

**(Reproducible 12.1) Source Evaluation Form: Why Should You Trust This Source?
Why Shouldn't You Trust This Source?**

Part 1: Basic Source Information

Author/creator:	Anahad O'Connor
Year published/created:	December 18, 2013
Published by:	The New York Times
Type of source (newspaper, photograph, article, law, etc.):	Newspaper
Other information about this source:	- very well regarded newspaper

Part 2: Rank the Trustworthiness of This Source: 3

3 = very trustworthy, 2 = trustworthy, 1 = some reservations, 0 = not trustworthy

Checklist

- 3 Author/creator is an expert on the topic.
- 3 Author/creator experienced the situation firsthand.
- 3 Information is backed up by several other sources (includes citations and/or you have seen similar information in other credible sources).
- 3 Information is published by a credible institution (a business that could get into a lot of trouble if it printed inaccurate information), such as a major newspaper, PBS, Library of Congress, a major museum, etc.

444 articles in NYT, Science Writer
- Degree in Psychology from Yale

Part 3: Bias/Perspective

What do you know about the author/creator of this source?

444 articles in NYT - Science writer.
Degree in Psych from Yale

What bias or perspective does this source represent? What is the creator in favor of or against?

Scientific name

What are the strengths of this source? What information can the author/creator reliably present? (Example: A zoologist would be a more reliable source about elephants than a dentist.)

Degree in Psych from Yale = Ivy League
Science Reporter for NYT = Big Time

The New York Times

FAMILY

Increasing Marijuana Use in High School Is Reported

By Anahad O'Connor

December 18, 2013 12:01 am

A new federal report shows that the percentage of American high school students who smoke marijuana is slowly rising, while the use of alcohol and almost every other drug is falling.

The report raises concerns that the relaxation of restrictions on marijuana, which can now be sold legally in 20 states and the District of Columbia, has been influencing use of the drug among teenagers. Health officials are concerned by the steady increase and point to what they say is a growing body of evidence that adolescent brains, which are still developing, are susceptible to subtle changes caused by marijuana.

"The acceptance of medical marijuana in multiple states leads to the sense that if it's used for medicinal purposes, then it can't be harmful," said Dr. Nora D. Volkow, director of the National Institute on Drug Abuse, which issued the report. "This survey has shown very consistently that the greater the number of kids that perceive marijuana as risky, the less that smoke it." Starting early next year, recreational marijuana use will also be legal in Colorado and Washington.

Experts debate the extent to which heavy marijuana use may cause lasting detriment to the brain. But Dr. Volkow said that one way marijuana might affect cognitive function in adolescents was by disrupting the normal development of white matter through which cells in the brain communicate.

According to the latest federal figures, which were part of an annual survey, Monitoring the Future, more than 12 percent of eighth graders and 36 percent of seniors at public and private schools around the country said they had smoked marijuana in the past year. About 60 percent of high school seniors said they did not view regular marijuana use as harmful, up from about 55 percent last year.

The report looked at a wide variety of drugs and substances. It found, for example, that drinking was steadily declining, with roughly 40 percent of high school seniors reporting having used alcohol in the past month, down from a peak of 53 percent in 1997. Abuse of the prescription painkiller Vicodin is half what it was a decade ago among seniors; cocaine and heroin use are at historic lows in almost every grade.

Cigarette smoking has also fallen precipitously in recent years. For the first time since the survey began, the percentage of students who smoked a cigarette in the past month dropped below 10 percent. Roughly 8.5 percent of seniors smoke cigarettes on a daily basis, compared with 6.5 percent who smoke marijuana daily, a slight increase from 2010.

Studies show that the concentration of THC in marijuana, its psychoactive ingredient, has tripled since the early 1990s, and Dr. Volkow said there was concern that the rising use and increased potency could affect the likelihood of car accidents and could lower school performance.

“What is most worrisome is that we’re seeing high levels of everyday use of marijuana among teenagers,” Dr. Volkow said. “That is the type that’s most likely to have negative effects on brain function and performance.”

A new study published this week by scientists at Northwestern University, which showed what appeared to be lasting brain alterations in people who smoked marijuana as adolescents, has become part of the debate. Using brain imaging scans, the scientists showed that in comparison with young adults who had never smoked marijuana, those who used it daily for about three

years as teenagers had differences in structures like the thalamus, globus pallidus and striatum.

These regions of the brain may help form a sort of mental notepad, called working memory, that allows people to solve puzzles, remember a telephone number or quickly process other bits of information needed for everyday tasks. Working memory is also a strong predictor of academic achievement in adolescents, said Matthew J. Smith, an author of the study and an assistant research professor in psychiatry and behavioral sciences at Northwestern University Feinberg School of Medicine.

The study could not determine whether the structural abnormalities were present before the subjects began smoking marijuana. But it did show that the younger the students were when they started, the greater the alterations. And the extent of those abnormalities was directly linked to how poorly the subjects did on memory tests.

One expert who was not involved in the study, Dr. Sanjiv Kumra, the director of the division of child and adolescent psychiatry at the University of Minnesota, said it was likely that more teenagers would misuse marijuana in the coming years. And that is concerning because adolescence is “a particularly susceptible period of ongoing brain development,” he said.

“There is this idea that cannabis is a harmless drug,” he added, “and these findings question that.”

A version of this article appears in print on 12/18/2013, on page A20 of the NewYork edition with the headline: Increasing Marijuana Use In High School Is Reported.

The New York Times, "Increasing Marijuana Use in High School Is Reported"

By Anahad O'Connor

A new federal report shows the percentage of American high schools students who smoke marijuana is rising.

Health officials worry: a "growing body of evidence" says adolescent brains are susceptible to changes caused by marijuana.

Dr. Nora D. Volkow, director of the National Institute on Drug Abuse:

- Because medical marijuana is accepted, kids think marijuana is harmless.
- Marijuana affects cognitive function by messing up the "white matter" by which "brain cells communicate."
- The concentration of THC in marijuana has tripled since the early 1990s.
- Daily use is the type of use "most likely to have negative effects on brain function and performance."

"Monitoring the Future," the federal study:

- 12% of 8th graders, and 36% of high-school seniors had smoked marijuana within the last year.
- Drinking is declining: 40% of high-school seniors having drunk in the last month (in December 2013), down from 53% having drunk in the last month in 1997.
- Vicodin use is half what it was ten years ago with high-school seniors.
- Cocaine and heroin use are at "historic lows in almost every grade."
- Daily cigarette smoking fell below 10% of high school seniors to 8.5%.
- 6.5% of high-school seniors smoke marijuana daily, up from a 2010 study,
 - This is the most dangerous type of use, according to Dr. Volkow (see above).

Northwest University Study:

- Brain imaging scans show lasting alterations in brains of people who smoked marijuana as adolescents.
- Those who used it daily for about three years had differences in brain structures like:
 - Thalamus, globus pallidus, and striatum.
 - These regions form the working memory.
 - A good working memory is "a strong predictor" of academic success in adolescents.
- Study could NOT show whether these differences were PREVIOUSLY present in adolescents, BEFORE they smoke marijuana, BUT:
 - The study DID show the younger the students started, the greater the alterations
 - The extent of these changes linked directly to how poorly people did on memory tests.