

## **Polysubstance use profiles among adolescents with early onset cannabis use, and their association with cannabis use frequency and related problems in emerging adulthood**

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**Introduction and Aims:** Early-onset cannabis use (EOCU;  $\leq 15$  years) and polysubstance use (poly-SU) among youth who use cannabis, are separate risk factors for later problem cannabis use (CU). This study examined poly-SU profiles among youth with EOCU. We then compared how these profiles differed to adult-onset CU (i.e.,  $\geq 19$  years, in line with the minimum legal age for CU in most Canadian provinces), on CU outcomes in emerging adulthood.

**Design and Methods:** Participants were  $N=435$  youth (56% females; EOCU  $n=349$ ) from the Quebec Longitudinal Study of Child Development. Self-reported adolescent SU was assessed at 15 and 17 years, while CU frequency and problem CU (measured via the Cannabis Abuse Screening Test (CAST)), were assessed at 21 years.

**Results:** Repeated measures latent class analyses revealed four poly-SU profiles among youth with EOCU: (1) light predominantly alcohol use ( $n=188$ ); (2) regular CU and alcohol use ( $n=50$ ); (3) escalating poly-SU ( $n=45$ ); (4) heavy CU and cigarette use ( $>$ weekly;  $n=66$ ). Youth with EOCU in the regular, escalating, and heavy profiles, had significantly greater CU (regular:  $B=0.22, 95\%CI[0.11, 0.32]$ ; escalating:  $B=0.20, 95\%CI[0.09, 0.32]$ ; heavy:  $B=0.32, 95\%CI[0.19, 0.46]$ ) and CAST scores at 21 years (regular:  $B=0.23, 95\%CI[0.12, 0.34]$ ; escalating:  $B=0.24, 95\%CI[0.13, 0.35]$ ; heavy:  $B=0.40, 95\%CI[0.27, 0.53]$ ), than youth with adult-onset CU. While youth with EOCU in the light poly-SU profile did not significantly differ from the adult-onset group on CU frequency, they had a significantly greater CAST score at 21 years ( $B=0.20, 95\%CI[0.12, 0.28]$ ).

**Discussions and Conclusions:** Four poly-SU profiles were found among youth with EOCU, which were differentially associated with later CU and related problems.

**Implications for Practice or Policy:** In addition to delaying CU onset, for youth with EOCU, intervention programs should focus on delaying regular CU and decreasing all other SU (particularly cigarette use) across adolescence, to decrease CU and related problems in emerging adulthood.

### **Disclosure of Interest Statement:**

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