Newsletter "Clinica dell'Alcolismo"

Anno X, n. 38

MISSION n. 62

An exploratory study on alcohol related problems among party-goers in the Veneto Region, Italy

*Diego Saccon**

Introduction

Binge drinking is defined as the consumption of an elevated number of alcoholic beverages in a single circumstance.
The Italian National Institute of Statistics (ISTAT) describes *binge drinking* as consuming 6 or more Alcohol Units (AU) in a single sitting, where one AU is equal to 12 grams of pure alcohol, as found in a glass of wine (12%) or a can of beer (4%) (ISTAT, 2019).
Similarly, the World Health Organization (WHO) has defined that "heavy episodic drinking" as the proportion of adults (15+ years) who had at least 60 grams or more of pure alcohol on at least one occasion in the previous 30 days.
This is an indicator of "higher risk of experiencing alcohol-related acute harm but also developing chronic health complications" (World Health Organization, 2018).
People involved in nightlife entertainment that is "party-goers", show a danger behaviour about binge drinking (Hughes Karen *et al.*, 2011) and, in Italy, the highest percentages of binge drinkers are those related to the north-eastern regions (Italian Health Ministry, 2022).
A number of prevention projects have been targeted at the risks related to the acute alcohol abuse in night life entertainment venues in the Veneto Region of Italy, in connection with the Safe Night Veneto Coordination.

L'articolo è stato sottoposto a referaggio doppiamente cieco (double blind peer review process) e segue gli standard in uso per le pubblicazioni scientifiche a livello internazionale ed accettati dalle principali banche dati citazionali.

** Direttore UOC Servizio per le Dipendenze. Coordinatore Dipartimento delle Dipendenze AULSS 4 Veneto, Venezia.*

In this paper, we analysed data collected on a sample of party-goers calling on the "Safe Night" mobile units in the 2008 to 2018 period and drew a profile of alcohol use patterns in this population. Furthermore, we compared our results with those relative to the binge drinking in the same-aged group of Italian population, to identify reduction risks actions in the nightlife setting.

Background

Since the 1990s, researchers have focused on health risks related to nightlife entertainment.
These risks include acute intoxication and drug and alcohol over-dose, car accidents, dangerous sexual behaviours, violence and rape.
These events might result in health injuries and can be fatal.
This phenomenon, therefore, is not only a safety problem, but a real burden for emergency services, hospitals, police, communities, and families.
In fact, alcohol reduces people's perception of risk, leading them to be more likely to drink and drive or to harm others (Santos *et al.*, 2015).
Alcohol consumption is usually used in recreational settings as a way to bond with friends and it is often associated with illicit drug use.
Studies state that most young people consider drinking and getting drunk a way to have fun and they rarely consider these behaviours having possible harmful outcomes (Herring, Bayley, Hurcombe, 2014).
Several factors seem to be associated with heavier consumption of alcohol.
Drinking in different locations, for instance, seems to be an important component of nightly heavy drinking (Labhart, Anderson, Kuntsche, 2017).
Further, drinking in private settings before going out (pre-drinking) increases the level of intoxication among bar patrons and al-

most doubles the amount of alcohol consumed over the course of a night as compared to non–pre-drinking nights (Labhart, Graham, Wells, Kuntsche, 2013).
Researchers also highlight the role played by peers through their actual and perceived drinking behaviours.
Quantitative studies point out a relation between individual drinking and the number of drinking peers which may be mediated by both peer influence and/or peer selection (MacArtur *et al.*, 2017).
The association between contexts and heavy drinking has also been demonstrated.
In fact, some contexts element such as age, size, personality, mood of the day, expectations of the social group or the location where the party takes place, can make people continue and accelerate their drinking or make them choose not to drink at all (Stanesby *et al.*, 2019).
An updated overview about the issue is the Healthy Nightlife Toolbox (HLT) (Hughes *et al.*, 2011), a website that was included in the European Monitoring Centre of Drug and Drug Abuse in 2017.
HLT has currently selected around 500 published studies from international literature concerning alcohol, drug, violence, and accidents linked to nightlife entertainment events.
Among these, 70 studies regarded binge drinking and only 2 were Italian. The *Committee for National Alcohol Policy and Action* (CNAPA) of the European Union (EU) has already indicated binge drinking as a main target in their alcohol harm reduction policies (World Health Organization, 2019).
ISTAT reported that people aged from 18 to 24 years old had frequent binge drinking episodes at discos, pubs and nightclubs (ISTAT, 2019).
Every year hundreds of thousands of young people in Italy go to nightlife entertainment venues especially at the seaside such as those found on the Veneto Region Adriatic coast.
The Italian Higher Institute of Health (ISS) estimated that the 14.3% of females and the 22.1% of males between 18 and 24 were binge drinkers and that in the Veneto region the percentages of binge drinkers (age > 11 years old) were equal to 4.7% in females and 14.8% in males, compared to 3.9% and 11.4%, respectively, in the whole Italian population (Italian Health Ministry, 2022).

Method and data analysis

Since 2006, the Safe Night coordination has been active in the Italian Veneto Region as a prevention initiative aimed at limiting the risk in places of youth entertainment.
Safe Night coordination is recognized by the Directorate of Social Services of the Veneto Region whom promotes the synergy between the following 8 local projects:

- "BSide", San Gaetano Foundation from Vicenza;
- "Fuori Posto", Addiction Department of Veneto's Local Health Unit n. 1 (Belluno);
- "Giochi Puliti", Addiction Department of Veneto's Local Health Unit n. 9 (Verona) & "Energie Sociali" No Profit Social Cooperative from Verona;
- "Off Limits", Addiction Department of Veneto's Local Health Unit n. 4 (Venice);
- "Spazio", Addiction Department of Veneto's Local Health Unit n. 3 (Venice);
- "STF", Addiction Department of Veneto's Local Health Unit n. 5 (Rovigo);
- "Tutor", Addiction Department of Veneto's Local Health Unit n. 9 (Verona);
- "What's Up" Addiction Department of Veneto's Local Health Unit n. 3 (Venice) & "Titoli Minori" No Profit Social Cooperative from Chioggia (Venice).

The primary objective of this initiative is to promote awareness, especially among the youngest, of the risks involved in the abuse of alcoholic beverages and substances.
The other objectives were to delay people who tested high levels at alcohol by offering water to hydrate and suggesting waiting before driving.
Also, the initiatives aimed to intercept young people among whom alcohol use or abuse was already problematic and suggest referral to specialized services.
Prevention activities are carried out on the road with mobile units that were visited by thousands of people, from adolescents to adults, in different nightlife settings such as discos, pubs, beer festivals, and more.
A Go-Card, which is a card with a personal anonymous identification code composed of the initials of the project and a numerical progressive code, was issued to each respondent.
This allowed for the identification of the subject also in different venues and situations where the various Safe Night projects work.
This enables the collection of longitudinal data.
The users, who showed up voluntarily, were asked to perform an alcohol test (breathalyser device), to fill out a form to investigate alcohol use and abuse behaviour, and to answer a questionnaire about drinking habits (Figure 1).
The questionnaire was presented via an electronic device, while an educator assisted the participant while responding.
The educator was present to explain the various questions and clarify any doubts for the respondent.
We consider drunkenness episodes declared at the questionnaire as binge drinking episodes.
The results of our survey were compared to those of the annual report issued by the Italian Health Ministry on alcohol-related problems elaborated with the scientific support of the ISS and the Italian National Institute of Statistics and to those of the Integrated Multi-purpose Research System on families by ISTAT (2019) [1].
ISTAT produces databases regarding daily life, including health.
In these reports, the habits of alcohol consumption and abuse are estimated on the basis of ISTAT age ranges.
Data were analysed with RStudio for Windows (version 3.6.1) software.

Results

Demography

There were 35,882 respondents who completed 41,875 questionnaires during the different nightlife settings using their "Go-Card" between the years of 2008 and 2018.
The sample consists in 6,898 females (19.22%) and 28,956 males (80.70%), with a 0.08% of users with unspecified gender (28 subjects).
The mean age at the first completion of the questionnaire was 27.45 ± 11.15 years (median = 24 years, min = 11 years, max = 79 years).
Most of the sample (88.48%) declared to live in Veneto and, concerning their level of education, the majority of our sample had a higher school diploma (47.7%), 28.6% a junior high school diploma, while 13.3% had a university degree.
The females in the study indicated a higher level of education.
The majority of the respondents declared to work (53.7% female, 63.5% male) whereas 30.8% studied (34.7% female, 25.8% male; of these, 3.3% were student workers). 4.5% were unemployed, 2.3% retired, 0.2% were in military service, and 0.6% declared other professions.

Fig. 1 - Habits Drinking Questionnarie

Date		**Progressive Code**			
Drinking patterns self esteem					
How do you consider your alcohol intake?	Low	Middle	High		
How many units of these alcoholic types did you take tonight?	bier unit n	wine unit n	spirits unit n	cocktail n	aperitif unit n
Do you get drunk never?	age at first alcoholic drink	age at first drunkenness	drunkenness number per month	drunkenness number per year	
How many minutes are passed from last drink?					
Self esteem of alcoholhaemic value		0-0,20 g/l	0,21-0,50 g/l	0,51-0,80 g/l	0,81-1,50 g/l > 1,50 g/l
Alcoholhaemic value at the alcohol test		g/l			
Drive behavior/pattern					
What type of license do you have?	only-scooter-license	car drive license	new-license (first three years)	nothing	
Number of license withdrawal					
If you've just drunk…	Will you drive always?	Will you wait?	Another people will drive?	Won't you use car or motorbike?	
Anagraphic data	year of birth	gender: female, male	occupation: employed, student, unemployed	educational: elementary, intermediate, high school, university degree	

Tab. 1 - Distribution of gender and age category of respondents with no missing date of birth

	Female		*Male*		*Total*	
	N	*% Column*	*N*	*% Column*	*N*	*% Column*
Age category						
< 14	5	0.1	23	0.1	28	0.1
14-15	100	1.5	372	1.3	472	1.3
16-17	434	6.4	1834	6.5	2268	6.5
18-20	1354	20.0	5428	19.2	6782	19.3
21-24	1735	25.7	6496	23.0	8231	23.5
25-29	1351	20.0	5076	17.9	6427	18.3
30-34	689	10.2	2923	10.3	3612	10.3
35-49	837	12.4	4217	14.9	5054	14.4
> 50	251	3.7	1935	6.8	2186	6.2
Total	6756	100.0	28304	100.0	35060	100.0

Tab. 2 - Distribution of educational level by gender of respondents with no missing data

	Female		*Male*		*Total*	
	N	*%*	*N*	*%*	*N*	*%*
Educational level						
Elementary	85	1.2	662	2.3	747	2.1
Secondary	1513	22.1	8657	30.1	10170	28.6
Professional school	391	5.7	2550	8.9	2941	8.3
High school	3480	50.8	13504	47.0	16984	47.7
Graduation	1382	20.2	3347	11.7	4729	13.3
Total	6551	100.0	28720	100.0	35571	100.0

Patterns of alcohol use

The episodes of drunkenness in our sample were assimilated to episodes of binge drinking in order to utilize the data available in the ISTAT database, despite the fact that drunkness, unlike binge drinking, involves a subjective evaluation of the effect.

In our sample the mean age of the first contact with alcoholic beverages was 14.86 ± 15.67 years with small gender differences.

Female first contact occurred at 15.26 ± 3.51 years.

Males began slightly earlier at 14.76 ± 17.38 years.

Users declared their first drunkenness episode approximately one year after the first alcohol experience (females at 16.54 ± 4.32 years; males at 15.90 ± 9.72 years).

31.1% of the respondents affirmed they had been intoxicated less than once a year, 31.9% 1-11 times per year, 20.6% 1-2 times a month and 16.3% over 3 times a month.

It also emerged that females are less likely to exaggerate with alcohol consumption than males.

The majority (76.36%) of those who had at least one episode of drunkenness per month belong to the 18-29 age group.

In the age range between 18 and 24 years, 77.89% of the interviewed were female and 79.37% were male.

The ISTAT data, instead, reported percentages of Italian binge drinkers in the whole population equal to 3.9% in females and 11.4% in males; while in the same age group these were 22.1% and 14.3%, respectively.

Participants were asked to rate their alcohol consumption as low, medium, or high and 42.4% of them evaluated themselves as low alcohol consumers, while 47.7% as medium alcohol consumers, and 9.9% rated their alcohol consumption as high.

There appears to be a gap between this self-evaluation and self-reported drunkenness episodes. Indeed, 32% of the whole sample declared to get drunk from 1 to 11 times a year and 35.11% from 1 to 8 or more times a month.

Tab. 3 - Distribution of number of alcohol intoxication by gender

	Female		*Male*		*Total*	
	N	*%*	*N*	*%*	*N*	*%*
Drunkenness						
< 1/year	2074	32.2	8488	30.9	10562	31.1
1-5/year	2031	31.5	7004	25.5	9035	26.6
6-11/year	372	5.1	1471	5.4	1798	5.3
1-2/month	1175	18.2	5811	21.1	6986	20.6
3-4 /month	602	9.3	3060	11.1	3662	10.8
5-8/month	155	2.4	1047	3.8	1202	3.5
> 8 month	76	1.2	598	2.2	674	2.0
Total	6440	100.0	27479	100.0	33919	100.0

Tab. 4 - Distribution of class age and drunkenness episode

	Drunkenness															
	< 1 /year		*1-5/year*		*6-11/year*		*1-2/month*		*3-4/month*		*5-8/month*		*> 8 month*		*Total*	
	N	*%Line*	*N*	*%Line*	*N*	*%Line*	*N*	*%Line*	*N*	*%Line*	*N*	*%Line*	*N*	*%Line*	*N*	*%Line*
Age category																
< 14	18	64.30	6	21.40	0	0.00	2	7.1	2	7.10	0	0.00	0	0.00	28	100.0
14-15	271	58.70	77	16.70	20	4.30	52	11.3	26	5.60	11	2.40	5	1.10	462	100.0
16-17	1042	47.40	369	16.80	85	3.90	383	17.4	218	9.90	75	3.40	27	1.20	2199	100.0
18-20	1530	23.30	1499	22.80	416	6.30	1645	25.0	986	15.00	332	5.10	163	2.50	6571	100.0
21-24	1501	19.00	2141	27.00	493	6.20	2065	26.1	1088	13.70	408	5.20	219	2.80	7915	100.0
25-29	1319	21.40	1946	31.60	364	5.90	1444	23.5	742	12.10	214	3.50	127	2.10	6156	100.0
30-34	993	28.70	1161	33.60	187	5.40	672	19.4	299	8.60	81	2.30	66	1.90	3459	100.0
35-49	2168	46.50	1399	30.00	179	3.80	574	12.3	232	5.00	56	1.20	54	1,20	4662	100.0
> 50	1450	79.20	270	14.70	25	1.40	54	2.9	16	0.90	9	0.50	7	0.40	1831	100.0
Total	10292	30.92	8868	26.64	1769	5.32	6891	20.7	3609	10.84	1186	3.56	668	2.01	33283	100.0

The alcohol levels detected by breath analyser were the following: 0-20 gr/L in 33.2%, 0.21-0.50 gr/L in 23.0%, 0.51 – 0.80 gr/L in 17.2%, 0.81-1.50 gr/L in 21.5%, > 1.50 gr/L in 5.1%.

Driving license and driving behaviour

The majority (78.6%) of the people interviewed had a class B driving licence (for car) or superior, 8.9% had a class.
A licence (for motorcycles), 9.1% had a scooter licence, and 3.3% of the sample stated to not have a licence. 5.9% of the sample had experienced at least one licence withdrawal (1.6% of the females, 6.8% of the males) but, comparing the alcohol levels with the driver's licence withdrawals, it was observed that the alcohol level tends to be higher in those who had already experienced a licence withdrawal.
Considering the Prevention Mobile Units, alcohol test results and the behaviour of people with an alcohol level above the legal limits for driving show that there is an alarming percentage of risky behaviour; people who did not have to drive afterwards were excluded from these results.
Indeed, 8.95% of people with an alcohol level above the legal threshold (0.5 grams/litre of blood) declared that they would drive, while the 18.34% stated their intent to wait before driving.
It was not clear, however, if the waiting time would be enough to metabolize the alcohol.

Discussion

The general objective of the research presented here is to conduct a descriptive study of the demographic, social and behavioural characteristics of the party-goers seen at the "Safe Night" Mobile Units for Risk Reduction in the Italian Veneto Region, an ensemble of prevention projects. A further aim is to compare the alcohol abuse patterns of party-goers to the same aged general population and to confirm, or not, the necessity of risk reduction activities.
In fact, special attention has been placed on party-goers in international literature as a category at risk of dangerous conduct [12].
In this sense, prevention interventions have been planned for years with the aim of both studying the type of population who partake in nightlife pursuits and dysfunctional conducts as well as informing the population of the associated risks [3].
The party-goers who have been screened at Safe Night Mobile Units were mostly young, between 18 and 30 years of age and, in 80% of cases were male with first alcohol use at 15 years of age, and a first drunkenness episode one year later.
Almost half of the sample (47.7%) had a higher school diploma, followed by those with a junior school qualification (28.6%) and, finally, those with university qualifications (13.3%).
The sample was mainly made up of workers (61.8%) and students (30.8%), where 78.6% declared possessing a B class driving licence.
In our sample, 19.21% of the alcohol users reported to get drunk

Tab. 5 - Distribution of license withdrawal and actual alcohol value

		Alcohol level					
		0-0.20	*0.21-0.50*	*0.51-0.80*	*0.81-1.50*	*> 1.50*	*Total*
License withdrawal							
None							
	N	10820	7145	5112	6108	1349	30534
	% Line	35.4	23.4	16.7	20.0	4.4	100.0
Yes							
	N	459	409	419	697	273	2257
	% Line	20.3	18.1	18.6	30.9	12.1	100.0
Total							
	N	11279	7554	5531	6805	1622	32791
	% Line	34.0%	23.0%	17.0%	21.0%	5.0%	100.0%

1-2 times a month, 10.06% affirmed to get drunk 3-4 times a month, presumably coinciding with the weekend, and 5.17% of the sample declared they got drunk a minimum of 5 times a month.
It emerges that more risky behaviours tend to be assumed by males. The most critical age group seems to be between 18 and 29 years old with a higher percentage of systematic drunkenness, one or more time per week, detected between 18 and 20 years of age (7.74%) and between 21 and 24 years of age (5.53%).
In the report issued by the Italian Health Ministry on alcohol related problems elaborated with the scientific support of the ISS and the Italian National Institute of Statistic [1, 4], 14.3% of females and 22.1% of males aged between 18 and 24 years in the general population had at least one episode of binge drinking per year while in our sample the percentage was 77.89% and 79.37%, respectively. The percentage in our sample appears dramatically higher. Furthermore, the gap between males and females in our results is lower than in the ISTAT general population data. Furthermore, ISTAT data reported an average of 14.8% of male and 4.7% of female with binge drinking behaviours in the general population of the Veneto Region, while we found at least one drunkenness episode per year in 52.08% of males and 11.99% of females.
Clearly, our sample of party-goers who were seen at the Risk Reduction Mobile Units had a higher percentage of drunkenness than the binge drinkers in the ISTAT survey, particularly in young people.
5.9% of the sample had lost their licence at least once; a percentage represented more by males. People previously disqualified for drunk-driving resulting in a licence withdrawal had an alcohol level above the legal threshold in 61.54% of the interviewees, while people who had never been disqualified were over the limit in 41.16% of cases.

Conclusions

The data presented here show an alarming pattern that may be alleviated continuing to propose interventions for the prevention of alcohol abuse in nightlife settings, focusing the efforts on the 18-29 age group without neglecting the proportion of minors.
However, this study has some limits, such as the voluntary basis of subject inclusion and the self-assessments of the questionnaires.
Further research is required in order to confirm these results and address the best actions to reduce the harm related to binge drinking in young party-goers.

Acknowledgments

Veneto Region of Italy, Health and Social Policy Administration

References

Herring R., Bayley M., Hurcombe R. (2014). "But no one told me it's okay to not drink": a qualitative study of young people who drink little or no alcohol. *Journal of Substance Use*, 19(1-2): 95-102.

Hughes K., Quigg Z., Eckley L., Bellis M., Jones L., Calafat A., Kosir M., van Hasselt N. (2011). Environmental factors in drinking venues and alcohol-related harm: the evidence base for European intervention, *Addiction*, 106(Suppl. 1): 37-46. doi: 10.1111/j.1360-0443.2010.03316.x.

ISTAT, Institution & Society, Health Statistics. *Il consumo di alcol in Italia, 2019*. Available from: www.istat.it/it/archivio/244222.

Italian Health Ministry (2022). Annual report on alcohol related problems. Relazione del Ministro della salute al Parlamento sugli interventi realizzati ai sensi della legge 30.3.2001 n. 125 in materia di alcol e problemi alcol correlati: 2021. Available from: www.salute.gov.it/portale/documentazione/p6_2_2_1.jsp?id=3202&lingua=italiano.

Labhart F., Anderson K.G., Kuntsche E. (2017). The Spirit Is Willing, But the Flesh is Weak: Why Young People Drink More Than Intended on Weekend Nights-An Event-Level Study. *Alcoholism, clinical and experimental research*, 41(11): 1961-1969. Available from: http://dx.doi.org/10.3109/14659891.2012.740138.

Labhart F., Graham K., Wells S., Kuntsche E. (2013). Drinking before going to licensed premises: an event-level analysis of predrinking, alcohol consumption, and adverse outcomes. *Alcoholism, clinical and experimental research*, 37(2): 284-291.

MacArtur G.J., Jacob N., Pound P., Hickman M., Campbell R. (2017). Among friends: a qualitative exploration of the role of peers in young people's alcohol use using Bourdieu's concepts of habitus, field and capital. *Sociology of Health & Illness*, 39: 30-46.

Santos M.G., Paes A.T., Sanudo A., Andreoni S., Sanchez Z.M. (2015). Gender Differences in Predrinking Behavior Among Nightclubs' Patrons. *Alcoholism, clinical and experimental research*, 39(7): 1243-1252. Available from: https://doi.org/10.1111/acer.12756.

Stanesby O., Labhart F., Dietze P., Wright C., Kuntsche E. (2019). The contexts of heavy drinking: A systematic review of the combinations of context-related factors associated with heavy drinking occasions. *PloS one*, 14(7), e0218465.

WHO (2019). *Action Plan on Youth Drinking and on Heavy Episodic Drinking (Binge Drinking) - (2014-2016)*. Geneva: World Health Organization.

World Health Organization (2018). *Global status report on alcohol and health 2018*. Geneva: World Health Organization.