

# Relationship of stress, cannabis use and first psychotic episode

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## Introduction and Methods

Several studies have associated cannabis use and stressful life events with first psychotic episode (FPE). We examined the relationship between stressful life events such as service in the army, cannabis use and FPE. We studied 20 male newly recruited soldiers, who were hospitalized in the Military Hospital for a FPE and compared them to 20 male patients of the same age who were hospitalized in a public hospital for FPE, in the same time period.

## Results

Characteristics of cannabis use – comparison between the two groups			
	Group A (N=20)	Group B (N=20)	P-value
Cannabis use	9	13	
Non cannabis use	11	7	0,204
Heavy/ Frequent use	6	13	
Non heavy/ Frequent use	3	0	<b>0,025</b>
First use <=18y.o.	5	9	
First use>18y.o.	4	4	0,512

Characteristics of FPE – comparison between the two groups			
	Group A (N=20)	Group B (N=20)	p-value
Delusions (all)	18	12	<b>0.028</b>
Bizarre delusions	4	2	0.376
Aggression/ Agitation	6	6	<b>1.000</b>
Withdrawal	3	6	0.256
Suicidal ideation	4	0	<b>0.035</b>

Characteristics of FPE – comparison between two groups based on cannabis use history			
	Yes (N=22)	No (N=18)	p-value
Delusions (all)	17	13	0.714
Bizarre delusions	5	1	<b>0.130</b>
Aggression/ Agitation	10	2	<b>0.018</b>
Withdrawals symptoms	4	5	0.470
Suicidal ideation	3	1	0.397

## Conclusion

- Cannabis use frequency does not differ between general hospital patients with FPE and army recruits with FPE; there is an indication that it is more frequent and heavy among the former. Our hypothesis that the combination of service in the army and cannabis use has a more negative impact on the onset of FPE than each one by itself is not supported.
- Delusions and suicidal ideation are more frequent in the group of recruits probably because of their inability to adapt quickly to a stress life situation, such as the service in army.
- Cannabis use influences the kind and frequency of FPE symptoms:
  - Agitation /aggression are more frequent (10/2) in the group of cannabis users
  - Bizarre delusion are more frequent in the group of cannabis users (p=0,130).

## Discussion

- Other studies have also suggested that stress due to recruitment and cannabis use do not seem to interact in producing negative impact on the onset of FPE (Andreasson et al.1987; Zammit et al.2002; van Os et al.2002; Ferguson et al.2003) than the impact that each condition has by itself. That the psychosocial stress of service in the army may be associated with an increased risk for developing psychosis is a well established finding (Cullberg 2003; van Winkel et al. 2008)
- Suicidal ideation has also been found in several studies to be more frequent in substance users, also among army recruits (Tan and Ang 2001; Price et al. 2009; Giotakos et al. 2011)
- History of cannabis use is known to be associated with agitation/aggression and bizarre delusions (Flanders 2007; Harris et al.2010)

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