

## ALCOHOL CONSUMPTION AMONG UNIVERSITY STUDENTS IN SPAIN

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### SUMMARY

Alcohol consumption in 1984 among 2921 students of nine Faculties in the University of Valladolid (Spain) is reported. Alcoholic drinks were frequently consumed, especially by males and during weekends. Per capita consumption was 9.85 l of absolute alcohol/year for males and 4.97 l for females. Beer, wine and gin were the favourite drinks. Alcohol consumption was similar in the different faculties and age groups but was to some extent related to age and place of residence in male students. Students' alcohol consumption was not as high as in the general Spanish population, and seems to have been stable during the last 10 years.

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*Key words:* Alcohol consumption – University students – Characteristics – Spain

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### INTRODUCTION

Spain is considered one of the principal producer and consumer countries of alcoholic drinks [1-3]. However, most of the available data have been obtained from production figures, those obtained from epidemiological studies being very limited. Alcohol consumption among University students has been investigated [4,5] in other Spanish regions, but not in the area of Old Castile and Leon. Accordingly, we examined alcohol consumption in nine Faculties in the University of Valladolid.

### MATERIALS AND METHODS

*The questionnaire* consisted of two sections, one referring to affiliation: Faculty, academic year, age, place of residence during the course, the other

section referring to alcohol consumption: kind and quantity of drink consumed both during the weekend and the rest of the week.

Questionnaires were distributed before or after lectures, being preceded by some explanations of the reasons for the survey, its anonymous character and instructions for completion (generally, within 15 min) being collected later.

### *Subjects*

Students (2921) of nine Faculties in the University of Valladolid properly completed the questionnaire. Distribution according to Faculty, academic year and sex is shown in Table I. The surveyed students comprised 25.8% of the total of students matriculated in the University of Valladolid in 1984.

### *Data processing*

Testimonies have been codified in a VAX 11/780 computer with VMS operative system by the Data Processing Centre in the University of Valladolid, having been treated with a package of standard statistics programmes.

### *Expression of results*

The quantities of alcohol consumed have been expressed as grams of absolute alcohol consumed per day in accordance with the equivalences shown in Table II. A  $\chi^2$ -test was performed for statistical significance.

## RESULTS

Alcoholic drinks were consumed more frequently ( $P < 0.01$ ) and to a higher extent ( $P < 0.01$ ) by males than by females, both during the weekend and the rest of the week (Table III). Figure 1 shows that most consumed between 1 and 39 g/day both during the weekend and the rest of the week, and that 19.5% of males and 3.3% of females were heavier drinkers (over 80 g/day) during the weekend.

All the alcoholic drinks (Table IV) were consumed more frequently ( $P < 0.01$ ) and to a higher extent ( $P < 0.01$ ) during the weekend than during the rest of the week, especially drinks of high alcoholic content. Beer and wine were the favourite drinks; gin was the most consumed spirit.

Alcohol consumption (frequency, quantity and kind of drink) were similar throughout the different faculties (data not shown,  $P > 0.05$ ). Also, alcohol consumption was similar throughout the different academic years ( $P > 0.05$ , Table V). However, a relationship was found ( $P < 0.05$ ) between alcohol consumption and age (18–25 years) in male students, but not ( $P > 0.05$ ) in female students (Fig. 2). Female students ( $P > 0.05$ ) consume alcohol to similar extents independently of their place of residence during

TABLE I  
SAMPLE DISTRIBUTION OF SURVEYED STUDENTS

Academic year	1st	2nd	3rd	4th	5th	6th	Male	Female
Medical students	131	154	61	88	103	70	241	366
Architecture students	110	56	70	37	36	22	260	71
Chemistry students	57	52	44	27	24		80	124
Physics students	52	34	27	14	7		86	48
Maths students	48	33	31	11	8		61	70
Economics students	90	80	95	76	66		214	193
Arts students	170	93	91	158	56		222	346
Teachers' training college students	152	92	125				81	288
Nursing students	67	44	59				40	130
Total	877	638	603	411	300	92	1285	1636

TABLE II  
ALCOHOLIC DEGREE OF SPANISH DRINKS

Kind of drink	Alcoholic degree	Vol. <sup>a</sup> (ml)	g/of <sup>b</sup> alcohol
Beer	4.0	200	6.4
Wine	10.0	50	4.0
Champagne	13.0	100	10.4
Sherry	17.0	50	6.8
Vermouth	16.0	70	9.0
Cognac (alone or mixed)	40.0	50	16.0
Anisette	36.0	50	14.0
Cognac and anisette	38.0	50	15.0
Punch	28.0	50	11.2
Gin (alone or mixed)	40.0	50	16.0
Rum (alone or mixed)	42.0	50	16.8
Vodka (alone or mixed)	42.0	50	16.8
Whiskey (alone or mixed)	45.0	50	18.0
Cointreau (alone or mixed)	40.0	50	16.0
Pacharan	28.0	50	11.2

<sup>a</sup>State the volume of intake of every one of the different drinks. Beer and wine have different volumes. Beer 'corto': 100 ml; 'cana' and 'beer 1/5': 200 ml; 'beer 1/3': 330 ml. Wine 'chato': 50 ml; 'glass': 100ml.

<sup>b</sup>Grams of pure alcohol in relation to the volume stated above.

TABLE III  
CONSUMPTION OF ALCOHOL ACCORDING TO SEX BY UNIVERSITY STUDENTS

Consumption of alcohol	Male		Female	
	% of students	g ± S.E.M./day	% of students	g ± S.E.M./day
Overall	90.2	21.6 ± 0.6	73.3*	10.9 ± 0.3*
Weekend	88.9	52.6 ± 1.4	73.0*	28.8 ± 0.7*
Rest of week	71.0	11.7 ± 0.5	43.1*	6.7 ± 0.3*

\* $P < 0.01$ .

the academic course, while the consumption of male students is higher ( $P < 0.05$ ) among those who share a flat with friends (Table VI).

## DISCUSSION

Like previous observations of university students [4,5] and among the general population [2] in Spain our results show that males consume alcoholic drinks more frequently and in higher quantities than females. As

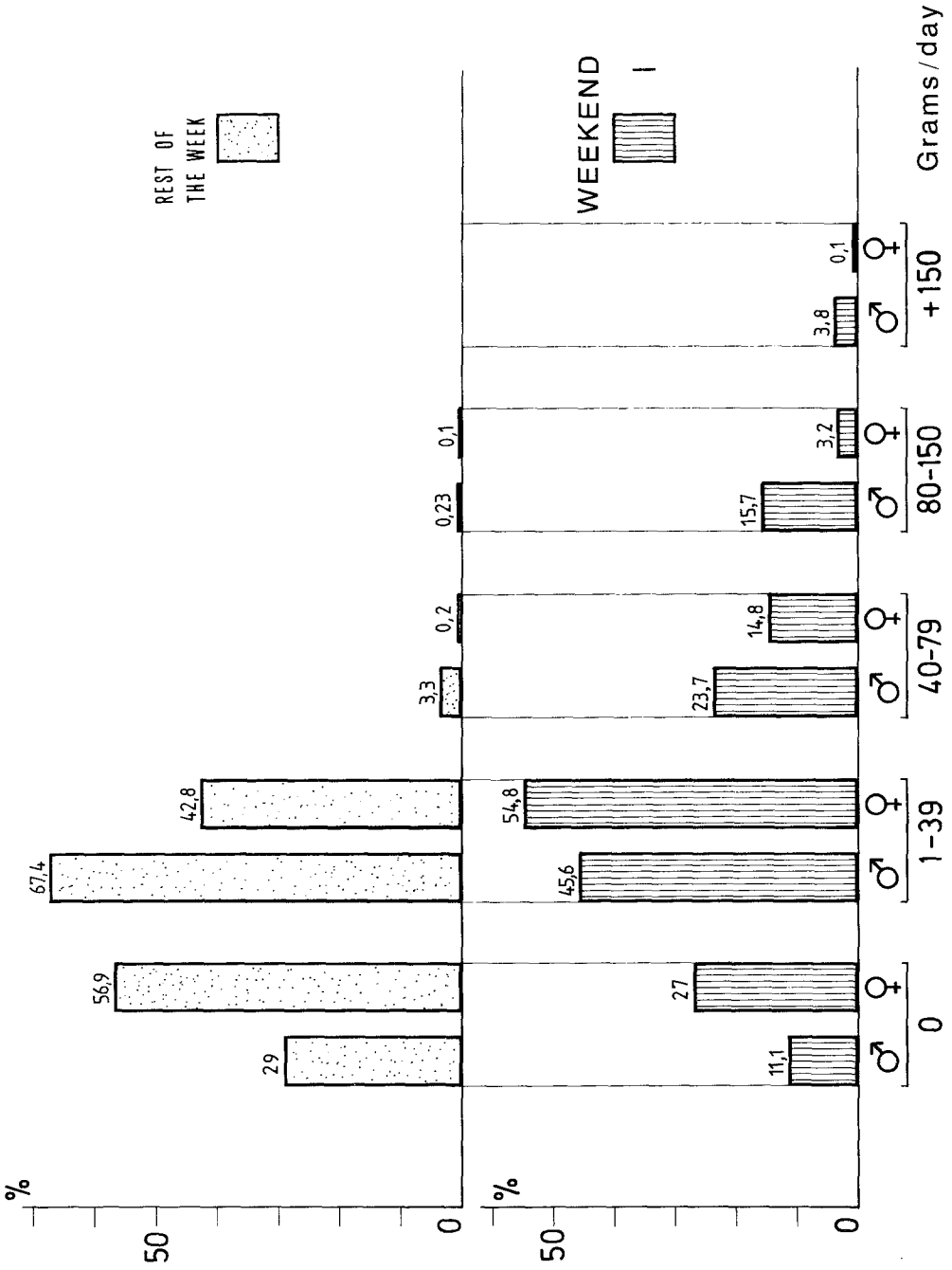


Fig. 1. Alcohol consumption (g/day) classified in different alcoholic groupings during weekend and rest of the week.

TABLE IV

## KIND AND AMOUNT OF ALCOHOLIC DRINKS CONSUMED BY UNIVERSITY STUDENTS

Kind of drink	Weekend		Rest of week	
	% of students	g/day	% of students	g/day
Beer	60.9	13.4	42.8*	4.7*
Wine	40.6	10.4	30.0*	5.5*
Champagne	13.9	9.0	1.3*	6.6*
Sherry	5.0	6.6	1.4*	3.6*
Vermout	28.9	9.0	4.5*	4.6*
Cognac	10.4	15.0	2.8*	8.2*
Anisette	6.4	10.8	1.6*	6.5*
Cognac and anisette	3.4	12.5	0.8*	5.6*
Punch	2.8	11.4	0.6*	6.4*
Gin	27.1	23.4	4.1*	9.1*
Rum	13.2	18.6	1.4*	9.1*
Vodka	8.0	17.9	0.8*	6.5*
Whisky	8.7	19.2	1.3*	9.7*
Cointreau	7.6	11.7	0.7*	4.9*
Pacharan	5.4	10.7	0.7*	6.1*

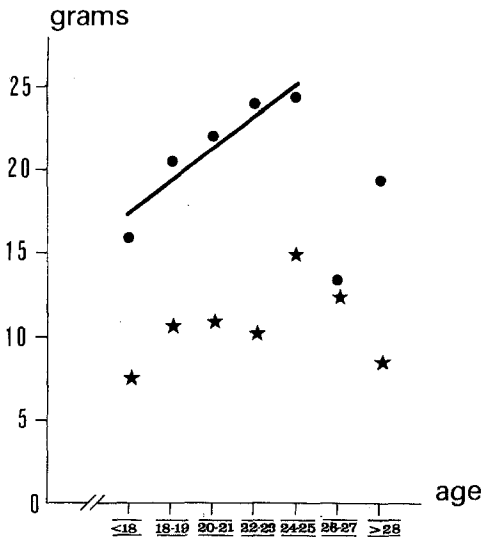
\* $P < 0.01$ .Fig. 2. Alcohol consumption (g/day) and age of university students. ●, males ( $P < 0.05$ ); ★, females ( $P > 0.05$ ).

TABLE V  
CONSUMPTION OF ALCOHOL ACCORDING TO ACADEMIC YEAR

Academic year	g $\pm$ S.E.M./day <sup>a</sup>
1st	16.1 $\pm$ 0.6
2nd	14.1 $\pm$ 0.6
3rd	17.2 $\pm$ 0.8
4th	16.9 $\pm$ 1.0
5th	17.5 $\pm$ 1.1
6th	16.5 $\pm$ 2.2

<sup>a</sup>There was no statistically significant difference between groups ( $P > 0.05$ ).

TABLE VI  
ALCOHOL CONSUMPTION ACCORDING TO PLACE OF RESIDENCE

Place of residence	Alcohol consumption (g/day)	
	Male	Female <sup>a</sup>
Family home	20.6	11.0
College room	21.5	10.7
Boarding house	19.2	6.7
In a flat with freinds	26.0*	11.4
Others	22.1	11.9

\* $P < 0.05$

<sup>a</sup>There was no statistically significant difference between groups ( $P > 0.05$ ).

other western countries alcoholic drinks were consumed especially during the weekend. Beer and wine were the favourite drinks of university students as reported elsewhere [4,5], while the general population prefers wine [2].

Consumption of alcoholic drinks in Spain is to some extent a social custom [6]. Some of the present results support this idea: alcohol consumption was similar regardless of the Faculty or the academic year. Thus, medical and nursing students consume alcohol to a similar extent as the rest of the student population, which is surprising because it could be expected that knowledge of the effects of alcohol might dissuade its consumption. Female alcohol consumption is not affected by age or place of residence during the academic course. However, in male students, alcohol consumption increased with age (18–25 years), and was higher among those students who lived with flatmates.

Since 1950 (Table VII), a progressive increase in the production and consumption of alcoholic drinks has been reported in Spain [1–3]. How-

TABLE VII  
 ALCOHOL CONSUMPTION (LITRES OF ABSOLUTE ALCOHOL PER YEAR) IN SPANISH GENERAL POPULATION AND IN  
 UNIVERSITY STUDENTS

Year	1950	1955	1960	1965	1970	1974	1975	1976	1977	1978	1979	1980
General population	8.1 [2]	7.9 [3]	11.6 [1] 8.5 [2] 8.9 [3]	12.1 [3]	14.9 [1] 10.7 [1] 12.3 [1]		14.9 [3]	14.0 [2] 14.7 [3]	14.6 [3]		19.6 [1]	8.2 [2]
University students							8.8 males [4] 4.1 females [4]			11.0 [5]		



ever, the consumption figures reported (Table VII) differ markedly, in part due to the very limited data available from epidemiological studies. Nevertheless, alcohol consumption among university students (present and previous data [4,5]) was much lower than that of the general Spanish population [1-3]. The levels of alcohol consumption found (per capita consumption in litres of absolute alcohol per year: male, 9.85; female, 4.97; average, 7.10) are in agreement with those previously reported for other Spanish university students during the academic years 1973/1974 and 1974/1975 [4], and 1977/1978 [5]. This permits the conclusion that alcohol consumption among university students in Spain has been stable during the last decade. Based on previous reports [2,3] a similar conclusion could be reached for the general population.

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