

# Women and alcohol. A survey in the city of Barletta

I. GRATTAGLIANO<sup>1</sup>, M.F. GALLONE<sup>2</sup>, S. TAFURI<sup>3</sup>, E. FANELLI<sup>3</sup>, G. VIOLA<sup>4</sup>, M. RAGUSA<sup>5</sup>, M. LOPRIENO<sup>6</sup>, M. QUARTO<sup>3</sup>

<sup>1</sup> Criminology and Forensic Psychiatry Section of Interdisciplinary Medicine Department, School of Medicine of University of Bari "Aldo Moro"; <sup>2</sup> Hygiene and Preventive Medicine Recidency Program, University of Bari "Aldo Moro"; <sup>3</sup> Department of Biomedical Science and Human Oncology, School of Medicine of University of Bari "Aldo Moro"; <sup>4</sup> Forensic Psychiatry Unit of Department of Neuroscience and Sense Organ, School of Medicine of University of Bari "Aldo Moro"; <sup>5</sup> Department of Neuroscience and Sense Organ, School of Medicine of University of Bari "Aldo Moro"; <sup>6</sup> Local Health Authority of Bari

## Key words

Women • Binge drinking • Alcohol problems

## Summary

**Introduction.** The aim of this survey was to evaluate the qualitative and quantitative relationship among women from Barletta - a national renowned wine center - and their alcohol consumption.

**Methods.** The AUDIT questionnaire was used to assess the prevalence of alcohol hazardous consumption among women. Questionnaires were submitted from March to November 2012. The sample was composed of 150 women older than 13 years of age, selected by stratified sampling based on age group.

**Results.** 107 women were enrolled with a total response rate of 71.3%. 62% of enrolled women consumes alcoholic beverages with a frequency that goes from 2-3 times a week to less than once a month, usually 1 or 2 alcoholic units. The binge-drinking was reported by 5% of women. Women who reported alcohol-related risk behaviors were less than 3%, they were single and between 18 and 60 years old and such behaviors occur less than once a month. The final score, calculated for all the women from their

questionnaire answers, was not higher than 8, with an average score of 1.3 (SD = 1.5; range: 0 to 2.8). The comparison of the average scores of the three age groups showed a statistically significant difference ( $F = 5.8$ ,  $p = 0.004$ ).

**Discussion.** Data from literature showed a change in the habits of alcohol intake by the global, European and also Italian population. These changes also affect and involve female. Our study found a quite moderate alcohol consumption among women from Barletta, with only 1% who consumes 3 or more alcohol units and drink more than four times a week and 3% who had hazardous behavior related to their alcohol consumption. Statistical significance was found for the age and the lack of stable relationships. The analysis of characteristics of at risk women (old age and single-status) suggests that much attention should be paid to them and they should represent the main subject of future social interventions to prevent alcohol related problems in the city of Barletta.

## Introduction

Alcohol is probably the drug that humanity has been long consuming and, together with tobacco, it is the most widespread, too. The alcohol consumption, as well as cigarette smoking, is an unnecessary habit accepted and allowed in all countries (except Islamic ones); it often has a social meaning in joyful occasions and social gatherings because it helps having good and friendly relations or gives importance to special events. As communicated by WHO, the pattern of alcohol consumption has changed during the last decades compared to the past and has shown an increase in the proportion of heavy drinkers (people who drink more than 150 mls of alcohol per day) and those who drink spirits (aperitifs, bitters, liqueurs, etc.), in addition to wine and beer, from 39.5% to 41.1% over the 1998-2005 years [1, 2]. What worries most is that 50% of the under-14-year-old population consumes several kinds of alcoholic beverages and it is gradually raising the number of adolescents and young women who drink alcohol, often between meals: this proportion amount to over 21% among males aged 11-15 years, to almost 59% of 16-17 years and to more than 75% of 18-19 years; the amount among females

aged 11-15 years is 17%, more than 42% among 16-17 years and 61% of 18-19 years. As a consequence, the alcohol related risks involving the working setting (drop in school performance and attendance) or being exposed to car accidents, use of violence, etc., are increasing in the younger groups [3]. Furthermore, alcohol is the third factor causing disability, critical illnesses such as cancer, vascular and liver diseases, premature mortality in the world (the second in Europe) [1, 2]. 2.5 million deaths per year (3.8% of all deaths) were caused by alcohol, 320,000 of which occur in people from 15 to 29 years old. In Europe, the percentages are doubled since the European Region has one of the highest alcohol consumption per capita [4, 5].

In Italy a change from a Mediterranean to a Nordic pattern of alcohol consumption was observed. Between 2000 and 2010 it was reported an increase both of frequency and quantity of alcohol consumption, often in one single occasion. A change in the kind of alcoholic beverage was found, too, especially in younger people, who prefer to drink aperitifs, cocktails and spirits, instead of wine and beer.

The quantity increase of alcohol consumption was registered both for males and females, these ones drinking

as much as men do [6]. The proportion of people aged 18-24 years who use to drink between meals increased from 33.7% to 41.9% and of people aged 14-17 years from 14.5% to 16.9%, the female part tripled in the last fifteen years. The binge drinking increased, too, with no genre difference since 2003 and it involved the 13.4% of men and the 3.5% of women in the 2010 [7]. Considering the relationship between woman and alcohol, in the past, women drank less, less frequently and in different situations than men. Nowadays, women still drink less than men, but this difference is gradually decreasing (in some European countries it is even reversed) [5, 8]. Moreover drinking habits and patterns are changed, especially in younger people: once women drank alone in the house, because of an old sense of privacy or for other reasons, today it frequently happens to see women consuming different kinds of alcoholic beverages in public places [9, 10]. The origins of this change are still not well defined: changes of social balances and the most frequent involvement of women in the business world certainly have played a role, because they push women to drink alcohol in different ways than in the past, as a sort of social and sexual claim. In some countries (especially in northern Europe) someone begins to talk about “drunkorexia”, an eating disorder which implies the alcohol is the main food in a person’s diet, and this could cause some related conditions, such as anorexia and hypovitaminosis. In Italy about 170,000 girls under 16 years consume alcohol even though abstinence is strictly recommended [11-13]. The relation between woman and alcohol is different from the relation that men have with it, either for the way of alcohol intake or the consequences it produces: beyond the genetic aspects and the different weight, women have a lower percentage of water in their body composition than men and this implies that, when women drink, alcohol produces the same effects as in males, because of the high solubility of alcohol, but with a lower alcohol amount (the liquid volume where alcohol will dissolve is lower, it will rise higher concentrations in women than men with the consumption of the same amount). Also the alcohol dehydrogenase hepatic enzyme (which metabolizes alcohol) has a lower concentration in female organism: therefore, the blood alcohol level stays high for a longer time and it also reduces the incubation period of alcohol-related pathologies, such as steatosis, cirrhosis and liver cancer. The data from the PASSI Survey 2010 [14] showed that in Puglia the proportion of subjects who consumes alcohol is the same as the whole nation, while the hazardous drinkers proportion is lower. A hazardous drinker is characterized by at least one of the following behavior:

- regularly drinking between meals;
- heavy drinker: according to the definition of the threshold value for the heavy alcohol consumption, defined by the National Institute of Research on Food and Nutrition in accordance with the most recent scientific evidence, heavy drinkers are males who drink more than 2 alcohol units per day and females who drink more than 1 (the alcohol unit corresponds to a can of beer or a glass of wine or a shot of alcohol);

- binge drinking: is defined as the consumption of five or more alcohol units for males, four or more units for females on a single occasion, at least once a month.

In Puglia, 13% of people enrolled in the survey can be classified as “at-risk drinker” (in Italy, 19%). This estimate corresponds to about 365,000 people aged 18-69 years, 80,000 (21.9%) of which in the range 18-24 years old age [14].

The risky alcohol consumption is more frequent:

- among respondents aged 18-24;
- for males;
- among people with a middle/high educational attainment who are in financial difficulties.

As regard females, the survey showed that the distribution of at risk drinking women is different in the different local health services of the region (range: 3% Lecce - Taranto 12%), with lower and higher percentages than the regional averages, like for the ASL Lecce and Taranto.

The survey performed in the city of Barletta is aimed to evaluate the qualitative and quantitative relationship between women from this town and their alcohol consumption.

Barletta is a city in the Puglia Region and it belongs to the ASL BAT. It has a population of about 94,904 inhabitants, with an average age of 39.7 years, the birth rate is 9.8% and the death rate is 7.4%. It is a national renowned wine center, thanks to the presence of a big winery and other wine factories.

## Methods

To assess the prevalence of alcohol hazardous to the health consumption among women of the city the AUDIT questionnaire (Alcohol Use Disorders Identification Test) was used, which is a questionnaire developed by the World Health Organization as a screening tool for the identification of at-risk drinkers [15-17].

The questionnaire consists of 10 items that inquire into alcohol consumption, ways of alcohol intake and alcohol-related problems in the previous 12 months. One of the items was about binge-drinking.

For each question there were multiple entries and a score between 0 and 4 was associated to each entries. The sum of all entries’ score quantifies the possible risk a subject has in his relationship with alcohol. This final score is stratified into three groups:

- 0-8: negative, no problems to report;
- 8-14: the consumer can be considered “at risk subject”, he/she has or has had alcohol-related problems (accidents or occasional heavy drinking), but he/she probably hasn’t a physical addiction to alcohol, yet;
- equal to or greater than 15: he/she has alcohol-related problems and/or is an alcohol-dependent subject.

A written informed consent was obtained from women who participated to the survey. In addition to the questionnaire, the enrolled subjects were asked to fill out a

**Tab. I.** Distribution of sample by age group.

Age group	N	%
< 18	9	8.4
18 - 60	48	44.9
> 60	50	46.7
Total	107	100.0

form which investigated age, marital status, educational attainment and job.

Questionnaires were submitted from March to November 2012.

The sample was composed of 150 women older than 13 years of age, living in the city of Barletta, selected by stratified sampling based on age group. The sample was divided into three strata: the first, which included women younger than 18 years (A Group), the second including women between 18 and 60 years (B Group), the third including women aged over 60 years (C Group). Each stratum consisted of 50 units.

Data from filled questionnaires were entered into a File Maker Pro 10 database and analyzed with the statistical software STATA MP11.

## Results

107 women were enrolled from a 150 units sample under investigation. The response rate amounted to 71.3% (Tab. I).

Five of younger than 18 women have not filled out the form for personal details; another woman did not indicate age. Therefore, the average age of the sample was calculated for 101 subjects and was equal to 54.4 years; the description of personal characteristics, instead, was

carried out on 102 subjects; analysis of the questionnaires answers was performed for 107 subjects.

The lowest response rate (18%) was reported among women younger than 18 years. This low participation was owed to the fact that a parental consent was required to the girls in order to join the study and a small number of parents let their daughters to participate and answer the questionnaire.

The educational attainment of the enrolled women was assessed considering the highest qualification achieved. Graduated women were the smaller proportion of the sample (7.8%), while 12.7% have no educational qualifications (Fig. 1).

Analyzing the distribution of educational attainment by age group, the total of women with low qualification or no title was older than 60 years, while women with a higher educational attainment were in the group aged between 18 and 60 years old.

Considering the job of enrolled women, the majority of women (54%) was reported to be housewife. Self-employed (2%) and unemployed women (3%) are less frequent (Fig. 2).

As regard as their marital status, 49% of women reported to be widowed, 11% to be married, 37% is unmarried, while 3% is separated or divorced.

The first question of the AUDIT questionnaire investigated the frequency of alcoholic beverages intake. 37% of women reported that they have never drunk alcohol, about 1% reported to have drunk alcohol more than four times a week. The remaining 62% consumes alcoholic beverages with a frequency that goes from 2-3 times a week to less than once a month. Table II shows the frequency of alcoholic beverages consumption in the different age groups.

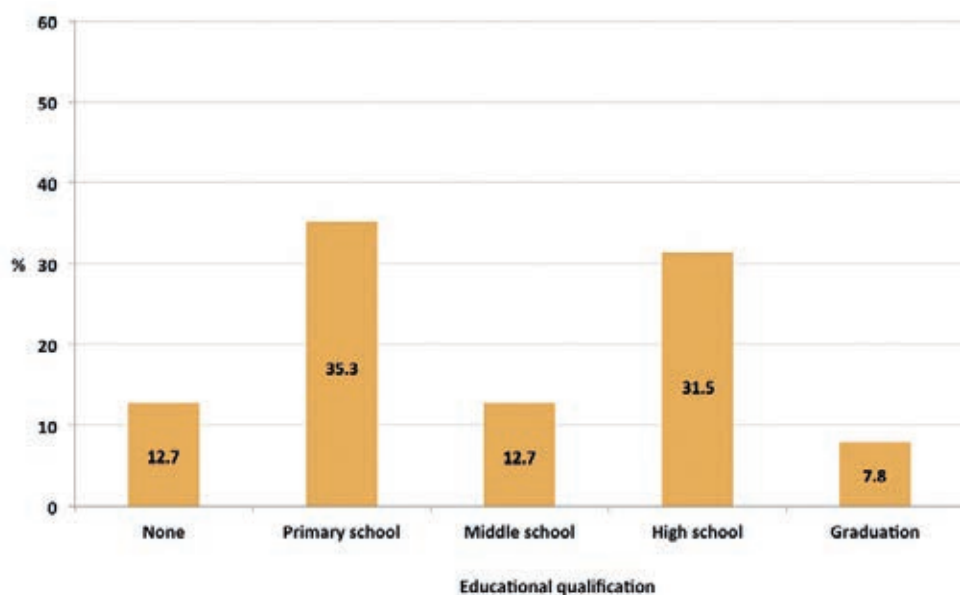
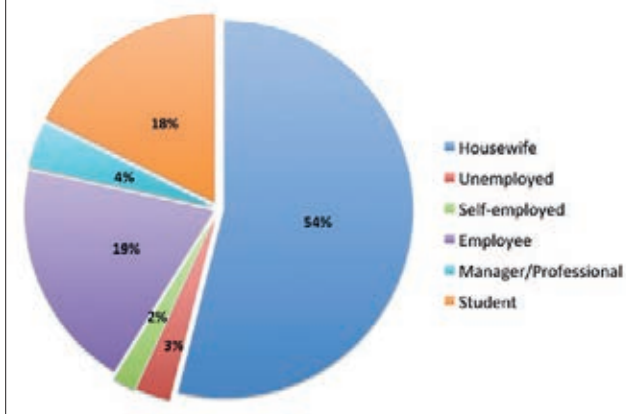
**Fig. 1.** Distribution of sample by educational qualification.

Fig. 2. Distribution of sample by job.



61.7% of the women stated they consumed 1 or 2 alcoholic units when they drank, less than 1% consumed 3 or more units.

The binge-drinking was reported by 5% of women, with a frequency of less than once a month.

The proportion of women who reported alcohol-related risk behaviors is less than 3% (Fig. 3) and such behaviors occur less than once a month.

All the women who reported alcohol-related hazardous behaviors were single and between 18 and 60 years old. In particular, the two women who were not able to stop drinking once started are an employee and unemployed woman; one of the three women who were not able to do daily activities because of drinking is a professional and two are unemployed. Two more women reported to feel guilty or regret after drinking and they were both unemployed. One of the three women who said they did not remember the events of the previous evening, due to the intake of alcohol, is an employee and two are unemployed.

All of the enrolled women stated they never received any advice to quit drinking by family, friends and health professionals.

The final score, calculated for all the women from their questionnaire answers, was not higher than 8. The average score was 1.3 (SD = 1.5; range: 0 to 2.8).

Women under 18 had an average score of 0.4, those aged 18 to 60 had an average score of 1, the average score of over 60 women was 1.8. The comparison of the average scores of the three groups showed a statistically significant difference ( $F = 5.8$ ,  $p = 0.004$ ). There were no significant differences between the average, grouped by

educational attainment of the enrolled women ( $F = 2.4$ ,  $p = 0.052$ ).

There was no correlation between the score and the age of the enrolled women.

## Discussion and conclusions

Data from literature clearly showed a change in the habits of alcohol intake by the global [2], European [4, 5] and also Italian [6, 7] population, this last one being less important [5]. These changes also affect and involve female. In fact, while in the past the woman used to drink at home, often alone and because of peculiar family and/or social situations, nowadays it is much common for women to have the same drinking habits men typically have [8]. Even the types of alcohol beverages the women consumes have changed: the abuse of alcopops, beer and spirits, that is not typical of the Mediterranean tradition, is increasing [7].

The results of our study showed that the alcohol consumption among women from Barletta is quite moderate, along with reported literature data [1, 5]. More than a third of the enrolled women said they never take alcoholic drinks, others said they only occasionally consume more than 1-2 alcohol units. The hazardous alcohol consumption was found in a small proportion of women (1%), with lower values compared to national [5] and regional ones [14], even if the binge-drinking involves a higher proportion (5%) of women than the national average [5].

Only ten of the women with alcohol risky consumption (3%) reported alcohol-related hazardous behaviors. They are all unmarried women between the ages of 18 and 60 years. Statistical significance was found for the age (women older than 60 years consume much alcohol) and the lack of stable relationships. This suggests that seniority and solitude could induce the alcohol consumption.

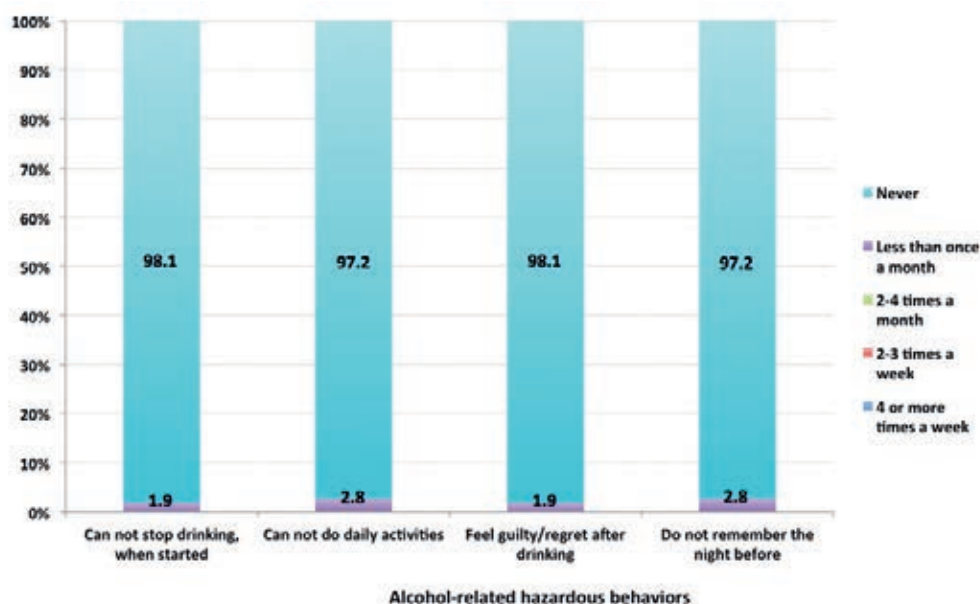
Despite the small sized sample and the lower response in the under 18 years old age group, which doesn't allow to have information about alcohol consumption in the youngest women, the study demonstrated that alcohol consumption is still moderate among women from the city of Barletta and not associated to harmful behavior and onset of alcohol-related problem. Nevertheless it suggests that much attention should be paid to women at risk because of their age and single-status, which seemed to be risk factors for alcohol related harmful be-

Tab. II. Distribution of sample by frequency of alcoholic beverages consumption and age group.

Frequency of alcoholic beverages consumption	< 18		18 - 60		> 60		Total	
	n	%	n	%	n	%	n	%
Never	6	66.7	8	16.7	26	52.0	40	37.4
Less than once a month	2	22.2	17	35.4	8	16.0	27	25.2
2-4 times a month	1	11.1	13	27.1	5	10.0	19	17.8
2-3 times a week	0	0.0	10	20.8	10	20.0	20	18.7
4 or more times a week	0	0.0	0	0.0	1	2.0	1	0.9
Total	9	100.0	48	100.0	50	100.0	107	100.0



Fig. 3. Proportion of women who reported alcohol-related risky behaviors, by frequency of hazardous behavior.



havior and problems, and they should represent the main subject of future social interventions to prevent alcohol related problems in the city of Barletta.

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■ Correspondence: Silvio Tafuri, Department of Biomedical Science and Human Oncology, Aldo Moro University of Bari, piazza Giulio Cesare 11, 70122 Bari - Tel. +39 080 5478481 - Fax +39 080 478472 - E-mail: [silvio.tafuri@uniba.it](mailto:silvio.tafuri@uniba.it)