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**Families and Relationships with Friends in the Genesis
of Addiction in Adolescents. Essay on Life Course
Analysis of 15–18 Year-Olds Enrolled in School, in Paris
and the Surrounding Area (Ile-de-France)**

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Abstract:

Background: friends play an important role in cigarette and cannabis usage during adolescence. However, family is also a factor insofar as it can expose an adolescent to the development of consumption, or protect them from it. Experimentation with, and consumption of, these substances comes about within a specific relationship configuration: that of a somewhat conflictual relationship between young people and their parents.

Methods: The study was conducted in the Paris area (France) among 15-18-year-olds enrolled at school, with whom we conducted 93 biographical interviews (representing 483 person-years of retrospective observation).

Results: The consumption of cigarettes or cannabis is influenced by relationships with peers and meet-ups with friends (especially at weekends), as well as within the protective school environment. The relationship between adolescent consumption and parental attitude is two-way; consumption can be considered as much a cause of conflict as it is a consequence.

Conclusions: First, a product-based approach (tobacco or cannabis) is less fruitful than an approach of entry to addiction by life events. Secondly, analysis of both parent-adolescent conflicts and outings with friends seem to be powerful levers of action in preventing take-up of cigarettes and cannabis.

Background

Adolescent consumption of cigarettes and cannabis generates international public health concern. The consequences of smoking for the health of this population are both known and serious (U.S. Department of Health and Human Services, 2014). An “association between cannabis use and effects on cognitive development during adolescence is limited” (National Academies of Sciences, 2017, p. 270) but there is “substantial evidence that initiating cannabis use at an earlier age is a risk factor for the development of problem cannabis use” (op. cit., p.348). This report concludes that it will be necessary to conduct further research on the developmental implications of cannabis use across age groups, particularly among adolescents (op. cit., p.285).

Although smoking fell sharply between 2009 and 2014, cigarette consumption remains very common among 15-year-olds. In the “Health Behavior in School-Aged Children Survey”, conducted among pupils aged 11 to 15 in the course of the 2013-2014 academic year, young Greenlanders were the heaviest smokers: 53% of girls and 51% of boys aged 15 stated that they smoked cigarettes at least once a week, unlike Armenia, where just 5% of girls and 1% of boys smoke, or Canada - where the figure is around 5%. France is in sixth place, with proportions reaching 20% and 18% respectively (Inchley J et al., 2016).

Cannabis is the drug most often consumed by young Europeans and North Americans: In the course of the 2013-2014 academic year, 27% of Canadian 15-year-olds had consumed cannabis in the past 12 months (as against 3% in Yugoslavia and the Republic of Macedonia). In any case, young French people remain the biggest consumers: 26% of girls and 29% of boys aged 15 have already consumed cannabis (as against 4% of Armenians), despite a national policy centered on repression (Kokoreff M., Coppel A., & Peraldi M., 2018).

This situation calls for a health promotion policy based on clear analysis of the social determinants of the behaviors.

Stressful life events are associated with a lower likelihood of remission from drug dependence (McCabe, Cranford, & Boyd, 2016; Liebrechts et al., 2015). The association between parental divorce and cannabis use in young adults is not statistically significant (Sakyi, Melchior, Chollet, & Surkan, 2012), but parental separation is a strong predictor for substance use variables, especially where it happens before a child reaches the age of 14 (Waldron et al., 2014).

Relationships with family and friends are significant factors in consumption during early adolescence (Windle, 2000; Cleveland, Feinberg, Osgood, & Moody, 2012). The friendship group plays an important role in learning about product use: activities, consumption techniques and pleasurable sensations. Less time spent with parents is associated with more drug use (Best et al., 2005). A behavior can be learned through information sources: personal communication and observation of others, personal experience, and emotional stimulation (Fujimoto & Valente TW, 2012; De Bruijn B, 1999; Bandura A, 1977; Luk, Wang, & Simons-Morton, 2012; Chan, Kelly, Carroll & Williams, 2017). These learning situations are facilitated, or not, by a number of factors including: how many friends are using these products (Brown, 2004; Spach, 2016); the quality of the relationship with those friends (Pearson M, Sweeting H, Gordon J, & Turner K, 2006; Abel G, Plumridge L, & Graham P, 2002); young people's group identity; group bonding (Fletcher, Bonell, Sorhaindo & Rhodes, 2009) and level of opportunity - that is, how often the young people get a chance to hang out with and be in contact with friends who are consumers. Both evenings spent among friends and friendly meet-ups are thus opportunities to build affinities and share consumption. Adolescence is a period of social interaction with friends (Nickerson & Nagle, 2005). In the 2013-2014 survey of health behavior in school-age children, most countries showed increased daytime meet-ups (before 8 pm) with friends aged 11 to 15, with young Bulgarians meeting up most during the day: 52% of girls and 56% of boys aged 15 (as against 7% for Portuguese boys and girls) (Inchley J et al., 2016).

Parental stance - especially with regard to evening meet-ups - is a predisposing factor in the use of products insofar as the rigid (control, restrictions on meet-ups) (Stephenson & Helme, 2006) or relaxed approach might expose their children to hanging out with friends likely to be consumers (Chan, 2011). Moreover, research projects have demonstrated that parental letting-go is linked with the consumption of larger quantities of psychoactive substances (Brody GH, Flor DL, Hollett-Wright N, Mc Coy, JK, & Donovan J, 1999). Levels of parental control are related to adolescent use of these products (Fagan, Horn, David Hawkins, & Jaki, 2013), with a higher level of control being associated with lower drug use. The effects of instrumental parental control vary across individuals, whereas expressive parental controls have a uniform effect on reducing adolescent drug use.

Relational factors either expose adolescents to the use of cannabis from the age of 17, or protect them against it (Chedid M, Romo L, & Chagnard E, 2008). Affection, cohesion and familial support or close relationships serve to protect against risky behaviors (Nicholson T, 2000; Loeber R, Yin Y, Anderson S, Schmidt L, & Crawford A, 2000). Parental monitoring is associated with positive effects (Tornay L. et al., 2013); a better parental relationship, coupled with a belief that drug usage is problematic, are associated with adolescent refusals

to accept cannabis (Burdzovic A., Pape H., & Bretteville-Jensen A.I, 2016). A considerable number of those young people who develop consumption of substances have conflictual relationships with their parents. Various researchers (Butters J, 2002; Sokol-Katz J, Dunham R, & Zimmerman R, 2017; Burcu E, 2002; Kim, Kwak, & Yun, 2010) have tried to test social learning and social bonding theory, concluding that parental influence was slightly more powerful than peer factors. Others (Pejnović Franelić I., Kuzman M., Pavi-çimetin I., & Kern J., 2011) have found the influence of peer group influence and availability seems to be more important than parental control and or family structure.

The great challenge of adolescence is "the construction of a free autonomous individual in sociability groups" (Dubet, quoted by Charles Henry Cuin, 2011). During this period, social integration happens through primary (family) and secondary (peer) groups. The works cited above identify the relationships between primary and secondary sociability as variables that are associated with drug use. They study the statistical correlation between substance use and the nature of relationships with parents or peers at the time of the survey. Yet adolescence, as a period of identity construction, of integration into social groups, and of adaptation to social roles, is a gradual process happening over a relatively long period of time - making a necessity of continuous observation of the relevant variables and their interrelationships.

Another limitation revealed by the literature review is that this research is conducted either by conducting quantitative studies on representative samples of the population to make an assessment, or by qualitative approaches, using a group. A sociological study conducted among the students of a school and its community seems to us a good opportunity to both study social representations and statistically verify the link between social condition and substance use.

Research Questions

This article seeks to determine the effect of life events, plus relationships with family and friends, on the development of use of addictive products at any time during adolescence, and to suggest responses to the following questions for primary prevention:

How, and to what extent, do behaviors in the consumption or non-consumption of cigarettes and cannabis in the course of adolescence connect with life events and the relational context in which young people evolve?

Do behaviors in the consumption or non-consumption of cigarettes and cannabis in the course of adolescence connect with life events and the relational context in which young people evolve?

If so, then how, and to what extent? And in what proportion can these life events, relationships with parents and levels of sociability respectively explain the consumption of addictive products at adolescence?

In addition to many existing studies using large representative samples, we ask these questions at the level of a school community, which is a place of interaction between adolescents and their relatives, parents and friends.

Method

In this article, the condition studied is the adolescent's relationship with whomever they are close to; the effect refers to consumption of the product. This consumption is a complex, dynamic action. It can be accidental or chronic, given up on - or indeed never experienced. In a primary prevention approach, we chose to study the conditions of entering into consumption of a product - in other words, "the first time". This single event can be defined and measured quite simply, using the biography analysis methods practiced by demographers and epidemiologists (event history analysis and time history analysis). Through graphic observation, by age, of the population curves having experienced such a "first time" event, we are able to rigorously represent its timing and intensity within a given population over the entire period of adolescence. The Kaplan-Meier method describes the evolution over time of the number of people who have not yet experienced the "product consumption" event. These observations can be statistically tested for significant differences in behavior between cohorts. For example, between those having experienced family conflict, and those who did not (Cox regression), throughout adolescence. This method allows us to go further in the search for causality, because if the cohort that experienced conflict during adolescence uses drugs earlier and more frequently, it becomes possible to deduce, under certain conditions, that conflict is a variable associated with the use of this product.

The explanatory variables are:

- life events
- quality of the parent-child relationship
- frequency of meet-ups with friends, as a criterion through which to approach the question of sociability

The dependent variable is the consumption or non-consumption of cigarettes or cannabis.

To test the link between independent and dependent variables, we suggest five working hypotheses.

H1: Non-consumers express non-conflictual relations and present low sociability.

H2: Conversely, those young people having developed consumption of cigarettes or cannabis in the course of adolescence report a gradual deterioration in their relationships with their parents (feelings of being misunderstood, conflicts that worsen over time).

Members of this group also present intense sociability, with daily meet-ups outside of school.

We also put forward a hypothesis that relational variabilities have different impacts on the choice of substance consumed.

Whereas starting to consume cigarettes results from a logic that is linked to sociability (H3), we suppose that consumption of cannabis at adolescence is down to familial logics (H4).

H5: Conflictual relations are the predominant factor (ranking above sociability) leading to consumption of these substances.

Data Sources

Since the adolescents' environment is school, we decided to conduct a survey at two typical schools in the Parisian region. The study covered 93 students aged 14 to 19, attending between December 2009 and February 2010, representing 483 person-years of retrospective observation.

These are the very ages at which consumption is constructed (Godeau E, Navarro F, & Arnaud C, 2012), with significant variations according to age. Indeed, following a quasi-linear growth in levels of use from starting secondary school, the distribution of cigarettes, alcohol and cannabis is constantly on the rise during the final year of school, across all supply chains (Spilka S & Le Nézet O, 2013).

In our sample, 38% (n=41) of students were in their *seconde* year (mainly 15-year-olds), 25% (n=29) were in *première* (mainly 17-year-olds), and 33% (n=29) in *terminal* (mainly 18 year-olds).

72% (67 of 93) of our sample were young women (♀), and 28% (26 of 93) young men (♂), 38 (23 ♀ and 15 ♂) were consumers of cigarettes (as against 55 non-consumers, some of whom were abstinent while others were experimenters). 18 (9 ♀ and 9 ♂) were consumers of cannabis (as against 75 (58 ♀ and 17 ♂) non-consumers, some of whom were abstinent while others were experimenters).

The reason for this over-representation of girls is that our sample includes students from the Literary pathway, in which young women are disproportionately represented as a result of gendered educational orientation (Chazal and Guimond, 2003).

The survey, which was conducted during lesson time, addressed both consumers and non-consumers. We distributed a retrospective grid featuring a time scale graduated by years of age: the Ageven (Age-Events) sheet; its purpose was to trace life trajectory via retrospective analysis. This demographers' tool for biographical data collection (Védaste Banturiki Y, Nganawara D, & Thomsin L, 2006), allows various individual trajectories to be reconstructed as a series of biographical events. It enables observation of several aspects of an individual's life (school, place of residence, family situation, consumption, etc.) as well as explorations of existing links between consumption and the familial and social environment (Chedid M et al., 2008)

To complete the Ageven sheet, participants were asked to reconstitute the main changes and events at each age, and provide brief answers to the questionnaire. Participants seemed to enjoy this exercise, even though some difficulty was experienced in relating milestone events. By creating an overview of their own life course, it allowed them to gain understanding of certain aspects of life, as well as unearth buried memories. Participants were able to step back and interpret their own behavior around substances.

To ensure informed consent from participants, we introduced the research question as well as the main points of the questionnaire. We also asked students for their parents' permission, whether or not they were minors (aged under 18). We reminded them that their participation was voluntary, non-compulsory and that the results of the survey would be anonymous. STATA software was used to process the data.

Definitions

In this work, we pay special attention to two groups:

- 'Non-consumers', including:
 - those who have never experimented
 - those who have experimented, but then decided not to take the experience any further
- 'Consumers' refers to those with the following behaviors:
 - occasional consumption, up to twice a week
 - repeated consumption, more than twice a week
 - daily consumption

Comparison of these profiles will take two forms: chronological description by consumption curves and by age, during the observation period, and an overall measure of the relative risk of passing from experimental to consumer status within a group of adolescents who were observed throughout the duration of the study.

To study the “parental relations” variable, we used the adjectives the participants themselves used to qualify the relation with their parents. The declarative data allow us to distinguish between 'conflictual' and 'non-conflictual' relationships.

- The non-conflictual aspect mentions relationships described by respondents as 'good', 'excellent', and 'supportive', marked by growing (even intense) 'closeness', 'average' which seems to refer to relations that are at once both supportive and conflictual, 'normal relations', 'with ups and downs', 'centered on advice, listening, or parental support at difficult moments'.
- The conflictual variable describes the lack of comprehension between parents and children, or relationships that are 'distant', 'conflictual', 'violent', 'aggressive', or 'non-existent'.

As a criterion with which to approach the question of sociability, we have chosen frequency of meet-ups with friends, which describe the level and context of sociability. The data gives rise to three categories of sociability:

- School-based: meet-ups happening within the school context, that is, during school days (e.g. at break time, around the school gates before classes begin)
- Weekend: meet-ups taking place only at the end of the week
- Intense: meet-ups every day and evening of the week

This meet-ups indicator can offer clues as to level of investment in the friendship sphere.

We have used two methods to present the history of the cohorts.

The survivor function (Kaplan-Meier 1958) describes the probability of surviving in the stage of non-consumption at different ages. This event is studied according to the status of the adolescents, taking into account their relationships with parents and friends.

The Cox logistic regression or proportional hazard model (Ritshard G, 2004) enables exploration of the relative risk of smoking cigarettes or cannabis among those surveyed who were experiencing parental conflicts, in comparison with those not experiencing these conflicts.

Ethical considerations

Because the survey was introduced by their teacher and conducted during lesson time, it was open to being interpreted by participants as a compulsory school activity. The students, fearing being labeled by teachers, or parents being informed, may have censored or understated their use of illegal substances.

To avoid any institutional association (in terms of either school or police), we stressed the confidential nature of the data collected and specified our status as sociological researchers. We chose to use the term study or university work. Speaking of an *enquête* (survey or investigation) might indeed link our study, in people's minds, with enquiries conducted by the police, school or health authorities.

Participants were reminded that their participation was voluntary, non-compulsory and that the results of the survey would be anonymous. We also specified that their responses would be subject to statistical processing, rather than value judgments.

Results

Description of the events studied

In the course of the period observed by the Ageven sheet, the proportions of young people having smoked cigarettes, and having consumed cannabis, are 48% and 30% respectively.

These behaviors in the consumption of products are influenced by relationships with both parents and friends. Many of the young people (7 of 10) go out often during term-time, on Wednesdays (when there is no school) and at weekends, fewer (5 of 10) are in conflict with their parents; and fewer still (2 of 10) have experienced a major impactful event, such as parental separation, or regular night-time socializing, away from the home.

In Table 1, we note that smoking cigarettes is correlated with consuming cannabis, and that these practices are themselves correlated with the existence of a conflict with parents and the fact of going out at weekends. Though this initial result confirms our intuitive formulation of hypotheses, the data remains too imprecise - because the statistics fail to take into account the duration of the experience in each situation.

The proportion of non-users declines more rapidly among teens whose relationships with their parents are conflictual, in comparison with those whose relationships are good (Figure 1).

Consistent with Hypothesis 1, an absence of conflict with parents does seem to protect against consumption. For example, 23% of participants having grown up in an environment marked by an absence of conflict have smoked cigarettes from the age of 18, whereas this is true of 68% of those who have experienced a conflictual environment. This observation is even clearer when it comes to the use of cannabis: in those who have not experienced conflict, 5% consume cannabis, whereas 48% of those who have experienced a conflict consume cannabis.

These differences can be expressed simply via the relative risk of consuming for those in conflicts, in comparison with those not in conflicts. To do this, we assume proportionality of risk between the two populations at different ages (Cox method).

Measurement of relative risk of consumption

Throughout adolescence, the relative risk of cigarette consumption is 4.5 times higher for those having experienced conflict than for those not having had this experience (Model 1 Cigarette, table 2). By using multiple regressions, the Cox method allows other variables that may affect consumption to be taken into account. All other things being equal, the relative

risk of cigarette consumption in adolescents having experienced parental conflict falls to 2.6. This value is significantly different from 1 (Model 2, table 2).

This same phenomenon is observed for the relative risk of cannabis consumption, which is seven times higher in the case of conflict with parents (Model 1 Cannabis, table 2). However, this risk falls to 1.4 and becomes non-significant where cigarette consumption and weekend meet-ups are taken into account (Model 2, table 2).

The risk of product consumption thus seems more strongly linked to the conditions in which adolescents meet up with their friends than it is to the experience of conflict.

Hypothesis H1 (that non-consumers express non-conflictual relations and present low sociability within the school environment) is verified and the risk of consumption of addictive products (cigarettes and cannabis) is, in the first analysis, linked with the adolescents' experience of conflict with parents (Hypothesis H2).

Yet this link is complex, because cigarette consumption falls very sharply when we introduce the effects of the meet-ups and consumption variables to the model. Hypothesis H2 is thus partially verified: only for users of cigarettes.

For a given (identical) family environment, the consumption of substances at adolescence seems to be linked with opportunities to consume with friends in an out-of-school context (Mayet A et al, 2014), that is, outside of school hours and the school sphere (evenings, weekends) (Figure 2). Wednesday meet-ups are linked to a lower risk of consumption of cigarettes (relative risk = 0.38), whereas weekend and evening meet-ups carry a relative risk of above 1 (hazard ratio of 1.7 and 2.57) (Model 1, Cigarette, Table 3).

When we introduce the conflict with parents variable to the model, the relative risk falls slightly, though it remains high for the weekend - and the 'protective' Wednesday effect reaches the limit of no significance (Table 3).

Meet-ups limited to the school space seem strongly linked to low usage of both cigarettes and cannabis (Model 1, cigarettes and cannabis).

Hypothesis H3 suggested that the impact of relational variables would differ in line with the substance(s) consumed. Whereas starting to consume cigarettes would be the result of a logic linked to sociability (H3), we suppose that the consumption of cannabis at adolescence is down to familial logics (H4). Hypothesis H3 is partially confirmed; consumption of cigarettes is more strongly linked with end-of-week (hazard ratio =13) meet-ups than with family conflict (hazard ratio =3.4), whereas no conclusion can be reached for the consumption of cannabis. Hypothesis H4 is unresolved. It follows that Hypothesis H5 (which

stipulates that conflictual relations could be both a major factor in determining sociability, and likely to lead to consumption of these substances) is rejected where the effect of meets-up are taken into account. It is not verified in the case of cigarette consumption and seems unlikely to be verified for cannabis, but this cannot be confirmed.

In a nutshell, the question is: does the conflictual relationship with parents bring about the consumption of cigarettes, or does the consumption of cigarettes bring about conflict with parents? The relative risk of smoking (Cox) was 4.5 for the first option and 3.29 for the second. These values are 7 and 2.56 respectively for cannabis when the adolescent is in conflict with their parents. In other words, the relationship between consumption and conflict is a two-way street in terms of the relationship between tobacco consumption and conflict with parents. In contrast, the relative risk of cannabis use among those who have experienced conflict is significantly higher than the relative risk of conflict among those who have used cannabis (Sahed, 2018).

Ultimately, the introduction of the “Major events” variable does not significantly alter the relative risk of smoking either cigarettes or cannabis in Table 3.

Conclusion

Discussion

It seems that young people who consume cigarettes or cannabis are more likely than those who do not consume these products to have a damaged relationship with their parents (feelings of being misunderstood, conflicts which worsen over time), and more often develop peer relationships beyond the school environment. Conversely, non-consumers describe positive relationships with their parents, and have stronger sociability within the school environment. There is a clear statistical relationship between adolescent-parent conflicts and the consumption of cigarettes – though less so for cannabis. The analysis shows that the link between conflict and consumption is influenced by relationships with peers and meet-ups with friends, especially during weekends and in the protective school environment. The relationship between adolescents and cigarette consumption is two-way and interactive - and within this relationship, consumption can be considered as much a cause of conflict as it is a consequence. On the other hand, conflict with parents around weekend outings is a determinant of cannabis use. The first observation is that the conflict with parents should be analyzed as a specific situation in which the adolescent, placed within a complex web of

relationships, is exposed to a higher or lower risk of entering addiction, depending on which times of the week when they meet up with friends.

Limitations of our study:

The results of this study do have certain limitations, due in particular to possible methodological bias. Firstly, several criticisms can be made of the retrospective method used. This may give rise to unreliable results, insofar as it relies on respondent memory. However given that these events are both 'significant' and relatively recent, the memory effect may be limited.

On the other hand, ordering the biographical events on the form is difficult for respondents, since briefly summarizing an event or situation experienced (or reducing it to keywords) may not be a straightforward exercise. Moreover, these data are subjective, at least to some extent, since they above all reflect the respondent's personal relationship to their own experience - after all, some events will be mentioned by some and not by others.

A further weakness of the study may stem from sampling.

The sample is the result of a survey of a group of high school students. It is not representative of the population as a whole of the same age, because it excludes both students at vocational high schools and those who have either dropped out of school or live in rural areas. However, in the case of a causality study (in which the study of chronology of events takes precedence over statistical representativeness), this criticism is not prohibitive. The most relevant way to judge the stability of the model would be via replication of an identical protocol, in different populations.

Methods of biographical analysis address the question of causality - one rarely addressed in the field of addiction. It entails making a judgment on the link associating a condition (sociability) with an effect (use) by taking into account the chronology of events. Does conflict precede the onset of drug use, or is it a consequence of drug use? The cause may be necessary, sufficient, or contributory (Bocquier, 1996, p.9). The cohort having experienced conflict during adolescence uses drugs both earlier and more frequently. This allows us to affirm, under the conditions of the weak determinism of the Cox model (*op. cit.*, p. 137), that conflict is a contributory cause of drug use.

Lessons for prevention.

First, the product-based approach (tobacco or cannabis) is of less interest than an approach of entry to addiction by life events. Second, the analysis of both parent-adolescent conflicts and outings with friends seem to be powerful levers of action with which to prevent embarking on the use of cigarettes and cannabis. Biographical and life course analysis (Ageven) proves a highly effective tool for the study of interactions between an adolescent subject and their immediate social environment.

Key points:

- In the course of adolescence, behaviors in the consumption of cigarettes or cannabis connect with the relational context in which young people evolve at school community level
- The product-based approach (tobacco or cannabis) is less effective than an approach through analysis of both the conflicts and the nature of peer group meet-ups
- Analysis of parent-adolescent conflicts and control of meet-ups seem to be powerful levers of action for prevention of embarking on the use of products
- The Ageven grid for the description of life events is an innovative tool used to analyse a situation within the community as well as for the development of primary prevention

The authors report no conflicts of interest.

Table 1: Correlation matrix between the events studied*.

	Consumes cigarettes	Consumes cannabis	Major events	Conflicts with parents	Goes out within the school context	Goes out on Wednesdays	Goes out on Wednesdays	Goes out on Wednesdays
Consumes cigarettes	1.0000							
Consumes cannabis	0.5894	1.0000						
Major events	0.3131	0.0893	1.0000					
Conflicts with parents	0.4297	0.3254	0.4952	1.0000				
Goes out within the school context	-0.1898	-0.3659	0.0170	-0.0196	1.0000			
Goes out on Wednesdays	0.0061	0.1700	-0.1193	-0.0286	-0.0827	1.0000		
Goes out on Wednesdays	0.3966	0.2646	0.0172	0.1420	-0.0147	0.2276	1.0000	
Goes out on Wednesdays	0.3166	0.2815	0.1094	0.2326	-0.2703	0.0663	0.1780	1.0000

***Unit of measurement: having experienced this event at least once in the course of adolescence.**

Table 2: Measurement of the relative risk of cigarette or cannabis consumption in adolescents in conflict with their parents in comparison with those not in conflicts with their parents

		Model 1 Conflict parent			Modèle 2 conflit parent + cannabis/cigarette + weekend		
		hazard ratio	P>z %	*=5% **=1%	hazard ratio	P>z %	*=5% **=1%
Cigarette	Conflitparent	4,48	0	S*	2,59	3,9	S *
	Cannabis				3,75	0,0	S **
	Weekend				7,83	4,5	S*
Cannabis	Conflitparent	7,05	0,9	S**	1,44	62,6	NS
	Cigarette				infini	100	NS
	Weekend				infini	100	NS

Table 3: Measurement of the relative risk of smoking cigarettes or cannabis by frequency of meet-ups with friends.

		Model 1 : Meets up			Model 2: Meets up + conflict parent		
		hazard ratio	P>z %	*=5% **=1%	hazard ratio	P>z %	*=5% **=1%
Cigarette	Scolaire	0,38	9,0	NS	0,36	6,0	NS
	Wednesday	0,30	3,2	S*	0,37	7,9	NS
	Weekend	17,03	0,6	S**	12,99	1,3	S*
	Evening	2,57	1,7	S*	2,07	6,1	S*
	Totale	1,35	57,0	NS	1,31	60,0	NS
	Conflict parent				3,37	0,5	S*
Cannabis	Scolaire	0,1	0	S**	0,11	S**	
	Wednesday	infini			infini		
	Weekend	infini			infini		
	Evening	2,09	0,7	S**	0,90	32,0	NS
	Totale	2,36	0,7	S**	2,09	28,0	NS
	Conflict parent				4,48	5,0	S*

Figure 1: Survivor functions without consumption of cigarettes or cannabis, by conflict with parents.

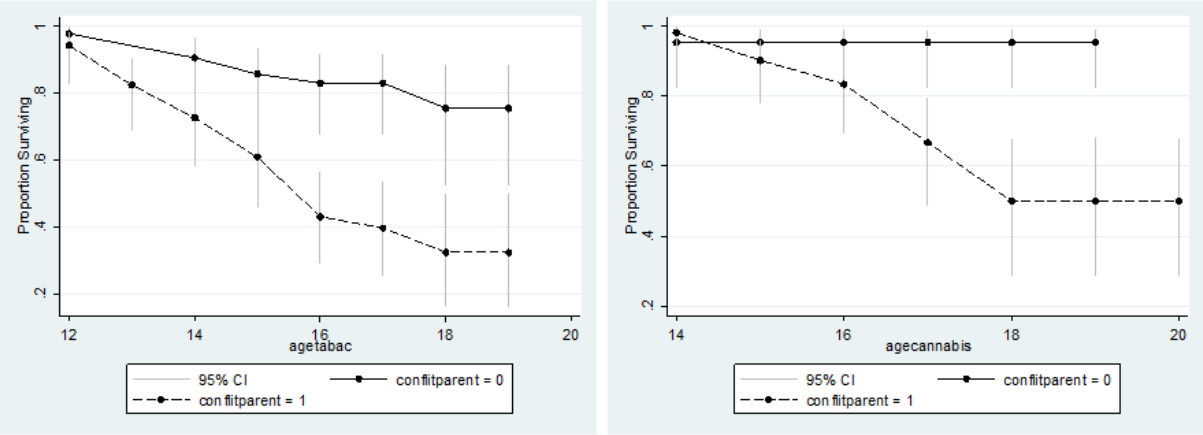
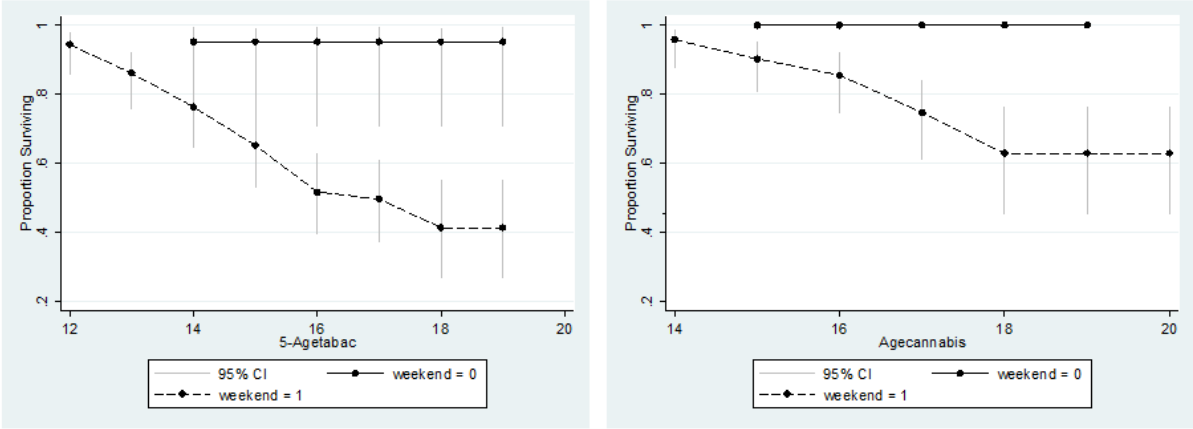


Figure 2: Survivor functions: consumption of cigarettes/cannabis by type of meet-up with friends.



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