

# The years of age. fontes, et al. (2011)

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The Fontes, et al. (2011) study investigated the impact of cannabis use on the development of the brain prior to and subsequent to attaining the age of fifteen years. The authors referred to several scholars who previously investigated these relationships, and they indicate that most of these studies suggest that puberty is a stage of major exposure to neurocognitive effects related to substance misuse. In contrast, the authors point out that few important studies have attempted to measure the disparities in cognitive performance involving chronic cannabis addicts who began abusing cannabis prior to attaining fifteen years of age, with chronic addicts who began after reaching fifteen years of age. Longitudinal, as well as cross-sectional structural brain imaging research demonstrate that the brain, prior to the reaching fifteen years of age, is under a complicated path of development.

The motive of the study by Fontes, et al. (2011) was to probe the executive functioning of persons who began chronic abuse of cannabis before reaching the age of fifteen, relative to those who began subsequent to reaching fifteen years of age. Fontes, et al.

(2011) assert that, while a number of studies have recognized neuropsychological deficits related to chronic cannabis experience, there are study outcomes investigating recurrent cognitive impairments associated to chronic cannabis that confirm contradictory viewpoints. The authors continue to assert that some studies demonstrate that even subsequent to abstinence, individuals who are chronic cannabis addicts may continue to encounter considerable neuropsychological deficits.

The authors allege that these conflicting outcomes may be based on the theory that the neurotoxic effects of cannabis differ in populations.

In this regard, when individuals below fifteen years of age are exposed to substances that are potentially neurotoxic, they become more liable to develop recurrent neuropsychological deficits, in comparison to older persons. Fontes, et al. (2011) asserts that adolescents are at risk of defective cognitive effects related to the abuse of cannabis. The authors allege that results from diverse studies imply that chronic cannabis addicts figure out complicated information significantly slowly, while performance deteriorates in cognitive overload duties as cannabis use increases. It is in this background that Fontes, et al. (2011) investigated the effect on executive functioning among 104 chronic cannabis addicts. While focusing on executive functioning, the group was divided in two sets, where 49 individuals were chronic users in the early-onset category and 55 individuals, late-onset chronic addicts and 44 cannabis-free controls that carried out neuropsychological duties. The control group involved individuals who not abused cannabis three months earlier or more than in five incidences across their lifetime.

Comparisons relating to neuropsychological measures were carried out by means of generalised linear model analysis of variance (ANOVA). In the study, Fontes, et al. (2011) held the theory that the early-onset group was likely to exhibit poor outcomes in cognitive tests that evaluate executive functioning, in comparison to the late-onset group, and the healthy controls. The inclusion criteria employed for chronic users of cannabis was males and

females, between eighteen and fifty-five years of age, exhibiting DSM-IV cannabis abuse or addiction as stipulated by the Composite International Diagnostic Interview (CIDI).

The criterion for exclusion entailed existing record of other DSM-IV Axis I disorders, excluding nicotine-related disorders as stipulated by CIDI; present usage of psychoactive drugs, record of head trauma with seizures for over five minutes, intellectual incapacity or approximate IQ less than eighty, as well as irreparable hearing, vision or injury. Persons in the control group were eligible for the study on condition that they were between eighteen and fifty-five years of age, and did not abuse psychoactive substances, did not hold a record of head trauma, and never diagnosed with Axis I DSM-IV disorders in their lifetime. The study's protocol was endorsed by the local institutional review board, while the respondents were under obligation to consent in writing, in line with the Federal University of Sao Paulo review board. The study outcomes point out that the early onset cohort are cognitively impaired in relation to controls, meaning that early use of cannabis is linked to negative impact on the brain. These outcomes correspond to former studies that investigated cognitive effects linked to early exposure to cannabis.

The study did not establish disparities in executive functioning outcomes between the late-onset group and the healthy group. In conclusion, the study findings imply that early-onset chronic users of cannabis but not display executive deficits, while the contrary is the case in the late-onset group. While the fundamental mechanisms may not be entirely understood, it is

apparent that exposure to cannabis at an early age might hold more significant detrimental impact on neurocognitive functioning.