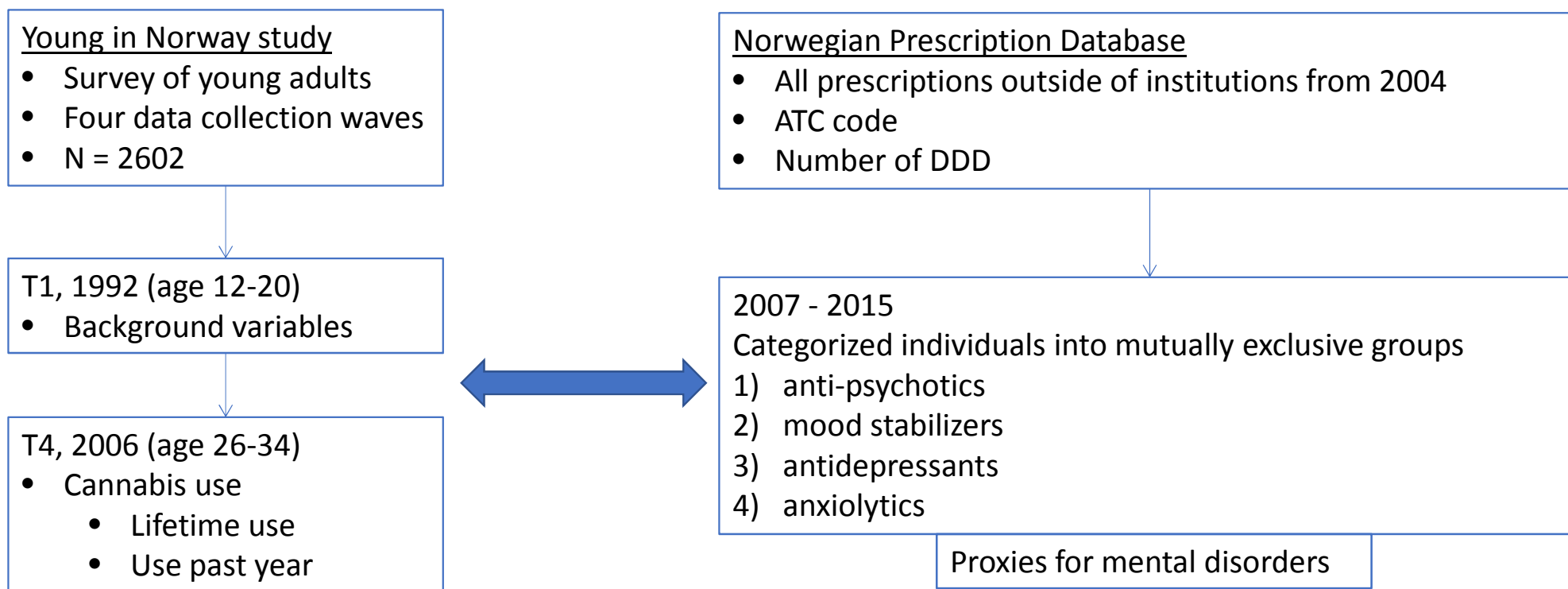
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Significant outcomes

- Cannabis use is associated with a five-fold increased risk for prescription of mood stabilizers and antipsychotics

METHODS

Procedure, participants and measures



METHODS

Analyses

- Multinomial regression analyses
- The four prescription outcome categories to «no drugs»
- «Lifetime use but not past year» and «Past year use» to «no use»
- Four steps of adjustment for confounders:
 1. Sociodemographic background
 2. In addition adjusted for conduct problems and drug use
 3. In addition adjusted for mental distress
 4. Excluded all persons who had obtained prescriptions of psychotropic drugs in 2004 (n=134) the year before cannabis use was measured

RESULTS

Descriptives

	Total number of participants	N	2602
2006	No cannabis use	n (%)	1706 (67.1)
	Lifetime cannabis use, but not past year	n (%)	518 (20.4)
	Cannabis use past year	n (%)	317 (12.5)

RESULTS

Descriptives

	Total number of participants	N	2602
2006	No cannabis use	n (%)	1706 (67.1)
	Lifetime cannabis use, but not past year	n (%)	518 (19.9)
	Cannabis use past year	n (%)	317 (12.2)
9 years follow up 2007- 2015	No prescriptions	n (%)	2114 (81.2)
	Antipsychotics	n (%)	33 (1.3)
	Mood stabilizers	n (%)	36 (1.4)
	Antidepressants	n (%)	233 (9.0)
	Anxiolytics	n (%)	104 (4.0)

RESULTS

The association between past year cannabis use and later prescription of psychotropic drugs

	Cannabis use	Antipsychotics OR (95% CI)	Mood stabilizers OR (95% CI)	Antidepressants OR (95% CI)	Anxiolytics OR (95% CI)
Unadjusted	Never used Before but not past year Past year				
Fully adjusted	Never used Before but not past year Past year				

*p<0.05, **p<0.01, ***p<0.001

Fully adjusted model includes control for socio-demographics, conduct problems and drug use, mental distress and use of psychotropic drugs the year before cannabis use was measured

RESULTS

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Unadjusted	Never used	(reference)	(reference)	(reference)	(reference)
	Before but not past year	0.98 (0.32 - 3.01)	1.59 (0.65 – 3.89)	1.31 (0.93 – 1.84)	1.27 (0.78 – 2.07)
	Past year	5.92*** (2.77 – 12.62)	4.66*** (2.15 – 10.09)	2.10*** (1.45 – 3.04)	1.78* (1.02 – 3.10)
Fully adjusted	Never used				
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Fully adjusted	Never used	(reference)	(reference)	(reference)	(reference)
	Before but not past year	1.11 (0.28 - 4.34)	1.53 (0.41 - 5.63)	1.19 (0.80 - 1.75)	1.15 (0.69 - 1.93)
	Past year	5.56** (1.64 - 18.87)	5.36*** (1.99 - 14.44)	2.10*** (1.36 - 3.25)	1.61 (0.84 - 3.07)

*p<0.05, **p<0.01, ***p<0.001

Fully adjusted model includes control for socio-demographics, conduct problems and drug use, mental distress and use of psychotropic drugs the year before cannabis use was measured

CONCLUSIONS

- Cannabis use was prospectively associated with prescriptions of antipsychotics, mood stabilizers and antidepressants
- The results reflect previous research on these disorders
- Using prescriptions as outcome supplements the evidence
- Cannabis use is associated with increased risk for mental disorders



Thank you for your attention!
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