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CANNABIS USE, ABUSE AND DEPENDENCE AND PANIC SYMPTOMS, ATTACKS AND DISORDER IN ADOLESCENTS AND YOUNG ADULTS

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BACKGROUND

- Previous research suggests that panic and anxiety disorders and substance use disorders co-occur
- The relationship between panic disorder and cannabis use, abuse and dependence is not well characterized in adolescents and young adults

OBJECTIVE

- To examine the relationships between cannabis use, abuse and dependence and panic symptoms/attacks/disorder in adolescents and young adults

METHODS: Subjects

Twins as Parents (TAP) study (2000-present)

- Fathers
 - 910 twin fathers sampled from the Vietnam Era Twin Registry with at least 1 child 12-28 yrs old in 2000
 - Twin pairs either concordant or discordant for psychoactive substance use disorders (primarily MJ A/D). Controls were unaffected twin pairs
 - 725 (80%) responded to diagnostic telephone interview
- Mothers
 - 601 eligible biological and/or rearing mothers with consent from twin
 - 428 (71%) responded to diagnostic telephone interview
- Offspring
 - 986 eligible offspring with consent from father and/or mother
 - 832 (84%) responded to diagnostic telephone interview

METHODS: Assessment

Offspring report:

- Lifetime DSM-IV cannabis use, abuse and dependence
- Lifetime DSM-IV:
 - Panic Disorder
 - Panic Attack
 - Panic Symptoms

MEASURES:

- Symptoms of a Panic Attack
 - Developed abruptly and peaked w/in 10 min:
 - 1) Heart palpitations
 - 2) Sweating
 - 3) Trembling/shaking
 - 4) Shortness of breath
 - 5) Choking feeling
 - 6) Chest Pain
 - 7) Nausea/abdominal pain
 - 8) Dizzy/lightheaded
 - 9) Derealization/depersonalization
 - 10) Fear of losing control
 - 11) Fear of dying
 - 12) Paresthesias
 - 13) Chills/hot flushes

MEASURES: DSM-IV Panic Attack and Panic Disorder

- Full DSM-IV criteria for panic attack (PA)
 - *Discrete period of intense fear or discomfort, in which 4 or more symptoms developed abruptly and reached a peak within 10 minutes*
- Full DSM-IV criteria for panic disorder (PD)
 - *Recurrent unexpected panic attacks, at least one attack followed by one month of: either persistent concern, worry, change in behavior*

MEASURES: Cannabis Use

- Among all respondents:
 - Ever used
 - Regular use (≥ 6 times in life)
 - Current use (past 12 months)
 - DSM-IV cannabis abuse/dependence
- Among users only:
 - Regular use (≥ 6 times in life)
 - Current use (past 12 months)
 - DSM-IV cannabis abuse/dependence
 - Lifetime quantity

METHODS: Data Analysis

- Measures of Association:
 - Chi-square
 - Odds Ratio (OR)

RESULTS

Table 1: Number of panic attack symptoms reported by level of cannabis use. NOTE: values with the same superscripts differ significantly from one another ($p \leq .05$)

	None <i>n</i> =612	1-3 <i>n</i> =78	4+ <i>n</i> =143	X ² p-value
Ever used	51.8% ^{ab}	64.1% ^a	69.9% ^b	<0.001
Regular use*	36.9% ^{ab}	48.7% ^a	50.4% ^b	.004
Current use**	11.4% ^a	7.7% ^b	18.2% ^{ab}	.038
Among users only:	<i>n</i> =317	<i>n</i> =50	<i>n</i> =100	
Regular use*	71.5%	76.0%	72.0%	.789
Current use**	22.1%	12.0%	26.0%	.145

* ≥ 6 times

**within the past 12 months

Table 2: Offspring meeting DSM-IV criteria for panic attack by level of cannabis use

	YES (n=95)	NO (n=742)	OR	95% CI
Ever use	78.5%	53.2%	3.21	1.91-5.37
Regular use*	54.8%	38.5%	1.94	1.26-2.99
Current use**	19.4%	11.4%	1.87	1.07-3.29
Among users only:	(n=73)	(n=394)		
Regular use*	69.9%	72.3%	0.87	0.51-1.53
Current use**	24.7%	21.3%	1.21	0.67-2.17

* ≥ 6 times

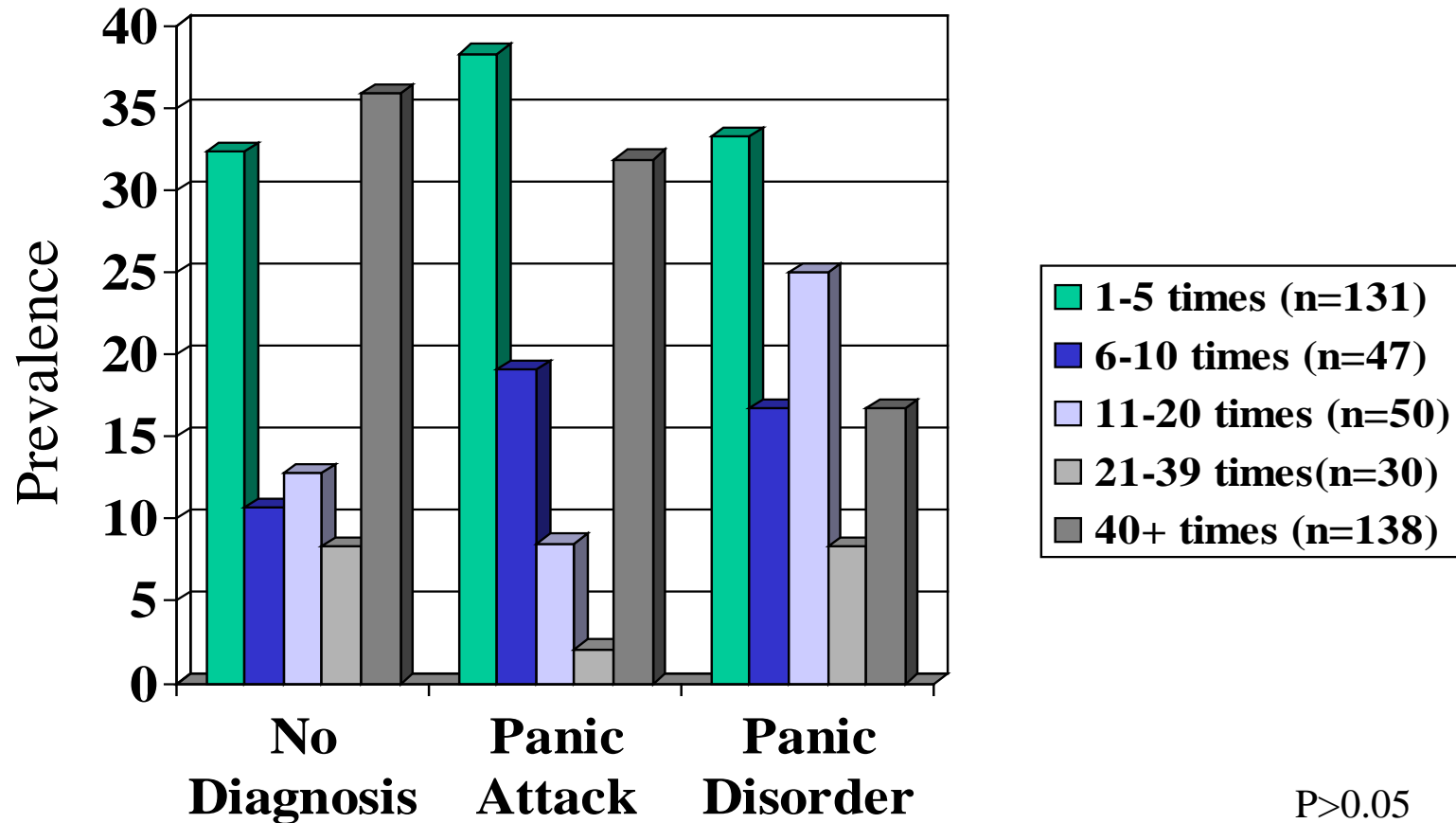
**within the past 12 months

Table 3: Offspring meeting 3-level DSM-IV panic disorder criteria by level of cannabis use. NOTE: values with the same superscripts differ significantly from one another ($p \leq .01$)

	No Diagnosis <i>n</i> =742	Panic Attack <i>n</i> =70	Panic Disorder <i>n</i> =24	X ² p-value
Ever use	53.2% ^a	81.2% ^a	70.8%	<0.001
Regular use*	38.5% ^a	55.1% ^a	54.2%	0.010
Abuse/dependence	21.0% ^a	34.8% ^a	33.3%	0.013
Among users only:	<i>n</i> =394	<i>n</i> =56	<i>n</i> =17	
Regular use*	72.3	67.9	76.5	.717
Abuse/dependence	39.3	42.9	47.1	.736

* ≥ 6 times

Figure 1: Lifetime quantity/number times used cannabis by 3-level DSM-IV PD diagnosis



CONCLUSIONS

- Panic symptoms, attack and disorder are associated with cannabis use but not regular use, current use or abuse/dependence among cannabis users
- Further research is needed to:
 - Adjust for the paternal drug use history (environment and genetics), age and gender
 - Derive multivariate models to determine which other psychiatric and substance use disorders contribute to the panic/cannabis use relationship
 - Examine temporal relationship between panic and cannabis use