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# Modelling the Influence of Individual and Parental Factors on Adolescents' Substance Use Using the Growing Up in Scotland Cohort

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## Introduction

- Adolescents' substance use and misuse are significant public health concerns.
- Adolescents' depression and parent-youth conflict are risk factors for adolescents' substance lifetime use, while parent-youth attachment protects the youth against these risks.
- The predictivity of adolescents' depression on specific substance use instead of the overall use has not been assessed in a Scottish youth sample.
- Parent-youth conflict and parent-youth attachment security might vary between fathers and mothers, but the difference between unique paternal and maternal factors are poorly understood in current studies.

## Methods

### Participants

- Data includes 2943 adolescents (14-15 yrs) in Growing Up in Scotland Birth Cohort 1.

### Measures

- **Outcome variables:** Adolescents' lifetime substance use (smoking, vaping, alcohol use, binge drinking, cannabis, other drug use).
- **Predictors:** Adolescents' Risk of Depression (using 3 items from CIDI-SF), Mother/Father-youth attachment (using 6 items from the People in My Life scale), Mother/Father conflict (using 4 items from questions in Growing Up in Australia).

## Major Results

*Table 1: Multivariate Logistic Regression: maternal models*

	Smoking (N=2171)	E-cigarette (N=2137)	Alcohol (N=2229)	Drunk (N=1272)	Cannabis (N=2228)	Other drug (N=2229)
Predictors						
Adolescents' depression risk (Ref: No)	<b>2.45***</b> [1.87, 3.22]	<b>2.42***</b> [1.90, 3.09]	<b>2.01***</b> [1.60, 2.52]	<b>1.86***</b> [1.38, 2.50]	<b>2.46***</b> [1.70, 3.57]	<b>4.39***</b> [2.06, 9.36]
Mother-youth Attachment	<b>0.79***</b> [0.70, 0.89]	<b>0.81***</b> [0.73, 0.90]	<b>0.87*</b> [0.79, 0.97]	<b>0.79***</b> [0.69, 0.90]	<b>0.77**</b> [0.66, 0.91]	<b>0.73*</b> [0.55, 0.98]
Mother-youth conflict	<b>1.36***</b> [1.20, 1.54]	<b>1.35***</b> [1.21, 1.51]	<b>1.19***</b> [1.07, 1.31]	<b>1.24**</b> [1.08, 1.43]	<b>1.38***</b> [1.17, 1.62]	<b>1.81***</b> [1.33, 2.45]

Note: \* < 0.05, \*\* < 0.01, \*\*\* < 0.001.

*Table 2: Multivariate Logistic Regression: paternal models*

	Smoking (N=1382)	E-cigarette (N=1362)	Alcohol (N=1407)	Drunk (N=776)	Cannabis (N=1406)	Other drug (N=1407)
Predictors						
Adolescents' depression risk (Ref: No)	<b>3.58***</b> [2.47, 5.19]	<b>3.10***</b> [2.25, 4.28]	<b>1.93***</b> [1.43, 2.59]	<b>1.94**</b> [1.30, 2.90]	<b>3.27***</b> [1.90, 5.64]	<b>3.96**</b> [1.41, 11.12]
Father-youth attachment	<b>0.77**</b> [0.65, 0.91]	<b>0.81**</b> [0.70, 0.95]	<b>0.85**</b> [0.73, 0.96]	<b>0.75**</b> [0.62, 0.92]	<b>0.73*</b> [0.57, 0.94]	0.74 [0.47, 1.17]
Father-youth conflict	<b>1.25*</b> [1.05, 1.49]	1.11 [0.96, 1.29]	<b>1.17*</b> [1.03, 1.33]	1.18 [0.97, 1.43]	1.21 [0.94, 1.56]	<b>1.76*</b> [1.10, 2.83]

Note: \* < 0.05, \*\* < 0.01, \*\*\* < 0.001.

- Regarding biological factors of the youth, demographic patterns of parents, and related social determinants were also entered into maternal and paternal models.
- Apart from the main predictors, logistic analyses suggest that other demographic factors including male gender, lower parental education levels, single child in household and rural residence were also found to be potential risk factors.

## Conclusions

- This study indicates the predictive impacts of individual risk for depression, parent-youth conflict and parent-youth attachment on adolescents' substance lifetime use.
- This study emphasizes the better predictive effects of mother-youth relationship factors than father-youth relationship factors.
- Attending to both individual and parental factors may benefit the identification, prevention and early-intervention of the at-risk groups of substance use.