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Nightlife young risk behaviours in Mediterranean versus other European cities: are stereotypes true?

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Background: Mediterranean lifestyle has long been hailed as protective against certain risk behaviours and diseases. Mediterranean drinking patterns of moderate alcohol consumption as part of daily life have often been assumed to protect young people from harmful alcohol consumption, in contrast to Northern European drinking patterns. Nightlife environments are strong related to alcohol and drugs use, and other health risk behaviours but few cross-national studies have been undertaken amongst young Europeans frequenting bars and nightclubs. This study aims to understand differences in nightlife risk-taking behaviours between young nightlife users from Mediterranean and non-Mediterranean cultures, including alcohol and illicit drug use, unprotected sex, violence and driving under the influence of alcohol. **Methods:** A total of 1363 regular nightlife users aged 16–35 years were surveyed in nine European cities by means of a self-reported questionnaire. Sample selection was done through respondent driven sampling techniques. **Results:** after controlling for demographic variables, no differences among the Mediterranean and non-Mediterranean samples were found in current alcohol, tobacco, cannabis, or cocaine use, neither in violent behaviours, but Northern people were more likely to get drunk [adjusted odds ratio (AOR) = 0.53], while Mediterranean were more likely to have unprotected sex (AOR = 2.01) and to drive drunken (AOR = 5.86). **Conclusion:** Our data suggest that stereotypes are partially confirmed, and that Mediterranean lifestyle is protective for some risk behaviours (drunkenness, ecstasy and amphetamines current use), but not for all of them. Further research in depth is needed in order to clarify the relations between cultural patterns, social norms and nightlife risk behaviours assumed by the young people.

Keywords: nightlife risk behaviours, Mediterranean, young people, drug use, alcohol

Introduction

The Mediterranean lifestyle (that typically seen in countries bordering the Mediterranean Sea) has long been hailed as protective against certain risk behaviours and diseases. For example, adherence to a Mediterranean diet has been associated with significant reductions in overall mortality, mortality from coronary heart disease and cancer, incidence of Parkinson's disease and Alzheimer's disease[1] and cognitive impairment.[2] A key feature of the Mediterranean lifestyle has been its traditional wine culture; for many centuries this alcoholic drink has been used as an accompaniment to meals.[3] Mediterranean drinking patterns of moderate alcohol consumption as part of daily life have often been assumed to protect young people from hazardous and harmful alcohol consumption and, in contrast, Northern European drinking behaviours have been characterized by heavy episodic drinking often for the purpose of intoxication.[4] However, recent evidence suggests that youth drinking patterns across Europe may be converging, with increasing heavy episodic drinking being seen in young people in many countries, including Mediterranean countries (e.g. Portugal, Italy).[5,6]

Much alcohol consumption among young Europeans occurs in public drinking premises such as bars and nightclubs, particularly at weekend nights. These environments are also strongly associated with other risk-taking behaviours, including illicit drug use, violence, drink- and drug-related driving and risky sexual behaviour. However, less is known about the influence of Mediterranean lifestyles on these behaviours in nightlife users. The ESPAD study of 15- and 16-year-old schoolchildren in Europe shows that the prevalence of regretted sex after alcohol use ranges from 3% (e.g. Portugal) to 13% (e.g. Czech Republic), and the prevalence of fighting after drinking ranges from 4% (Portugal) to 20% (Ukraine).[5] However, as individuals progress into adulthood, comparable data are scarce. For drugs, national surveys in young adults find last year use of ecstasy, for example, to range from <1% in countries including Greece, Italy and Portugal, to 3.9% in the UK and 7.7% in the Czech Republic.[7] Across a range of European countries, young people who frequently visit bars and nightclubs have been found to be more likely to use illicit drugs.[8]

Despite the strong links between nightlife and risk-taking behaviours, few cross-national studies have been undertaken amongst young Europeans frequenting bars and nightclubs. This study aims to understand differences in nightlife risk-taking behaviours between young nightlife users from Mediterranean and non-Mediterranean cultures, including

alcohol and illicit drug use, unprotected sex, violence and driving under the influence of alcohol. It utilises a sample of 16- to 35-year-olds from nine European cities from nine different countries, all recruited from populations frequenting pubs/bars and nightclubs.

Methods

Participants

A total of 1363 regular nightlife users aged 16–35 years were surveyed in nine European cities: Athens (Greece), Berlin (Germany), Brno (Czech Republic), Lisbon (Portugal), Ljubljana (Slovenia), Liverpool (UK), Palma de Mallorca (Spain), Venice-Mestre (Italy) and Vienna (Austria).

Materials and procedure

The pan European research group Irefrea developed a questionnaire to gather data on demographics of the study population, and a variety of historic and current risk taking behaviours including substance use, violence, risky driving and sexual activity. The questionnaire was based on pre-validated survey tools used in previous studies published by the authors[8,9] and questions were further refined through consultation with representatives from all participating countries. The tool was piloted in Palma and Liverpool before final implementation. Questionnaires were distributed using a variation of 'respondent driven sampling'; this snowball effect methodology was developed for recruiting recreational drug users while minimizing selection bias.[10] In the present study, two males and two females aged <19 years, and two of each gender aged >19 years were selected from each city as initial recruits (seeds). Individuals were selected on the basis that they were regular users of pubs and/or clubs. The seeds were given a verbal and written explanation of the study objectives and methodology which stressed that participation was voluntary and anonymous. Verbal consent was gained. Part of the survey requested the participant to provide non-identifiable details of the roles of up to 10 friends in their social network; participants were asked to recruit two of these (one being a distant friend and one an intermediate associate) into the study. Seeds were supplied with multiple copies of the survey to pass along the chain of participants. Recruitment was repeated and continued through at least two waves after the second wave participants had been identified with the aim of a final sample size of approximately 150 in each country. Questionnaires were self-completed by the participant either in the presence of the researcher or in their own time and returned anonymously by post to the principal researcher in their respective city. The survey took place between February and July 2006.

Data from all countries were entered into SPSS v.14.0, cleaned for accuracy and consistency at two sites (Palma, Spain and Liverpool, UK) and analysed in Palma, Spain. Survey respondents from each city were divided into two country groups (Mediterranean and non-Mediterranean) based on geographical location (having a Mediterranean coastline or not) and whether they shared a common culture (having a Mediterranean lifestyle or not). The Mediterranean group included the cities from Portugal, Spain, Italy, Greece and Slovenia, and the non-Mediterranean group was composed of the cities from Austria, Czech Republic, Germany and UK. Chi-square analyses were conducted between the groups to determine if a significant difference lies between a Mediterranean versus a non-Mediterranean lifestyle on: past risk behaviour (age at first use of alcohol, tobacco and drugs); current nightlife activity and risk behaviour (number of nights out on a typical weekend, frequency of alcohol consumption, drunkenness, smoking and drug taking in the last month, and typical mode of transport on a night out); risky sexual behaviour (number of times engaged in unprotected sex and number of sexual partners in the past 12 months); and, experience of night-time criminal activity (frequency of being involved in a physical fight and drink-driving in the past 12 months). To account for confounding factors, logistic regression analyses were conducted to determine which risky behaviours or nightlife attributes were the most powerful predictors of the Mediterranean group.

Results

Basic sample characteristics

Sample characteristics are presented in table 1. The Mediterranean and non-Mediterranean groups did not differ in gender and marital status, yet there was a significant difference in the age of respondents between the two groups [$\chi^2(3) = 21\,156$; $P < 0.001$]. The Mediterranean group consisted of a higher percentage of participants in the 16- to 18-year (Mediterranean, 30.8% vs. non-Mediterranean, 26.3%) and 25- to 35-year age categories (26.0 vs. 20.7%), whereas the 19- to 21-year age category was highest in the non-Mediterranean group (29.21 vs. 18.8%). There was also a significant difference in the respondents' occupation [$\chi^2(4) = 43\,403$; $P < 0.001$] and self-rated financial level [$\chi^2(4) = 22\,586$; $P < 0.001$] between the Mediterranean and non-Mediterranean groups; the Mediterranean group had higher percentages of students and people with temporary work (44.8 vs. 33.6% and 14.3 vs. 5.2%, respectively) and a higher self-rated income (see table 1).

Table 1 Basic sample characteristics

	***N* = 1363**	**Non-Mediterranean (44.6%)**	**Mediterranean (55.4%)**	***P***
Sex	Male	48.2	48.8	
	Female	51.8	51.2	
Age (years)	16–18	26.3	30.8	
	19–21	29.1	18.8	
	22–24	23.9	24.4	
	25–35	20.7	26.0	<0.001
Marital status	Single	55.1	56.8	
	Have a partner	37.9	36.5	
	Living with partner/ married	7.0	6.7	
Occupation	Student	33.6	44.8	
	Temporary work	5.2	14.3	
	Permanent employment	31.4	23.1	
	Unemployed or looking for a job	4.3	5.9	
	Other/unspecified	25.4	11.8	<0.001
Self-rated financial level of family	High	6.9	6.7	
	Medium/high	24.0	28.7	
	Medium	46.9	50.0	
	Medium/low	15.5	12.6	
	Low	6.7	2.0	<0.001

Values calculated by chi squares tests. Mediterranean: cities from the countries Portugal, Spain, Italy, Greece and Slovenia. Non-Mediterranean: cities from the countries Austria, Czech Republic, Germany and UK.

Drug use and other risk behaviours

Frequencies of current alcohol and drug use, drunkenness during the last month, leisure habits as frequency of nights out per weekend, means of transport when going out and coming back at night and other health risk behaviours, as having been involved in a fight, having more than five sexual partners or having unprotected sex (all three behaviours referred to the past 12 months) are displayed in table 2 through chi-squares comparisons for the Mediterranean vs. non-Mediterranean group. Nevertheless, after having controlled for all the demographic variables included in table 1, binary logistic regression showed which were the remaining differences among groups, as follows: regarding current drug use, non-Mediterranean showed significant higher levels of use for the following substances: ecstasy [adjusted odds ratio (AOR) = 0.56], amphetamine (AOR = 0.85) and mushrooms (AOR = 0.39). Regarding the other drugs, no significant differences were found, only for the drunkenness frequency (during the last month) which was about two times more probable to happen for the non-Mediterranean sample (AOR = 0.53). Differences for all the other risk behaviours were also confirmed; Mediterranean were about two times more likely to have unprotected sex (AOR = 2.01), although non-Mediterranean had greater chances (AOR = 0.98) to have more than five different sexual partners during the last year. Having driven drunk in the past 4 weeks was five times more probable for the Mediterranean (AOR = 5.86), which also showed about 15 times greater chance to use private transport for going out (AOR = 15.53) and for coming back (15.93) when going out at night (table 2).

General linear modelling was used to calculate estimated marginal means, controlling for age, gender, marital status and occupation and self-rated financial level, in order to see the differences between ages of first drug use for both groups. For alcohol, cannabis, tobacco and mushrooms, age was significant lower among the non-Mediterranean group ($P < 0.001$ for all) and also for the corrected means (the only difference that emerges is in the level of significance for the mushrooms $P < 0.01$ instead of the original $P < 0.001$ uncorrected). In the corrected values, no significant differences were found for the age of first use of cocaine, ecstasy neither amphetamines (table 3).

Discussion

The aim of this study was to explore the potential influence of the Mediterranean lifestyle on risk-behaviours of young people participating in nightlife. Our findings partly confirm the typical Mediterranean stereotype—a tendency to go out at night more frequently than young people from non-Mediterranean cultures, coupled with less intoxication, less illegal drug use (particularly, ecstasy and amphetamines). However, we found that Mediterranean nightlife users engage in two risk behaviours, drink driving and unprotected sex, more frequently than their non-Mediterranean counterparts. Such behaviours can have negative effects not only the individual, but also on third parties. For instance, driving under the influence of alcohol can have potentially fatal

Table 2 Comparison of alcohol, drug use and other risk behaviours between Mediterranean and non-Mediterranean populations

	Percentage				95% CIs		
	Non-Mediterranean	Mediterranean	P^a	AOR for being Mediterranean	Lower	Upper	P^b
Current users							
Alcohol	94.3	92.1	0.106	–	–	–	
Tobacco	61.7	61.6	0.981	–	–	–	
Cannabis	44.6	38.1	<0.05	–	–	–	
Cocaine	14.7	13.1	0.381	–	–	–	
Ecstasy	15.4	8.2	<0.001	0.566	0.363	0.759	<0.01
Amphetamine	7.0	3.8	<0.01	0.489	0.280	0.852	<0.05
Mushrooms	9.9	2.4	<0.001	0.200	0.100	0.399	<0.001
Drunkeness							
At least once (vs. never)	79.6	60.8	<0.001	0.407	0.309	0.536	<0.001
Frequency[c]							
Five or more times (vs. less than five times)	29.3	11.8	<0.001	0.291	0.212	0.400	<0.001
Nights out per weekend							
More than once a weekend (vs. once or less)	42.9	56.3	<0.001	1.809	1.412	2.318	<0.001
Violence[d]							
Been in nightlife physical fight	23.7	16.2	<0.001	–	–	–	
Sexual behaviour[d]							
unprotected sex	37.5	49.1	<0.001	1.537	1.174	2.012	<0.01
Five or more sexual partners	17.6	13.1	<0.05	0.684	0.477	0.981	<0.05
Nightlife Transport							
Having driven drunk[c]	8.5	25.0	<0.001	3.996	2.724	5.861	<0.001
Public transport used going out	50.7	27.5	<0.001	0.324	0.248	0.423	<0.001
Private transport used going out	7.9	44.5	<0.001	10.575	7.197	15.538	<0.001
Public transport used coming back	50.7	30.1	<0.001	0.393	0.304	0.507	<0.001
Private transport used coming back	6.9	42.5	<0.001	7.176	7.176	15.939	<0.001

CI, confidence interval
a: *P* values for the chi square comparisons
b: *P* values for the binary logistic regressions. AORs have now been calculated using all demographics in table 1
c: In the past month
d: During the past 12 months

Table 3 Observed and corrected values for mean age of substance first use

	Non-Mediterranean			Mediterranean			
		95% CIs			95% CIs		
Substance	**Mean**	**Lower**	**Upper**	**Mean**	**Lower**	**Upper**	***P***
Uncorrected[a]							
Alcohol	13.86	13.70	14.01	15.00	14.86	15.15	<0.001
Tobacco	14.09	13.85	14.33	15.12	14.95	15.29	<0.001
Cannabis	15.48	15.28	15.68	16.36	16.16	16.56	<0.001
Cocaine	18.45	17.97	18.92	18.43	18.06	18.80	0.962
Ecstasy	17.95	17.55	18.35	18.03	17.57	18.48	0.817
Amphetamine	18.06	17.59	18.53	18.13	17.39	18.87	0.869
Mushrooms	17.45	17.04	17.86	19.18	18.58	19.79	<0.001
Corrected[b]							
Alcohol	13.52	13.22	13.82	14.72	14.43	15.01	<0.001
Tobacco	13.97	13.59	14.35	14.97	14.61	15.34	<0.001
Cannabis	15.32	14.94	15.70	16.14	15.77	16.50	<0.001
Cocaine	18.08	17.35	18.81	18.11	17.43	18.79	0.921
Ecstasy	17.54	16.83	18.25	17.69	16.95	18.42	0.671
Amphetamine	17.70	16.77	18.63	17.52	16.49	18.54	0.718
Mushrooms	17.71	16.86	18.57	18.96	18.00	19.92	<0.01

CI, confidence interval
a: Analysis of variance
b: Estimated marginal means controlling for age, gender, marital status, occupation and self-rated financial level

consequences, causing devastating social and emotional repercussions and a burden on public services. It has been suggested that southern European populations are less concerned about the subsequent impacts of their own actions than Northern European populations due to a lack of civic consciousness; there is possibly a tendency in Southern European countries to rely less on personal responsibility to resolve public health issues, in other words, people are confident on the State or the Government to solve their social problems.[11]

The reasons behind these differences cannot be simple, because there are many questions implied. Among other questions there is a strong movement towards homogenization in Europe, which affects questions like consumption patterns. But let us have a look to some other questions.

Easy access to alcohol and illegal substances has previously been suggested to be a key player in excessive drinking and/or drug taking.[12,13] Mediterranean nightlife participants have easy access to alcohol with low prices[14]. This is also true of non-Mediterranean countries, such as the UK, where cheap alcohol can be purchased in the supermarket for consumption at home before going out.[15] Ecstasy is a typical recreational drug among young people aged 15–24 years in Europe; the Mediterranean countries included in this study have easier access to this drug than the central European countries,[16] but the Mediterranean group displayed lower levels of ecstasy use during nightlife. Thus, accessibility is unlikely to be an explanation for the differences in frequency of drunkenness and ecstasy use between the Mediterranean and non-Mediterranean groups found here.

The age at first use is a known risk factor for current participation in drugs.[17,18] But in our case, there is a lack of evidence to suggest that the early initiation of alcohol, tobacco and cannabis in the non-Mediterranean group is affecting the significant difference in the frequency of consumption of such substances between the Mediterranean and non-Mediterranean countries, which disappear after controlling for demographic factors, excluding ecstasy current use, for which no significant difference of first age use was found in the corrected means. So the age at which participants first use drugs could be related to cultural norms. Family influence and control may be responsible for the delayed initiation in the Mediterranean group in our sample, but finally what counts will be the informal control or Civic norms—prohibitions against engaging in behaviours that are often legal or tolerated when conducted in private settings—that possibly have an important effect on public drunkenness, drug abuse or other deviant behaviours.[19–21]

Drunkenness is not an acceptable behaviour culturally or socially in Mediterranean countries. A recent study among an Italian population indicated that a social control exists at parties and in restaurants, where excessive consumption appears to be tolerated, but only if socially regulated. They also indicated a transition from a partially intoxicating use of alcohol to a moderate use.[22] Nationality is a key factor when making comparisons in the frequency of drunkenness. In 2009, Bellis *et al.* studying young tourists to Ibiza, found that over half of British tourists were drunk five or more nights per week, compared with a third of Germans and only one in ten Spanish visitors.[23] Cultural expectations are not limited to drinking patterns, violence is also related to societal acceptances. For instance, in a sample of over 3000 young Europeans visiting Ibiza we found that British participants were involved in fights more often than Germans or Spanish participants.[24] Nevertheless, it is important to point out that in this present study, no differences were found for violent behaviours during the past 12 months, after correcting for socio-demographic variables. One explanation could be that, differences in the levels of violence among nationalities were related in that study to contextual situations (tourists from other countries, and tourists from the own country) and in the present one, respondents were in their original countries of origin.

A Mediterranean lifestyle and the social expectations that exist in their culture could be functioning as safeguarding factors in nightlife risk behaviours such as binge drinking patterns (drinking excessively often to the point of drunkenness over short time scales), ecstasy usage and involvement in violent incidents; however, it does not protect against engaging in unsafe sex or driving under the influence. The results here are in contrast to that found by Kloep[25] suggesting that there are no big cultural differences related to the risk behaviours adolescents participate in. One possible explanation could be the difference in the ages of the samples (this study includes youngsters until 35 years), and maybe the adolescent behaviour is closer between cultures than it becomes when getting older.

This study provides an interesting insight into the differences in nightlife activity of young people across Europe, a relatively under researched area. However, the representativeness of the sampling should be used with caution: results relate to young people from nine cities, and cannot be generalized to all young people from Mediterranean or non-Mediterranean countries. Instead, results should be viewed as a tendency, which needs further research with broader samples. It should also be noted that the study has utilized participants' self-reported information which could be prone to under- or over-exaggeration. Further research should focus not only on the frequency of risk behaviours in nightlife, but also the implications of trans-cultural differences.

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Conflicts of interest: None declared.

Key points

- This study aims to understand differences in nightlife risk-taking behaviours between young nightlife users from Mediterranean and non-Mediterranean cultures, including alcohol and illicit drug use, unprotected sex, violence and driving under the influence of alcohol.
- No differences for current alcohol, tobacco, cannabis neither cocaine were found between groups, although mean age of first use was lower in general terms for the non-Mediterranean groups.
- Non-Mediterranean sample showed significant higher levels of current ecstasy, amphetamines and mushrooms use, and also drunkenness
- Regarding other health risk behaviours, and after controlling for demographic factors, it was found that Mediterranean are about five times more likely to drive drunk, and about two times more likely to assume risky sexual relations, although presenting lower levels of promiscuity.
- This study points towards tendencies which must be further researched in depth in the frame of the study of cultural patterns, social norms and its relation with nightlife risk behaviours assumed by the young Europeans.

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