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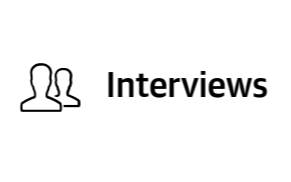
July 21, 2021

Development Over Time of the Population-Attributable Risk Fraction for Cannabis Use Disorder in Schizophrenia in Denmark

Carsten Hjorthøj, PhD^{1,2,3}, Christine Merrild Posselt, MSc¹, Merete Nordentoft, DrMedSc^{1,3}

Author Affiliations

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Key Points

Question Has the population-attributable risk fraction for cannabis use disorder in schizophrenia increased over time, as would be expected with increasing use and potency of cannabis?

Findings In this Danish nationwide, register-based cohort study, the population-attributable risk fraction for cannabis use disorder in schizophrenia increased from approximately 2% in the period to 1995 to approximately 6% to 8% since 2010.

Meaning These findings may indicate that cannabis use disorders are associated with an increase in the proportion of cases of schizophrenia.

Abstract

Importance Cannabis use and potency of cannabis have increased during the past 2 decades. If the association between cannabis use and schizophrenia is causal, this should be reflected in an increase in the proportion of cases of schizophrenia being attributable to cannabis, the population-attributable risk fraction (PARF).

Objective To determine whether the PARF for cannabis use disorder in schizophrenia has increased over time.

Design, Setting, and Participants This nationwide, register-based historical prospective cohort study included all people in Denmark born before December 31, 2000, who were alive and 16 years or older at some point from January 1, 1972, to December 31, 2016. Data analysis was performed from August 2020 to April 2021.

Exposure Diagnosis of cannabis use disorder.

Main Outcomes and Measures Diagnosis of schizophrenia, with estimated PARF of cannabis use disorder in schizophrenia from 1972 to 2016.

Results A total of 7186834 individuals were included in the analysis, including 3595910 women (50.0%) and 3590924 men (50.0%). The adjusted hazard ratio for schizophrenia fluctuated at approximately 4 (with 95% CIs ranging from approximately 3 to 6) throughout most of the study period when people diagnosed with cannabis use disorder were compared with those without cannabis use disorder. The PARF of cannabis use disorder in schizophrenia also fluctuated, but with clear evidence of an increase from 1995 (when the PARF was relatively stable around 2.0%, with a 95% CI of approximately 0.3% to either side) until reaching some stability around 6.0% to 8.0% (with a 95% CI of approximately 0.5% to either side) since 2010.

Conclusions and Relevance The results from these longitudinal analyses show the proportion of cases of schizophrenia associated with cannabis use disorder has increased 3- to 4-fold during the past 2 decades, which is expected given previously described increases in the use and potency of cannabis. This finding has important ramifications regarding legalization and control of use of cannabis.

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Full Text

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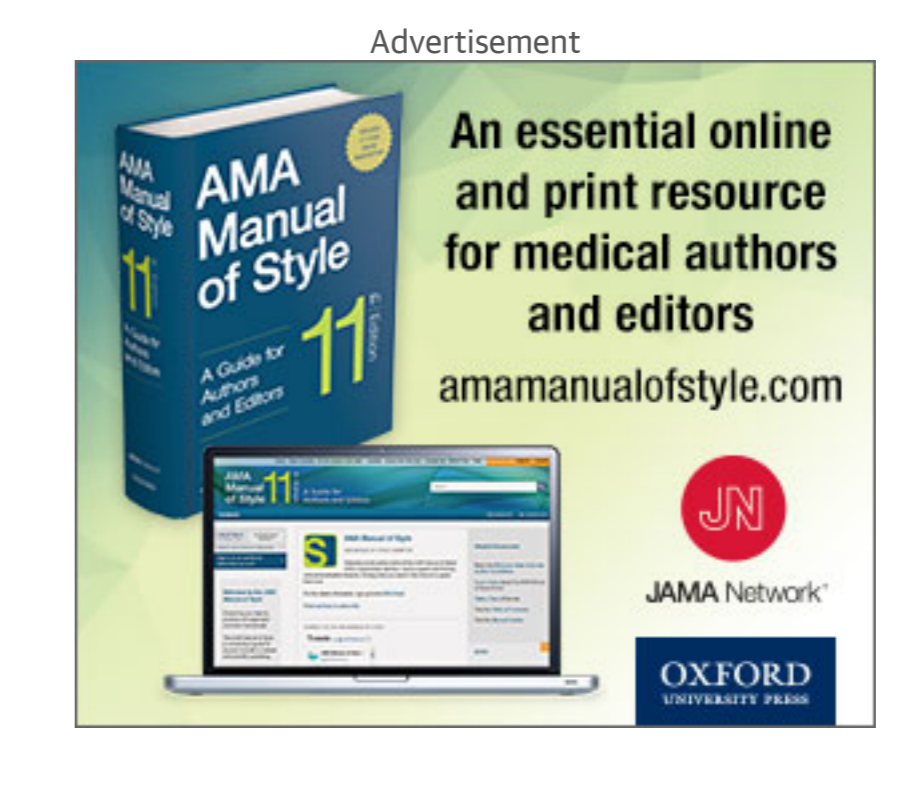
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