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NEET (Not in Education, Employment or Training) status among young Swiss men. Longitudinal associations with mental health and substance use

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Abstract

Introduction. NEET (Not in Education, Employment or Training) youths are youths disengaged from major social institutions, and constitute a worrying concern. However, little is known about this subgroup of vulnerable youths. This study aimed to examine if NEET youths differ from other contemporaries in terms of personality, mental health and substance use, and to provide longitudinal examination of NEET status, testing its stability and prospective pathways with mental health and substance use.

Method. As part of the Cohort Study on Substance Use Risk Factors, 4,758 young Swiss men in their early twenties answered questions concerning their current professional and educational status, personality, substance use, and symptomatology related to mental health. Descriptive statistics, Generalized Linear Models for cross-sectional comparisons, and cross-lagged panel models for longitudinal associations were computed.

Results. NEET youths were 6.1% at baseline and 7.4% at follow-up with 1.4% being NEET at both time points. Comparisons between NEET youths and non-NEET youths showed significant differences in substance use and depressive symptoms only. Longitudinal associations showed that previous mental health, cannabis use and daily smoking increased the likelihood of being NEET. Reverse-causal paths were non-significant.

Discussion. NEET status seemed to be unlikely and transient among young Swiss men, associated with differences in mental health and substance use but not in personality. Causal paths presented NEET status as a consequence of mental health and substance use rather than a cause. Additionally, this study confirmed that cannabis use and daily smoking are public health problems. Prevention programs need to focus on these vulnerable youths to avoid them being disengaged.

Keywords. Cannabis use; Cigarette smoking; Disengagement; Education; Unemployment.

Highlights

- NEET status was transient and related to mental health and substance use.
- Previous mental health increased the likelihood of becoming NEET.
- Cannabis use increased the risk of being disengaged, regardless the frequency of cannabis use.
- Regular/heavy smoking increased the likelihood of becoming NEET.
- NEET status did not appear as a cause of later mental health and substance use.

Implications and contributions

NEET youths require special focus because they are more likely to be drug users and to report depressive symptoms. Mental health, cannabis use and daily smoking also should be at focus among youths, because it increases the risk of becoming disengaged from society.

NEET (Not in Education, Employment or Training) status among young Swiss men. Longitudinal associations with mental health and substance use

Nowadays, an increasing number of youths are disengaged from major social institutions such as the education system and the labour force (1), especially in the context of the current economic downturn. These youths are termed ‘NEET’ (Not in Education, Employment or Training). In 2011, the prevalence rate of NEET youths across OECD countries was 16% among the 15-29 year-olds (7% inactive and 9% unemployed), and 20% among the 25-29 year-olds (12% inactive, 8% unemployed) (2). Public health literature has recently shown interest in this phenomenon, because NEET youth may be a vulnerable and socially excluded subgroup of youths, with increased risky behaviours and poor mental health (3, 4). The at-risk population includes school dropouts, minorities, foster youths, and youths in the justice system (Wald & Martinez, 2003). However, little is known about the characteristics of NEET youths and how they are different from other contemporaries.

Indeed, to our knowledge, no study investigated if NEET status is associated with a set of stable characteristics such as personality. Are NEET youths a specific subgroup of youths with permanent traits? Or is there a difference in transient patterns of behaviors and feelings? This study investigated this topic.

Furthermore, a few previous studies associated NEET phenomenon with increased mental health issues, including conduct disorders, mood disorder and suicidal thoughts (3, 4). However, causal paths from mental health to NEET phenomenon are not clear. Indeed, youth with prior mental health issues are likely to be disengaged from education and employment (5, 6). On the contrary,

being disengaged may lead to feeling of hopelessness and mental health issues (3, 6, 7). Indeed, being a NEET may have a demoralising effect for individuals (2).

Being NEET is also associated to increased risk of substance use and crime (3, 7). Longitudinal studies focusing on the relationship between NEET status and substance use are scarce, but unemployment and school disengagement have often been investigated separately. Studies reported reciprocal effects between substance use and unemployment/school disengagement. Indeed, unemployed are more likely to use substance, and substance use increases the likelihood of being unemployed (6, 8). School disengagement and academic failure may also be both causes and consequences of substance use (9, 10).

NEET youth is a heterogeneous population (Eurofound, 2012) and subgroups shared different patterns of related issues. First, previous studies distinguished between short- and long-term NEET youths (Besharov & Gardiner, 1999). Youths disengaged for long periods suffer serious social and economic problems, whereas short-term NEET youths did not. Second, a recent report (Eurofound, 2012) distinguished 'vulnerable' NEET youths and 'non-vulnerable' NEET youths. The first ones are marginalized youths, lacking of social, cultural, and human capital (see also Wald & Martinez, 2003) (e.g. long-term unemployed youths, disengaged youths with asocial lifestyle, illness). The second ones are voluntary NEET youths, who choose to be NEET and not lack of social, cultural, and human capital (e.g. travelling youths). The latters are more susceptible to be short-term NEET youths.

To our knowledge, no study investigated longitudinal associations between NEET youths with risky behaviours and mental health, although this design is required for the examination of causality and reverse causality (11). This study aimed to fill in this gap within a sample of young Swiss men. Therefore, the objectives of the study were twofold: 1) to examine if NEET youths

differ from other contemporaries in terms of personality, substance use, and mental health; 2) to provide longitudinal examination of NEET status, testing whether NEET status is a transient or a stable phenomenon, including prospective pathways between NEET status, mental health and substance use to see if there were reinforcing factors for staying or becoming NEET.

Methods

Participants and procedures

The present study analysed data collected in the Cohort Study on Substance Use Risk Factors (C-SURF), a longitudinal study designed to assess substance use patterns and their related consequences for young Swiss men. Participants were enrolled during conscription in three of Switzerland's six army recruitment centers; these cover 21 of the 26 Swiss cantons (including all French-speaking cantons) and are located in Lausanne (French-speaking), Windisch, and Mels (both German-speaking). Army recruitment is obligatory in Switzerland, thus all young Swiss men around 20 years old were eligible for the study's inclusion. Assessments of baseline (September 2010-May 2012) and follow-up (March 2012-April 2013) data were carried out outside the army environment and independently of eligibility for military service. Respectively 5,990 and 5,223 (87.2%) participants filled in the baseline and the follow-up questionnaires. Missing values were listwise deleted and the final sample consisted of 4,758 participants (91.1% of the follow-up sample). More information on sampling and non-response is available from Studer et al. (12, 13). In summary, the results indicated that non-response bias was small. There was no significant difference between respondents and non-respondents regarding the occupational status for any outcome (personality, substance use, mental health). The study

protocol (Protocol No. 15/07) was approved by Lausanne University Medical School's Clinical Research Ethics Committee.

Measures

NEET status. Current occupational status was assessed by asking participants "what is your current professional status?". Answers were aggregated into 'studying/working' (including participants in military service or civic service), and 'NEET'. These youths included people who are no longer studying and are out of work, including participants currently looking for a job and those not looking for a job (e.g. jobless, at home, sabbatical).

Personality. Six aspects of personality were assessed: traits of neuroticism/anxiety, aggression/hostility and sociability were measured using the Zuckerman-Kuhlmann Personality scale (ZKPQ-50-cc) (14); the sensation seeking trait was measured with the brief sensation seeking scale (BSSS) (15); and the behavioural inhibition system (BIS) and behavioural approach system (BAS) were assessed using the BIS/BAS scale (16).

Mental health. Screening measures for symptomatology of mental health were used. The WHO's Major Depressive Inventory (ICD-10) was used to assess levels of depression (17) during the two previous weeks. The number of depressive symptoms was used to because of the small number of participants with major depressive diagnosis. Mental health was assessed using the Short Form Health Survey (SF-12) (18), with the mental component summary, assessed for the four previous weeks. Higher score indicated better mental health.

Alcohol use. Alcohol use was assessed using the extended quantity-frequency (QF) measure of alcohol use (19), and following Rehm et al. (20) to create groups of alcohol users. A first variable with a cut-off of at least 40g pure alcohol on average per day (i.e. 28 drinks a week);

and a second variable with a cut-off of at least 20g pure alcohol on average per day (i.e. 14 drinks a week). The first cut-off is recommended as a basis for formal therapy, and the second one for brief intervention. The variables were coded 0 if the participants drank less alcohol than the cut-off, and 1 otherwise. We also measured binge drinking with the standard question of the Alcohol Use Disorder Identification Test (AUDIT) as frequency of six drinks or more on an occasion in the previous twelve months. Weekly or more frequent binge drinking was coded 1, and 0 otherwise.

Tobacco use. Tobacco use was assessed with two variables: smoking status (participants were asked whether they smoked during the previous twelve months, coded 1 if participants smoked, 0 otherwise), and daily smoking (participants who smoked at least one cigarette daily, coded 1 for daily smokers and 0 otherwise).

Cannabis use. Cannabis use was also assessed with two variables: cannabis use (coded 1 if participants used cannabis during the previous twelve months and 0 otherwise) and hazardous cannabis use (coded 1 if participants used cannabis weekly and 0 otherwise).

Other illicit drug use. The use of 15 other illicit drugs (e.g. cocaine, heroin, ecstasy, poppers, ketamine) was assessed for the previous twelve months, coded 1 if participants used at least one illicit drug, and 0 otherwise.

Demographic covariates. Language (French or German), perceived family income ('below-average income', 'average income', 'above-average income'), age at baseline and parents' level of education (primary, secondary, tertiary) were assessed.

All variables, except personality and covariates, were investigated at baseline and follow-up.

Statistical analyses

Prevalence rates and descriptive statistics were first computed. Then, two sets of analyses were performed, each one related to a research question.

Examining if NEET youth differ from other contemporaries in terms of personality, substance use, and mental health

The first set of analyses included cross-sectional comparisons using baseline data. Sixteen generalized linear models (GLM) were computed, including NEET status as an independent variable and personality (6 variables), substance use (8 variables), and mental health (2 variables) as dependent variables. We performed linear regression and logistic regression according to the distribution of the dependent variable, controlling for demographic covariates.

Longitudinal investigations of NEET status

The second set of analyses provided evidence regarding longitudinal associations for NEET youths. First, the change of NEET status over time between baseline and follow-up was assessed with 1) prevalence rates of NEET at baseline and follow-up, 2) a contingency table between the two time points, and 3) a logistic regression with NEET status at baseline predicting NEET at follow-up, controlling for demographic covariates.

Second, the direction of the relationships between NEET status, substance use and mental health was investigated using ten cross-lagged panel models including occupational status and each variable related to substance use and mental health (depression, mental health, candidates for brief intervention, candidates for formal therapy, binge drinking, tobacco use, daily smoking, cannabis use, hazardous cannabis use, and other illicit drug use). These models examined whether one variable predicted subsequent changes in the other variable, i.e. causal paths (e.g. NEET status at baseline predicted cannabis use at follow-up), and of the reverse lagged associations, i.e. reverse-causal paths (e.g. cannabis use predicted NEET status at follow-up).

The models were tested controlling auto-regression (the relationship between the same variable at both time points), synchronous correlations (the relationship between two variables at the same time point), and for demographic covariates.

For all analyses, a Bonferroni correction was applied for each model to keep a 5%-error rate.

As a sensitivity analyses, we also tested models with and without including participants looking for a job in the NEET youths. The results were the same (no change of direction of effects), with some significance level not reaching $p < .05$ due to small sample size.

Analyses were carried out using Mplus 7 (21) and SPSS 21.

Results

Participants were aged 20.0 ± 1.2 years old on average at baseline and 21.3 years old at follow-up (about 15 months' difference). The age range at baseline was 17.9 to 27.8 year-old, with only 0.5% of participants being 25-year-old or older. Table 1 shows the prevalence rates and descriptive statistics. At baseline, NEET youths were 6.1%, including 4.0% of unemployed (N = 192) and 2.1% of other NEET youths (N = 100). At follow-up, NEET youths were 7.4%, including 4.9% of unemployed (N = 234) and 2.5% of other NEET youths (N = 117).

Insert Table 1 about here

Examining if NEET youth differ from other contemporaries in terms of personality, substance use, and mental health

Comparisons between NEET youths and non-NEET youths showed no significant differences in terms of personality (see Table 1, $p > .05$ for all seven variables). In cross-sectional comparisons,

NEET status was associated with an increased number of mental health problems (symptoms of depression: $p = .004$) than non-NEET status, but not with mental health.

NEET status was associated with increased illicit drug use (cannabis use: $p = .006$, hazardous cannabis use: $p < .001$, other illicit drug use: $p = .005$) and tobacco use (smoking status: $p = .002$, daily smoking: $p < .001$), but not with alcohol use (candidates for brief intervention, candidates for formal therapy, binge drinking).

Longitudinal associations of NEET status

Regarding the transient or stable character of NEET status, Table 2 reported longitudinal associations for NEET status. Only 1.4% of all participants were NEET at both baseline and follow-up. A total of 23.3% of the participants who were NEET at baseline were NEET at follow-up (68 of 224).

The results of the logistic regression predicting NEET status at follow-up with NEET status at baseline showed a significant association of NEET status at baseline with NEET status at follow-up ($\beta = .178$, $p < .001$, OR = 1.20).

Insert Table 2 about here

Table 3 presents the results of the ten cross-lagged panel models examining the prospective pathways between NEET status, mental health and substance use.

Regarding mental health, reverse-causal paths were significant. Mental health at baseline increased the risk of being NEET at follow-up (depression: $\beta = .106$, $p < .001$, OR = 1.11;

mental component summary: β = -.105, p < .001, OR = 0.90). Causal paths were non-significant: NEET status at baseline did not predict mental health at follow-up.

Regarding substance use, three reverse-causal paths were significant. Daily tobacco use, cannabis use, and hazardous cannabis use at baseline increased the risk of being NEET at follow-up: daily smoking (β = .090, p < .001, OR = 1.09), cannabis use (β = .082, p = .020, OR = 1.09), and hazardous cannabis use (β = .082, p < .001, OR = 1.09). The other reverse-causal paths and all causal paths from NEET status to substance use were non-significant.

Insert Table 3 about here

Discussion

This study aimed to examine if NEET youths differ from other contemporaries in terms of personality, substance use, and mental health, and to provide longitudinal examination of NEET youths, including prospective pathways between NEET status, mental health and substance use, and the stability of the NEET phenomenon across time.

First of all, the prevalence rates of the current study were in accordance with those previously reported. NEET youths and unemployed represented 6.1% of the total sample at baseline and 7.3% at follow-up. Disengagement from any institution (education system, labour force) was quite uncommon among young Swiss men. The OECD (2) reported a total of 6.0% of inactive and unemployed Swiss youths in 2013, including 3.5% of the 15-24 year-olds being inactive. In the current study, inactive youths (excluding unemployed participants who looked for a job) were a little more than 2% at each separate time point. The number of NEET youths appeared to be very low in Switzerland, in comparison with the whole OECD countries (12.5% in 2010,

12.6% in 2012; (2, 22). However, the results are comparable with those of Northern OECD countries, which reported such low prevalence rates of NEET youths, such as Netherlands, Denmark, Iceland, Austria, Norway, Sweden, Germany, Finland, and also Japan (i.e. inactive youths < 4.9%, inactive and unemployed youths < 8.4%). In contrast, Southern European countries (Greece, Turkey, Italy, Spain) and Mexico reported the highest prevalence rates of inactive youths (> 6.4%) and inactive and unemployed youths (> 19.6%). The prevalence rate of NEET youths in the U.S.A. was also much greater in 2012 (inactive youths: 5.7%, inactive and unemployed youths: 13.0%). These differences may be associated with cultural and religious questions. Indeed, the Northern countries mentioned are historically Protestant countries (excepted Austria), whereas the other Latin countries are historically Catholic/Orthodox countries. Since Weber (23), it is well known that Protestantism is associated with a specific work ethic, which values hard work and self-discipline. Austria and Japan, even if they have not a Protestant background, have low prevalence rates of unemployment. Because of this unique cultural context, NEET youth may be a less crucial problem in Switzerland than elsewhere.

Second, NEET youths did not differ in any dimensions of personality. However, they were more likely to engage in substance use. This was true for illicit drug use, such as cannabis use and other illicit drug use, and also for tobacco use, but not for alcohol use. NEET youths were also more likely to report depressive symptoms. As mentioned in the OECD report (2), being NEET may be associated with demoralizing effects. The result dealing with depressive symptoms should be in line with this assumption. Overall, these results were in line with the hypothesis that being NEET was not a set of characteristics, referring for example to a specific personality of NEET youths.

Regarding longitudinal associations, NEET status was transient, as only 1.4 % of the youths were NEET at both baseline and follow-up. Even if some youths were NEET for a while, most of them did not remain NEET for a long time. ‘Doing nothing’ did not seem in the Swiss youth culture of these young men in their twenties. However, the risk of being NEET at follow-up was increased by 1.20 if participants were NEET at baseline, a small but significant effect. Therefore, a specific attention to these vulnerable youths is required to avoid long-tem disengagement. Moreover, as NEET status in youths appears to be transitory, including the length of time being a NEET youth as a risk factor in future studies may be very informative. It would also allow identifying whether long-term NEET youths face a trajectory of challenges, especially in Switzerland, where this status was uncommon. Indeed, the follow-up period was quite short.

The prospective pathways from NEET status to mental health showed that youths with prior mental health issues were more likely to become NEET (5, 6). Indeed, having mental health increased the risk of becoming a NEET. On the contrary, the demoralising effects of being NEET was not found in this study, as NEET status did not increase the risk of developing later mental health issues (2).

Regarding substance use, cannabis use and heavy cannabis use at baseline increased the likelihood of being NEET at follow-up. This result added to the growing evidence on negative consequences associated with cannabis use. Indeed, previous studies reported that repeated cannabis use in teenage and early adulthood increases later adverse consequences on health, school disengagement, unemployment, and more generally, psychosocial functioning (see for example (24-26). It appeared that cannabis use increased the risk of being disengaged, even if being NEET is uncommon and transient in Switzerland. This result is in line with a recent study showing that cannabis use is a risk factor for job loss (8). Moreover, not only heavy cannabis use

increased the risk of being NEET, being a cannabis user also increased this risk, regardless of the frequency of cannabis use.

Tobacco use also increased the risk of becoming later a NEET, but it concerned only daily smoking and no smoking status (being a smoker or not). Therefore, regular and/or heavy tobacco use seemed to have harmful effects. Deleterious consequences of smoking on health are well known (27), but it has also social consequences such as disengagement. For example, Brook et al. (28) showed that cigarette smoking is a risk factor for unemployment. Smoking-related illnesses, increased absenteeism, financial stress leading to psychological symptoms, and decline in cognitive functioning are possible causes of this relationship. The fact that even youths in their early twenties showed this association is a worrying concern.

No reciprocal associations of NEET status with substance use appeared, as reported in studies focusing separately on unemployment and school disengagement (6).

Alcohol use showed specific patterns, being neither associated with NEET status in cross-sectional, nor with longitudinal associations. Previous studies reported conflicting results between alcohol use and academic performance, sometimes suggesting that alcohol use decreases the number of years of schooling and graduation, and other times reporting negligible or non-significant associations (29). Conflicting associations between alcohol use and unemployment have also been reported (8). Indeed, unemployment may increase alcohol use because people used alcohol for coping motives, but income effect also may moderate alcohol use. A recent study reported no association between heavy alcohol use/ DSM-IV alcohol abuse/dependence and the unemployed subgroup of youths between 18-25 year-olds (8). These authors suggested that this finding was due to a high degree of acceptance of alcohol use among youths. It was also maybe because alcohol use is widespread among youths, so alcohol use

reached a maximum that NEET youths cannot exceed. More studies are needed to elucidate these inconsistent associations.

Overall, these results showed that being NEET had not any long lasting consequences, even if it was associated with substance use and depressive mood. Indeed, causal paths presented NEET status as a consequence of mental health and substance use rather than a cause. Some issues (mental health, cannabis use, tobacco use) may have consequences on youths' disengagement, but they did not lead to youths' disengagement, and did not show reciprocal reinforcing effects.

Therefore, NEET status among young Swiss men was at the same time unusual, transitory, and without long lasting consequences. These results may be surprising, because NEET status has been associated with various deleterious consequences, even if prospective associations have rarely been at focus. One explanation is that NEET youths represent a heterogeneous population, as reported in the introduction section. Contrariwise to other countries where NEET status has been associated with long-lasting consequences, Swiss young men may belong to the 'non-vulnerable' NEET youths, i.e. those who choose to be NEET and do not lack social, cultural, and human capital. Therefore, they are more likely to be short-term NEET without consequences on health and risky behaviours. More investigations are needed on this topic, including prospective comparisons with other countries.

The most important limitation of this study was that it only included men. To establish whether its findings are consistent for both sexes would require a study including women. Another shortcoming was self-reported data: even if these are generally considered valid on health issues and substance use, self-reported surveys could introduce various forms of bias. Thirdly, mental health assessment only assessed screening measures of general symptomatology. Measures of diagnosis may later the findings. Moreover, other relevant disorders such as psychosis, bipolar

disorder, and attention deficit hyperactivity disorder were not included and need further investigations. Finally, a last limitation was that men around 20 year-olds were included in the study, so the whole age range of NEET youths were not at focus. Indeed, NEET status may concern younger and older youths (from 15 to 29 year-olds, as reported in OECD (2).

In conclusion, NEET youths require special focus as they were heavy drug users and in some ways showed poorer mental health. However, this status seemed to be an unlikely and transient one among young Swiss men emerging into adulthood, and most NEET youths did not become disengaged from society. NEET status seemed to be highly related to the country's context, including culture and economic situation. Moreover, causal paths presented NEET status as a consequence of mental health and substance use rather than a cause. Additionally, this study confirmed that cannabis use and daily smoking are public health problems with adverse consequences, and thus prevention programs need to focus on these vulnerable youths to avoid them being disengaged and excluded in addition to their mental health and/or substance use.

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Table 1. Descriptive statistics and cross-sectional comparisons[*] of NEET and non-NEET

	Baseline			
	Overall	NEET	Non-NEET	p-value
% (n)	100% (4,758)	6.1% (292)	93.9% (4,466)	
Personality, mean (sd)				
Sensation seeking (1-5)[a]	3.04 (0.86)	3.01	3.05	ns
Aggression/hostility (0-1)[a]	0.41 (0.21)	0.44	0.41	ns
Sociability (0-1)[a]	0.58 (0.22)	0.55	0.58	ns
Neuroticism/anxiety (0-1)[a]	0.20 (0.20)	0.23	0.20	ns
Behavioural inhibition system (1-4)[a]	2.42 (0.47)	2.40	2.43	ns
Behavioural approach system (1-4)[a]	2.18 (0.43)	2.24	2.17	ns
Health status, mean (sd)				
Depression (0-50)[b]	6.98 (7.06)	9.28	6.83	< .001
Mental health (0-100)[a]	47.37 (9.07)	45.40	47.50	ns
Substance use, % (n)				
Candidates for brief intervention (≥ 14 drinks per day)[c]	19.8	20.9	19.7	ns
Candidates for formal therapy (≥ 28 drinks per day)[c]	4.7	4.8	4.7	ns
Binge drinking[c]	22.0	22.1	20.2	ns
Tobacco use[c]	42.1	53.1	41.4	.002
Daily smoking[c]	18.3	30.5	17.5	< .001
Cannabis use[c]	30.0	40.4	29.3	.006
Hazardous cannabis use (≥ weekly)[c]	8.4	20.2	7.7	< .001
Other illicit drug use[c]	10.4	18.8	9.8	.005

[a] Proportion is given.
[*] Linear Generalized Models (GLM) ([a] linear regression, [b] Poisson regression, [c] logistic regression) were performed, comparing 'NEET' and 'non-NEET'. The analyses controlled for language, age, perceived family income and parents' level of education.
A Bonferroni correction was applied.

Table 2. Contingency table for NEET status at baseline and follow-up

		Follow-up	
		Non-NEET	NEET
Baseline	Non-NEET	87.9% (4,183)	5.9% (283)
	NEET	4.7% (224)	1.4% (68)

Table 3. Prospective associations[*] between NEET status, mental health and substance use

V2	Causal paths NEET bl → V2 fu			Reverse causal paths V2 bl → NEET fu		
	β	p-value	OR	β	p-value	OR
Depression[b]	.093	ns	-	.106	< .001	1.11
Mental health[a]	-.028	ns	-	-.105	< .001	0.90
Candidates for brief intervention (≥ 14 drinks per day)[c]	-.015	ns	-	.062	ns	-
Candidates for formal therapy (≥ 28 drinks per day)[c]	.049	ns	-	.027	ns	-
Binge drinking[c]	.014	ns	-	.017	ns	-
Tobacco use[c]	.014	ns	-	.076	ns	-
Daily smoking[c]	.032	ns	-	.090	< .001	1.09
Cannabis use[c]	-.002	ns	-	.082	.020	1.09
Hazardous cannabis use (≥ weekly)[c]	.056	ns	-	.082	< .001	1.09
Other illicit drug use[c]	.050	ns	-	.047	ns	-

bl: baseline; fu: follow-up; OR: odd-ratio.

Example of causal path: depression at fu on NEET status at bl. Example of reverse-causal path: NEET status at fu on depression at bl.

[*] Cross-lagged panel model controlling for language, age, perceived family income, parents' level of education, auto-regression of the same variable within time, and synchronous correlations between NEET-status and V2, either at baseline and follow-up ([a] linear regression, [b] Poisson regression, [c] logistic regression).

Non-NEET status was used as the reference category.

[***] $p < .001$.

Standardized β are given. A Bonferroni correction was applied.