## **CANNABIS AND PSYCHIATRIC DISORDERS**

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#### SUMMARY

There are connection between use of cannabis and many psychiatric disturbances in adolescents, especially "cannabis psychosis", depression, panic attacks and suicide. Negative effects could occur either as a result of a specific pharmacological effect of cannabis, or as the result of stressful experiences during the intoxication of cannabis in young people. Potentially is very dangerous high frequency suicidal ideation among cannabis users.

Key words: cannabis – psychiatric disturbances – suicidal ideation

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## INTRODUCTION

Cannabis is the most commonly used illegal drug not only in Europe. In the United state is observed 4.2% lifetime prevalence rate for cannabis dependence. Cannabis users are usually younger people and more often males. Cannabis use has been associated with increased risk of psychiatric disorders. A 15-year followup of 50465 Swedish male conscripts reported that those who had tried cannabis by age 18 years were 2.4 times more likely to be diagnosed with schizophrenia than those who had not (Andreasson et al. 1987).

Adolescent cannabis users are at risk for poor educational outcomes, early school leaving and reduced educational achievement.

According to results of the investigation in Bosnia and Herzegovina (Licanin et al. 2002) PAS abuse is much more among adolescents in urban areas (alcohol 62.4% and cannabis 70.0% than in rural areas: alcohol 37.6% and cannabis 30.0%).

Regarding to age, drug abuse is the most common among adolescents aged 15-17. Alcohol is much more related to boys, but regarding to cannabis there is almost no differences.

Acute or chronic cannabis use may produce many psychiatric disturbances, especially "cannabis psychosis", depression, panic attacks and suicide.

According to Wayne Hall and Louisa Dagenhardt (2009) there are acute and chronic adverse effects of cannabis use, and possible adverse effects of regular cannabis use with unknown causal relation:

#### Acute adverse effects

- Anxiety and panic, especially in naive users;
- Psychotic symptoms (at high doses);
- Road crashes if a person drives while intoxicated.

#### **Chronic adverse effects**

Cannabis dependence syndrome (in around one in ten users);

- Chronic bronchitis and impaired respiratory function in regular smokers;
- Psychotic symptoms and disorders in heavy users, especially those with a history of psychotic symptoms or a family history of these disorders;
- Impaired educational attainment in adolescents who are regular users;
- Subtle cognitive impairment in those who are daily users for 10 years or more.

## Possible adverse effects of regular cannabis use with unknown causal relation:

- Respiratory cancers;
- Behavioral disorders in children whose mothers used cannabis while pregnant;
- Depressive disorders, mania, and suicide;
- Use of other illicit drugs by adolescents.

#### Cannabis in psychiatric classification

According to the DSM IV-TR DSM-IV-TR: Cannabis-Related Disorders have: Cannabis Use Disorders (Cannabis Dependence and Cannabis Abuse), and Cannabis-Induced Disorders (Cannabis Intoxication, Cannabis Intoxication Delirium, Cannabis-Induced Psychotic Disorder, With Delusions, Cannabis-Induced Psychotic Disorder, With Hallucinations, Cannabis-Induced Anxiety Disorder and Cannabis-Related Disorder Not Otherwise Specified):

"Cannabis-induced delusional disorder is a syndrome (usually with persecutory delusions) that develops shortly after cannabis use. It may be associated with marked anxiety, depersonalization, and emotional lability and may be misdiagnosed as schizophrenia. Subsequent amnesia for the episode can occur."

"Cannabis-induced mental disorders are diverse. Chronic cannabis use can cause a syndrome resembling dysthymic disorder. Acute adverse reactions to cannabis should be differentiated from panic, major depressive disorder, delusional disorder, bipolar disorder, or paranoid schizophrenia."

# Hypotheses about the relationship between cannabis use and psychosis

There are two hypotheses about the relationship between cannabis use and psychosis:

The first hypothesis is that heavy cannabis use may cause a "cannabis psychosis" (toxic psychosis), that would not occur in the absence of cannabis use.

The second hypothesis is that cannabis use may precipitate schizophrenia, or exacerbate its symptoms in a vulnerable or predisposed individual (among other associated factors, regular cannabis use appears to quadruple the risk of disease (Hautecouverture et al. 2006).

## Possible explanation about effects cannabis in young people

This could occur either as a result of a specific pharmacological effect of cannabis (delta-9-THC), or as the result of stressful experiences during the intoxication of cannabis. Schizophrenia is the disorder about which concern has been most often expressed in the case of cannabis use.

#### Cannabis and suicidal idea

Licanin et al. (2003) found that more prevailing suicidal idea occurrence was observed in cannabis abusers (50.0%) and alcohol abusers (36.6%) in comparison to non-abusers regardless gender and/or living ambient (settlement types). The augmentation in number of suicidal ideas was not observed in tobacco smokers.

In a one of the study in Bosnia and Herzegovina about the relationship between suicidal thoughts and psychoactive drug abuse, it was found that of the representative sample 28.7% of them have suicidal thoughts. From the examined students 20.2% used cannabis (Spremo & Loga 2005).

### CONCLUSION

For a log time cannabis has been the most used illicid drug by young people, especially adolescents. Cannabis use has been connected with increased risk of mental disorders. Effects of cannabis depend on mode of administration, the dose received, time of using, user' s expectation and premorbid personality of user. The risk of psychaitric disorders is very high in vulnerable groups including individuals who used cannabis during adolescence, those who had previously experienced psychotic symptoms, and those at high genetic risk of the psychiatric disorders.

### REFERENCES

- 1. Andreasson S, Engstrom A, Allebeck P & Rydberg : Cannabis and schizophrenia: a longitudinal study of Swedish conscripts, Lancet, 1987, 2:1483-86.
- 2. Hall W & Degenhardt L: Adverse health effects of nonmedical cannabis use, Lancet 2009:374, 1383-92.
- 3. Hautecouverture S, Limosin F & Roullon: Epidemiology of schizophrenic disorders, Presse, M. 2006, 35, 452-3.
- 4. Ličanin I, Loga S, Cerić I et al.: Zloupotreba psihoaktivnih supstanci kod adolescenata u ruralnoj i urbanoj sredini, Med. Arh, 2002, 56 (5-6)285-288.
- 5. Ličanin I, Cerić I, Loga S et al.: Socio-ekonomski parametri zloupotrebe supstanci kod adolescenata u BiH, Zbornik radova Prvog kongresa psihijatara Bosne i Hercegovine, Sarajevo, 2003, 212-213.
- 6. Spremo M, Loga S, Burgić-Radmanović M & Ličanin I: Psychoactive supstances and risk behavior among adolescents, Neurologia Croatica, 2006, vol. 155, suppl. 2, 161-162.

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