# Violent Behaviour, Drunkenness, Drug use, and Social Capital in Nightlife Contexts\*

### Comportamiento Violento, Embriaguez, Uso de Drogas y Capital Social en los Contextos de Ocio Nocturno

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**Abstract.** Violent behaviour linked to nightlife leisure contexts is a problem that particularly affects younger population groups. We carried out a survey with a sample of 1,363 young people who frequently take part in the nightlife of nine European cities (Athens, Berlin, Brno, Lisbon, Ljubljana, Liverpool, Palma, Venice and Vienna), to explore relationships between violence (carrying a weapon, being threatened or injured with a weapon, being involved in a physical fight), alcohol and drug use, and social capital. 11.4% of women and 28.4% of men reported having been involved in a physical fight over the previous month. Logistical regression analyses revealed that being male and younger were predictors for the three violent behaviours; drunkenness and drug use predicted carrying a weapon and being threatened and having many friends predicted carrying a weapon and fighting. There is clearly a need for increasing attention to studying and preventing violence in recreational settings.

Keywords: drunkenness, nightlife, social capital, use of drugs, violence.

Resumen. El comportamiento violento ligado a los contextos de ocio nocturno constituye un problema que afecta particularmente a la población más joven. Se realizó una encuesta con una muestra de 1.363 jóvenes en nueve ciudades europeas (Atenas, Berlín, Brno, Lisboa, Liubliana, Liverpool, Palma de Mallorca, Venecia y Viena) entre jóvenes que participan con cierta frecuencia en la vida nocturna para explorar la violencia (llevar un arma, haber sido amenazados o heridos con un arma; haber participado en una pelea física), el uso de alcohol y drogas y el capital social. El 11.4% de las mujeres y el 28.4% de los hombres aseguraron haber participado en una pelea física durante el mes anterior. La regresión logística reveló que ser hombre y más joven es un factor de predicción de las tres conductas violentas. La embriaguez y el consumo de drogas predijo portar un arma y haber sido amenazado. Mientras que tener muchos amigos predice portar un arma y pelearse. Es necesario aumentar el interés por el estudio y la prevención de la violencia en lugares de ocio.

Palabras clave: borrachera, capital social, diversión nocturna, uso de drogas, violencia.

Profound changes during recent decades in Europe have led to the appearance of, or increase in, problems such as drug use, risk sexuality and violence. The World Health Organization (WHO, 2005) has estimated that 73,000 deaths a year occur in Europe as a result of violent situations, and that the number of people injured and requiring hospital treatment is between 20 and 40 times greater. An important obstacle to the study of the socio-cultural dimensions of violence is that these violent actions are not systematically reported and registered by health, police and judicial institutions, meaning that it is a somewhat invisible phenomenon (Anderson, Hugues, & Bellis, 2007). It is this

The relationship between violence and alcohol abuse is well known (Anderson et al., 2007; Babor, Caetano, Casswell, Edwards, Giesbrecht, Graham et al., 2003; Macdonald, Cherpitel, Borges, DeSouza, Giesbrecht, & Stockwell, 2005; Plant & Plant, 2006; WHO, 2005). Evidence is also starting to emerge that links the use of cannabis with violent behaviour (Howard & Menkes, 2007). This drug may reduce the possibility of aggression during the period of intoxication, but could also increase violence during periods of abstinence (Hoaken & Stewart, 2003). In a study carried out with a representative sample of American teenagers, 11% of those interviewed who drank alcohol and of those who used illegal drugs had a greater probability of injuring some-

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lack of knowledge about the matter that is of greatest concern to the WHO, which has carried out various studies in efforts to draw attention to the problem and propose measures to combat it (WHO, 2002, 2004).

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<sup>\*</sup> Versión en castellano disponible en [Spanish version available at]: www.psychosocial-intervention.org

one or being injured in fights and of being involved in illegal behaviours (Kodjo, Auinger, & Ryan, 2004). There is also evidence that cocaine use is related to violence (Stuart, Temple, Follansbee, Bucossi, Hellmuth, & Moore, 2008). The use of alcohol and cocaine affects cognitive functioning, reduces self-control, affects information-processing capacity and reduces the ability to recognize warning signs in situations with the potential to generate violence (Pennings, Leccese, & de Wolff, 2002).

Currently, a not inconsiderable portion of this violence among young people is linked specifically to the use of alcohol and drugs in recreational contexts. In the United Kingdom, one in five violent altercations takes place in bars, pubs or discotheques, and for incidents between strangers, the proportion rises to one in three (Kershaw, Budd, Kinshot, Mattinson, Mayhew, & Myhill, 2000). The abuse of alcohol, following the pattern of binge drinking, has become a popular habit among young Europeans (Rossow, 2001). Consequently, there is an increasing awareness in recent years in relation to the nocturnal recreational context as a risk factor for drug use and violence (Anderson 2005; Anderson et al., 2007; Calafat, Fernández, Juan, & Becoña, 2007; Hughes, Tocque, Humphrey, & Bellis, 2004; Hugues, Anderson, Morleo, & Bellis, 2008; Roberts, 2004; Roberts & Turner, 2005; Winlow & Hall, 2006).

Social capital may be an important contextual determinant of health (Kawachi, Kennedy, Lochner, & Prothrow-Stith, 1997). Pierre Bourdieu (1983) refers to "social capital" as a group of resources available to members of a stable network of more or less institutionalized relationships. Social capital can be defined as "the features of social organisation, such as civic participation, norms of reciprocity, and trust in others that facilitate cooperation for mutual benefit". At an individual level, it can be measured through the personal social network, "although social capital is possibly more than just the sum of the individual level social networks" (Pearce & Davey, 2003). With regard to alcohol abuse in college, the protective effect of social capital on heavy episodic or "binge" drinking was shown by Weitzman (Weitzman & Kawachi, 2000; Weitzman & Chen, 2005) who reported that exposure to higher than average levels of social capital at the campus community level (measured as the mean aggregate level of individual time spent volunteering per day), significantly reduced individual risks of binge drinking in a national study of over 14,000 respondents surveyed across 140 colleges. Social capital was also a protective factor for smoking and illicit drug use among Swedish teenagers, but not for binge drinking (Lundborg, 2005). But even where associations have been observed between measures of social capital and population health it is by no means clear that these associations are causal (Pearce et al, 2003).

The present research will try to improve our knowl-

edge and understanding of violence in nightlife, especially in relation to the use of alcohol and other drugs. The violence will also be studied in relation to available social capital and involvement in nightlife.

#### Method

### **Participants**

1,363 frequent users of recreational weekend nightlife locations, with an age range of 16 to 35 (M = 21.75; SD = 4.27), resident in 9 European cities: Athens (Greece), Berlin (Germany), Brno (Czech Republic), Lisbon (Portugal), Ljubljana (Slovenia), Liverpool (United Kingdom), Palma de Mallorca (Spain) and Venice/Mestre (Italy).

### Materials and procedure

We used a self-applied and anonymous questionnaire. The fieldwork was carried out between February and July, 2006. The sampling method employed was a variant of 'respondent-driven sampling', which has been validated previously as a recruitment mechanism in nightlife contexts characterized by drug use (Wang, Carlson, Falck, Siegal, Rahman, & Li, 2005). The sampling process began with the selection of eight key informants in each city: two men and two women aged under 19, and two of each gender aged over 19. Participants had to be regular users of pubs and/or clubs representative of the average consumer (citycentre locations, popular discos, etc.) and also users of specific locations (places specializing in music associated with drug use, such as Dance music). As part of the questionnaire, participants identified up to ten friends and they were asked to recruit two members (one close and another not so close) to begin the next "wave" of interviews. This second wave of recruiters repeated the process, which continued with two more waves, with the aim of obtaining a sample size of approximately 150 participants in each city. The aim of the present study was to explore violent behaviours and its relationship to binge drinking during nightlife in nine cities of Europe.

The data for each city were put into the statistical package SPSS v. 14.0. Chi-squared tests were carried out for the variables associated with three violent behaviours in nocturnal recreational behaviour: "carrying a weapon," "being threatened or injured by someone carrying a weapon" and "being involved in a fight". These three variables associated with violence were explored by means of multivariate analyses with logistical regression methods in relation to demographic variables (age and sex), use of alcohol and drugs (isolated and combined use), volume of available social capital and participation in nightlife.

#### Results

## Frequencies of violent behaviours in recreational contexts according to gender and age

Men presented a significantly higher frequency of the three risk behaviours than that of women (Table 1). While 2.7% of women reported usually carrying a weapon in recreational contexts, 9.7% of men reported doing so. Additionally, 5.9% of women reported having been threatened/injured with a weapon, while the frequency among men was almost three times higher (14.5%). As regards being involved in a physical fight in nightlife contexts, 11.4% of women reported this, whilst 28.4% of men had been involved in such a situ-

ation over the previous month. Frequencies of the three types of violent behaviours reduce consistently as age increases (see Table 1).

### Frequencies of violent behaviours in recreational contexts according to alcohol and drug use

Interestingly, with regard to the people who had been drunk during the previous month (without using illegal drugs) we did just find significant relationship with one of the three explored violent variables: those that have been threatened (see Table 1). The 8.6% of interviewees who report not having got drunk in the previous month have been threatened or attacked,

Table 1: Violence by typology of drunkenness and drug use, amount of social capital, and nightlife involvement

	Carry a gun/knife while going out	Have been threatened/injured with a weapon in nightlife	You were on a physical fight in nightlife contexts			
Gender	$\chi^2 = 29.688***$	$\chi^2 = 28.202***$	$\chi^2 = 63.367***$			
Male	9.7%	14.5%	28.4%			
Female	2.7%	5.9%	11.4%			
Age groups	$\chi^2 = 21.667***$	$\chi^2 = 34.777***$	$\chi^2 = 37.662***$			
<18	9.8%	16.5%	24.3%			
19-21	7.0%	10.8%	26.8%			
22-24	4.6%	6.8%	15.7%			
> 25	1.8%	4.3%	10.1%			
Drunkenness only	$(n = 351) 5.4\%, \chi^2 = 4.6$	$(n = 351) 5.7\%, \chi^2 = 5.7*$	$(n = 351) 10.5\%, \chi^2 = 2.4$			
Never $(n = 175)$	6.9 %	8.6 %	10.3 %			
Occasional drunkenness ( $n = 65$ )	4.1 %	3.5 %	6.1 %			
Frequent drunkenness ( $n = 111$ )	6.3 %	1.6 %	13.5 %			
Drugs only	$(n = 1,383) 6\%, \chi^2 = 4.6$	$(n = 1,383) 10\%, \chi^2 = 5.5$	$(n = 1,383) 19.6\%, \chi^2 = 28.3***$			
Ex-user $(n = 658)$	6.4%	9.4%	19.0%			
Occasional drug ( $n = 244$ )	4.1%	8.6%	17.2%			
Frequent drug ( $n = 293$ )	6.1%	13.6%	29.0%			
Drugs and drunkenness combined	$(n = 497) 7.8\%, \chi^2 = .40$	$(n = 497) 14.1\%, \chi^2 = 5.6$	$(n = 497) 27.6\%, \chi^2 = 15.1***$			
Occasional drug and occasional drunk $(n = 53)$	5.7%	11.3%	9.4%			
Frequent drug and occasional drunk ( $n = 49$ )	8.5%	4.3%	21.3%			
Occasional drug and frequent drunk ( $n = 173$ )	8.1%	17.3%	26.0%			
Frequent drug and frequent drunk (n = 224)	8.0%	14.3%	34.4%			
Amount of social capital	$(n = 83) 6\%, \chi^2 = 8.424*$	$(n = 139) 10.1\%, \chi^2 = 8.538*$	$(n = 271) 19.6\%, \chi^2 = 21.862***$			
Less than 4 friends, one group, no change group	3.2%	8.7%	14.5%			
4 friends, one group, no change group	5.7%	8.5%	19.7%			
More than 4 friends, 1 group, no change group	8.0%	14.2%	23.6%			
More than 4 friends, more than 1 group, change g	group 9.4%	15.6%	37.5%			
Nights going out per weekend	$(n = 1,367) 5.9\%, \chi^2 = 7*$	$(n = 1,367) 10\%, \chi^2 = 13.7***$	$(n = 1,367) 19.5\%, \chi^2 = 23.6***$			
Less involvement	4.2%	7.0%	14.3%			
More involvement	7.6%	13.0%	24.7%			
Weekends going out per month	$(n = 1,380) 6\%, \chi^2 = .61$	$(n = 1,380) 10.1\%, \chi^2 = 1.16$	$(n = 1,380) 19.6\%, \chi^2 = 10.9**$			
Less involvement	6.8%	8.7%	13.9%			
More involvement	5.7%	10.6%	21.8%			

 $<sup>*\;</sup>p<.05,\,**\;p<.01,\,***\;p<.001$ 

Note: Row percentage presented

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whilst 3.5% of those who admit to getting drunk occasionally have been in this situation, and 1.6% of those who get drunk frequently would have experienced such a situation. This gives the somewhat paradoxical result that those who get drunk most frequently are those least likely to have been threatened or attacked.

On the other hand, no significant differences were found (Table 1) between categories of ex-users, occasional users and frequent users of either one drug or several drugs in relation to *carrying a weapon*, and having been threatened or injured during recreational contexts. In contrast, we did find significant differences when examining the relationship between frequency of drug use and frequency of physical fights in recreational nightlife contexts. Following on from this, while similar frequencies of physical fights were found for percentages of ex-users of drugs (19%) and occasional users (17.2%), a significantly larger frequency of physical fighting arises among frequent drug users (almost 30%) (see Table 1).

We did not find any significant relationship between the combined abuse of alcohol and drugs with both risk behaviours carrying a weapon and having been threatened/injured with a weapon. In contrast, participation in fights violence in the nightlife context significantly increased with the combined use of alcohol and drugs (see Table 1). In this regard, while 9.4% of those who get drunk and take drugs occasionally are involved in fights, the percentage rises to 21.3% among those who get drunk occasionally but take drugs frequently. Additionally, among those who get drunk frequently and take drugs occasionally, 26% of cases report having been involved in fights in recreational contexts, with the highest percentage of fights being found among those who combine frequent drug use with frequent bouts of drunkenness (34.4%).

### Frequencies of violent behaviours associated with social capital and involvement in nightlife

Increasing numbers of friends, numbers of groups of friends and numbers of times the individual changes group per night were associated with higher probabilities of the risk behaviour carrying a weapon during recreational contexts. Specifically, it increases from 3.2% for those with low social capital to 9.4% among those having high social capital. Similar results were found for those who reported having been threatened or injured with a weapon. While 8.7% of those who have low social capital were threatened or assaulted, the percentage almost doubles (15.6%) for those with high social capital. Furthermore, we found a dramatic increase in the frequency of physical fights during recreational contexts for those whose social capital is large. In this regard, while 14.5% of cases with little social capital had been involved in a physical fight, 37.5% of cases with a good deal of social capital

reported having been involved in fights in pubs and clubs.

Finally, with regard to involvement in nightlife (number of times one goes out in the weekend and number of weekends per month), we found that the variable most closely related to violent behaviours was the number of nights spent each weekend in going out ("on the town"), which showed significant relationships with the three risk behaviours measured. Specifically, 7.2% of those who go out most frequently each weekend reported carrying weapons, compared to 4.2% of those who least frequently went out at weekends. Similarly, 7% of participants who report rarely going out have been threatened or injured with a weapon at night in festive contexts, while 13% of those who frequently went out at weekends reported having been a victim of this violent behaviour. As regards physical fights, 14.3% of those who go out only rarely at weekends are likely to fight, whilst the risk of fighting rises to 24.7% in those who go out more times a week. Finally, the percentage of cases of physical fights at night increased from 13.9% among those spending the least number of nights per weekend to 21.8% among those who most frequently go out at night per month.

### Regression analyses for the three risk behaviours

With regard to the criterion variable "carrying a weapon in recreational contexts at night", logistical regression analyses revealed at least five statistically significant predictors, which were gender, age, combined use of drugs and alcohol, amount of social capital and number of nights per week devoted to going out. It is noteworthy that men were 3.4 times more likely to carry a weapon during recreational nightlife contexts than women. Likewise, the youngest participants (under 19) were found to be three times more likely to carry a weapon than the rest of age groups. Moreover, those interviewees who combined drugs and alcohol were found to be more prone to carrying weapons during nightlife contexts. Finally, social capital and involvement in nightlife revealed to be a significant predictor of this violence-related behaviour (see Table 2).

With regard to the criterion variable "being threatened or injured with a weapon in the nightlife context", logistical regression analysis revealed three statistically significant predictors, which were gender, age and combined use of drugs and alcohol. Men were twice as likely to be threatened or injured with a weapon in nocturnal recreational contexts than women. In addition, those aged below 19 were nearly three times more at risk of being threatened or attacked with a weapon in the nightlife context. Those who get drunk and take drugs emerged as a predictor of this violence-related behaviour (see Table 2).

Table 2. Logistic regression analyses for violent behaviours with gender, drunkenness, drug use, social capital, and nightlife involvement as predictors

			Carry a weapon while going out			Have been threatened or injured with a weapon in nightlife contexts			You were in a physical fight in nightlife contexts				
		AOR	Lower 95% CI	Upper 95% CI	р	AOR	Lower 95% CI	Upper 95% CI	р	AOR	Lower 95% CI	Upper 95% CI	p
Gender	Female (Ref) Male	3.4	1.75	6.62	<.0001	2.24	1.4	3.6	<.001	4.7	1.71	12.8	<.01
Age group	>25 ( <i>Ref</i> )				<.001				<.05				<.05
(years)	22-24	1.88	1.49	2.07	.081	1.61	.82	3.15	.17	1.25	.52	3.03	.61
	19-21	2.6	1.13	3.1	.001	2.26	1.14	4.5	.02	2.08	.98	2.91	.035
	<18	3.3	2.13	3.7	.001	2.73	1.41	5.3	.003	1.89	.79	2.16	.025
Drug use and	Occasionally drugged and occasionally drunk (Ref)				<.05	2.13	.95	3.3	.32				.53
Drunkenness	Frequently drugged and occasionally drunk (a)	1.5	.97	3.6	.023				<.01	1.16	.29	1.96	.62
	Occasionally drugged and frequently drunk	1.12	.9	3.3	.1	3.1	1.87	4.41	.18	1.42	.36	2.12	.83
	Frequently drugged and frequently drunk	1.12	.75	3.19	.10	2.45	1.08	3.69	.04	2.7	1.12	3.21	.065
Social	Less than 4 friends; one group; no group change (Ref)				<.05				.28				<.05
Capital	4 friends; one group; no group change	1.72	.98	2.2	.15	.93	.43	2.3	.41	1.06	.4	2.23	.94
	More than 4 friends; 1 group; no group change	1.78	.99	2.31	.018	1.33	.39	2.16	.11	1.72	.61	2.75	.01
	More than 4 friends; > than 1 group; group changes	1.91	1.1	3.3	.017	1.46	.36	3	.1	2.63	1.14	3.96	.03
Nights per	Less nights (Ref)				<.05				.63				.31
weekend	More nights	1.49	.87	2.11		1.16	1.01	1.35		1.87	.91	3.23	
Weekends	Less weekends(Ref)				.29				.51				.43
per month	More weekends	.98	.54	1.78		1.5	.69	2.27		1.36	.23	2.34	

Note: drug intake alone and drunkenness alone were not included in the analysis due to small number of positive cases

Finally, "being involved in fights in the nightlife context", logistical regression analyses revealed three statistically significant predictors: gender, age and amount of social capital. Men were almost five times more likely to be involved in fights than women (AOR = 4.7; see Table 2). Older age groups also had a lower probability of being involved in a fight in the nightlife context, especially those over 25 years of age. Social capital had predictive capacity in this physical violence-related behaviour, with larger social capital being predictive of fight involvement during nightlife contexts (Table 2).

### Discussion

Gender and age is related to the three violent behaviours considered (carrying weapons, being threatened and fighting), which is in line with previous sociological and criminological literature regarding violent and delinquent behaviours. It is well documented that men commit a larger number of violent crimes (especially

during adolescence), and crimes of a different type to those committed by women (Heidensohn, 1996). In addition, it is also well documented that *age* is the factor most closely related to violence. Previous literature shows that there is a career of crime/violence that begins around age 14, peaking at around the age of 20 and then falling rapidly (Wilson & Herrnstein, 1985).

Combined use of alcohol and drugs was also related, as expected (Rosow, 2001), to carrying weapons and the possibility of being threatened/injured. Interestingly, however, the use of substances is not related to fighting, possibly because the use of alcohol and fighting are not so marginal behaviours in these contexts.

The analysis of *social capital* (in the present study the number of friends, the number of groups who the informant goes out with and changing from one group to another during the night) indicates that the greater an individual's social capital, the greater his or her probability of being involved in a fight or carrying a weapon. In recreational nightlife some supposedly deviant behaviours can sometimes have different con-

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AOR = Adjusted Odds Ratio. CI = Confidence Interval.

a = indicates reference category only for central item 'have been threatened or injured with a weapon in club environments'

notations than in other social contexts. For example, in another study (Calafat, Cajal, Juan, Mendes, Kokkevi, Blay, Palmer, & Duch, 2010) on nightlife contexts shows that not having a network of friends or having a less prosocial network is related to being less of a consumer. Having a non-deviant, but prosocial network is related to being a person who gets drunk without using illegal drugs. We should also consider that violence among young people in nightlife settings has a positive value for some of them.

Doing nothing, or taking only largely impotent measures, is, by default, harmful (Giesbrecht, 2008). For a more detailed reflection on prevention of activities in nightlife, a recent review (Calafat, Juan, & Duch, 2009) can be consulted. In general terms, however, and according to the results of this research, we make the following proposals:

- To raise awareness among young people about violence in nightlife settings. According to the WHO (2004) there is a low level of consciousness about violence. The first step is therefore to increase awareness about the frequency and consequences of violence.
- It is also important to work on the relation between violence and the use of alcohol and illegal drugs.
- Further research is needed into the role of friends in relation with nightlife violence. Going out with many friends can enhance the possibility of violence. This suggests that violence has a group meaning that should be dealt with.
- There is a need for interventions aimed at increasing the visibility of control in recreational zones.

#### References

- Anderson, Z. (2005). *Trauma and injury intelligence*. *Group themed report 2: Assaults*. Liverpool: Centre for Public Health, Liverpool John Moores University.
- Anderson, Z., Hughes, K., & Bellis, M. A. (2007). Exploration of young people's experience and perceptions of violence in Liverpool's nightlife. Liverpool: Centre for Public Health, Liverpool John Moores University.
- Babor, T., Caetano, R., Casswell, S., Edwards, G., Giesbrecht, N., Graham, K. ... Rossow, I. (2003). *Alcohol: no ordinary commodity*. Oxford: Oxford University Press.
- Bourdieu, P. (1983). Ökonomisches kapital, kulturelles kapital, soziales kapital. In R. Kreckel (Ed.), *Soziale ungleichheiten. Soziale welt.* Vol. 2 (pp. 183-198). Göttingen: Otto Schwartz.
- Calafat, A., Cajal, B., Juan, M., Mendes, F., Kokkevi, A., Blay, N., ... Duch, M. A. (2010). The influence of personal networks when participating in nightlife on the use and abuse of alcohol and drugs. *Adicciones*, 22, 147-154.

- Calafat, A., Fernández, C., Juan, M., & Becoña, E. (2007).
  Weekend nightlife recreational habits: Prominent intrapersonal 'risk factors' for drug use? Substances Use & Misuse, 42, 1443-1454.
- Calafat, A., Juan, M., & Duch, M. A. (2009). Preventive interventions in nightlife: A review. Adicciones, 21, 387-414.
- Giesbrecht, N. (2008). Recent developments in overall alcohol consumption and high risk drinking: A case for effective population level interventions in Canada. *Adicciones*, 20, 207-220.
- Heidensohn, F. (1996). *Women and crime*. London: Macmillan Press.
- Hoaken, P. N., & Stewart, S. H. (2003). Drugs of abuse and the elicitation of human aggressive behavior. *Addictive Behaviors*, 28, 1533-1554.
- Howard, R. C., & Menkes, D. B. (2007). Brief report: Changes in brain function during acute cannabis intoxication: Preliminary findings suggest a mechanism for cannabis-induced violence. Criminal Behaviour and Mental Health, 17, 113-117.
- Hughes, K., Anderson, Z., Morleo, M., & Bellis, M. A. (2008). Alcohol, nightlife and violence: The relative contributions of drinking before and during nights out to negative health and criminal justice outcomes. *Addiction*, 103, 78-79.
- Hughes, K., Tocque, K., Humphrey, G., & Bellis, M. A. (2004). Taking measures: A situational analysis of alcohol in the North West. Liverpool: Centre for Public Health, Liverpool John Moores University.
- Kawachi, I., Kennedy, B. P., Lochner, K., & Prothrow-Stith, D. (1997). Social capital, income inequality, and mortality. *American Journal of Public Health*, 87, 1491–1498.
- Kershaw, C., Budd, T., Kinshott, G., Mattinson, J., Mayhew, P., & Myhill, A. (2000). The 2000 British Crime Survey. Home Office Statistical Bulletin, 18/00, London: Home Office.
- Kodjo, C. M., Auinger, P., & Ryan, S. A. (2004). Prevalence of, and factors associated with adolescent physical fighting while under the influence of alcohol or drugs. *Journal* of Adolescent Health, 35, 346.e11-346.e16.
- Lundborg, P. (2005). Social capital and substance use among Swedish adolescents: an explorative study. *Social Science & Medicine*, 61, 1151-1158.
- Macdonald, S., Cherpitel, C. J., Borges, G., DeSouza, A., Giesbrecht, N., & Stockwell, T. (2005). The criteria for causation of alcohol in violent injuries based on emergency room data from six countries. *Addictive Behaviors*, 30, 103-113.
- Pearce, N., & Davey, G. (2003). Is social capital the key of health inequalities? *American Journal of Public Health*, 93, 122-129.
- Pennings, E. J. M., Leccese, A. P., & de Wolff, F. A. (2002). Effects of concurrent use of alcohol and cocaine. *Addiction*, 97, 773-783.
- Plant, M., & Plant, M. (2006). *Binge Britain. Alcohol and the national response*. Oxford: Oxford University Press.
- Roberts, M. (2004). Good practice in managing the evening and late night economy: A literature review from an envi-

- ronmental perspective. London: Office of the Deputy Prime Minister.
- Roberts, M., & Turner, C. (2005). Conflicts of liveability in the 24-hour city: Learning from 48 hours in the life of London's Soho. *Journal of Urban Design*, *10*, 171-193.
- Rossow, I. (2001). Alcohol and homicide: a cross-cultural comparison of the relationship in 14 European countries. *Addiction*, *96*, S77–S92.
- Stuart, G. L., Temple, J. R., Follansbee, K. W., Bucossi, M. M., Hellmuth, J. C., & Moore, T. M. (2008). The role of drug use in a conceptual model of intimate partner violence in men and women arrested for domestic violence. *Psychology of Addictive Behaviors*, 22, 12-24.
- Wang, J., Carlson, R. G., Falck, R. S., Siegal, H. A., Rahman, A., & Li, L. (2005). Respondent-driven sampling to recruit MDMA users: A methodological assessment. *Drug and Alcohol Dependence*, 78, 147-157.
- Weitzman, E. R., & Chen, Y. (2005). Risk modifying effect of social capital on measures of heavy alcohol consump-

- tion, alcohol abuse, harms, and secondhand effects: National survey findings. *Jornal of Epidemiology and Community Health*, 59, 303–309.
- Weitzman, E. R., & Kawachi, I. (2000). Giving means receiving: the protective effect of social capital on binge drinking on college campuses. *American Journal of Public Health*, *90*,1936–1939.
- WHO (2002). World report on violence and health. Geneva: WHO.
- WHO (2004). Preventing violence. A guide to implementing the recommendations of the Alcohol: Minimising the harm. What works? London: Free Association Books.
- WHO Regional Office for Europe (2005). *Alcohol and interpersonal violence*. *Policy briefing*. Geneva: WHO.
- Wilson, J. Q., & Herrnstein, R. J. (1985). Crime and human nature: The definitive study of the causes of crime. New York: Simon and Schuster.
- Winlow, S., & Hall, S. (2006). *Violent night*. New York: Berg.

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