

Parental permissiveness, control, and affect and drug use among adolescents

Elisardo Becoña^{1,2}, Úrsula Martínez¹, Amador Calafat², José Ramón Fernández-Hermida³, Montse Juan², Harry Sumnall⁴, Fernando Mendes² and Roman Gabrhelík⁵

¹ University of Santiago de Compostela, ² Irefrea, ³ University of Oviedo, ⁴ Liverpool John Moores University and ⁵ Charles University in Prague

Abstract

Background: Parents play an important role in determining the risk of children's drug use. The aim of this study was to analyse how certain family-related variables (permissiveness toward drug use, and parental control and affect) were linked to the use of alcohol, tobacco and cannabis, based on young people's self-report of such variables. **Method:** The sample was composed of 1,428 school children (51.8% males) aged between 11 and 19 from Mallorca (Spain). **Results:** We found that the young people who perceived their parents as permissive and those who perceived less maternal control and higher levels of both paternal and maternal affect were more likely to use alcohol, tobacco and cannabis. Sex differences were found within this pattern. Variables of maternal affect and control were not influential among males, whereas the general pattern was maintained among females. **Conclusions:** This study highlights the importance of perceived permissiveness and the need of considering parent's and children's gender when providing control and affect, as fathers will influence male children whereas mothers will influence female children.

Keywords: Permissiveness, control, affect, drugs, family, young people.

Resumen

Permisividad, control y afecto parental y consumo de drogas en adolescentes. Antecedentes: los padres juegan un papel importante a la hora de determinar el riesgo del consumo de drogas de sus hijos. El objetivo de este estudio fue analizar cómo la permisividad hacia el consumo de drogas y control y afecto del padre y madre estaban relacionadas con el consumo de alcohol, tabaco y cannabis. **Método:** la muestra estuvo compuesta por 1.428 jóvenes (51.8% varones) de entre 11 y 19 años de Mallorca. **Resultados:** aquellos jóvenes que percibían a sus padres más permisivos, con menor control por parte de la madre y mayores niveles de afecto tanto materno como paterno, tenían más probabilidades de consumir alcohol, tabaco y cannabis. Se encontraron diferencias en función del sexo dentro de este patrón. Las variables de afecto y control por parte de la madre no fueron influyentes en el caso de los varones, mientras que el patrón general se mantuvo en el caso de las mujeres. **Conclusiones:** este estudio resalta la importancia de la permisividad percibida y es necesario tener en cuenta el sexo de padres e hijos a la hora de proporcionar afecto y control, ya que son los padres los que influyen en los hijos varones y las madres en las mujeres.

Palabras clave: permisividad, control, afecto, drogas, familia, jóvenes.

Alcohol, tobacco and cannabis use is highly prevalent among young people in Spain as compared with most European countries (European Monitoring Centre for Drugs and Drug Addiction [EMCDDA], 2011), with polydrug use being the most prevalent pattern (Spanish Drug Monitoring Agency [OED in its Spanish initials], 2008). The average age of drug initiation in Spain is relatively low, around 13-14 years for tobacco and alcohol and 14.6 years for cannabis (OED, 2008).

A number of important risk and protective factors for drug use have been identified at the community, school, individual and family-levels (Pettersson, Hawkins, & Catalano, 1992; Stone, Becker, Huber, & Catalano, 2012). Among risk and protective

factors related to the family, different studies have highlighted the role of parents in their children's substance use (Becoña, Martínez, Calafat, Juan, Duch et al., 2012; Becoña, Martínez, Calafat, Juan, Fernández-Hermida et al., 2012; Pérez, 2012; Velleman, Templeton, & Copello, 2005; Secades-Villa, Fernández-Hermida, & Vallejo-Seco, 2005). Different studies have found that the more liberal parents are towards drug use (e.g., attitudes towards use, providing alcohol with meals), the more likely it is that their adolescent children will drink alcohol (Moore, Rothwell, & Segrott, 2010; Muñoz-Rivas & Graña, 2001) or use tobacco (Muñoz-Rivas & Graña, 2001) or cannabis (Olsson et al., 2003).

Parental control may both prevent alcohol and drug use and delay the age of onset of such use (Velleman et al., 2005). Children whose general behavior is controlled by their parents show lower levels of alcohol, tobacco and cannabis use (Choquet, Hassler, Morin, Falissard, & Chau, 2007; Moore et al., 2010). The authoritative parental style, involving relatively high levels of parent-child communication and active parental control, has been shown to be protective against substance use (Becoña, Martínez,

Calafat, Juan, Fernández-Hermida, et al., 2012; Julià, Escapa, Marí-Klose, & Marí-Klose, 2012). However, some authors question whether this parental style is always the most appropriate (García & Gracia, 2009; García & Gracia, 2010). Indeed, it would seem that when control is overly strict and limits are enforced with too much coercion, behavioral problems such as substance use may emerge in children (Schucksmith, Glendinning, & Hendry, 1997). Parental styles characterized by a lack of attachment are related to higher levels of use of alcohol and other drugs (Becoña, Martínez, Calafat, Juan, Fernández-Hermida et al., 2012), whereas different studies have indicated a lower prevalence of alcohol (Schucksmith et al., 1997) and tobacco use (Glendinning, Schucksmith, & Hendry, 1997) among children in family contexts characterized by supportive relationships.

Overall, studies indicate the importance of obtaining an appropriate balance between parental control and affect, the two fundamental characteristics of the authoritative parental style (Becoña, Martínez, Calafat, Juan, Fernández-Hermida et al., 2012; Julià et al., 2012).

The aim of the present study is to analyze the predictive capacity of young people's perception of their parents permissiveness toward drug use, the affect parents show and the control parents exert regarding to their own use of alcohol, tobacco and cannabis use. This study is innovative as children's responses towards their mothers and fathers are analysed separately in relation to affect, control and permissiveness toward substance use.

Method

Participants

Convenience sampling was used to recruit participants from fourteen public, private and grant-assisted private schools from the island of Mallorca (seven from Palma and the remaining seven from the rest of the island). In each school, one group participated per academic year. The selection was made by taking into account data from the Statistical Yearbook of Spain of 2010, which lists the pupils and schools in the Balearic Islands (65% public and 35% private). The initial sample was made up of 1,757 secondary-school students covering ages from 11 to 19 years. Of these, 329 participants' data were removed from the study because of incomplete data or spoiled questionnaires. Thus, the final sample was made up of 1,428 adolescents aged 11 to 19 years ($M = 14.73$, $SD = 1.81$), of whom 740 were males (51.8%) and 688 were females (48.2%).

Instruments

Perception of parents' permissiveness towards drug use was assessed by a brief scale constructed ad hoc made up of three items: "I am allowed to smoke", "I am allowed to drink alcohol at home" and "I am allowed to drink alcohol outside of home" with a Likert scale with four response options each: *never*, *sometimes*, *often* or *always*. The scale showed adequate reliability ($\alpha = .692$).

For the assessment of the perception of parental affect and control, we used the control and affect scales of the Parental Acceptance-Rejection questionnaire (PARQ) (Rohner, Saavedra, & Granum, 1978). Previous application of the PARQ/C in Spain has shown it to be a reliable measure of young people's perceptions of their parents (García & Gracia, 2010). The affect scale rates the child's perception of his/her father and mother as affectionate,

receptive and involved with him or her (e.g., "He/She says nice things about me", "He/She is really interested in what I do", "He/She lets me know he/she loves me"). Cronbach's alpha for this scale was .894 for the mother and .923 for the father. The control scale assesses the adolescent's perception of the strict control exerted by the father and the mother over his/her behavior (e.g., "He/She tells me exactly what time to be home when I go out", "He/She tells me exactly how I am to do my work (e.g., homework, chores)", "He/She wants to control whatever I do"). Responses for these items were rated on a Likert scale with four options: *almost always true*, *sometimes true*, *rarely true* or *almost never true*. Cronbach's alpha for this scale was .774 for the mother and .810 for the father.

For assessing frequency of adolescents' alcohol use the item used was: *How often do you drink alcohol?*, the response options were: *I have never drunk alcohol*, *Less than once a month*, *Monthly*, *Weekly*, *2-4 times a week* and *Daily or almost daily*. To simplify the data analysis, this variable was re-coded as: never, lifetime, in the last 30 days, and weekly use.

For the assessment of tobacco use we used the item: "Read the following statements and cross the box next to the one which best describes you: *never smoked*; *only ever tried smoking once*; *smoked sometimes but I never smoke a cigarette now*; *smoke cigarettes now but I don't smoke as many as one a week*; *smoke between one and six cigarettes a week*; *usually smoke more than six cigarettes a week*". To simplify the data analysis, this variable was re-coded as: never, lifetime, in the last 12 months and weekly.

For the assessment of cannabis use we asked: *Have you ever used cannabis?* The response options were: *No*; *Yes, all my life*; *Yes, during the last 12 months*; and *Yes, during the last 30 days*.

Procedure

Once the schools had been selected, the head teachers were contacted in order to obtain their consent. A letter was then sent to the parents of each selected student explaining the aims of the study and inviting them to participate in it. A passive consent procedure was used and so if parents were opposed to their children's participation, they had to sign and return the letter.

Regarding administration of the questionnaires, a group of four trained field researchers, was sent to each school to talk to the participants about the aims of the study and the confidentiality of the data. After giving their informed consent for participating in the study each participant completed their own questionnaire individually under examination like conditions, which took between 30-60 minutes. Data collection was conducted between November and December 2010.

The study was approved by the Department of Education, Culture and Universities of the Balearic Islands, Spain (Conselleria d'Educació, Cultura i Universitats del Govern de les Illes Balears, España).

Data analysis

Student t-test was conducted for the comparison between users and non-users of the different substances (alcohol, tobacco and cannabis) using PASW Statistics 20. Differences were considered statistically significant from a $p < .05$.

Path analysis was conducted using the Amos 19 (SPSS, 2006) program. We used the maximum-likelihood method for assessing the fit of the model (Byrne, 2010), with three types of indices:

Table 1
Differences in permissiveness, control and affect between alcohol, tobacco and cannabis users and non-users

	Use		Non-use		t
	Median	S.D.	Median	S.D.	
Alcohol	n = 830		n = 598		
Permissiveness	6.95	2.49	5.65	1.77	-11.436***
Maternal control	35.65	6.41	38.05	6.09	7.110***
Maternal affect	13.22	5.08	11.50	3.87	-7.233***
Paternal control	34.45	7.17	36.69	7.05	5.867***
Paternal affect	14.92	5.95	12.83	5.12	-7.124***
Tobacco	n = 671		n = 757		
Permissiveness	6.89	2.59	5.98	1.94	-7.495***
Maternal control	35.62	6.62	37.57	6.03	5.793***
Maternal affect	13.45	5.21	11.65	3.98	-7.271***
Paternal control	34.39	7.19	36.26	7.10	4.927***
Paternal affect	15.28	6.05	12.95	5.16	-7.762***
Cannabis	n = 350		n = 1078		
Permissiveness	7.54	2.84	6.04	1.98	-9.182***
Maternal control	34.57	6.86	37.33	6.07	6.731***
Maternal affect	13.95	5.46	12.03	4.31	-6.004***
Paternal control	33.68	7.28	35.94	7.09	5.154***
Paternal affect	15.87	6.45	13.45	5.32	-6.352***

* p<.05; ** p<.01; *** p<.001

(1) measures of absolute fit, such as the chi-square statistic, the Goodness-of-Fit Index (GFI) or the Root Mean Square Error of Approximation (RMSEA); (2) measures of incremental fit, using the Adjusted Goodness-of-Fit-Index (AGFI); and (3) measures of the parsimony of the model, using the Comparative Fit Index (CFI).

Results

Differences in key indicators between users and non-users of alcohol, tobacco and cannabis are shown in Table 1. Those adolescents who had tried alcohol, tobacco and cannabis during their lifetime perceived higher levels of parental permissiveness toward such use, as well as less control and more affect from both their father and their mother.

The hypothesised model predicted direct links between parental permissiveness, father and mother affect and control, and children’s use of alcohol. Tobacco use was indirectly predicted through alcohol use, and finally, cannabis through tobacco use. However, this model did not present an adequate fit, $\chi^2/df = 11.832$, CFI = 0.961, GFI = 0.979, RMSEA = 0.087, AGFI = 0.931. Inspection of the model modification indices allowed for the identification of related variables that, if theoretically justified, would improve the fit of the model. In the adjusted model cannabis use was regressed on alcohol use and the fit of the model was improved, $\chi^2/df = 5.062$, CFI = 0.987, GFI = 0.991, RMSEA = 0.053, AGFI = 0.969. Finally, inspection of modification indices also suggested regressing children’s tobacco use on paternal affect, which improved the model further, $\chi^2/df = 2.289$, CFI = 0.996, GFI = 0.996, RMSEA = 0.030, AGFI = 0.986. The final model is presented in Figure 1 and Table 2.

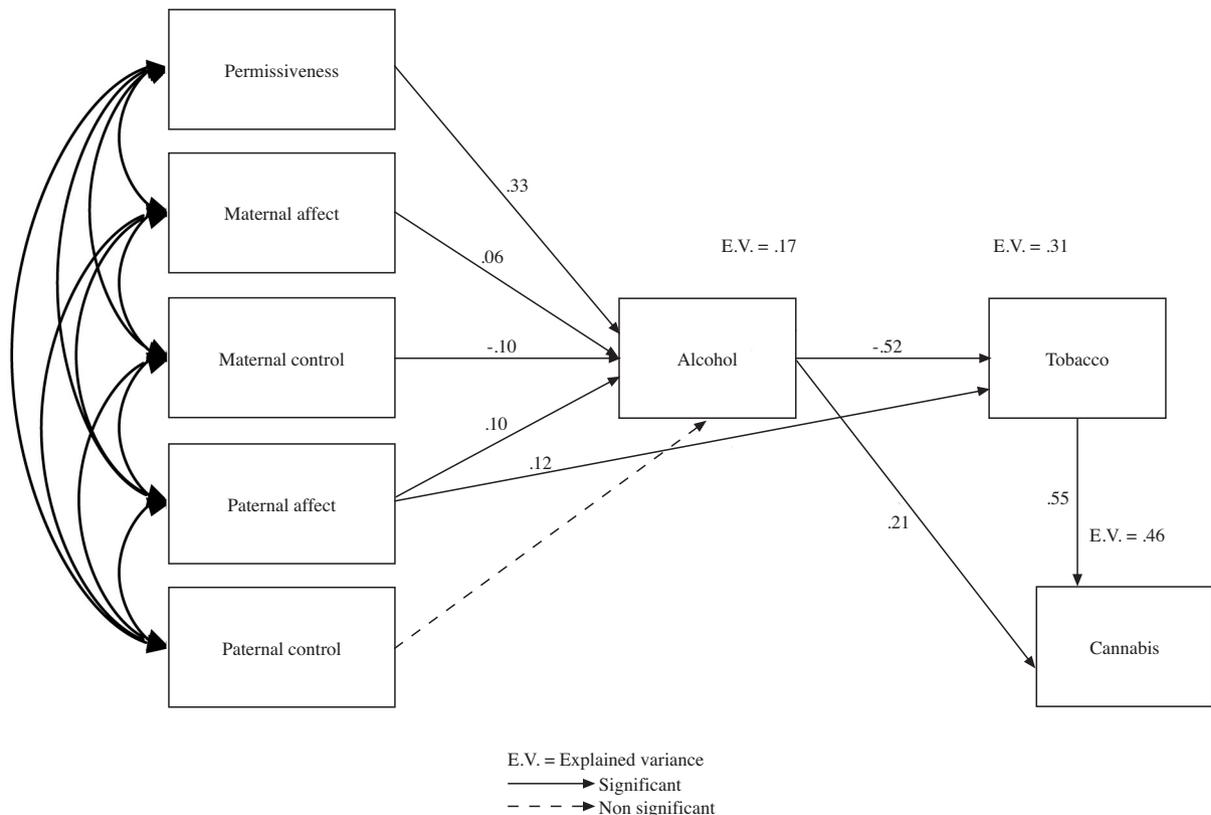


Figure 1. Model for the prediction of alcohol, tobacco and cannabis use

Table 2
Correlation matrix for the final model

	Permissiveness	Maternal affect	Maternal control	Paternal control	Paternal affect	Alcohol	Tobacco	Cannabis
Permissiveness	1							
Maternal affect	0.075**	1						
Maternal control	-0.280***	-0.067*	1					
Paternal control	-0.211***	-0.153***	0.618***	1				
Paternal affect	0.138***	0.520***	-0.169***	-0.179***	1			
Alcohol	0.375***	0.146***	-0.221***	-0.170***	0.196***	1		
Tobacco	0.262***	0.140***	-0.135***	-0.110***	0.225***	0.542***	1	
Cannabis	0.193***	0.107***	-0.120***	-0.096***	0.164***	0.504***	0.659***	1

* p<.05; ** p<.01; *** p<.001

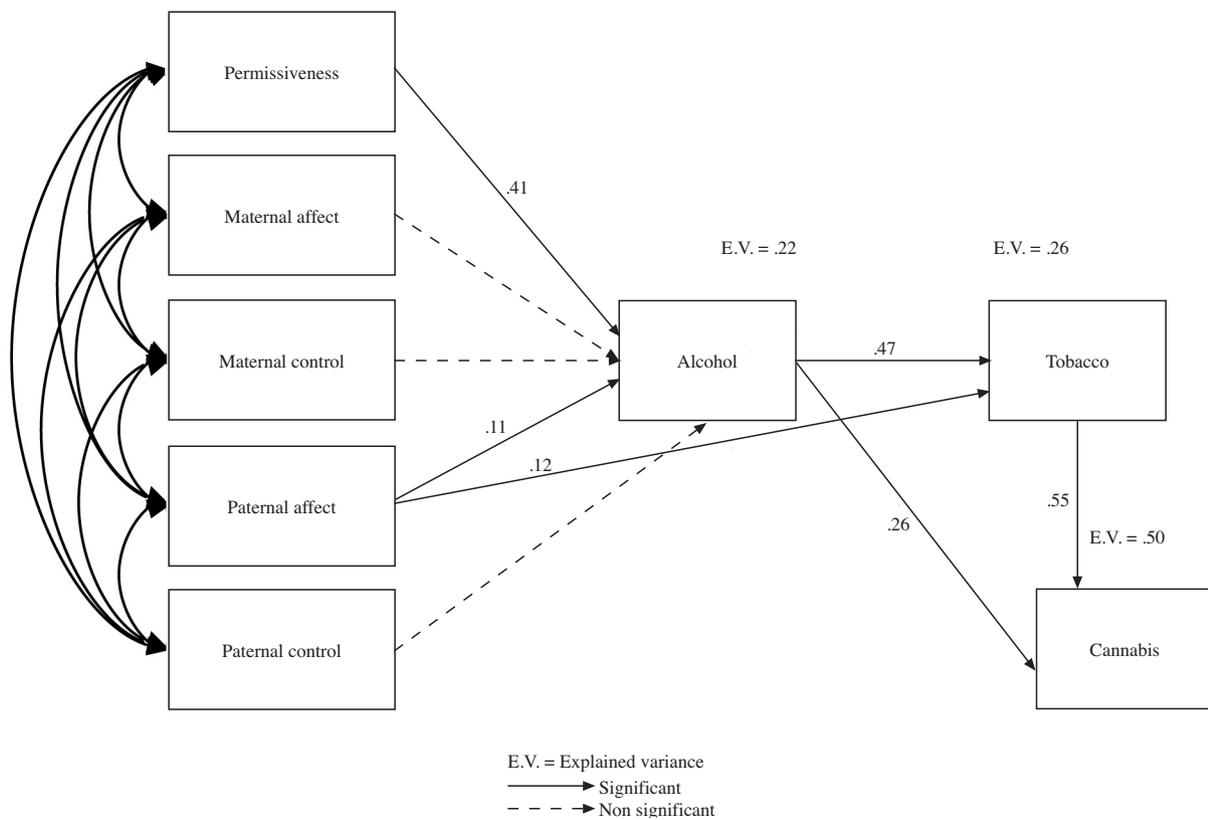


Figure 2. Model for the prediction of alcohol, tobacco and cannabis use in males

All of the relations between the different variables in the model were statistically significant, except for the path that linked paternal control and children’s alcohol use. Perception of parental permissiveness toward drug use was a significant predictor of alcohol use ($\beta = 0.33, p<.001$), as well as maternal affect ($\beta = 0.062, p<.028$) and maternal control ($\beta = -0.10, p<.001$). On the other hand, paternal affect was a significant predictor of both alcohol ($\beta = 0.10, p<.001$) and tobacco use ($\beta = 0.12, p<.001$), but paternal control was not a significant predictor of alcohol use ($\beta = -0.01, p<.702$). Finally, alcohol use was a significant predictor of tobacco ($\beta = 0.52, p<.001$) and of cannabis use ($\beta = 0.21, p<.001$),

and tobacco use was a significant predictor of cannabis use ($\beta = 0.55, p<.001$).

To analyze the differences by adolescents’ sex, we assessed the model in males and females separately (Figures 2 and 3).

In the male subsample, the model showed good fit, $\chi^2/df = 3.726$, CFI = 0.986, GFI = 0.989, RMSEA = 0.061, AGFI = 0.956. The relationship between the variables was different in comparison to the total sample, and maternal affect and control and paternal control were not significant in the prediction of children’s alcohol use.

Regarding female subsample, the fit of the model was very good, $\chi^2/df = 1.581$, CFI = 0.996, GFI = 0.995, RMSEA = 0.029, AGFI

= 0.979. As in the total sample, all the variables were statistically significant in the prediction except for that of paternal control.

Table 3 shows the fit of all the models assessed.

Discussion

The aim of the present study was to analyze the relationship between different familial variables (perceived permissiveness toward drug use and parental affect and control) and the use of alcohol, tobacco and cannabis in a sample of adolescents, using a model analyzed with path analysis.

The results showed the important role played by young people’s perception of their parents’ permissiveness concerning drug use. We found that, adolescents who perceived their parents as more permissive towards substance use were more likely to report using drugs. These findings are in line with previous studies

(Kelly, Comello, & Hunn, 2002; Olsson et al., 2003). However, the studies carried out by Trujillo, Pérez and Scoppetta (2011), showed that drinking in the presence of one’s parents, drinking at parties at home and the perception that drinking alcohol is a family tradition lead young people to have fewer alcohol-related problems (drunkenness, vomiting, problems at home and with their partners), suggesting that alcohol use associated with family habits is not necessarily perceived by youths as a sign of permissiveness.

As far as parental affect and control are concerned, only maternal control and maternal and paternal affect had any influence on substance use; the influence of perceived paternal control was not significant. In other words, this indicated that lower perceived level of maternal control and a greater perceived affect in both father and mother are related to higher levels of children’s alcohol, tobacco and cannabis use. And whereas a greater perception of control and

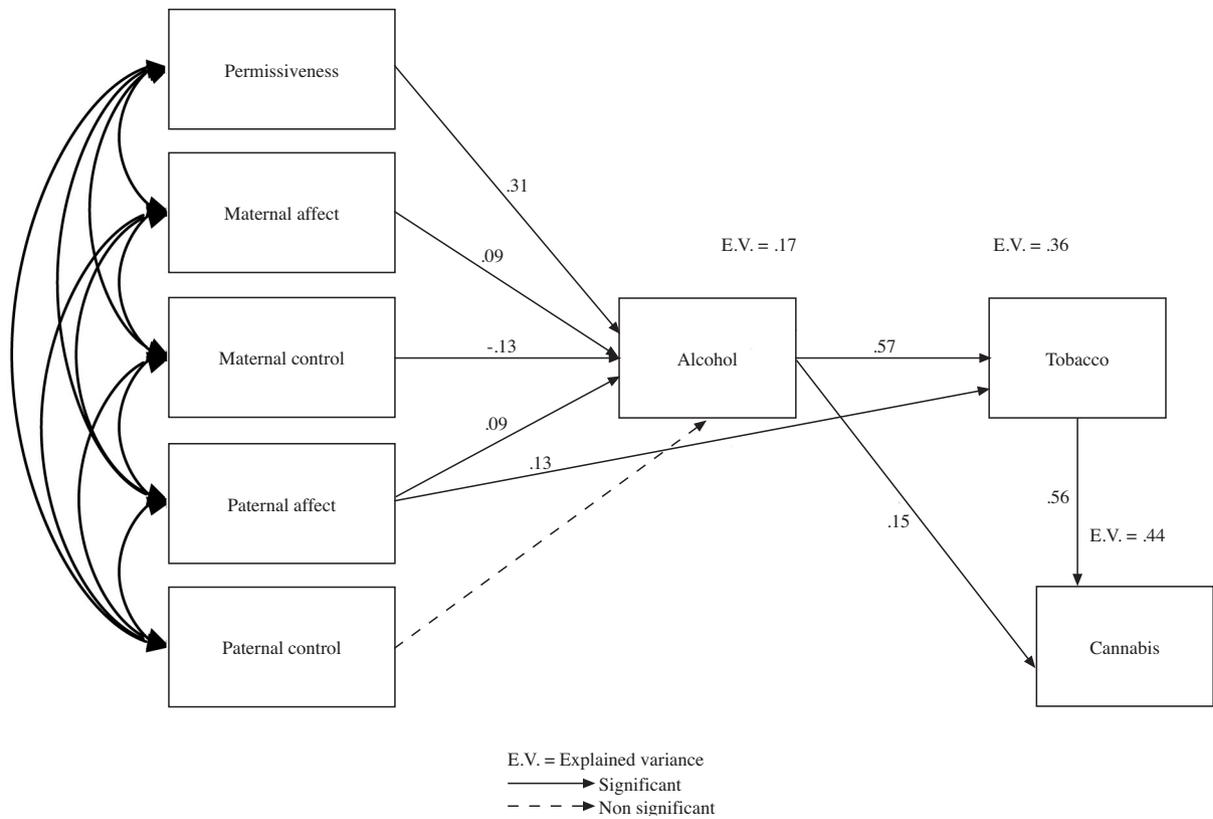


Figure 3. Model for the prediction of alcohol, tobacco and cannabis use in females

Indices	Acceptable values	Model 1 (initial)	Model 2	Model 3 (final)	Sex	
					Females	Males
χ^2/df	$3 < \chi^2/df < 5$	11.832	5.062	2.289	1.581	3.726
CFI	$0.90 < CFI < 0.97$	0.961	0.987	0.996	0.996	0.986
GFI	$0.90 < GFI < 0.95$	0.979	0.991	0.996	0.995	0.989
RMSEA	$0.05 < RMSEA < 0.08$	0.087	0.053	0.030	0.029	0.061
AGFI	$0.85 < AGFI < 0.90$	0.931	0.969	0.986	0.979	0.956

lower levels of substance use coincide with the findings of other studies, our results contradict those concerning greater influence of perceived affect, as in our study, it was not associated with less substance use (Glendinning et al., 1997; Schuksmith et al., 1997). Only Harakeh, Scholte, Vermulst, de Vries and Engels (2004) reported that parental supervision was unrelated to adolescent smoking in their sample. García and Gracia (2009) concluded that, in Spain, the indulgent parental style was the best, which suggests that the parental control variable is less important in Spain than it is in other countries and cultures. Our results also partly reflect this effect, as they indicate that the absence of control and the perception of less paternal affect seem to be protective factors against substance use in young males, whereas in the case of young females, the protective factors seem to be greater perceived control and less affect on the part of the mother.

The differences found in our study as compared to the results found in the literature may be because in previous studies, the paternal affect and the maternal affect variables were not considered separately. Such dichotomization of parental affect may be crucial in this context. Indeed, the differences between males and females have been observed, as already pointed out Patock-Peckham and Morgan-López (2009).

Sex specific differences observed in the results based on our model are noteworthy, as certain variables that were of predictive importance for females (maternal affect and control, and paternal control) did not apply for males. This result is similar to those of previous studies (Patock-Peckham & Morgan-López, 2009) and suggests that in the case of substance use in females, it is the mother who plays the main role, and less perceived maternal affect and more maternal control, and less paternal affect are protective against substance use. In the case of males, it was the father who exerted the greater influence, with lower perceived paternal affect being a protective factor against substance use.

In accordance with previous studies indicating that early onset of smoking and drinking increased the risk of subsequent use of cannabis or other drugs (Becoña et al., 2011; Prince van Leeuwen et al., 2011), our results show that current alcohol use frequency was a predictor of tobacco use, which in turn was a predictor of more recent cannabis use. At the same time, frequency of alcohol use also had a direct effect on cannabis use, although weaker than the indirect effect through tobacco use.

This study has several limitations. First of all, as it is a cross-sectional study, we cannot establish causal relations between the

variables. Also, we did not take into account the possible influence of the adolescents themselves on their parents' behavior, bearing in mind that some research suggests that the relationship may be bi-directional (Kerr, Stattin, & Özdemir, 2012). Furthermore, our study was carried out in schools, without the presence of young people who had given up school or who were not attending. This may have affected the results and so they can only be generalized to current school attendees. Lastly, the data are based on self-reported measures that may affect the validity of the data. Although anonymity was guaranteed, a social desirability effect cannot be ruled out. In any case, the study also has several strengths. It was carried out on a very large sample of young people aged 11 to 19 years. Moreover, we assessed the adolescents' perceptions of their fathers and mothers, analyzing the influence of the sex variable in the prediction. Furthermore, we used path analysis, a statistical technique that allows the assessment of the effects of different variables on other variables simultaneously. Finally, we should point out that whereas the majority of studies focus on the evaluation of one substance (either alcohol, tobacco or cannabis), here we have assessed all of them at the same time. This last strength is of great importance as alcohol, tobacco and cannabis are the most widely used substances that also account for later health and psychosocial-related problems.

The results of this study highlight the importance of the family in adolescents' use or non-use of drugs (alcohol, tobacco and cannabis), as well as the influence of alcohol on the onset of tobacco and cannabis use. The results may be used in strategies focusing on strengthening parental skills in order to prevent or reduce their children's drug use.

Future studies should focus on the research on the influences of gender between parents and children regarding affect and control, and also, on the study of perceived permissiveness. This variable has been shown to have great influence on adolescents' drug use but it is still unexplored.

Acknowledgements

Work on this article was partially funded by the European Commission, Directorate General for Justice, with funds from the European Family Empowerment project (JLS/DPIP/2008-2/112). Funding also came from the Delegación de Gobierno del Plan Nacional sobre Drogas (*Orden SSI/1602/2012, de 25 de junio de 2012, and Orden SSI/1603/2012, de 10 de julio de 2012*).

References

- Becoña, E., López-Durán, A., Fernández del Río, E., Martínez, U., Osorio, J., Fraga, J., et al. (2011). Borracheras, conducción de vehículos y relaciones sexuales en jóvenes consumidores de cocaína y éxtasis [Drunkness, driving and sexual relations in young cocaine and ecstasy users]. *Adicciones*, 23, 205-218.
- Becoña, E., Martínez, U., Calafat, A., Juan, M., Duch, M., & Fernández-Hermida, J.R. (2012). ¿Cómo influye la desorganización familiar en el consumo de drogas de los hijos? [How does family disorganization influence children's drug use?]. *Adicciones*, 24, 1-114.
- Becoña, E., Martínez, U., Calafat, A., Juan, M., Fernández-Hermida, J.R., & Secades-Villa, R. (2012). Parental styles and drug use: A review. *Drugs: Education, Prevention & Policy*, 19, 1-10.
- Byrne, B.M. (2010). *Structural equation modelling with AMOS. Basic concepts, applications, and programming*. New York: Taylor & Francis Group.
- Choquet, M., Hassler, C., Morin, D., Falissard, B., & Chau, N. (2007). Perceived parenting styles and tobacco, alcohol and cannabis use among French adolescents: Gender and family structure differentials. *Alcohol and Alcoholism*, 43, 73-80.
- European Monitoring Centre for Drugs and Drug Addiction. *Annual report 2011. The state of the drugs problem in Europe*. Retrieved from http://www.emcdda.europa.eu/attachements.cfm/att_143743_ES_EMCDDE_AR2011_ES.pdf.
- García, F., & Gracia, E. (2009). Is always authoritative the optimum parenting style? Evidence from Spanish families. *Adolescence*, 44, 101-131.

- García, F., & Gracia, E. (2010). ¿Qué estilo de socialización parental es el idóneo en España? Un estudio con niños y adolescentes de 10 a 14 años [What is the optimum parental socialization style in Spain? A study with children and adolescents aged 10-14 years]. *Infancia y Aprendizaje*, 33, 365-384.
- Glendinning, A., Schuksmith, J., & Hendry, L. (1997). Family life and smoking in adolescence. *Social Science & Medicine*, 44, 93-101.
- Harakeh, Z., Scholte, R.H.J., Vermulst, A.A., de Vries, H., & Engels, R.C.M.E. (2004). Parental factors and adolescents' smoking behavior: An extension of the theory of planned behavior. *Preventive Medicine*, 39, 951-961.
- Julià, A., Escapa, S., Marí-Klose, M., & Marí-Klose, P. (2012). Factores de riesgo psicosociales en el consumo de tabaco de los adolescentes: estados de ánimo negativos, grupo de iguales y estilos parentales [Psychosocial risk factors in adolescent tobacco use: Negative mood-states, peer group and parenting styles]. *Adicciones*, 24, 309-318.
- Kelly, K.J., Comello, M.L.G., & Hunn, L.C.P. (2002). Parent-child communications, perceived sanctions against drug use, and youth drug involvement. *Adolescence*, 37, 775-787.
- Kerr, M., Stattin, H., & Özdemir, M. (2012). Perceived parenting style and adolescent adjustment: Revisiting directions of effects and the role of parental knowledge. *Developmental Psychology*, 48, 1540-1553.
- Moore, G.F., Rothwell, H., & Segrott, J. (2010). An exploratory study of the relationship between parental attitudes and behaviour and young people's consumption of alcohol. *Substance Abuse Treatment, Prevention, and Policy*, 5, 6.
- Muñoz-Rivas, M.J., & Graña, J.L. (2001). Factores familiares de riesgo y protección para el consumo de drogas en adolescentes [Family risk and protection factor for drug use by adolescents]. *Psicothema*, 13, 87-94.
- Observatorio Español sobre Drogas (2008). *Encuesta Estatal sobre uso de Drogas en Estudiantes de Enseñanzas Secundarias (ESTUDES)* [National Survey on Drug Use among Secondary School Students]. Retrieved from <http://www.pnsd.msc.es/Categoria2/observa/pdf/Estudes2008.pdf>.
- Olsson, C.A., Coffey, C., Toumbourou, J.W., Bond, L., Thomas, L., & Patton, G. (2003). Family risk factors for cannabis use: A population-based survey of Australian secondary school students. *Drug and Alcohol Review*, 22, 143-152.
- Patock-Pecham, J.A., & Morgan-López, A.A. (2009). The gender specific meditational pathways between parenting styles, neuroticism, pathological reasons for drinking, and alcohol-related problems in emerging adulthood. *Addictive Behaviors*, 34, 312-315.
- Pérez Alonso-Geta, P.M. (2012). La socialización parental en padres españoles con hijos de 6 a 14 años [Parenting style in Spanish parents with children aged 6 to 14]. *Psicothema*, 24, 371-376.
- Petterson, P.L., Hawkins, J.D., & Catalano, R.F. (1992). Evaluating comprehensive community drug risk reduction interventions. Design challenges and recommendations. *Evaluation Review*, 16, 579-602.
- Prince van Leeuwen, A., Verhulst, F.C., Reijneveld, S.A., Vollebergh, W.A. M., Ormel, J., & Huizink, A.C. (2011). Can the Gateway Hypothesis, the Common Liability Model and/ or the Route of Administration Model predict initiation of cannabis use during adolescence? A survival analysis-The TRAILS Study. *Journal of Adolescence*, 48, 73-78.
- Rohner, R.P., Saavedra, J., & Granum, E.O. (1978). Development and validation of the parental acceptance rejection questionnaire: Test manual. *JSAS Catalogue of Selected Documents in Psychology*, 8, 7-8.
- Schuksmith, J., Glendinning, A., & Henry, L. (1997). Adolescent drinking behaviour and the role of family life: A Scottish perspective. *Journal of Adolescence*, 20, 85-101.
- Secades-Villa, R., Fernández-Hermida, J.R., & Vallejo-Seco, G. (2005). Family risk factors for adolescent drug misuse in Spain. *Journal of Child and Adolescent Substance Abuse*, 14, 1-15.
- SPSS (2006). *Structural equation modelling with Amos*. Chicago, IL: SPSS.
- Stone, A.L., Becker, L.G., Huber, A.M., & Catalano, R.F. (2012). Review of risk and protective factors of substance use and problem use in emerging adulthood. *Addictive Behaviors*, 37, 747-775.
- Trujillo, A.M., Pérez, A., & Scopetta, O. (2011). Influencia de variables del entorno social sobre la ocurrencia de situaciones problemáticas asociadas al consumo de alcohol en adolescentes [Social context variables and their influence on the occurrence of problematic situations associated with alcohol use in adolescents]. *Adicciones*, 23, 349-356.
- Velleman, R.D.B., Templeton, L.J., & Copello, A.G. (2005). The role of the family in preventing and intervening with substance use and misuse: A comprehensive review of family interventions, with a focus on young people. *Drug and Alcohol Review*, 24, 93-109.