Cannabis use, other substance use, and co-occurring mental health concerns among youth presenting for substance use treatment services: Sex and age differences.

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Author information

Abstract

Cannabis use among youth is of significant concern given the potential negative health impacts on young people. This study describes the mental health characteristics, cannabis use, and substance use profiles of youth aged 14 to 24 years seen at the Youth Addiction and Concurrent Disorders Service at the Centre for Addiction and Mental Health, through an age and gender lens. Almost all participating youth indicated lifetime cannabis use. Substance use and mental health profiles among those indicating a history of cannabis use differed along sex and age. Male youth were more likely to use cannabis more frequently, while female youth were more likely to use greater variety of substances and display more co-occurring mental health problems. Adolescent problematic substance use tended to co-occur with externalizing problems whereas problematic young adult substance use tended to co-occur with internalizing problems. Implications for the integrated, coordinated care of substance use and mental health concerns, with attention to the unique needs of subgroups of youth, are discussed.

KEYWORDS: Cannabis use; Concurrent disorders; Mental health; Sex differences; Substance use disorders; Youth

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Early Adolescent Substance Use and Mental Health Problems and Service Utilisation in a School-based Sample.

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Author information

Abstract

OBJECTIVE: This paper reports on substance use, mental health problems, and mental health service utilisation in an early adolescent school-based sample.

METHOD: Participants were 1,360 grade 7 and 8 students from 4 regions of Ontario, Canada. Students completed an in-class survey on mental health and substance use. The sampling strategy and survey items on demographics, substance use, service utilisation, and distress were adapted from the Ontario Student Drug Use and Health Survey. Internalising and externalising mental health problems were assessed using the Global Assessment of Individual Needs - Short Screener. Distress was defined as fair or poor self-rated mental health.

RESULTS: Rates of internalising and/or externalising problems above the threshold exceeded 30%; yet, fewer than half had received mental health services in the past 12 mo. Substance use was associated with increased odds of internalising and externalising problems above the threshold and distress. Youth using cannabis had 10-times the odds of exceeding the threshold for internalising or externalising problems. The use of substances other than alcohol or cannabis was associated with increased odds of fair or poor self-rated mental health among grade 8 students. Of the youth who confirmed at least a substance use problem, most also reported mental health problems; this association was stronger among girls than boys.

CONCLUSIONS: Early adolescent substance use was associated with concurrent self-reported mental health problems in a non-clinical sample. The low levels of service utilisation reported highlight the need for improved access to early identification and intervention to prevent the development of concurrent disorders.

KEYWORDS: comorbidity; early adolescence; mental health; service utilisation; substance use

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Transition to drug co-use among adolescent cannabis users: The role of decision-making and mental health.

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Author information

Abstract

BACKGROUND: Co-use of cannabis and drugs other than cannabis (DOTC) influences the risk of experiencing cannabis disorders. Accordingly, we explored whether speed of transition to drug co-use, the number of DOTC used, and/or being an experimental cannabis-only user, a regular cannabis-only user, or a regular cannabis user who co-uses DOTC (i.e., cannabis-plus user) were associated with decision-making (DM), mental health disorder symptoms, or cannabis use-related characteristics.

METHODS: We analyzed baseline data from a sub-sample of 266 adolescent (ages 14 to 16) cannabis users (CU) participating in an ongoing longitudinal study. Assessments included semi-structured interviews, self-report questionnaires, and measures of drug use, DM (measured via the Iowa Gambling Task), mental health disorders, and cannabis use-related problems.

RESULTS: Endorsing a larger number of mood disorders symptoms was associated with being a regular cannabis-plus user rather than a regular cannabis-only user (AOR = 1.08; C.I.95% 1.01, 1.15). Poorer DM was associated with a faster transition to co-use, such that for each one unit increase in DM performance, the years to onset of drug co-use increased by 1% (p = 0.032). Endorsing a larger number of cannabis use-related problems was positively associated with endorsing a larger number of DOTC used (p = 0.001).

CONCLUSIONS: This study provides new evidence on the process of drug co-use among CU. Specifically, mood disorder symptoms were associated with use of DOTC among regular CU. Furthermore, poorer DM was associated with a faster transition to drug co-use. Poorer DM and mood disorder symptoms may aggravate or accelerate the onset of adverse consequences among adolescent CU.

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KEYWORDS: Cannabis; Co-use; Decision-making; Depression; Polydrug; Transition

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A prospective study of newly incident cannabis use and cannabis risk perceptions: Results from the United States Monitoring the Future study, 1976-2013.

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Abstract

BACKGROUND: A prevailing epidemiological theory about drug use occurrence among secondary school students is that trends in perceived risk of drug-related harms can drive use. If so, cannabis risk perceptions during one school year should predict newly incident cannabis use in the same school the following year. We aimed to study trends in incidence and epidemiological clustering of cannabis use among United States (US) 12th-graders, and a novel prediction that incidence in school-year 't' is influenced by school-specific cannabis risk perceptions (CRP) of 12th-graders a year prior at 't-1'.

METHODS: US schools sampled each year from 1976 to 2013 (~130 schools per year) yielded an annual nationally representative sample of ~15-16,000 12th-graders with questionnaire assessments. Analyses involved Alternating Logistic Regressions (ALR) to study trends in school-level clustering and slopes that estimate the degree to which CRP levels at 't-1' might predict newly incident cannabis use at 't'.

RESULTS: School-level CRP levels at 't-1' predict newly incident cannabis use in the next year's 12th-grade class. For each unit CRP increment, the next year's class shows tangibly reduced incidence of starting to use cannabis (overall odds ratio, OR = 0.10; 95% CI: 0.03, 0.33). Within-school clustering of newly incident cannabis smoking also can be seen (e.g., pairwise odds ratio, PWOR = 1.11; 95% CI: 1.07, 1.15).

CONCLUSIONS: Programmatic manipulation of perceived risk in one year's senior class via public health/school alliances might dampen the subsequent risk of newly incident cannabis use in the next year's class.

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KEYWORDS: Adolescents; Cannabis; Clustering; Epidemiology; Incidence; Marijuana; Perception; Risk


[Indexed for MEDLINE]
Concomitant THC and stress adolescent exposure induces impaired fear extinction and related neurobiological changes in adulthood.

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Author Information

Abstract

Δ⁹-tetrahydrocannabinol (THC) consumption during adolescence is reported to be a risk factor for the appearance of psychiatric disorders later in life. The interaction between genetic or environmental events and cannabinoid exposure in the adolescent period can also contribute to exacerbate behavioural deficits in adulthood. Here we investigate the effects of THC treatment as well as the consequences of concomitant THC and stress exposure during adolescence in the extinction of fear memory in adult mice. Adolescent mice treated with THC and exposed to stress exhibit impaired cued fear extinction in adulthood. However, no effect was observed in animals exposed to these two factors separately. Notably, resistance to fear extinction was associated with decreased neuronal activity in the basolateral amygdala (BLA) and the infralimbic prefrontal cortex, suggesting a long-term dysregulation of the fear circuit. These changes in neuronal activation were paralleled with structural plasticity alterations. Indeed, an increase of immature dendritic spines in pyramidal neurons of the BLA was revealed in mice simultaneously exposed to THC and stress. Corticosterone levels were also enhanced after the cued fear conditioning session in the same experimental group. These results show that an interaction between cannabis exposure and stress during adolescence may lead to long-term anxiety disorders characterized by the presence of pathological fear.

KEYWORDS: Adolescence; Amygdala; Dendritic spines; Fear extinction; Stress; Δ(9)-tetrahydrocannabinol

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LinkOut - more resources

Age-varying effects of cannabis use frequency and disorder on symptoms of psychosis, depression and anxiety in adolescents and adults.

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Author Information

Abstract

AIMS: We tested the age-varying associations of cannabis use (CU) frequency and disorder (CUD) with psychotic, depressive and anxiety symptoms in adolescent and adult samples. Moderating effects of early onset (≤ 15 years) and sex were tested.

DESIGN: Time-varying effect models were used to assess the significance of concurrent associations between CU and CUD and symptoms of psychosis, depression and anxiety at each age.

SETTING AND PARTICIPANTS: Adolescent data (V-HYS; n = 662) were collected from a randomly recruited sample of adolescents in Victoria, British Columbia, Canada during a 10-year period (2003-13). Adult cross-sectional data (NESARC-III; n = 36 309) were collected from a representative sample from the United States (2012-13).

MEASUREMENTS: Mental health symptoms were assessed using self-report measures of diagnostic symptoms. CU was based on frequency of past-year use. Past-year CUD was based on DSM-5 criteria.

FINDINGS: For youth in the V-HYS, CU was associated with psychotic symptoms following age 22 (b = 0.13, 95% confidence interval (CI) = 0.002, 0.25), with depressive symptoms from ages 16-19 and following age 25 (b = 0.17, 95% CI = 0.003, 0.34), but not with anxiety symptoms. CUD was associated with psychotic symptoms following age 23 (b = 0.51, 95% CI = 0.01, 1.01), depressive symptoms at ages 19-20 and following age 25 (b = 0.71, 95% CI = 0.001, 1.42) and anxiety symptoms ages 26-27 only. For adults in the NESARC-III, CU was associated with mental health symptoms at most ages [e.g. psychotic symptoms; age 18 (b = 0.22, 95% CI = 0.10, 0.33) to age 65 (b = 0.36, 95% CI = 0.16, 0.56)]. CUD was associated with all mental health symptoms across most ages [e.g. depressive symptoms; age 18 (b = 0.96, 95% CI = 0.19, 1.73) to age 61 (b = 1.11, 95% CI = 0.01, 2.21)]. Interactions with sex show stronger associations for females than males in young adulthood [e.g.]

V-HYS: CUD×sex interaction on psychotic symptoms significant after age 26 (b = 1.12, 95% CI = 0.02, 2.21). Findings were not moderated by early-onset CU.

CONCLUSIONS:
Clinical and functional outcomes of cannabis use among individuals with anxiety disorders: A 3-year population-based longitudinal study

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Abstract

BACKGROUND: Cannabis use has been reported to negatively affect the course and outcome of various psychiatric disorders; yet little is known on its effect on rates of remission from anxiety disorders and associated clinical and functional outcomes.

METHODS: In this study, data were drawn from Waves 1 and 2 of the National Epidemiologic survey on Alcohol and Related Conditions, focusing on individuals who qualified for a diagnosis of any anxiety disorder (social anxiety, panic disorder, generalized anxiety disorder, and specific phobias) at Wave 1 (N = 3,723). Cannabis users and individuals with cannabis use disorders (CUDs) throughout a 4-year period were compared to nonusers in rates of remission, suicidality, general functioning, and quality of life at Wave 2, while controlling for baseline confounders.

RESULTS: Although rates of remission decreased with level of cannabis use, this was not maintained in adjusted models. Aside from specific outcomes (individuals with CUDs were significantly more prone to report breaking up from a romantic relationship; adjusted odds ratio [AOR] = 3.85, 95% confidence interval [CI] = 1.66-8.97) and repeatedly quitting school (AOR = 6.02, 95% CI = 2.65-13.66)), following adjustment no additional differences were found in outcome measures.

CONCLUSIONS: These findings add to previous reports suggesting that poorer outcome of anxiety disorders among cannabis users may be attributed mainly to differences in baseline factors and not cannabis use.

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KEYWORDS: anxiety disorders; cannabis; course of illness; marijuana

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[Indexed for MEDLINE]
Patterns in adolescent cannabis use predict the onset and symptom structure of schizophrenia-spectrum disorder.

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Author information

Abstract
This study investigated adolescent cannabis use as a risk factor for schizophrenia spectrum disorder (SSD). Motives for early cannabis use and resulting usage patterns were examined alongside clinical measures of SSD onset and symptomatology. Participants (N = 178) were recruited for two samples: 1: healthy controls (HC) with cannabis use, 2: schizophrenia patients (SSD) with cannabis use. Structured interviews of participants and family informants were used to obtain diagnostic and biographical information. Factor-analysis of reported motives for initiating cannabis use produced four groups: sedation, stimulation, social pressure, and recreation. Regression analyses revealed significant relationships between these groups and SSD. Most notably, reason group factor scores predict SSD risk as well as schizotypal symptom severity. Findings also indicate that these factors follow a hierarchical structure, which explains their relative involvement in increased SSD risk. We suggest that adolescent cannabis use both hastens the onset and amplifies the severity of SSD. In response we propose a model for identifying at risk individuals, predicting the onset and severity of SSD, and potentially mitigating the associated psychiatric impairments.

KEYWORDS: Adolescent; Cannabis; Motivation; Psychosis; Schizophrenia; Symptomatology

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The association between adolescent cannabis use and anxiety: A parallel process analysis.

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Abstract

INTRODUCTION: Associations between anxiety symptoms and cannabis use have been previously explored, yet the directionality of these associations remains highly debatable. The present study aims to prospectively examine patterns of cannabis use and anxiety during adolescence focusing on their co-development and bidirectional influences.

METHODS: Adolescents (n=250) of predominantly Hispanic ethnicity, aged 14-17 at baseline, exposed to drugs, alcohol, or cigarettes completed three (bi-annual) assessments across a 1-year period. Latent growth curve modeling (LGCM) and parallel process growth curves were conducted to examine potential associations in the joint development of anxiety and cannabis use.

RESULTS: Our results suggest that, during adolescence, early cannabis use has a greater influence on prospective reports of anxiety, than vice versa. Specifically, adolescents exhibiting higher initial levels of cannabis use displayed more persisting self-reported anxiety across time, as compared to those with less frequent use (b=0.28, p=0.024). In contrast, early levels of anxiety were not found to influence rates of change in cannabis use. These analyses considered concurrent depression, alcohol, and nicotine use.

CONCLUSIONS: Our findings suggest that prevention and targeted intervention programs for cannabis use in adolescence would benefit from anxiety management strategies; in order to reduce subsequent anxiety associated with cannabis use. Future studies should continue to employ longitudinal designs across larger time periods and aim to replicate these findings with more diverse samples.

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KEYWORDS: Adolescents; Anxiety; Cannabis; LGCM; Parallel process