

SOCIAL CLIMATE ON ALCOHOL IN ROTTERDAM, THE NETHERLANDS: PUBLIC OPINION ON DRINKING BEHAVIOUR AND ALCOHOL CONTROL MEASURES

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Abstract — Research was undertaken regarding the Dutch climate on alcohol in 1994 and results were compared with earlier findings. It was found that the social climate on alcohol in The Netherlands can be characterized by 'moderation'. Over the years, drinking without problems has become more acceptable (and is even encouraged at times) whereas excessive drinking and consequent problems still meet strong disapproval. Opinions concerning alcohol control measures mirror this attitude. Measures such as the restriction of drinking in public places and raising the age limits are endorsed by the public. However, more people are now against restrictions on the general availability of alcohol. Although drink-driving has decreased over the years, its prevalence is still high, especially among those who are most at risk.

INTRODUCTION

Alcohol is known and used throughout the world. However, the way in which, and to what extent alcohol is integrated into society differs across countries: every society has its own social climate on alcohol. Social climate on alcohol can be described as the blend of different views on drinking, conceptions of alcohol-related problems, and the defining of appropriate measures for dealing with them. All such aspects exist in every society and may change over time (Partanen and Montonen, 1988).

In The Netherlands, alcohol consumption is deeply integrated into society. This integration is marked by a steep, threefold increase of alcohol consumption *per capita* from 1960 to 1980. In the 1980s, the consumption *per capita* stabilized at a high level of ~9 l. Since the late 1980s and early 1990s, consumption *per capita* has decreased slightly to ~8 l (de Zwart and Mensink, 1996). The marked increase in alcohol consumption, leading to the highest level of alcohol use ever in The Netherlands, provoked a political memorandum *Alcohol and Society (Alcohol en Samenleving)*, 1986). A more comprehensive alcohol control

policy was advocated: more prevention and educational activities, a more efficient alcohol treatment system, and modernization of the law on alcohol. Consequently, over the past decade, more preventative activities have been developed and implemented such as national mass media campaigns and alcohol education in schools (Garretsen and van de Goor, 1995; NIGZ, 1996). Greater emphasis is put on early recognition of problem drinkers (Hoeksema and Holten, 1990). Also, a bill for a revised law on alcohol is planned to be presented in Parliament by the end of 1997.

The present law on alcohol regulates the distribution of alcoholic beverages and the conditions of distribution. Some of the crucial articles are: a legal drinking age of 16 years for beer and wine and 18 years for spirits, and sale licences for public houses and restaurants issued by the municipal authority. The sale of beer and wine is allowed in every grocery store, but the sale of spirits requires a licence. Alcohol advertising is subject to a voluntary code: all audiovisual advertisements (except television) and 40% of the television advertisements will be accompanied by an educational slogan. Furthermore, advertisements should not be aimed at under-aged children, relate drinking with work or sports or promote heavy drinking. The bill for the revised law on alcohol proposes the prohibition of the sale of

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alcohol in petrol stations and work places and to ban alcohol from health care facilities, educational institutes, and specific youth associations.

In the context of the alcohol control policy, knowledge of the social climate on alcohol is of major importance. First, social climate on alcohol directly influences drinking behaviour and hence alcohol-related problems. Furthermore, social climate on alcohol is the framework within which alcohol control policy and its measures are placed (Edwards *et al.*, 1994). The efficacy of an alcohol control policy depends to a large extent on public support for this policy. On the other hand, preventative measures may influence the social climate on alcohol use, for instance towards a greater awareness of alcohol-related harm. This greater awareness may in turn change the acceptability of public policies known to reduce alcohol-related harm. Despite its importance for alcohol policy, only limited empirical information is available on the Dutch social climate on alcohol. In 1958, just before the strong increase in alcohol consumption, Gadourek (1963) assessed some aspects of social climate on alcohol. The next and last survey in which comprehensive information was gathered on social climate on alcohol was conducted in 1980–81, at a time when alcohol consumption *per capita* stabilized at a high level (Garretsen, 1983). Since 1980, however, various aspects concerning alcohol have changed in Dutch society. The consumption *per capita* remains at a high level, but recently a slight decline was noted. Furthermore, the memorandum *Alcohol and Society (Alcohol en Samenleving, 1986)* induced political action. Therefore, it seems expedient to renew insight into the Dutch social climate on alcohol.

The aims of this study were to gain insight into various aspects of social climate on alcohol among the inhabitants of Rotterdam, The Netherlands, in 1994, and the changes in social climate over the years. Conforming to the definitions by Partanen and Montonen (1988), the following indicators of social climate on alcohol were used: (1) attitudes towards drinking behaviour of close relatives; (2) attitudes towards drinking behaviour at a party; (3) the journey home after having drunk; (4) opinions on restrictive measures. The first three indicators give insight into attitudes towards drinking behaviour and its consequences. The last indicator sheds light on public opinion about measures of

alcohol policy. It could be argued that trends in alcohol consumption *per capita* will be mirrored by attitudes towards drinking behaviour: the more society drinks, the higher the tolerance with respect to drinking behaviour in society and vice versa. Therefore, the stabilization of alcohol consumption *per capita* at a high level over the last 15 years should be expected to be mirrored by a stabilization of public tolerance with respect to drinking behaviour at a high level. However, prevention and information campaigns may have increased public awareness of alcohol-related harm. This increased awareness could have led to stronger support for alcohol control measures and a (slight) decrease in tolerance for alcohol use. Law enforcement on legal limits for drinking and driving might have produced a decrease in drink-driving. Furthermore, from a political view-point, it is important to know whether the revision of the law on alcohol, stressing restrictions on the availability of alcohol in public places and among young people, is supported by the public.

METHODS

Data collection

Data on social climate on alcohol in 1994 were collected within the framework of a large-scale general population survey called Risky Lifestyles in Rotterdam. For this survey, a random sample of 8000 persons was drawn from the municipal population register of Rotterdam, The Netherlands, in February 1994. The sample included inhabitants between 16 and 69 years of age and, to avoid language problems, persons with Dutch nationality. Data collection by postal questionnaire and oral interview (7500 and 500 people respectively) took place in the spring of 1994. No differences were found between the two data collection methods with respect to self-reported drinking habits (Bongers and van Oers, 1998).

The overall response rate was 44.2% ($n = 3537$). Considering the main data collection method (postal questionnaires), the low saliency of the research topic and the location of the study (a highly urbanized city), the response rate is not atypical (Hox and de Leeuw, 1994). Furthermore, a follow-up study among a sample of the non-responders to our study revealed that about half of

them were unwilling to cooperate in any survey. In this follow-up study, it was concluded that it was unlikely for non-responders to be selective with regard to the topic of the study (Jansen and Hak, 1996). However, non-response analyses showed that the response was selective in terms of sex and age (Bongers *et al.*, 1997). The differential response probability model was used to evaluate and correct for the consequences of this differential non-response (Bethlehem and Kersten, 1986). The 1994 results reported in this article are based on the weighted data set.

To study changes in the social climate on alcohol the 1994 findings were compared with findings of 1958 and 1980–81. In 1958, Gadourek (1963) conducted a survey on alcohol and smoking among the Dutch general population. In 1980–81, Garretsen (1983) examined an alcohol survey among Dutch inhabitants of Rotterdam, The Netherlands. The design and methods of these studies are extensively explained in the above publications.

Measurements

Social climate. Social climate was assessed by the following indicators: (1) attitudes towards drinking behaviour of close relatives; (2) attitudes towards drinking behaviour at a party; (3) the journey home after having drunk (drink-driving); (4) opinions on restrictive measures. In 1994 and 1980–81 all four indicators were measured, whereas in 1958 only the first two indicators were measured. Attitudes towards drinking behaviour of close relatives were measured by the questions: 'Would you mind if a close relative was: (a) tipsy every now and then; (b) drunk every week; (c) a teetotaler?' Attitudes towards drinking at a party were measured by the questions: 'Suppose there is a party, how many alcoholic drinks is a man of your age allowed to drink according to you? He will not be driving a car himself'. Respondents were asked the same question about women. Drink-driving was measured by asking respondents: 'How do you usually proceed home after having drunk three or more glasses?'. The cut-off point of three or more glasses was chosen, as it corresponds on average to a blood-alcohol concentration (BAC) higher than 0.5 promille, (50 mg/dl) which is the Dutch legal limit. Opinions on restrictive measures were ascertained by asking respondents whether they

were in favour or against: (1) prohibition of advertising; (2) a price increase per glass of 50 cents (equal to a price increase of ~20–25%); (3) restrictions on alcohol use in public places like schools, trains, and swimming pools; (4) reduction in the number of public houses; (5) reduction in the number of outlets in which alcoholic beverages are sold.

Drinking behaviour. Drinking behaviour was measured by the Quantity-Frequency-Variability method. Four questions were asked: 'Which alcoholic drinks do you usually drink when you drink?'; 'How many days a month do you drink on average?' (F); 'If you drink alcohol, how many glasses do you drink on average?' (Q); 'Have you ever drunk six or more glasses in one day in the past 6 months?' (V). Based on these questions, respondents were categorized into abstainers, light, moderate, excessive, and very excessive drinkers (for categorization, see Bongers *et al.*, 1997).

Background variables. The background factors of sex, age, daily activities, and educational level were measured. The variable of daily activities categorized respondents as employed or house-keeping; unemployed; declared unfit for work; retired; student or conscript. Educational level was defined as respondent's highest level of education.

Data analysis. To gain insight into the social climate on alcohol in 1994 and its changes over time, proportions of respondents with restrictive and less restrictive attitudes or opinions were compared for each indicator of social climate. On the basis of the 1994 data, insight was gained into differences in social climate by background variables and by own drinking behaviour.

The relation between social climate and the background variables of sex, age, daily activities, and educational level was analysed bivariate. Differences in attitudes towards others, drinking behaviour and own drinking behaviour were analysed by logistic regression analyses. Odds ratios were calculated and adjusted for differences in background variables. Differences in drink-driving and restrictive measures by own drinking behaviour were analysed bivariate. For alcohol policy, it is important to know how respondents behave and react, who are most likely to drink and drive, or who are most affected by restrictive measures respectively. In these cases, adjusting for background variables is not informative.

Table 1. Public opinion on drinking behaviour of close relatives (%)

	1958*				1980-81†				1994			
	Yes	No	Don't know	<i>n</i>	Yes	No	Don't know	<i>n</i>	Yes	No	Don't know	<i>n</i>
Would you mind if a close relative is:												
Tipsy every now and then?	68.6	30.4	1.0	1291	56.3	39.9	3.8	2128	44.8	48.2	7.0	3379
Drunk every week?	98.1	1.6	0.3	1289	95.3	3.4	1.4	2139	92.9	4.3	2.9	3373
A teetotaler?	9.9	86.6	3.0	1286	4.0	93.4	2.6	2111	5.4	88.8	5.7	3361

*Gadourek (1963); †Garretsen (1983).

RESULTS

Public opinion on drinking behaviour and its consequences

Attitude towards close relatives' drinking behaviour. Table 1 shows respondents' attitudes towards drinking behaviour of close relatives over the years. The percentage of respondents who would not mind their close relatives being tipsy occasionally increased substantially over the years. In 1958, 30% of the respondents would not mind whereas in 1980-81 and 1994, figures of 40% and 45% were obtained. The percentage of respondents who would mind if their close relatives were to be drunk every week decreased slightly from 98% in 1958, to 95% in 1980-81, and 93% in 1994. In 1958, 87% of the respondents would not care if a close relative was a teetotaler. This percentage increased to 93% in 1980-81, and declined to 89% in 1994.

Attitudes towards drinking behaviour of close relatives differed by sociodemographic characteristics. More than half of the women (52.2%) would mind if close relatives were to be tipsy occasionally, against 37.1% of the men. Age was also an important influential factor: the higher the

age, the more respondents cared if their close relatives were tipsy. It was found that 28.9% of the young people between 16 and 24 years of age would mind this against 68.7% of the respondents between 55 to 69 years of age. Consistent with the findings by age, 28.9% of the subgroup of students and conscripts would mind if close relatives were sometimes tipsy against 66.8% of the retired respondents. Furthermore, the higher the educational level the less respondents would mind if close relatives were tipsy. Although the findings with regard to being drunk every week were less pronounced, they pointed in the same direction. Finally, no clear differences in opinion towards teetotalers were found by background factors.

Respondents' drinking behaviour was found to be strongly related to their attitude towards drinking behaviour of close relatives after controlling for differences in sex, age, educational level, and daily activities (Table 2). The level of tolerance with respect to close relatives being tipsy every now and then increased significantly in parallel to their own drinking behaviour: very excessive drinkers were almost nine times as likely as abstainers to tolerate this kind of drinking. Although most respondents agree on

Table 2. Odds of tolerance with respect to drinking behaviour of close relatives by own drinking behaviour controlled for sex, age, educational level, and daily activities (based on 1994 data)

	Abstainers	Light drinkers	Moderate drinkers	Excessive drinkers	Very excessive drinkers
Odds of not minding if close relatives would be:					
Tipsy every now and then	1	2.38 [1.88-3.02]	5.78 [4.28-7.80]	6.56 [4.28-10.06]	8.89 [5.04-15.68]
Drunk every week	1	0.74 [0.42-1.31]	1.99 [1.08-3.66]	2.11 [1.00-4.45]	3.17 [1.33-7.57]
A teetotaler	1	1.40 [0.90-2.18]	0.94 [0.55-1.61]	0.82 [0.39-1.76]	0.39 [0.18-0.88]

Table 3. Public opinion on male and female drinking behaviour of respondents' contemporaries at a party when they do not have to drive home themselves (%)

	1958*		1980-81†		1994	
	Males	Females	Males	Females	Males	Females
Men or women are allowed to drink at a party:						
as much as they like	‡	‡	36.2	34.1	38.2	37.2
≥5 glasses	33.7	11.8	24.3	17.4	20.9	15.7
3 or 4 glasses	31.2	32.2	19.7	22.4	20.3	20.9
1 or 2 glasses	9.4	26.8	5.9	10.4	8.6	12.7
0 glasses	1.7	8.2	1.2	2.3	2.3	3.3
don't know	24.1	21.0	12.7	13.3	9.6	10.2
n	1251	1256	2150	2150	3368	3412

*Gadourek (1963); †Garretsen (1983); ‡'no answer' category in this study.

their negative attitude towards frequent drunkenness, moderate and (very) excessive drinkers were significantly more likely than abstainers to be tolerant if close relatives were to be drunk every week. No significant differences were found in tolerance with respect to teetotallers by own drinking behaviour, except that very excessive drinkers were significantly less likely to be tolerant.

Drinking at a party. Table 3 shows tolerance towards drinking behaviour at a party over the years. A considerable number of respondents answered 'don't know' to these questions, especially in 1958. In 1994, almost 40% of the respondents allowed men to drink as much as they like at a party provided they did not have to drive home themselves. Another 21% of the respondents answered they would allow five or more glasses. Only 2% of the respondents thought men should not drink at all at a party. Similar figures were found with respect to female drinking at parties. These findings resemble the findings of 1980-81. In 1958, however, people were much stricter with respect to drinking at a party: only one-third of the respondents allowed men to drink five or more glasses. Also notable is that, in 1994, as in 1980-81, the norms towards male and female drinking behaviour at a party were similar, whereas in 1958, people (men as well as women) were stricter towards female than towards male drinking.

Attitudes towards drinking behaviour at a party differed by subgroup of the population. Women were less tolerant than men with respect to levels of drinking at a party: 43.3% of the men against

33.1% of the women answered that men of the same age may drink as much as they want. Age was also related to attitude: drinking as much as you want was tolerated by almost half of the young people (47.2%) against only one-fifth (19.9%) of people in the oldest age category. Furthermore, the higher the educational level, the more tolerant respondents were towards male drinking behaviour at a party. Comparable results were found for female drinking behaviour at a party.

After controlling for sex, age, educational level, and daily activities, the likelihood of tolerance with respect to drinking levels at a party was strongly related to respondents' own drinking behaviour (Table 4). Compared with abstainers, moderate drinkers were five times as likely and excessive drinkers 10 times as likely to allow men to drink five or more glasses at a party. For female drinking behaviour, the same pattern was found, although the odds ratios were not as high as for male drinking behaviour.

The journey home after drinking three or more glasses. In 1980-81 and 1994, respondents who drank were asked how they usually returned home after having drunk three or more glasses. For these years, the percentage of respondents who reported driving home by car or motorcycle decreased from 12% to 7% (Table 5).

Drink-driving was strongly related to drinking behaviour (Table 6). The more respondents drank, the more often they reported driving home after three or more drinks. Almost a quarter of the very excessive drinkers and 15% of the respondents who drank six or more glasses once a week or

Table 4. Odds of tolerance with respect to male and female drinking behaviour at a party by own drinking behaviour controlled for sex, age, educational level, and daily activities (based on 1994 data)

	Abstainers	Light drinkers	Moderate drinkers	Excessive drinkers	Very excessive drinkers
Odds of allowing males or females to drink ≥ 5 glasses at a party when they do not have to drive home themselves:					
Males	1	2.29 [1.81–2.90]	5.04 [3.71–6.86]	10.21 [5.94–17.35]	11.65 [5.83–23.25]
Females	1	2.00 [1.58–2.52]	4.25 [3.17–5.69]	6.83 [4.28–10.90]	7.41 [4.14–13.25]

more drove home themselves. The more regularly respondents drank outside their own homes, the more often they drove home after three or more drinks. Respondents who drank regularly in sports club canteens were particularly likely to drive themselves home.

Drink-driving also differed by subgroups of the population. In 1994, men drove home more often after drinking than women (11.3% vs 2.5%). Of the young people (16–24 years of age) only 3.1% drove home after drinking, against 10.1% of the respondents between 44 and 54 years of age. The percentages among the other age categories varied between 6 and 9%. Consistent with the results by age, the percentage of students and conscripts who drove home after drinking was very low (1.9%). The percentage of those who drove home after drinking was relatively high among working and retired respondents: 8.2 and 8.5%, respectively.

Public opinion on alcohol control measures

In 1994 as well as in 1980–81, the great majority of respondents was in favour of restricted alcohol consumption in public places like schools

or trains (Table 7). In both years, more than 60% of respondents were in favour of raising the age limit for buying alcoholic beverages. With respect to the remaining measures (price increase of 50 cents, reduction of traditional outlets, and prohibition of advertising), only a minority of the respondents reported in favour. The support for prohibition of advertising and price increase has dropped by 10% from 1980–81 to 1994.

Attitudes towards restrictive measures differed by background characteristics (Table 8). Women were more often in favour of restrictive measures than men. Younger people (under 35 years of age) were more negative about restrictive measures. Educational level was also related to attitudes towards restrictive measures: the higher the educational level of respondents, the less they were in favour of restrictive measures. Finally, students and conscripts were mostly negative towards restrictive measures.

Respondents' drinking behaviour was strongly related to their opinion on restrictive measures. The more people drank, the less they favoured restrictive measures. Half or more of the abstain-

Table 5. How respondents usually return home after having drunk three or more glasses (%)*

	1980–81†	1994
Usual way of going home after having drunk ≥ 3 glasses:		
By car/motorbike	12.1	7.1
By bike	3.3	13.7
By cab, by public transport, or driven home by friend/partner	57.8	55.3
On foot	9.6	22.0
Does not apply to me as I never drink ≥ 3 glasses	26.3	32.1
Other	1.5	4.0
<i>n</i>	1672	2878

*Respondents were allowed to give more answers. In 1980–81, however, the maximum was two answers whereas in 1994 no maximum was given; †secondary analyses on the dataset of Garretsen (1983).

Table 6. Driving home by car or motorbike after having had three or more drinks by drinking behaviour (among drinkers) (%)

Drinking behaviour	<i>n</i>	Driving home by car/motorbike after drinking ≥ 3 glasses
Categories of drinking		
Light drinkers	1931	3.9
Moderate drinkers	616	11.9
Excessive drinkers	185	15.3
Very excessive drinkers	100	24.3
		$\chi^2 = 115.01$; <i>df</i> = 3; <i>P</i> < 0.001
Drinking ≥ 6 glasses		
Once or more a week	447	15.6
Less than once a week	961	8.8
Never	1334	3.2
		$\chi^2 = 89.98$; <i>df</i> = 2; <i>P</i> < 0.001
Drinking in a pub, restaurant or disco		
Once or more a week	376	11.9
Less than once a week	1582	7.6
Never	543	3.1
		$\chi^2 = 26.40$; <i>df</i> = 2; <i>P</i> < 0.001
Drinking in a sports club canteen		
Once or more a week	155	21.4
Less than once a week	398	13.4
Never	1812	4.9
		$\chi^2 = 82.37$; <i>df</i> = 2; <i>P</i> < 0.001
Place where one drinks the most per occasion		
At home (own or that of friends/family)	1705	6.4
In public places	809	8.8
At work or at school	22	19.8
		$\chi^2 = 10.04$; <i>df</i> = 2; <i>P</i> = 0.007

ers were in favour of restrictive measures irrespective of the type of measure. Excessive drinkers most often opposed these restrictive measures. However, a relatively high percentage of very excessive drinkers was in favour of the restrictive measures: their percentage lay between that of light and moderate drinkers.

In general, those subgroups in the population which would be particularly affected by the measures were less in favour of restrictions. More than half of those between 16 and 19 years of age (57.6%) were against raising the age limits for buying alcoholic beverages. Among students and conscripts, as many as two-thirds (64.6%) were against raising the age limits. Of this same subgroup, more than three-quarters (76.3%) opposed a price increase of 50 cents. Income was not related to opinion as regards the latter measure. Furthermore, among those who drink in

licensed premises once or more a week, only 10% were in favour of a reduction in the number of public houses.

DISCUSSION

The present results indicate that the public has become more tolerant with respect to alcohol use. Tolerance of 'being tipsy every now and then' increased remarkably between 1958 (Gadourek, 1963) and 1980–81 (Garretsen, 1983) and increased slightly from 1980–81 to 1994. Drinking (a lot) at a party was tolerated by the majority of the respondents in 1994 as well as in 1980–81. In 1958, respondents were much stricter with respect to this behaviour. It is noteworthy that, since 1958, the norms towards male and female drinking at a party have converged. Several factors were related to attitudes towards drinking behaviour. The most

Table 7. Public opinion on alcohol control measures in 1980–81 and 1994 (%)

	1980–81				1994		
	In favour	Indifferent	Against	<i>n</i>	In favour	Against	<i>n</i>
In favour or against:							
Prohibition of advertising	52.1	26.5	21.4	2094	40.6	59.4	3358
Price increase of 50 cents a glass	41.9	24.2	33.8	2089	31.5	68.5	3346
Restrictions on alcohol use in public places	77.6	11.3	11.1	2107	81.1	18.9	3440
Raising age limits	61.5	18.6	19.9	2080	61.7	38.3	3381
Reduction in number of public houses	30.4	30.6	39.0	2038	29.2	70.8	3301
Reduction of number of shops selling alcoholic beverages	32.9	29.4	37.6	2056	32.8	67.2	3325

important factor was the respondent's own drinking behaviour: the more people drink, the more tolerant they were of other people's drinking behaviour.

As hypothesized, the changes in attitude towards alcohol use over time are mirrored by changes in consumption *per capita*: the increased acceptability of alcohol use is in line with the sharp increase in consumption *per capita* from 1960 to the 1980s. Stabilization of the consumption *per capita* at a high level in more recent years is mirrored by stabilization in tolerance with respect to drinking (a lot) at a party.

Contrary to the recent slight decrease in consumption *per capita*, tolerance with regard to close relatives 'being tipsy every now and then' slightly increased between 1980–81 and 1994. Consequently, the question is whether this slight increase in tolerance is real. It may, for instance, be explained by different interpretations of 'being tipsy every now and then': in 1994, 'being tipsy' might be perceived as just 'drinking a little too much' and in 1980–81 as 'being nearly drunk'. Further research is needed, as no conclusive answer can be given on the basis of this study.

Another indicator of social climate on alcohol was drink-driving. The prevalence of driving home after having drunk three or more glasses was assessed. Three or more glasses was chosen since the legal limit in The Netherlands is set at a BAC of 50 mg/dl which corresponds to up to two glasses for an average person. The percentage of people who drive themselves home after having drunk three or more glasses decreased from 12 to 7% from 1980–81 to 1994. This decrease is likely to be due to the increased level of enforcement of the legal limit over those years (Mathijssen and

Wesemann, 1993). Deterrence is the primary approach to prevent drinking in conjunction with a risky situation. Drink-driving legislation when energetically enforced has been shown to be a highly effective public policy in terms of injuries averted and lives saved (Edwards *et al.*, 1994). Of course it is alarming that among those who drink a lot and/or often drink outside the home, drink-driving was most prevalent. Education programmes on drink-driving should be aimed at these specific target groups. Contrary to what is often thought, young people are not the section of the population that should be approached in this respect. The percentage of young people who drove home after having drunk too much was relatively low. This finding might be explained by the fact that many young people do not possess a vehicle but, as they live in the urban city of Rotterdam, they have access to public transport. The occurrence of drink-driving found among 'normal' moderate drinkers raises the question whether mass media campaigns and alcohol education programmes reach all the risk groups. More attention should be paid to the fact that moderate drinking can also cause problems in certain situations.

In both 1980–81 and 1994, support was clearly given to a restriction on alcohol use in public places. The next most favoured measure was raising the age limits. Yet, in 1994 only a minority of respondents supported measures which restricted the general availability of alcohol. When comparing our results with those of a survey among Dutch Members of Parliament in 1994 (Hendriks *et al.*, 1997) it became clear that both the public and Members of Parliament generally desire restrictions on alcohol in public

Table 8. Public opinion on alcohol control measures by background variables in 1994 (%)

	In favour of ≥4 measures	In favour of 2 or 3 measures	In favour of zero or 1 measure
Total population (<i>n</i> = 3159)	32.3	40.0	27.8
Sex			
Male	25.8	40.0	34.2
Female	38.6	39.9	21.5
	$\chi^2 = 85.83; df = 2; P < 0.001$		
Age (yr)			
16–24	23.1	37.7	39.2
25–34	22.9	42.8	34.4
35–44	33.5	42.4	24.1
45–54	40.1	38.1	21.8
55–69	49.0	36.0	15.0
	$\chi^2 = 178.42; df = 8; P < 0.001$		
Educational level			
Primary school	52.7	31.9	15.4
Lower vocational/ general	41.9	39.2	19.0
Intermediate vocational/general and higher general	28.4	41.8	29.8
Higher vocational	20.9	43.2	35.9
University	9.3	40.7	50.0
	$\chi^2 = 281.78; df = 8; P < 0.001$		
Daily activities			
Employed/housekeeper	31.7	41.6	26.7
Unemployed	34.4	44.5	21.1
Declared unfit to work	49.3	32.7	18.0
Retired	44.2	39.3	16.5
Student/conscript	18.8	31.6	49.6
	$\chi^2 = 140.86; df = 8; P < 0.001$		

places. It is notable, however, that only one-fifth of the Members of Parliament wished to raise the age limits against almost two-thirds of the public.

The support for prohibition of alcohol advertising and a price increase of 50 cents per glass dropped by 10% between 1980–81 and 1994. There are no definite explanations for this drop in support. The lower level of support for a ban on alcohol advertising might be related to the voluntary code on alcohol advertising that has operated since 1990. People may consider the code as sufficient.

The 1994 and 1980–81 data were limited to the general population of Rotterdam. Rotterdam is a city in the urban west of The Netherlands. Although The Netherlands is not a large country, differences in social climate on alcohol by geographic region are possible. Garretsen and Knibbe (1985) showed that people in the south

eastern Netherlands are more tolerant with respect to drinking than people in Rotterdam. Therefore, caution should be exercised when extrapolating to the whole Dutch population. The comparison of the 1958 figures with those of 1994 and 1980–81 also require some caution, as the sample in 1958 was representative of the total Dutch population, whereas in the later studies the general Rotterdam population was sampled.

In summary, the social climate on alcohol in 1994 in Rotterdam, The Netherlands, can be characterized by 'moderation': both positive and negative aspects of alcohol are recognized. Drinking without problems is tolerated (and sometimes even stimulated), whereas excessive drinking and its consequent problems are strongly disapproved of. The opinions on alcohol control measures are mirrored by attitudes towards drinking. Measures such as the restrictions on

drinking in public places and raising the age limits are endorsed by the public. However, most people are against measures, including price increases, which would restrict the availability of alcoholic beverages.

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