

# The influence of personal networks on the use and abuse of alcohol and drugs

## La influencia de las redes personales en el uso y abuso de alcohol y drogas

AMADOR CALAFAT\*; BERTA CAJAL\*\*; MONTSE JUAN\*;  
FERNANDO MENDES\*; ANNA KOKKEVI\*\*\*; NICOLE BLAY\*;  
ALFONSO PALMER\*\*; MARIA ANGELS DUCH\*

\* European Institute of Studies on Prevention (Irefrea).  
\*\* Universitat de les Illes Balears. Palma de Mallorca.  
\*\*\* Athens University Medical School.

Send correspondence to:  
Amador Calafat  
Irefrea. Rambla, 15, 2ª, 3ª. 07003 Palma de Mallorca (España)  
www.irefrea.org  
E-mail: lrefrea@irefrea.org

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### RESUMEN

Las redes de amigos cuando se sale las noches de los fines de semana son muy importantes para la socialización, pero también pueden influir en facilitar o no el uso y abuso de alcohol y drogas ilegales. Se encuesta a 1.363 jóvenes de 9 ciudades Europeas para conocer su red de amigos (7.360) a partir de 22 posibles características. Para el análisis estadístico se utilizó el análisis factorial con rotación varimax y análisis de la varian-

za. El 69% de la muestra se había emborrachado durante el último mes y más de la mitad de ellos habían consumido drogas ilegales.

La mayoría de los encuestados tiene un grupo estable de amigos con los que suele salir. Las principales características que definen la red de amigos es que sea más o menos desviada y/o prosocial.

No tener red o ser ésta menos prosocial se relaciona con consumidores bajos. Tener una red no desviante y pro-social, se relaciona con ser una persona que se embriaga sin usar drogas o ser un ex -usuario. Los usuarios de drogas ilegales tienen una red desviada y prosocial. Las pautas de consumo de los varones parecen estar menos afectadas por su tipo de red social.

Hay cuestiones preventivas ya conocidas que se desprender de los resultados, como puede ser la influencia negativa ejercida por las redes de amigos desviantes. Sin embargo, no se conoce tanto el efecto, también negativo, de tener redes más prosociales. Mejorar las capacidades prosociales puede tener, por tanto, efectos contrapreventivos. Por otro lado, puede que influir sobre la red de amigos tenga mayores efectos preventivos entre las mujeres

**Palabras clave:** *redes, amigos, alcohol, drogas, influencia amigos, contextos recreativos, uso recreativo*

### ABSTRACT

Party networks of young people are very important for socialization, but can also influence their involvement in risk behaviours or they can be protective. The influence of nightlife network of friends in using alcohol/drugs is investigated through a survey. We explore the individual-centred networks (7.360 friends) of 1.363 recreational nightlife users in 9 European cities in 2006, through 22 friend characteristics. Statistical analysis utilised factorial analysis with varimax rotation and analysis of variance. The 69% of the sample had been drunk during the last month and more than half of them had used illicit drugs.

Most of the respondents use to have a stable group of friends with whom to go out. Network's main characteristics were being more or less deviant and/or prosocial.

Having not network or a less prosocial network is related to be low consumers. Having a non deviant, but prosocial network is related to being a person who gets drunk without using illegal drugs. Users of illegal drugs have a deviant and prosocial network. Finally ex users have less deviant networks, but at the same time a helper and prosocial network. Males drug use patterns appear to be less affected by the characteristics of their networks.

Some preventive consequences coming from these results are already known as the importance of having less deviant friends. But some other issues are less known: to enhance certain prosocial skills may have counter preventive effects among recreational users and to influence the network for preventative purposes may be more effective among females.

**Key words:** *network, friends, use of alcohol, use of drugs, peer influence, Europe, nightlife, recreational use.*

## INTRODUCTION

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In recent years networks have increasingly been invoked as conceptual models and explanatory tools across a wide variety of academic disciplines (Reifman, 2004). Since the 1980s, researchers have attempted to apply a social network framework to study the use of drugs. Despite this, aspects of peer relations other than peer smoking have rarely been a focus of such research (Ennett, Faris, Hip, Foshee, Bauman, Hussong & Cai, 2008). Early research by Kandel (1973, 1975) demonstrated that peer influence was an influential risk factor in drug use. Through longitudinal surveys, adolescents with friends that used drugs were shown to have a higher probability of subsequently using drugs themselves. Kandel's (1980) 'adolescent socialization theory' included the influence of both parents and peers, yet considered the peer influence to be greater than that of parents, especially for marijuana use. However, it warned about the possibility of exaggerating peer influence if peer selection was not taken into account, 'Both selection and socialization appear to be approximately of equal importance' (Kandel, 1978). Research has since supported the importance of peer selection and peer influence, but with Bauman and Ennett (1996) also believing that peer selection and influence carry equal weight. Thus, a complex process of peer group and individual influences appears to be at play (Kirke, 2004), which sometimes results in changed drug behaviour in teenagers and sometimes not. Influence and selection need not be mutually exclusive patterns but can be complementary processes.

Although based on longitudinal studies, most research in this area has used perceived peer substance use data, which are known to exaggerate peer effects (Kandel, 1980); or used data on dyads of best friends, who are more likely than other friends to be similar to respondents (Kirke, 2004), producing the same effect. Consequently, there is increasing recognition that it is important to study this phenomenon through a larger social network (Kirke, 2004). Here, many questions can be investigated including: centrality; best or closest friends; popularity; density (volume of connections in the network); leadership; liaison; isolation; deviant or drug using peers; friends' perceptions of the use of drugs; and homophily. All peers may be not equally influential in affecting the behaviour of a specific network member. For example, in modelling, peer networks' effects on drinking have been found to be greater the closer respondents felt to their peer networks (Rethinam & Reifman, 2002). In relation to gender and substance use, males have been shown to be predominantly influenced by other males, and females by both males and females (Kirke, 2004).

One of the network characteristic that could play a particularly influential role is the proportion of members whom the focal respondent labels as "drinking buddies" (e.g., Leonard, Kearn & Mudar, 2000). Popular friends or leaders are also important (Rogers & Cartano, 1962). Thus, opinion leaders appear to adopt behaviours that they expect to be accepted in the community, and subsequently their modelling of these behaviours speeds their diffusion throughout the community. It looks like that popular students are more likely

to smoke, especially in schools with high smoking prevalence (Alexander, Piazza, Mekos & Valente, 2001).

Some studies have found that adolescents who are isolated or rejected from the group are more likely to smoke (Ennett & Bauman, 1993; Pearson & Michell, 2000). This might arise as most young adolescents do not smoke and do not approve of smoking (Tani, Chavez & Deffenbacher, 2001). However, contradictory results were reported by Abel, Plumridge and Graham (2002). They regrouped students into different social positions; 'popular', 'try-hards', 'ordinary' and 'loners.' They found that it was those least well connected, the 'loners', who were least likely to smoke cigarettes. Ceasing drug use is also often facilitated by dissociating from drug using peers and receiving support from network members that have more prosocial orientations or who are not involved in drugs (Latkin, Knowlton, Hoover & Mandell, 1999; Valente, Gallaher & Mouttapa, 2004)

The recreational context in which the population moves has a role in socialisation process (friendship...) and the use and abuse of alcohol and drugs. Nightlife is a well defined context where drug use, sex and socialisation coincide (Calafat, Juan, Becoña & Mantecón, 2008; Hughes, Bellis, Whelan, Calafat, Juan & Blay, 2009; Vidal-Infer, Tomás-Dols, Aguilar-Moya, Samper-Gras, Zarza & Aguilar-Serrano, 2009). Research involving a representative national sample of Icelandic adolescents, explored variations in the use of alcohol and illegal drugs among three different patterns of leisure activity. This showed that substance use varied significantly across the three leisure patterns. Moreover, it found that the well-known relationship between adolescent substance use and having substance-using friends is significantly contingent on the type of leisure pattern (Thorlindsson & Bernburg, 2006).

This research will investigate the friend's network role in facilitating or making difficult the use of alcohol and illegal drugs in the nightlife. Given the centrality of the consumption of alcohol and drugs in nightlife, it would be expected that individuals' substance use will function as a socializing tool and therefore, consumers will have more prosocial networks than low consumers. The whole point of the paper is to identify the relationships between categories of people determined by their consumption patterns and the characteristics of their social networks, in order to better understand the norms and attitudes that help support and prevent substance use.

## METHODS

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### *Participants*

1363 regular nightlife users aged 16-35 years from nine different European cities: Athens (Greece), Berlin (Germany), Brno (Czech Republic), Lisbon (Portugal), Ljubljana (Slovenia), Liverpool (UK), Palma de Mallorca (Spain) and Mestre/Venice (Italy).

## Materials and procedure

A self-administered and anonymous questionnaire was used. Questionnaires were completed either in the presence of the pollster or self-completed and returned by post between February and July 2006. Sampling utilised a variation of 'respondent driven sampling' (RDS) methodology that had previously been developed and validated as a mechanism for recruiting recreational drug users while minimising selection bias (Wang, Carlson, Falck, Siegal, Rahman & Li, 2005). RDS is a variation of snow-ball techniques and allows researchers to perform randomization in the sampling to improve validity and reliability of results (Heckathorn, 2002).

Here, initial recruits (seeds) in each country were selected as two males and two females aged <19 year and two of each sex age 19+ years. Individuals had to be regular users of pubs and/or clubs representing regular costumers at non-specialist premises (i.e. generic town and city centre venues) and customers of specialist premises (i.e. venues specialising in music associated with drug use; e.g. Dance). As part of the questionnaire individuals identified up to 10 colleagues and were asked to recruit two members (one a distant friend and one of intermediate association). Participants contacted these individuals and asked them to participate in the survey. These second wave respondents repeated the process and this continued through at least two more waves with the aim of recruiting a final sample size of approximately 150 in each country. The final sample was within acceptable levels (i.e. <2%) for sampling equilibrium across the demographic variables age and gender (see Mantecón, Juan, Calafat, Becoña & Román (2008) for detailed procedures).

The questionnaire aimed to explore, among others items, sociodemographic data, alcohol and drug use, and information about a maximum of 10 friends with whom they participate in nightlife activities. Respondents have given information on 22 characteristics, behaviours, skills or roles (see table 1) of each member of their network. These 22 characteristics could be classified in different categories such as behaviours related to the use of drugs and alcohol, helping skills (in relation to the recreational context), socialising skills (mainly referred to the recreational context), sex related behaviour, and antisocial behaviour. These characteristics do not respond to any scale, but to characteristics expected to be found among a group of friends who go out together to participate in the nightlife, according to previous research and ethnographies.

Data from all countries were entered into SPSS v.15.0 for statistical analysis and cleaned in Palma de Mallorca (Spain). For analyses presented here, the total sample (n=1363) was restricted to those aged 16 to 35 (n=1341) as only 1% of individuals were under 16 and 0.7% over 35. After a factorial analysis with varimax rotation, the punctuations obtained in every factor were evaluated by means of an analysis of variance with regard to the classification of the type of consumption. Depending on the breach of the suppositions of normality and homogeneity of variance there were realized the pertinent analyses, analysis of variance as well as the contrasts. To do it, there were used the tests of Welch, Brown-Forsythe, Kruskal-Wallis, the contrasts C of Dunnett and the

contrasts non-parametrics. On the basis of these different analyses there were obtained the results showed in this work.

Table 1. Measured characteristics of the members social network

Abbreviation and classification	Explored characteristics of the members of the respondent's ego-centered network
<i>Drugs 1</i>	Occasionally sells drugs to pay for their night out
<i>Drugs 2</i>	Gets drunk frequently or goes over the top when taking drugs
<i>Drugs 3</i>	Has problems with alcohol and drugs
<i>Drugs 4</i>	Pushes others in the group to take drugs
<i>Drugs 5</i>	Provides you or others in the group with drugs
<i>Helpers 1</i>	Will tell others if they have drunk too much or taken too many drugs
<i>Helpers 2</i>	Looks after others if they loose control
<i>Helpers 3</i>	Lend money to others in the group when they need it
<i>Helpers 4</i>	Is good at giving advice in preventing drug or sexual problems
<i>Socialising 1</i>	Has a lot of success finding sexual partners
<i>Socialising 2</i>	With whom do you have the most fun with
<i>Socialising 3</i>	Often makes the decisions when you go out
<i>Socialising 4</i>	Knows a lot of people when you go clubbing
<i>Socialising 5</i>	Only drinks alcohol or takes drugs in moderation
<i>Sex 1</i>	With whom you had sex during the last year
<i>Sex 2</i>	Who has had sexual problems (e.g. sexual transmitted infection)
<i>Sex 3</i>	Helps you to find a sexual partner
<i>Antisocial 1</i>	Drives under the influence of alcohol or drugs
<i>Antisocial 2</i>	Gets involved in arguments and fights
<i>Antisocial 3</i>	Generally does mad or crazy things
<i>Antisocial 4</i>	Has carried a weapon when going out at night
<i>Antisocial 5</i>	Has been in trouble with the police in the last twelve months

## RESULTS

### Sociodemographic variables

Approximately half of the sample was female (53%) and mean age was 21.75. Half of respondents (55%) were single (unmarried and without a steady partner), and around 59% were still living with their family. Half (47%) of the respondents were still in school and the other half (42%) were temporarily or permanently employed. Six percent were looking for a job.

The average self reported family economic status was slightly above "medium".

### Drunkenness and drug use

In order to measure alcohol abuse we used frequency of drunkenness during the last month. Two thirds (68.5%) of the sample had been drunk at least once during the last month and nearly half of them (45.3%; 31% of the whole sample) had not used illicit drugs. Although frequency of illicit drug use varied between countries, overall prevalence was relatively

high. Lifetime prevalence was 73.8% for cannabis, 30.4% for cocaine and 28.7% for ecstasy.

Ten categories of substance use were identified (see table 2) taking into account the frequency of being drunk and using illicit drugs. These were: 'Low Consumers' (LC) - individuals that had not been drunk during the last month and had either never used or only experimented with illicit drugs; 'Occasional Drunkenness' (ODk) - those that reported getting drunk once a month; 'Frequent Drunkenness' (FDk) - those reporting getting drunk two or more times a month; 'Occasional Drugs' (OD) - those that reported using illegal drugs less than once a week; 'Frequent Drugs' (FD) - those reporting using illegal drugs once a week or more. We consider also all the possible combinations between drunkenness and use of illegal drugs. For example ODk+FD means: those people reporting having being drunk once a month and using illegal drugs once a week or more. Finally we have a group of 'Ex users' (Ex) where we include people that in the past were using some illegal drug in a moderate or frequent way and that now is not using them and that has not been drunk during the last month.

**Table 2. Drunkenness and drug use patterns according the frequencies and possible combinations.**

	Frequency (n)	Percentage (%)
Non consumers (N)	249	18
Occasional Drunkenness (ODk)	136	9,8
Frequent drunkenness (FDk)	293	21,2
Occasional use illegal drugs (OD)	55	4
Frequent Illegal drugs (FD)	77	5,6
Ex user (Ex)	55	4
Frequent drunkenness and occasional drugs (FDk+OD)	186	13,4
Occasional drunkenness and frequent drugs (ODk+FD)	49	3,5
Occasional drunkenness and occasional drugs (ODk+OD)	54	3,9
Frequent drunkenness and frequent drugs (FDk+FD)	229	16,6

### Relationship between frequencies of drug use and sociodemographic variables

Differences between genders were identified ( $p = .001$ ). More women than men were found in the Low consumers (LC), Occasional Drunkenness (ODk) and Ex-users groups, and more men found in the Frequent drunkenness + Frequent Drugs (FDk+FD) group. A similar percentage of men and women were found in the Frequent drunkenness (FDk) group.

When we look to the marital status ( $p = .043$ ) single are more frequently in the abusing positions (Frequent drugs, frequent drunkenness or both). We find also that people living with their families tend to abuse less ( $p = .001$ ). Level of studies was not related to drug use, but a relationship was found with participants' self-evaluation as students ( $p = .001$ ). Those that considered themselves to be or have been good students are more represented among the Low consumers, Occasional and Frequent drunkenness (LC, ODk and FDk) groups, and less

represented in the groups using illicit drugs. Respondents that reported more frequent nightlife participation (more weekends a month, more nights per weekend and more hours per session) tend ( $p = .001$ ) to abuse alcohol and illicit drugs more.

### Isolated people

111 (8% of the sample) respondents declared not having a group of friends with whom they go out at the weekends partying. This group fell mainly ( $p = .032$ ) in the Low consumers, Occasional and Frequent drunkenness (LC, ODk and FDk) groups, and were also more represented in the Ex and Frequent Drugs (FD) groups. They were less represented in the categories that combined illicit drugs and alcohol. This group has been excluded from further analyses related to network characteristics, precisely because they did not have such a network.

### Respondent's friends network description

The respondents provided information on "friends who they go out with (for nightlife activities) normally", with the questionnaire asking for individuals to describe a maximum of ten friends. The average size of a reported network was 7.2 friends, giving a reported ego-centered network formed by 7360 individuals. Most of respondents (40.4%) described 6 friends who they party with.

Around half (53.2%) of friends in the networks were male, 44% had been known for more than four years and 16% for less than a year. Key reasons respondents reported going partying with their friends included: they like the same places (86%); they have been friends for long time (80%); they understand each other (78%); have similar drinking/drugging habits (52%); and similar sexual interests (35%). Respondents also reported engaging in leisure activities other than partying with the same group or network of friends.

### Network friends' characteristics

Respondents have given information (see table 1) on 22 characteristics behaviours, skills or roles of each member of their network. These characteristics could be categorised as behaviours related to the use of drugs and alcohol, helping skills (in relation to the recreational context), socialising skills (mainly referred to the recreational context), sex related behaviour, and antisocial behaviour.

### The use of alcohol and drugs and the characteristics of the networks of friends

Univariate analysis was used to explore some of the more frequently represented single characteristics inside the networks in relation to the 10 categories of substance use. 'Friends who make decisions when going out' were reported in the networks of 66.2% of respondents. Their presence was

Table 3. Rotated components matrix of the 22 characteristics

Characteristics members personal network	Components			
	Factor 1 'Drug use and antisocial behaviour'	Factor 2 'Helpers and socialising'	Factor 3 'Sex and Antisocial'	Factor 4 'Socialising'
Antisocial 2	.657	.051	.064	.261
Drug 2	.639	.217	-.049	.154
Drug 3	.608	-.015	.317	.029
Drug 5	.584	.199	.389	-.076
Drug 1	.561	.111	.398	-.097
Antisocial 5	.556	.016	.255	.180
Antisocial 1	.526	.169	.094	.061
Helpers 2	.106	.767	-.017	.061
Helpers 3	.108	.758	-.051	.137
Helpers 1	-.002	.677	.213	.007
Helpers 4	.048	.635	.175	.173
Socialising 5	.103	.577	.063	.069
Socialising 2	.226	.495	-.094	.254
Sex 2	.077	.060	.695	.107
Antisocial 4	.301	-.055	.645	.098
Drug 4	.491	-.025	.564	.043
Sex 1	.190	.136	.534	-.033
Sex 3	.011	.082	.488	.323
Socialising 1	.041	.148	.280	.691
Socialising 3	.105	.123	.037	.602
Antisocial 3	.462	.222	-.006	.486
Socialising 4	.223	.420	.017	.465

positively ( $p < .01$ ) related to the frequent drunkenness groups with or without the simultaneous use of illegal drugs (FDk, FDk+OD and FDk+FD) and negatively related to the Frequent drug users, Occasional Drunkenness, Occasional Drugs and Low consumers (FD, ODk, OD and LC) groups.

'Friends who know a lot of people when going out' were reported in the networks of 79% of respondents. This was more frequent ( $p < .002$ ) in the Frequent drug users simultaneously with occasional or frequent drunkenness and Occasional drug users alone or with frequent drunkenness

Table 4. Significant relation among the identified factors and patterns of use (in the total sample, among males and among females)

Patterns of Drunkenness (Dk) and Drug use (D)	TOTAL SAMPLE		MALES	FEMALES		
	Factor 1 'Drug use and antisocial behaviour'	Factor 2 'Helpers and socialising'	Factor 3 'Sex and Anti-social'	Factor 1 'Drug use and antisocial behaviour'	Factor 2 'Helpers and socialising'	Factor 4 'Socialising'
Never use	-.3704	-.2925	-.2931	-.2486	-.3366	-.1854
Occasional Drunkenness ODk	-.3900	.0641	-.4796	-.2749	-.0018	-.0902
Frequent Drunkenness FDk	-.1776	.0261	-.1704	-.1039	.0259	-.1745
Occasional Drug OD	-.1172	-.1173	-.2021	-.1170	-.1024	-.0397
Frequent Drug FD	.2991	.0297	-.1177	.7928	.0085	.1581
Ex User EX	-.3696	.1186	-.4818	-.2861	.1497	-.0508
Frequent Drunkenness + Occasional Drug FDk+OD	.2383	.1158	.1940	.0709	.2736	.2542
Occasional Drunkenness + Frequent Drug ODk+FD	.2286	.0927	.1229	.1753	.0147	.3609
Occasional Drunkenness + Occasional Drug ODk+OD	.0262	-.0421	-.1692	.2614	-.0352	.0510
Frequent Drunkenness + Frequent Drug FDk+FD	.5760	.1139	.4237	-.5972	.3117	.3444

(FD+ODk,FD+ FDk, OD and OD+ FDk) groups and less frequent among the Low and Ex consumers, Frequent Drug users and Occasional drunkenness (LC, FD, Ex and ODk) groups. Reporting friends with social skills was more common in people who got drunk frequently (FDk) and less common in non users and respondents reporting using illicit drugs frequently (without getting drunk).

### ***Regrouping the variables defining the network of friends (antisocial behaviour, drug users, helpers, socialising and sex related)***

In table 1, five groups of variables used to define the network of friends are considered: 'Drug users', 'Helpers', 'Antisocial behaviour', 'Socialising' and 'Sex related'. The presence of 'Helpers' inside the network (inter groups:  $F=3.294$ ,  $p < .001$ ) was lower among the Low consumers (LC) group and higher among the Frequent drunkenness (FDk, FDk+OD and FDk+FD) groups. It appears that the best explanation for having helpers in the network is alcohol abuse. LC do not have or do not need helpers around them. LC also had fewer 'Socialising' friends, which are found more commonly in the networks of people who are Frequently drunk (FDk, , FDk+OD and FDk+FD), Ex users and Occasional drunkenness and occasional drug users (ODk+OD) ( $F=7.209$ ,  $p < .001$ ).

Fewer 'Drug abusers' were present in the networks of Low and Ex consumers, Occasional and Frequent drunkenness (LC, Ex, ODk and FDk) groups and more common in the Frequent and Occasional drug users (FD+FDk, FD, FD+ODk and OD+FDk) network groups ( $F=20.39$ ,  $p < .001$ ). Thus low consumers, ex users or people that just get drunk are less likely to have friends who abuse, sell or provide illicit drugs in their networks. Having friends in the network with 'Antisocial Behaviour' was negatively related to Low and Ex consumers and to Occasional drunkenness and drug users (LC, Ex, ODk and OD), and positively related with Frequent drug users and Occasional drug users when combined with frequent drunkenness (FD, FD+FDk, OD+FDk) ( $F=15.779$  ( $p < .001$ )).

### ***Factorial analysis of the network characteristics. Relationship with the respondents' drunkenness and drug use frequency***

When we carry out a factorial analysis (with varimax rotation) of the 22 characteristics we get four factors that explain the 46.85% of the variance for the total sample (see Table 3).

The *Factor 1* (explaining the 24.85% of the variance) is composed by four of the 'drug users' variables and three 'Antisocial behaviour' variables. The *Factor 2* (explaining the 11.39%) is composed by 4 'Helpers' variables and two 'socialising' variables.

When we cross (see table 4) the *Factor 1* ('Drug use + antisocial behaviour') by the different respondent's use patterns we find ( $p < .001$ ) that it has a negative relation -in this order- with Occasional drunkenness (ODk), Low and Ex consumers, Frequent drunkenness (FDk) and Occasional

drug users (OD). There is a positive relation with Frequent drunkenness and drug use (FDk+FD), Frequent drug use (FD), Frequent drunkenness and occasional drug use (FDk+OD) and, finally, Frequent drug use with occasional drunkenness (ODk+FD). When we cross the *Factor 2* ('Helpers and socialising') we find again a very clear schema. There is a significant relationship ( $p < .001$ ) confronting the Low consumers group (LC) against, in this order, the Ex, Frequent drunkenness and occasional drug use (FDk+OD), Frequent drunkenness and frequent drug use (FDk+ FD), Occasional drunkenness and frequent drug use (ODk+ FD), Occasional (ODk) and Frequent drunkenness (FDk).

When we realize the same factor analysis by gender, in the case of males, only the third one factor (composed by four 'antisocial' items and one of the 'drug' items ('gets drunk very often or goes over the top when taking drugs')) -with a 6.18% of explanatory capacity on the total variance- has significant relationship ( $p < .001$ ) with (see table 4) the drug and alcohol use patterns. Low consumers, Occasional Drunkenness (ODk) and Ex-users (Ex) are opposed to Frequent drunkenness simultaneously with Frequent drug use (FDk+ FD).

In the case of females, among the four first factors, we get significant relationships with the alcohol and drug use patterns, with three of these factors. The *Factor 1* (explaining the 22.1% of the variance) is composed by three "Antisocial" variables and 4 "Drug" variables. When crossing by the drug use patterns we get intergroup relations ( $p < .001$ ) between Es and Low consumers, Occasional drunkenness (ODk) and Occasional drug use (OD) and Frequent drunkenness (FDk), against Frequent drug users (FD and FD+FDk). The *Factor 2* (explaining the 11.32% of the variance) is defined basically by the 'Helpers' (4 variables) and the 'Socialising skills' (2 variables). What we get here is an intergroup opposition ( $p < .001$ ) between the consumers against Frequent drunkenness (FDk, FDk+OD and FDk+FD). Finally we have the *Factor 4* explaining the 4.83% of the variance. It is composed by four variables (having had sexual relationships with, drunk and driving, helps finding sexual partner and gets drunk very often or goes over the top when taking drugs). When looking for the relationship with the alcohol and use patterns we get in the inter group comparison ( $p < .04$ ) Low consumers against Frequent drunkenness with occasional or frequent drug use (FDk+ OD and FDk+ FD) and Frequent drunkenness alone (FDk) against Frequent drunkenness and occasional drug use (FDk+ OD).

## **DISCUSSION**

Most of the people going out to participate in nightlife use to have a stable group of friends with whom to go out. This study provides a wider perspective on the influence of friendship networks on alcohol and illicit drug use than other studies that rely on perceptions of the quality of friendships or the friends' use of drugs. Factorial analysis found these networks could be defined by two main characteristics: a 'deviant network', composed of friends that tend to get drunk, abuse drugs, provides drugs, have antisocial behaviours etc.; and a 'helpers and socialising' network with friends that tend

to give help or advice (e.g. telling respondents if they were drinking too much), that are moderate in their substance use habits, are socially proactive and with whom respondents tended to have fun. Depending on the drinking and drug use habits of the young respondents, they had more probability of having a certain type of network. Having not network or a less prosocial network is related to be low consumers. Having a non deviant, but prosocial network is related to being a person who gets drunk without using illegal drugs. Users of illegal drugs have a deviant and prosocial network. Finally ex users have less deviant networks, but at the same time a helper and prosocial network.

It's interesting to observe that not having a network of friends -'*lonely or isolated people*' formed 8% of our sample- or having less prosocial (e.g. less people who looked after others or with whom respondents had fun) could have a certain protective function and correspond to individuals that fell largely into categories of low consumers or ex substance users, occasional or frequent drunkenness without drugs, but also with the exception of a minority group of isolated people that tend to use illegal drugs. Other studies report mixed findings, with some finding that being alone led to more drug use (Ennett & Bauman, 1993; Pearson & Michell, 2000) and others that it led to lower use (Abel, Plumridge & Graham, 2002). However studies focused in recreational contexts have normally found isolated people to use drugs less (Ross, Mattison & Franklin, 2003; Thorlindsson & Bernburg, 2006). *Low consumers* (individuals that had not been drunk in the last month, may have experimented with illicit drug in the past, but were not current drug users; 18% of the sample). Low consumers had on plus less deviant networks, as could be expected. Similar results have been found among school students. Non consumers were those who, in relation to users, reported less participation in extracurricular activities and less personal satisfaction in life (Evans & Skager, 1992).

*Being drunk without using illegal drugs* once a month (9.8% of the sample) or more frequently (21.2%) was quite common among our sample. These respondents were characterised by having a less deviant and more prosocial network (e.g. having more friends ready to give help or socialise). Being drunk may be a culturally accepted, expected and 'desirable' behaviour in this recreational context. Reifman (2006) also found that having a high percentage of fraternity / sorority members in one's network and being associated with people one had known for a long time were significantly related to heavy drinking.

*But who are the 'helpers'* that are found frequently around people who get drunk? In this study they are individuals who are ready to assist their friends when problem arise in nightlife environments (e.g. losing control, getting drunk, running out of money,...). The fact that people who get drunk have more helpers around them than low consumers could be interpreted in different ways. Extreme behaviours can force people to adopt a protective / helping role. In this sense it could be that people become helpers only as a consequence of being confronted with problems. The other possible explanation is that people that like to get drunk look for more proactive friends, capable of keeping the homeostasis of the group in order to have, in spite their behaviour, fewer possible problems.

Both possibilities are not necessarily contradictory and, in fact, are quite compatible. However, we tend to believe that people who get drunk like to have a more proactive and socialising network, and this can include people ready to give help.

*Combining the use of illegal drugs with drunkenness* (around 37.4% of the sample) and *using illegal drugs frequently* without being drunk (5.6%) is related to having a more deviant network, but at the same time a helping and socialising network. Use of illicit drugs in recreational nightlife contexts is a relatively accepted behaviour with a clear socialising function. This can explain why the two network types are both compatible with people who use illicit drugs. Other studies have also found a relationship between engaging in drug use and even delinquency and having friends and high quality friendship (Dishion, Andrews & Crosby, 1995; Giordano, 2003)

The case of the ex *users* is interesting. It appears that ex users have less deviant networks, but at the same time a helper and prosocial network. This confers with the results of other studies. The term 'recovery capital' (Grandfield & Cloud, 1999) refers to social support as an element for recovery. Here there is a need to dissociate from drug using peers and at the same time receive support from network members that have more prosocial orientations (Latkin, Knowlton, Hoover & Mandell, 1999; Valente, Gallaher & Mouttapa, 2004).

*Gender* is an important issue. Males had more friends abusing alcohol and illicit drugs or with antisocial behaviour. Among males just one factor (to have deviant friends), with only 6.1% capacity of variance explanation, was capable of differentiating between low consumers, occasional drunkenness (once a month) and ex users in relation to the greatest abusers. Conversely, in the case of females three factors were capable of predicting drunkenness or use of drugs. According to these results, male drug use patterns appear to be less affected by the characteristics of their networks. A possible explanation for this is that characteristics that better define networks of friends in this recreational context (deviancy and helping and socialising skills) overlap with the characteristics of males respondents, more so than females respondents ('This is a man's world?'). Also, when females have sexual relationship with a member of their network there are more possibilities to use alcohol and drugs. This issue is also found in other research (Kirke, 2004; Wang, Fitzhugh, Turner & Fu, 1997).

In terms of prevention, "there is still uncertainty as to how to tap into potentially powerful social networks to minimize risky behaviors" (Dorsey, Scherer & Real, 1999). Some researchers have used network information to increase the effectiveness of prevention programs (Valente, Ritt-Olson, Stacy, Unger, Okamoto & Sussman, 2007). Some preventive consequences coming from these results are already known as the importance of having less deviant friends. But some other important lessons emerge from this research: to enhance certain prosocial skills may have counter preventive effects among recreational users; to influence the network for preventative purposes may be more effective among females.

This study provides interesting and new information about a relatively under researched area. However, both the

representativeness of the sample and its cross-section design limits detailed interpretation. It should also be borne in mind that the study has used self-reported information reflecting how the interviewees think that of their network of friends (egocentered network).

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