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# Global Status Report: Alcohol and Young People

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## Abstract

The global burden of disease from alcohol exceeds that of tobacco in large part because acute consequences of alcohol use lead to death and disability in the younger years of life. There is evidence of a convergence in drinking patterns among the young, towards products marketed to youth cultures and tastes, and associated in developed countries with drinking to intoxication and with acute consequences such as motor vehicle crashes, drowning, and interpersonal violence. It also appears that young people in many countries are beginning to drink at earlier ages, while research in developed countries has found early initiation of alcohol use to be associated with greater likelihood of both alcohol dependence and alcohol-related injury later in life. After a review of available research and statistics on behavioural and physical consequences of alcohol use, the document describes the globalisation of alcohol brands and marketing designed to embed alcohol products and consumption into the lifestyles of young people. Brief profiles of prevalence among young people in Member States in each of the WHO Regions point to the need for standardised monitoring of alcohol use and consequences, and attention is called to WHO's guidelines for doing this. Educational approaches to prevention of alcohol problems among young people have in and of themselves shown little effect, while brief treatment interventions have shown promise. Research has demonstrated the effectiveness of intervention at the community level as well as of policies such as minimum drinking age laws and alcohol taxation. Promotion of alcoholic beverages to young people is inappropriate and dangerous to health. Public health policy makers in Member States as well as international governmental and non-governmental organisations need to work for the adoption and implementation of a culturally appropriate mix of alcohol control policies to prevent alcohol's heavy toll on morbidity and mortality among young people and the population at large.

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## **GLOBAL STATUS REPORT: YOUNG PEOPLE AND ALCOHOL**

### **Introduction**

World-wide, five per cent of all deaths of people between the ages of 5 and 29 in 1990 were attributable to alcohol use (Murray & Lopez 1997). The Global Burden of Disease Study found that alcohol was responsible in 1990 for 3.5 per cent of all disability-adjusted life years (more than tobacco or illegal drugs). The burden from alcohol exceeds that from tobacco largely because alcohol problems tend to take their toll earlier in life. While adverse health outcomes from long-term chronic alcohol use may not cause death or disability until late in life, acute health consequences of alcohol use, including intentional and unintentional injuries, are far more common among younger people.

Survey and anecdotal data from countries around the globe suggest that a culture of sporadic heavy or “binge” drinking among young people may be spreading from the developed to the developing countries. Globally, efforts to promote alcohol use have increased in both prevalence and sophistication in the past 30 years. Prevention technologies have not kept pace either with the spread of new and potentially harmful patterns of drinking, or with the expansion of promotional activities, despite the fact that there are numerous strategies that have been found to be effective, at least in the developed nations (Edwards et al. 1994).

Drawing on WHO’s global alcohol database, this report will provide an overview of the prevalence of drinking among young people, alcohol-related mortality and other health effects, trends in the alcohol environment surrounding youthful drinking, and prevention policies designed to reduce alcohol-related problems among the young.

### **WHO data sources and methods**

WHO has established a database providing a standardised reference source of information for global epidemiological surveillance of alcohol use and related problems. The database brings together a large amount of information on the alcohol and health situation in individual countries and, wherever possible, includes trends in alcohol use and related mortality since 1970. WHO has also collected information on alcohol production, trade, consumption, and health effects, as well as on national alcohol control measures, policies and programmes. In addition to large international databases maintained by other international governmental organisations, more than 850 published sources have been identified and consulted.

The scope and sources for the database are described in WHO Global Status Report on Alcohol published in 1999 (WHO 1999). Methods for data collection have included reviews of on-line databases and fugitive literature collections, consultation with regional key informants, and use of large statistical databases such as those maintained by WHO’s Division of Evidence and Information for Health Policy and Analysis. A network of expert informants in the various WHO regions provided additional assistance.

Despite efforts made by WHO to obtain and validate data and information, many gaps in, and uncertainties about, the actual alcohol and health situation in WHO Member States remain. WHO therefore encourages comments or additional information from readers of this report, in order to improve the reliability of its global epidemiological surveillance and thereby increase the usefulness of this information in supporting efforts to reduce alcohol-related problems world-wide. **Any information, comments or suggestions may be sent directly to: Dr. Maristela Monteiro, WHO, 20 Avenue Appia, 1211 Geneva 27, Switzerland.**

### **Types of alcohol products and patterns of use**

Alcohol in most societies is a luxury product rather than a necessity, and so the wealthier countries consume more alcohol than the rest of the world. At the same time that there is some evidence that young people are initiating heavier drinking at earlier ages (see below), the popularity, range and availability of inexpensive alcoholic beverages have increased. Survey evidence from the United Kingdom indicates that young people between the ages of 13 and 16 have been the most frequent consumers of at least some of these products, the alcoholic lemonades and other fruity beverages collectively known as “alcopops” (Hughes et al. 1997; Health Education Authority 1999).

There is evidence as well, particularly from Europe and North America, that national differences in beverage preferences are converging among younger drinkers. In southern Europe, young people are increasingly turning to beer instead of wine as their beverage of choice. For example, in 1993 the Spanish National Household Health Survey found that beer and spirits consumption were more frequent among young people, while older people continued the country’s historical preference for wine (Del Rio et al. 1995). A 1993 study of more than 11 000 French young people between the ages of 11 and 18 found that beer was the preferred drink, followed by hard liquor, and that these preferences were far more consistent throughout the country than the authors had expected. France is located at the centre of Western Europe, and its traditional differences in regional drinking patterns have historically reflected the variation in beverage preferences of the continent as a whole. Because of this, the uniformity of beverage preferences found by the authors led them to surmise that a convergence in European drinking patterns was emerging (Arvers & Choquet 1999). Meanwhile, in the United Kingdom, where the national preference already tilted strongly in the direction of beer, young people increasingly prefer to drink their lager cold, as is the drinking style in the US, as opposed to the British tradition of consuming it at room temperature (Hagerty 2000).

In this emerging drinking pattern, young people are less likely to consume wine and distilled spirits, and more likely to consume beer (Gabhainn & François 2000; Business Research Centre 1997) or a wide range of other relatively low-alcohol products often apparently designed to appeal to young or inexperienced drinkers. These include alcopops, wine coolers, wines fortified with distilled spirits to bring their alcohol content up as high as 20 per cent, ciders, alcoholic “energy” drinks, and so on. The alcohol in these beverages results from the inclusion of malt, wine or spirits-based products. What they tend to share is a price within a range competitive with popularly priced beer or cider, a sweet taste, and an image designed to appeal to the young.

In developing countries, convergence towards this drinking pattern is more likely to be found in those living in urban areas, and rising in affluence (Room et al. in press). For instance, in Mexico urban drinkers are much more likely to drink beer, while rural drinkers and those at the lower end of the socio-economic scale are more likely to drink the local products *pulque* and *aguardiente* (Medina-Mora 1999). In Benin, alcohol consumption has shifted from adults and old people to younger people of both genders (Agossou et al. 1999), while studies in Zimbabwe have found that young people who identify with a Western as opposed to a traditional cultural identity are more likely to drink alcohol and to drink it heavily (Eide & Acuda 1996; Eide et al. 1998).

### **Age of initiation**

Age of initiation of alcohol use is important for at least two reasons. First, research in the US has found that the earlier the age at which people begin drinking, the more likely they are to become alcohol dependent later in life (Grant & Dawson 1997). Those who begin drinking in their teenage years are also more likely to experience alcohol-related unintentional injuries (such as motor vehicle injuries, falls, burns, drowning) than those who begin drinking at a later age (Hingson et al. 2000). Adverse effects of early onset of drinking may be shorter term as well: prospective research has found a younger age of initiation to be strongly related to a higher level of alcohol misuse at ages 17 and 18 (Hawkins et al. 1997).

Costa Rican survey data confirm the proposition that an earlier age of initiation may predict a greater likelihood of alcohol problems later in life. According to that country's 1995 national survey of drug use, 55 per cent of those identified as alcoholic and 40 per cent of those determined to be drinking excessively (defined as consumption of more than 100 millilitres of absolute alcohol for men and 60 millilitres of absolute alcohol for women on two or more occasions in the past month) had begun drinking before the age of 15, compared with only 31 per cent of those drinking at lower levels (Bejarano et al. 1996).

Second, trends in the age of initiation are one indicator that may be used to monitor larger changes in overall drinking patterns among youth. When prevalence of experimentation not only with alcohol use but with heavy use at earlier ages increases, there may be substantial cause for concern.

Since surveys generally rely on self-reporting and recall, it is difficult to measure age of initiation of alcohol use precisely, and most of the information on this subject is available from the developed countries. Trend data are also rare. However, using data from the 1998 National Drug Strategy Household Survey, Australian researchers looked at the age of initiation by five-year age cohorts for persons born between 1940 and 1984. They found that more than half (56 per cent) of the 1980-84 birth cohort reported alcohol use by age 15, compared to only 16 per cent of those born between 1940 and 1944 (Degenhardt et al. 2000).

In the US, the average age of first use of alcohol is 13.1 years (US Department of Health and Human Services 1998). Among young people surveyed in 1997 and 1998 in 23 European countries, more than half of 11 year-olds in most countries reported

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having tasted alcohol. There was little difference between the genders at this level of consumption. However, boys are somewhat more likely to have initiated weekly drinking by age 13 than girls, and substantially more likely to have done so by age 15 (Gabhainn & François 2000). These figures run the risk of obscuring national differences. For instance, a 1993 survey in the Czech Republic found that most young people had used alcohol prior to age 12, a substantial increase over a similar study conducted in 1978 (Ferrer et al. 1995). In contrast, a national survey in Spain of persons aged 18 and over conducted in 1989 found the average age of first use to be 16.7 years (Royo-Bordonada et al. 1997). Age of initiation is subject to many cultural factors. However, in at least some developing countries, the age of experimentation is much younger – 10.1 years, for instance, in Porto Alegre, Brazil (Pechansky & Barros 1995).

A standardised survey in 1999 asked young people born in 1983 in 25 European countries if they had been drunk before the age of 13. Table 1 below shows the results for this question. In comparison with an identical survey conducted in 1995, in 11 countries the numbers initiating at this age had increased, while in 8 countries the numbers had fallen (Hibell et al. 1997).

**Table 1. Percentage of 15-16 year olds in European countries who had been drunk at age 13 or earlier, 1999.**

Country	Drunk by age 13 or earlier		
	Males	Females	Total
Bulgaria	19	11	15
Cyprus	10	5	7
Czech Republic	20	12	16
Denmark	48	37	42
Estonia	26	14	19
Faroe Islands	18	11	15
Finland	34	33	33
Former Yugoslav Republic of Macedonia	12	3	8
France	15	10	12
Greece	11	6	9
Hungary	13	7	10
Iceland	19	16	17
Ireland	28	21	25
Italy	8	7	7
Latvia	23	11	16
Lithuania	22	9	16
Malta	17	11	14
Norway	19	15	17
Poland	16	6	11
Portugal	14	9	12
Romania	32	15	22
Russian Federation (Moscow)	35	30	33
Slovak Republic	18	11	14
Slovenia	22	12	17
Sweden	26	22	24
Ukraine	26	18	22
United Kingdom	40	36	38

Source: Swedish Council for Information on Alcohol and Other Drugs (CAN) web site: [www.can.se](http://www.can.se).



For children under particular kinds of stress, age of initiation and likelihood of frequent consumption may be greater. For instance, street children between the ages of 6 and 18 in Brazil who lived with their families and attended school were less likely to drink alcohol than those who spent all day in the streets and slept there. In the latter group, 25 per cent drank alcohol daily (Leticia et al. 1996). Another study of Brazilian street children reported in 1998 that 33 per cent of those between the ages of 9 and 11 and 77 per cent of those between the ages of 15 and 18 were heavy users of alcohol (Noto et al. 1998). A 1989 national sample of Canadian “street youths” found that about 88 per cent drank alcohol, while 9 per cent reported drinking daily (McKenzie et al. 1997).

### **Behavioural and physical consequences**

Alcohol is a physical and behavioural teratogen. At the earliest ages, young people are vulnerable to the effects of the drinking of others. Children exposed to alcohol during pregnancy are at risk for Foetal Alcohol Syndrome (FAS), alcohol-related birth defects (ARBD), and alcohol-related neuro-developmental disorder (ARND). FAS is a cluster of physical abnormalities (facial malformations and growth retardation) and neuro-developmental abnormalities that may appear in children of mothers who drank excessively during pregnancy. In the USA, FAS is the leading preventable cause of mental retardation, affecting an estimated 0.5 children per 1 000 live births in the general population (Institute of Medicine 1996). Incidences of 1.7 per 1,000 and 3.3 pr 1,000 live births have been reported in Sweden and France, respectively (Taylor 1996). The incidence of foetal alcohol effects may be much higher than FAS, which may result from lower levels of drinking in pregnancy. Therefore, currently there is no evidence of a “safe” dose of alcohol at any time during pregnancy.

Drinking by parents may also harm family life, leading to a variety of deleterious effects on young people. In the European Union alone, a collaborative report from WHO’s European Regional Office estimated that 4.5 million young people lived in families adversely affected by alcohol (European Commission 1998). Problems for the young people in such homes may include instability or collapse of marriages and family structures, increased risk of physical or sexual abuse, neglect, and strain on family finances. Such family problems may in turn put young people at greater risk of developing anti-social behaviours, emotional problems and problems in the school environment (Velleman 1993). A complex mix of environmental and genetic factors has been shown to put children of alcohol dependent parents at higher risk of alcohol and other drug problems (Cloninger 1999).

Surveys of young people in European countries have looked at a wide range of behavioural consequences of alcohol use. These included individual problems, defined by self-reports on young people’s reduced performance at school or at work, damage to objects or clothing, loss of money or other valuable items, and accident or injury as a result of alcohol use. Relationship problems cover self-reported quarrels or arguments, and problems in relationships with friends, teachers or parents as a result of drinking alcohol. Young people also reported on whether they had engaged in unwanted sexual experiences or unprotected sex. Finally, delinquency problems included self-reports of alcohol-related scuffles or fights, victimisation by robbery, or trouble with the police, as well as driving a motorcycle or a car under the influence of

alcohol. Table 2 below provides the average scores in each of the larger categories for the countries for which data were available.

**Table 2. Behavioural consequences of alcohol use among 15 year olds in selected European countries**

Country	Individual Problems	Relationship problems	Sexual experiences	Delinquency problems
Croatia	10	13	6	5
Czech Republic	16	18	14	7
Denmark	20	23	10	9
Estonia	9	21	8	8
Faroe Islands	13	19	10	8
Finland	17	22	8	10
Hungary	8	13	7	4
Iceland	14	20	16	11
Ireland	12	23	N.A.	N.A.
Italy	10	12	9	9
Lithuania	15	21	8	7
Malta	10	13	7	6
Norway	13	15	13	6
Poland	10	17	6	7
Portugal	6	17	6	7
Slovak Republic	11	12	7	5
Slovenia	11	11	6	7
Sweden	15	16	6	9
Turkey (Istanbul)	7	12	N.A.	N.A.
Ukraine	13	22	11	7
United Kingdom	21	22	15	12

Source: Hibell et al. 1997

Data from Canada suggest that young people are more likely to suffer from alcohol-related harm than other age groups. In Canada's 1994 Alcohol and Other Drugs Survey, prevalence of alcohol-related harm (including harm to friendships, discord with a spouse or partner, negative impact on outlook on life, health consequences, problems with work or education, and negative financial outcomes) was more than twice as high as among the general population (Poulin, Single & Fralick 1999).

Alcohol may cause physical harm to children, although the evidence remains preliminary. Studies in laboratory animals have found that high doses of alcohol may delay the onset of puberty, retard bone growth and result in weaker bones (Dees & Skelley 1990; Cicero et al. 1990; Sampson et al. 1996).

While evidence is inconclusive regarding the direct impact of alcohol use on the physical development of young people, there are indications that heavy alcohol use at a young age is predictive of a range of psychological and physical problems. Protracted and continuous abuse of alcohol may be predictive of more severe health problems in general for boys and girls (Aarons et al. 1999). Grant & Dawson (1997) found that those young people who had begun drinking before age 15 were four times more likely to develop alcohol dependence than those who began drinking at age 21, the legal drinking age in the US.

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The range of adverse physical consequences stemming from heavy use of alcohol on a single occasion is well documented. The most obvious of these is alcohol poisoning, which although relatively rare is often emblematic of young drinkers' inexperience with alcohol. Alcohol may have a more immediate and severe effect on young people because their muscle mass is smaller than that of adults.

While alcohol poisoning is by definition caused by alcohol use, causality for other acute consequences is less clear. Various meta-analyses have sought to distinguish correlation from cause in alcohol's role in health. Drawing primarily on studies from developed and English-speaking countries, English et al. (1995) estimated that 34 per cent of all motor vehicle crash deaths, drownings and falls, 47 per cent of homicides, 41 per cent of suicides, and 44 per cent of burns are attributable to alcohol use.

A study of suicides in Finland among persons aged 13 to 22 found that 42 per cent qualified for a diagnosis of alcohol use disorder or misuse, using standard diagnostic tools. These subjects were also more likely to be alcohol-intoxicated when they committed the suicidal act (Pirkola et al. 1999). Research in other developed countries has documented that alcohol consumption is a significant co-factor in other leading causes of death among young people as well, including motor vehicle crashes (see e.g. Single et al. 1999), homicides and drowning (see e.g. US Department of Health and Human Services 2000a).

The cost of underage drinking to the US economy alone was estimated at nearly US\$58.4 billion in 1994. This figure includes costs of youth involvement in motor vehicle crashes (US\$18.2 billion) and violent crime (\$35.9 billion), as well as burns, drownings, suicides and alcohol poisonings (Levy, Stewart & Wilbur 1999).

Tables 3 and 4 below provide age-standardised death rates from motor vehicle crashes and from suicide for young people in those countries for which data were available.

**Table 3. Age-standardised death rates from motor vehicle crashes per 100 000 population under age 25.**

Country	Year	Total	Males	Females
Latvia	1998	8.44	12.75	4.00
Kuwait	1997	8.15	13.82	1.58
Republic of Korea	1997	7.35	10.57	3.94
Thailand	1994	7.33	12.06	2.44
Saint Kitts and Nevis	1992	7.04	10.25	3.74
Lithuania	1998	7.03	10.50	3.47
Luxembourg	1997	6.88	10.79	2.83
Belgium	1994	6.84	10.47	3.07
Belize	1995	6.56	10.91	2.16
Venezuela	1994	6.56	9.83	3.17
Greece	1998	6.24	9.57	2.75
New Zealand	1998	6.00	8.09	3.84
Portugal	1998	5.99	9.35	2.54
United States of America	1997	5.79	7.57	3.91
Russian Federation	1998	5.75	7.98	3.47
Ecuador	1991	5.64	8.42	2.79
Estonia	1999	5.34	7.53	3.09

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El Salvador	1993	5.05	7.70	2.43
Belarus	1998	4.95	7.35	2.54
Austria	1999	4.77	7.24	2.23
Slovenia	1998	4.68	6.56	2.71
France	1997	4.66	7.02	2.21
Poland	1996	4.65	6.69	2.53
Cuba	1996	4.53	6.21	2.77
Colombia	1994	4.51	6.88	2.11
Puerto Rico	1992	4.50	7.14	1.83
Italy	1996	4.35	6.74	1.86
Spain	1997	4.18	6.24	2.02
Ireland	1996	4.08	6.69	1.36
Mexico	1995	3.97	6.07	1.85
Denmark	1996	3.94	5.91	1.88
Canada	1997	3.93	5.24	2.55
Australia	1997	3.92	5.52	2.25
Costa Rica	1995	3.84	5.99	1.58
Germany	1998	3.66	5.26	2.00
Slovakia	1995	3.66	5.17	2.08
Switzerland	1994	3.56	5.07	2.02
Republic of Moldova	1998	3.31	5.24	1.32
Argentina	1996	3.21	4.68	1.72
Romania	1998	3.07	3.92	2.18
Ukraine	1999	2.97	4.40	1.49
Chile	1994	2.93	4.33	1.49
Kazakhstan	1997	2.92	4.28	1.54
Japan	1997	2.83	4.30	1.28
Mauritius	1998	2.81	5.35	0.19
Iceland	1996	2.80	3.92	1.63
Turkmenistan	1994	2.76	4.00	1.46
Trinidad and Tobago	1994	2.72	3.80	1.47
Israel	1996	2.70	3.85	1.49
Finland	1996	2.63	3.82	1.40
Bulgaria	1998	2.63	3.59	1.63
Netherlands	1997	2.58	3.53	1.59
Hungary	1999	2.56	3.54	1.54
Singapore	1998	2.35	4.10	0.57
Uzbekistan	1993	2.31	3.40	1.21
Croatia	1998	2.28	3.40	1.13
United Kingdom	1998	2.22	3.15	1.24
Tajikistan	1992	2.22	3.37	1.05
Norway	1996	2.12	2.78	1.43
Sweden	1996	1.80	2.49	1.08
Czech Republic	1999	1.68	2.52	0.79
The former Yugoslav Republic of Macedonia	1997	1.59	2.16	0.99
Bahamas	1995	1.55	3.11	0.00
Albania	1998	1.54	2.65	0.53
Kyrgyzstan	1999	1.52	2.00	1.03
Malta	1998	1.24	2.40	0.00
Barbados	1995	1.10	2.17	0.00
Armenia	1997	0.90	1.35	0.43
Hong Kong	1996	0.86	1.30	0.41

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Azerbaijan	1999	0.70	0.97	0.42
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**Table 4. Age-standardised death rates from suicide per 100 000 population under age 25.**

Country	Year	Total	Males	Females
Russian Federation	1998	5.42	9.19	1.55
Kazakhstan	1997	5.33	8.36	2.27
Lithuania	1997	5.24	9.08	1.32
New Zealand	1998	4.73	6.92	2.49
Finland	1995	3.94	6.35	1.42
Estonia	1996	3.90	6.42	1.30
Latvia	1995	3.85	6.50	1.10
Belarus	1998	3.79	6.60	0.97
Australia	1997	3.14	5.02	1.18
Mauritius	1998	2.99	3.54	2.43
Ukraine	1999	2.98	5.10	0.79
El Salvador	1993	2.95	3.40	2.54
Luxembourg	1997	2.72	4.71	0.67
Ireland	1996	2.69	4.56	0.75
Norway	1995	2.66	4.19	1.07
Slovenia	1996	2.61	3.85	1.30
Canada	1997	2.50	4.05	0.87
Croatia	1994	2.45	3.40	1.45
Belgium	1994	2.34	3.99	0.62
Trinidad and Tobago	1994	2.28	2.91	1.54
Cuba	1996	2.27	2.21	2.33
Austria	1999	2.21	3.46	0.92
Kyrgyzstan	1999	2.19	3.47	0.89
Singapore	1998	2.13	2.45	1.80
Hungary	1995	2.06	3.42	0.64
United States of America	1997	2.06	3.38	0.66
Czech Republic	1993	1.94	3.10	0.74
Bulgaria	1998	1.91	2.71	1.06
Albania	1998	1.89	1.93	1.86
Belize	1995	1.88	3.10	0.67
Poland	1996	1.87	3.15	0.55
Ecuador	1991	1.83	1.71	1.96
Turkmenistan	1994	1.67	2.22	1.09
Iceland	1995	1.60	3.14	0.00
France	1997	1.54	2.28	0.77
Uzbekistan	1993	1.53	2.06	0.99
Republic of Korea	1994	1.52	1.91	1.11
Costa Rica	1995	1.50	2.24	0.72
Japan	1994	1.48	2.07	0.87
Republic of Moldova	1995	1.45	2.21	0.68
Venezuela	1994	1.44	2.15	0.71
Germany	1997	1.43	2.26	0.57
Sweden	1996	1.42	1.99	0.81
Slovakia	1993	1.33	2.19	0.44
Colombia	1994	1.17	1.62	0.71
Barbados	1995	1.17	0.81	1.53

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Netherlands	1995	1.14	1.55	0.72
United Kingdom	1998	1.14	1.74	0.50
Romania	1998	1.10	1.68	0.49
Argentina	1996	1.08	1.56	0.60
Chile	1994	1.08	1.83	0.30
Puerto Rico	1992	0.96	1.64	0.27
Malta	1994	0.94	1.82	0.00
Israel	1996	0.93	1.53	0.31
Spain	1997	0.91	1.38	0.42
Tajikistan	1992	0.90	1.10	0.70
Mexico	1995	0.86	1.36	0.38
Italy	1996	0.83	1.33	0.32
The former Yugoslav Republic of Macedonia	1997	0.82	1.00	0.63
Portugal	1998	0.39	0.63	0.13
Greece	1998	0.30	0.50	0.10
Armenia	1997	0.13	0.25	0.00
Kuwait	1994	0.12	0.20	0.00
Azerbaijan	1999	0.10	0.14	0.05

### Marketing to young people

Marketing plays a critical role in the globalisation of patterns of alcohol use among young people that reflects the revolution that is occurring in marketing in general. Corporations as diverse as Nike, Kraft and Intel have demonstrated to the business world the value of brands, as distinct from manufacturing facilities or processes or other hard assets. According to the 1998 United Nations Human Development Report, global advertising spending is now outpacing the growth of the world economy by a third (Klein 1999).

Increasingly this spending goes not (as in earlier eras) to direct advertising such as television, radio and print campaigns, but rather to “below-the-line” expenditures that are designed to embed brand names and products in the every-day activities of the target audience. Among US brand names, the ratio spent on direct advertising as opposed to other promotional activities reversed itself between 1983 and 1993, so that only 25 per cent of total spending went to direct advertising, while 75 per cent went to other promotional activities, such as sponsorships, product tie-ins and placements, contests and sweepstakes, and special promotions.

In the language of the marketers, these activities are designed to make the product an integral part of the lifestyle of the target user, and to create an intimate relationship between the user and the product. United Distillers and Vintners is part of Diageo, the world’s largest spirits marketer. Its director of global commercial strategy, Ivan Menezes, said in a recent interview:

We’ve got to own the emotional heartland of the category and connect with the consumer in a way that goes beyond the rational aspects of the brand....The emotional high ground we believe Johnnie Walker [whisky] can hold surrounds the area of inspiring personal progress. That whole area carries of a set of values that works extremely well across borders (quoted in Fleming & Zwiebach 1999:18).

The point of the marketing is to associate the product with certain values. This association is not always accomplished smoothly, as in the case of alcohol it generally requires ignoring public health risks of alcohol use, as well as indigenous cultural opposition to alcohol. For instance, Malaysian consumers were asked in a whisky marketing campaign to choose their favourite role model from among six choices. All of the choices were global figures rather than local, Malaysian leaders. They included Martin Luther King, Jr., Nelson Mandela, and to the dismay of the local Indian community, the abstaining and temperance-advocating Mahatma Ghandi.

This example illustrates the new form that marketing is increasingly taking. Marketers talk about the relationship between the product and the consumer as a spiritual bond, and present their products not as commodities but as concepts, experiences and lifestyles (Klein 1999). In the process, part of the effect is to create cultural change. The goal is to fashion a unique experience, and to identify this experience with the product. For many products, including beer, this is also quintessentially a youth experience.

As a commodity, alcohol has the added advantage of being able to fit into a wide range of household budgets and cultures. A relatively inexpensive product like a Carlsberg or a Heineken beer can be the price of admission to the global culture depicted in the advertising for these brands, a world of beautiful leggy blondes, racing thoroughbreds and successful sports teams. A more costly bottle of Hennessy cognac becomes both an extension of traditional gift-giving among overseas Chinese businessmen in Southeast Asia, and a badge of belonging in the international class of people who drink expensive French alcohol (Jernigan 1997)

Alcohol in its earlier forms certainly played cultural roles. Yet these roles tended to be defined by the communities who produced and served the alcohol. Global alcohol plays a cultural role primarily defined by its global brand owners (although it may also take on alcohol's older cultural functions as well, as when a Zimbabwean pours Castle lager on the ground to honour his ancestors). As global businesses, these brand owners have a single paramount goal (and responsibility to their shareholders): to maximise sales – and thus presumably consumption – of their products.

In this process, the youth market is critical, and requires keeping up with the rapidly changing nature of youth subcultures. Successful youth brands not only attach themselves to the subculture but position themselves to be among its defining features. The past two decades have seen several waves of new alcoholic beverages designed for youth markets. The declining consumption in the wealthy countries has made courting young drinkers even more crucial. Wine coolers in the 1980s have been followed by alcopops, pre-mixed cocktails and “energy drinks” in the 1990s. The value of the alcopops and pre-mixed cocktails sector in the UK in 1998 was £750 million (Jackson et al. 1999). In the US, sales of “malternatives,” coolers, and pre-mixed cocktails were estimated at \$1.5 billion in 2000 (McCarthy 2000). These generally sweet and fruity beverages are successful because, according to one young Canadian drinker, they get “you drunk faster and you can't taste the alcohol” (Menon 1999).

The latest venue for the premiere of new alcoholic products is the all-night clubbing scene. Virgin, the firm that broke a long-standing self-imposed ban on broadcast

advertising by spirits marketers in the UK, introduced two new “energy drinks,” one alcoholic and one non-alcoholic, in the spring of 2000. Energy drinks, loaded with caffeine, help young people get through the long nights of clubbing. Pre-mixed energy drinks were a natural successor to the common practice of mixing non-alcoholic energy drinks such as Red Bull with vodka or other distilled spirits. Months later, the makers of the hyper-caffeinated Jolt Cola in the US introduced another new category, alcoholic spring water. DNA Alcoholic Spring Water is dubbed the “pure water that’s lost its innocence,” and contains spring water, fruit flavours, and five percent alcohol (*Food Management* 2000).

The marketing of these and other youth-oriented beverages provides a case study in embedding products in young people’s lifestyles and daily practices. The brewers have tended to lead the way. Marketing beer to young people via the internet made headlines in the US in 1999, when a media watchdog group charged that 82 percent of beer industry sites were using marketing tactics attractive to youth, such as contests, games, slang and cartoons (*Modern Brewery Age* 1999).

Identifying the product with popular music is also standard marketing practice. Again in the US, in an editorial titled “Wrong Gig for Bud Ads”, the bible of the advertising industry, *Advertising Age*, chastised market leader Anheuser-Busch for releasing a CD of its controversial cartoon lizards Frankie and Louie’s favourite hits from the 1960s, 1970s and 1980s (*Advertising Age* 1999). While there is a two-decade history of beer sponsorships of rock concerts, Miller and Molson’s “Blind Date” concerts in North America solved the problem of such tours offering the bands involved more publicity than the beer manufactures and brands that were sponsoring them. The concerts were held in clubs much smaller than the usual venues, and the identity of the band was kept a secret until patrons had already arrived at the venue. Thus the name people associated with the event was Miller rather than the band. As one concert promoter put it, “In a funny way the beer is bigger than the band.” (Klein 1999:48)

Spirits marketers are increasingly copying the techniques of the beer companies, as they seek out the same market to counter falling consumption among their older consumers. A year after the controversy over beer industry marketing on the internet, spirits companies expressed dismay and claimed their presence was an accident after advertisements for Jack Daniel’s and Southern Comfort whiskies and Finlandia vodka were found on the site Comics.com (Kranhold 2000). One industry newsletter reported in 2000 that Canadian Mist whiskey was offering a free CD with each 750 ml. bottle to attract “a younger segment of legal-aged adults” (Kane’s Beverage Week 2000a).

Meanwhile, Skyy vodka increased its sales by 21 per cent, as overall vodka sales fell, by focusing on promotions and advertisements in hip clubs and in such magazines as *Spin* and *Vogue* (Fulmer 1999). Courvoisier brandy spent \$5 million to target young African-Americans in the hip-hop culture, using event sponsorships, billboards and print advertising (Stamler 2000). According to another trade journal, the entire Scotch category was bent on re-inventing itself, targeting young people with pin-up girls, “cool” graphics, irreverence and rock concert sponsorships (Furlotte 2000). Cutty Sark led the way, reversing its decline in US sales by giving its brand a new, beer-like theme: “Booze, Babes and Bands.” Three rock-and-roll tours promoted the



brand, while outlets offered free playing cards, t-shirts and caps (Kane's Beverage Week 2000b).

Sports marketing offers another means of reaching young drinkers. Sporting events, whether televised or live, attract substantial audiences of young people, particularly young men, who as the prevalence studies described below amply illustrate are among the heaviest consumers of alcoholic beverages. In the USA, beer maker Anheuser-Busch is the official sponsor of the National Basketball Association, the National Hockey League, the National Football League, the National Basketball League, and Major League Baseball. In 1999, Anheuser-Busch anticipated spending US\$500 million on its media and sports marketing programmes (Beer Marketer's Insights 1999). Meanwhile, in Europe, Carlsberg paired its sponsorship of Euro 2000 football with on-premise promotions such as inflatable goal posts, football caps and sweepstakes-type games; Foster's reached out to young racing fans with a web site promoting its sponsorship of Grand Prix racing.

This brief tour through the latest marketing techniques and products targeting young people in wealthy countries offers a harbinger of what is to come in developing nations. India provides a good example of how quickly marketing techniques are being diffused into settings marked by fewer alcohol control policies and ineffective or no monitoring or enforcing agencies and organisations. The drinking age of 18 is poorly enforced due to lack of staff (Saxena 1997). In fast-developing Mumbai, India's largest brewer, the UB Group, announced plans to introduce "Spike," a cola-flavoured malt-based alcoholic beverage in late 1999, to be followed by a broader release in 2000 (Kurian 1999). Bacardi-Martini India, in a joint venture with the UK-based Virgin records, released two volumes of the "Bacardi Blast" CD, a compilation of chart-topping hits (Business Line 2000). On the world-wide web, a site that bills itself as "India's no. 1 entertainment site" features Bacardi's own "Bat Club" section offering memberships to Mumbai residents, as well as recipes and, until recently, a sub-section titled "Get Drunk."

Such marketing activities are by no means limited to India. In Malaysia, Carlsberg has expanded its Hot Trax chain of CD, comics and sports trading card stores (Jernigan 1997) into a series of rock concert tours and a web site featuring free CD offers, downloads, streaming audio and video, and advertisements for the latest Chinese pop albums (carlsberg.com.my). The brand had already established itself firmly in the nation's network of private Chinese-language high schools through a series of benefit rock concerts in those venues (Jernigan 1997).

These examples of recent marketing practices by the world's leading alcohol producers and marketers demonstrate that the companies have shown substantial willingness to target young people in settings such as the US and the UK. Both countries have significant governmental regulation of their alcohol industries' promotional activities, self-regulatory schemes instituted by those industries, and active networks of non-governmental organisations monitoring both of these. Further examples have shown the diffusion of these marketing practices into developing countries, where both alcohol control regimes and non-governmental sectors are far weaker or have fewer resources or political space within which to operate.

## Prevalence

Outside of Europe and North America, there is little uniformity in the means and scales used to monitor alcohol consumption among young people. Although it is more common for countries to survey their young populations regarding alcohol use than to conduct national population surveys, the range of ages being surveyed and of definitions of categories of consumption used render cross-national comparisons difficult in most regions.

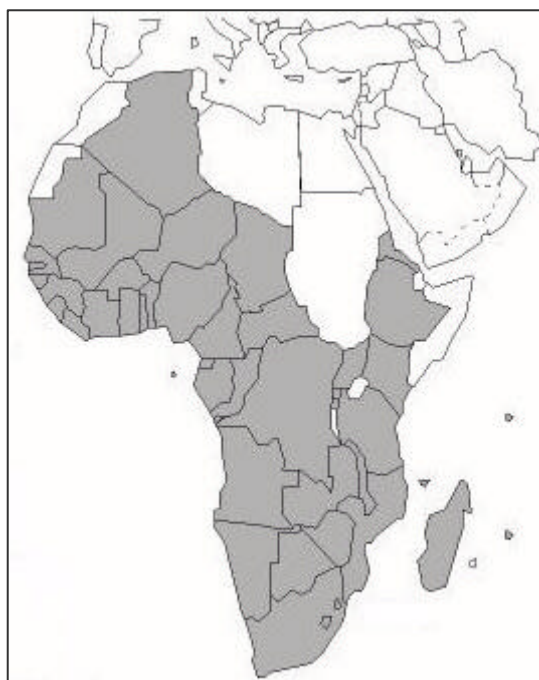
**Table 5. Geographic coverage of youth survey data by WHO region**

Region	Countries with survey data/ total number of countries	Per cent of region's population represented
AFRO	8/46	41
AMRO	15/36	80
EMRO	4/22	26
EURO	34/52	85
SEARO	4/10	73
WPRO	9/28	95

With this in mind, the sections below discuss overall profiles of prevalence of alcohol use by region, and then provide specific data by country where available. Table 5 shows the number of countries for which surveys were available by region, and the percentage of each region's population represented by those countries.

### African Region

Amid the tremendous cultural diversity of the African continent there may be discerned some consistent trends. In most countries, young males are more likely to drink than young females. In both genders, use of alcohol increases with age. Current use is on average fairly low compared to the more developed regions. Interviews with young drinkers have found, particularly in Sub-Saharan Africa, that they believe that drinking is essential to having a good time, and that their purpose in drinking is to get drunk (Strijdom 1992, Meursing & Morojele 1989). These beliefs are reflected in drinking patterns. In Zimbabwe, for instance, university students who do drink are much more likely to drink to intoxication than their British counterparts (Chambwe et al. 1983). There is also some evidence that those drinkers who identify with Western cultural symbols are more likely to drink heavily (Eide & Acuda 1996).



**Table 6. Summary of survey findings, African Region**

Country	Population	Year	Lifetime use	Current use	Heavy use	Notes	Source
Ethiopia	Urban high school students	1989			9.2	Self-reported	Kebede & Ketsela 1993
Ethiopia	University students	1988		31.1			Zein 1988
Kenya	Secondary school and teacher training college students	1995		42		Used beer or wine	Amayo 1996
Kenya	Secondary school and teacher training college students	1995		31.5		Used spirits	Amayo 1996
Kenya	Secondary school and teacher training college students	1995		22		Used <i>chang'aa</i>	Amayo 1996
Lesotho	Age 5 to 14	1992		6.2			LHWP 1996
Lesotho	Age 15 to 29	1992		16.9			LHWP 1996
Lesotho	High school students (age 11 to 22)	1989	50			54% of boys, 42% of girls	Meursing & Morojele 1989
Namibia	Schoolchildren age 12 to 16	1992		22.9 (boys), 12.6 (girls)			Parry 1997
Nigeria	University students (undergraduates)	1988	77			81% of men, 68% of women	Adelekan et al. 1993
Nigeria	Senior secondary school students	1988		12			Abiodun et al. 1994
Nigeria	Secondary students age 14 and above	?	57			Former Anambra State	Eke 1997
South Africa	Africans age 10 to 21: Males Females	?		39-40 23-32		Current is use in past year	Parry & Bennetts 1998
Swaziland	Second form students (appr. age 13)	1989	32				Myeni 1989
Zimbabwe	Age 14 and under	1992	31.1				Acuda & Eide 1994
Zimbabwe	Age 15 to 16	1992	39.5				Eide & Acuda 1996
Zimbabwe	Age 17 to 20	1992	46.1				Eide & Acuda 1996

**Ethiopia** A 1989 survey of 519 high school students in the capital city of Addis Ababa (Kebede & Ketsela 1993) found that 9.2 per cent “consumed alcohol heavily” according to self-reports (no definition of “heavily” was given in the study). The prevalence of current alcohol use among university students in north-west Ethiopia in 1988 was 31.1 per cent. Alcohol was also frequently used in combination with tobacco and *khat* (Zein 1988).

**Kenya** A 1989 survey of 2 059 secondary school students in Nakuru found that 12 per cent of males reported drinking beer and 2 per cent reported drinking *chang'aa*, versus 3 per cent and 0.5 per cent respectively for females (Kiragu 1994). A three-year study completed in 1995 of alcohol and other drug use in secondary schools and teacher training colleges nation-wide surveyed 2 381 students. Of these, 42 per cent had used beer or wine, 31.5 per cent had used spirits, and 22 per cent had drunk *chang'aa* (Amayo 1996).

**Lesotho** In a 1992 baseline health study of households in the Lesotho Highlands, 16.9 per cent of respondents 15 to 29 years old reported current drinking. Of children between the ages of 5 and 14, 6.2 per cent (5.8 per cent of boys and 6.4 per cent of girls; 4 per cent of children ages 5 to 9, 8.8 per cent of children ages 10 to 14) reported current alcohol use. Traditional beer was the most commonly consumed alcoholic beverage. The majority of respondents indicated they drank alcohol monthly or less often, although two children reported daily alcohol use (Lesotho Highlands Water Project 1996).

A national survey among secondary and high school students reported in 1989 that 24.2 per cent of the total sample drank alcoholic beverages (Moremoholo 1989).

A 1989 report of an interview survey of 1 133 high school students from 11 to 22 years of age indicated that about half of the students (54 per cent of the boys and 42 per cent of the girls) had drunk alcohol at some point in their lives. Drinking was positively associated with age, sex (male), drinking by friends, higher family income, and drinking in the family. No indication of widespread alcohol abuse was found, but about half of the students believed that moderate drinking is impossible and that the fun of drinking is to get drunk (Meursing & Morojele 1989).

**Namibia** Five studies from 1991 and 1992 have reported that 20 per cent of school children and 75 per cent of out-of-school youth abuse alcohol over weekends (Parry 1997). One of these, conducted in Katutura and Khomasdal on schoolchildren between the ages of 12 and 16, found that alcohol was the most used substance by young people. Of boys, 22.9 per cent drank alcohol, while 12.6 per cent of girls reported drinking. Rates increased with age. In addition, 35.5 per cent of the young people surveyed agreed with the statement that "a youngster cannot enjoy a party without alcohol" (Strijdom 1992).

**Nigeria** A number of school and college surveys have found alcohol use to be common among students, with many drinking students having had their first drink in family settings (Gureje 1999). In June 1988 a questionnaire survey of 636 undergraduate students at the University of Ilorin in Kwara State found that 77 per cent reported lifetime alcohol use (81 per cent of men and 68 per cent of women) (Adelekan et al. 1993). In response to a 1988 survey of 1 041 senior secondary school students in Ilorin, 12 per cent reported current use of alcohol (Abiodun et al. 1994). One researcher reported in 1988 that the preceding decade had witnessed increasing alcohol use among young people, but longitudinal data were unavailable to support this (Odejide et al. 1987). The same study reported that around the age of eight many respondents had been given alcohol, usually during family festivities.

More recently, a survey of 640 secondary students aged 14 and above in former Anambra State showed that 57 percent had used alcohol (Eke 1997).

**South Africa** In multistage random sampling of 443 Black urban and rural current drinkers aged 10 to 21, it was found that 4.4 per cent of urban males, 1.9 per cent of urban females, 7.8 per cent of rural males and 1.8 per cent of rural females were drinking at risky levels (defined as an average of 3.4 beers per day, equivalent to yearly consumption of 25.61 litres of absolute alcohol) (Rocha-Silva et al. 1996).

Among high school males surveyed in the Cape Peninsula, Whites were most likely to drink heavily (defined as five or more drinks at one sitting at least once in the past 14 days), followed closely by Blacks and then Coloureds. Black females were least likely to drink heavily (Morojele et al. 1997). Using the same definition of heavy drinking, a study of a random sample of 7 340 high school students in the Cape Peninsula published in 1993 reported that English-speaking students had higher rates of heavy drinking than Afrikaans- or Xhosa-speaking students (Flisher et al. 1993).

A study done in the late 1980s of White students in 200 schools found that 10.3 per cent were drinking on two or more days a week (Department of Education and Culture 1990).

**Swaziland** In a 1991 study of 16 Swaziland secondary and high schools, 22 per cent of girls and 7.5 per cent of boys stated they were regular drinkers, and 16 per cent of girls and 20 per cent of boys started drinking by the age of 15 (COSAD n.d.).

In 1989, 68 per cent of second-form students (about age 13) from three schools in the working-class urban area of Mbabane reported never drinking alcohol, 25 per cent were "rare" drinkers and 3 per cent said they drank frequently (Myeni 1989).

**Zimbabwe** A random survey of more than 2 500 schoolchildren between the ages of 12 and 21 found that 32 per cent of boys and 28 per cent of girls between the ages of 12 and 14 had tried alcohol. Lifetime prevalence of alcohol use was 31.1 per cent for people 14 years or less, 39.5 per cent for 15 to 16 year olds, and 46.1 per cent for 17 to 20 year olds. Alcohol was the drug most commonly used by all the schoolchildren, and was more common among male than female students, and in private than public schools, largely due to the socio-economic differences between the two student populations. Of those 14 years old or less, 7.6 per cent had tried alcohol before they were 10 years old (Acuda & Eide 1994, Eide & Acuda 1995). Students with more Western attitudes and tastes were likely to drink more than those who adhered to Zimbabwean customs (Eide & Acuda 1996). Further analysis of this data found that students from higher socio-economic backgrounds were more likely to exhibit a global cultural orientation, which in turn was related to greater consumption of alcohol, and of clear, barley-based, as opposed to traditional sorghum-based, beer (Eide et al. 1998).

A comparison made in the early 1980s between Zimbabwean and British university students found that fewer Zimbabweans (particularly females) drink, but those who do drink more and drink to intoxication more frequently (Chambwe et al. 1983).

**Region of the Americas**

As in the African Region, in the Region of the Americas, boys are much more likely than girls to drink and to drink heavily, although there is some evidence from Mexico and Brazil that consumption among girls is rising, at least in urban areas (Carlini-Cotrim 1999; Medina-Mora 1999). Gender differences in prevalence are far more marked in Central and South America than in North America. Everywhere prevalence increases with age, and by age 18 most young people have tried alcohol.



**Table 7. Summary of survey findings, Region of the Americas**

Country	Population	Year	Lifetime use	Current use	Heavy use	Notes	Source
Belize	Primary, sixth form and high school students	1992	57		10.9	Heavy shows weekly use	Pride Belize Survey Team Project 1992
Bolivia	Age 12 to 17	1988	38.6	17.7		Current is use in past 30 days	Del Castillo & Salinas n.d.
Brazil	Urban secondary school students in Sao Paolo	1993	81.6	43.8	19.3	Current is use in past 30 days; heavy is 6 or more times in past 30 days	Carlini-Cotrim 1999
Canada	Age 5 to 17	1994	78.2	65		Current is use in past year	McKenzie et al. 1997
Chile	16 to 17 year old schoolchildren	1997	82.8	47.6		Current is use in past 30 days	Navarro et al. 1997
Costa Rica	Age 15 to 19 (m) Age 15 to 19 (f)	1995 1995	52.6 46.6	41.6 30.3	10.1 0.5	Current is use in past year; heavy is weekly use or more	Bejarano et al. 1996
Dominican Republic	Age 15 to 19	1992	66.3	37.8		Current is use in past 30 days	Jutkovitz et al. 1992a
Guatemala	Age 12 to 14	1990	23.7	8.9		Current use is past 30 days	Development Associates 1990
Jamaica	Age 13 to 14	1987	71.2				National Council on Drug Abuse 1988
Mexico	Age 12 to 18	1993	54			Boys are three times more likely to use than girls	Medina-Mora 1999
Panama	Age 12 to 14 Age 15 to 19	1991	59.9 79.5				Jutkovitz et al. 1992b
Peru	Age 12 to 19	1992	79.6				Ortega 1993
United States of America	Age 13 to 14 Age 15 to 16 Age 17 to 18	1999	52.1 70.6 80.0	24.0 40.0 51.0	15.2 25.6 30.8	Current is use in past 30 days; heavy is 5 or more drinks in a row at least	Johnston et al. 2000

## PREVALENCE: REGION OF THE AMERICAS

						once in past two weeks	
Venezuela	University students	1996	80.5	28.8		Current is use in past 30 days	Ministry of Health 1997

**Belize** Interviews were gathered from 520 people between the ages of 14 and 30 in households in Belize City in 1993 using random sampling. Nearly 61 per cent of all respondents had used alcohol at some time in their lives and 43.2 per cent reported usage within the last 30 days. More than 58 per cent of males reported current usage of alcohol (in the past thirty days), compared with only 29.1 per cent of women. Of those drinking in the past month, 6.6 per cent used alcohol daily (7.5 per cent of males, 4.9 per cent of females). Of those between the ages of 14 and 19, 33.1 per cent (43.9 per cent of males and 22.7 per cent of females) had used alcohol in the past 30 days (Pride Belize Survey Project Team 1993).

In 1992, a self-administered questionnaire collected data from 3 473 students, including 4 sixth forms, 30 high schools and 116 primary schools. Alcohol was the only drug that showed rising use compared with surveys conducted in 1986 and 1989. Fifty-seven per cent (62.7 per cent of males, 52.2 per cent of females) had used alcohol. One quarter of those 10 years old or younger had used alcohol, while 82.6 per cent of 17 year olds had tried alcohol. Of those who used alcohol, 73 per cent had begun using it before age 15. Only 0.6 per cent of the sample reported using alcohol every day, 2.3 per cent drank at least three times per week, and 10.9 per cent drank weekly. The majority of respondents in each grade used alcohol six times or less per year (Pride Belize Survey Project Team 1992).

**Bolivia** In cities of more than 30 000 inhabitants in 1996, 17.7 per cent of those between the ages of 12 and 17 reported drinking alcohol in the past month, an increase from 16.7 per cent in 1992. Thirty-five per cent of 12 to 17 year-olds reported use in the previous year. The lifetime prevalence rate for the 12 to 17 age group was 38.6 per cent, while the 18 to 24 age group showed a lifetime prevalence of 84.7 per cent (Del Castillo & Salinas n.d.).

**Brazil** Drinking alcohol is common among young people, and increasing among females. Several studies have found mean age of onset to be 10.1 years. Studies of secondary students in public schools in ten Brazilian state capitals during 1987, 1989 and 1993 showed a significant increase in alcohol use in seven of the ten cities between 1987 and 1993. In 1987, 76 per cent of students had used alcohol, 58 per cent in the past year and 31 per cent in the last month, and 5 per cent on 20 or more days during the past month. By 1993, life-time use among males had increased in only three cities, while among females use had increased in eight cities. Younger students (12 to 15 years old) more consistently increased their alcohol use than their older counterparts. Prevalence of use in the past 30 days increased in nine cities, while frequent use (six or more times in the last 30 days) increased in six cities (Carlini-Cotrim 1999).

In the 1997 iteration of the same study, approximately 50 per cent of the young people between the ages of 10 and 12 reported having used alcohol, compared to 74 per cent of those between 10 and 18. Use of alcohol among students, and particularly heavy use, continued to rise. Thirty per cent of those between the ages of 10 and 18 had

used alcohol to the point of intoxication. Eleven per cent reported fighting and 19.5 per cent missing school after drinking (Galduroz et al. 1997).

A survey of households in the 24 largest cities in the state of São Paulo found that 35 per cent of those between the ages of 12 and 17 had used alcohol (Galduróz et al. 1999). A household survey published in 1995 of 950 adolescents between the ages of 10 and 18 in the urban area of Porto Alegre found alcohol use prevalent in 70 per cent of the sample. Males drank more heavily and frequently than females, and drinking increased with age. The mean age for initial experimentation with alcohol was 10.1, with no gender differences. (This is in marked contrast to a 1996 study of those aged 15 and over, for whom modal age of onset was 15 for males and 20 for females.) About 26 per cent of those who had ever tried alcohol became intoxicated, and beer was the most common beverage used for intoxication (51 per cent of those who ever got intoxicated), followed by spirits (32 per cent). The most frequent place of initiation into alcohol use was “family setting,” and when the 40 per cent of the sample that reported drinking in the last 30 days were asked about drinking situations, 70.1 per cent reported that they usually drink with their families. Heavy drinking by adolescents was positively associated with their perception that their parents were drinking too much (Pechansky & Barros 1995).

In a study of self-reported substance use of 105 children found wandering the streets of the southern city of Porto Alegre, those who both lived and slept in the streets were more likely to use alcohol. Of the 29 per cent who did so, more than 25 per cent drank alcohol on a regular, nearly daily basis (Leticia et al. 1996).

**Canada** In 1995, 58.8 per cent of students in Ontario had used alcohol in the past 12 months. This represents an increase from the 56.5 per cent recorded in 1993, and a decrease from the 66.2 per cent recorded in 1989. Males had slightly higher rates of alcohol use than females (60.0 per cent and 57.6 per cent in 1995, respectively). The largest percentage of alcohol use was in the 18 years and over age category (78.2 per cent compared with 75.0 per cent in the 16 to 17 age group, 56.9 per cent in the 14 to 15 age group, and 31 per cent in the 13 and under age group) (Adlaf et al. 1995).

In the 1994 Canadian Alcohol and Drug Survey, the group most likely to drink were 20 to 24 year olds, of whom 84 per cent reported that they were current drinkers (McKenzie et al. 1997).

**Chile** Results of a national survey of 29 066 schoolchildren were published in 1997. Lifetime prevalence of alcohol use was 72.4 per cent (74.5 per cent for males, 70.4 per cent for females). Lifetime prevalence was 48.9 per cent for those under 14, 68 per cent for those who were age 14 and 15, 82.8 per cent for 16 and 17 year olds, and 84.5 per cent for those over 18. Annual prevalence over the entire sample was 62.5 per cent, and monthly prevalence was 37.7 per cent. Annual prevalence of alcohol use was 39.2 per cent for those under 14, 57.6 per cent for 14 and 15 year olds, 73.6 per cent for 16 and 17 year olds, and 74.6 for persons over 18. Monthly prevalence was 18.6 per cent for those under 14, 33.1 per cent for 14 and 15 year olds, 47.6 per cent for 16 and 17 year olds, and 47.3 per cent for those over 18. Average and median age of first use of alcohol were 13.3 and 14 years, respectively (Navarro et al. 1997).



Regular consumption of alcohol among young people rose from 11.5 per cent in 1984 to 18 per cent in 1990. Approximately 70 per cent of all children who complete secondary school education consume alcohol, more than 15 per cent have been inebriated before the age of 15, and 5 per cent drink more than once a week. These percentages are higher among young people who have dropped out of school, among the unemployed and among the children of alcoholic parents (Urzua 1993). In Santiago, excessive consumption of alcohol among individuals between the ages of 15 and 24 increased by 400 per cent in the period from 1958 to 1982 (Urzua 1993). A national survey of urban inhabitants found prevalence of drinking in the past month to be highest among persons who were 19 to 25 years of age, at 49.74 per cent. In general, prevalence of use in the past month increased with socio-economic status (Sistema Nacional de Informacion Sobre Drogas 1996).

**Costa Rica** According to a national survey of persons between the ages of 12 and 70 conducted in 1995, 52.6 per cent of males and 46.6 per cent of females between the ages of 15 and 19 abstain from alcohol, while 10.1 per cent of males and 0.5 per cent of females in this age group drink at least once or twice per week. However, 14.3 per cent of those in the 12 to 20 age group have had at least one experience of continuous drinking over two days or more that leads to intoxication (Bejarano et al. 1996).

**Dominican Republic** A probability sample of the urban population (municipalities over 20 000) drawn between October 1991 and April 1992 found that lifetime prevalence of alcohol use for those between the ages of 12 and 14 was 43.3 per cent, while 19.5 per cent had used alcohol in the past 30 days. For those from age 15 to 19, lifetime prevalence was 66.3 per cent and current prevalence was 37.8 per cent (Jutkovitz et al. 1992a).

**Guatemala** Based on a sample of 1 807 people between the ages of 12 and 45, a survey in the late 1980s found that 23.7 per cent of those from age 12 to 14 had used alcohol, while 8.9 per cent had used it in the past 30 days (Development Associates 1990).

**Jamaica** A 1987 study of 8 886 post-primary students indicated that three out of every four students (76.3 per cent) had consumed alcohol during their lifetime, and one in three (33.3 per cent) drank alcohol during the 30 day period before the survey. Male lifetime prevalence rates were higher than those of females (84.7 per cent and 68.9 per cent, respectively). The lifetime prevalence increased progressively with age, rising from 71.2 per cent in the 13 to 14 age group to 86.8 per cent in the 19 to 21 age group (National Council on Drug Abuse 1988).

**Mexico** The 1997 National Survey on Addictions found that 33 per cent of males and 27 per cent of females had tried alcohol prior to the age of 18, 27 per cent of males and 18 per cent of females in the past year, and 12 per cent of males and 6 per cent of females in the past month. In the same age group, 3.6 per cent of males and 1.5 per cent of females reported heavy drinking, defined as five or more drinks on a single occasion (Consejo Nacional Contra Las Adicciones 2000).

The National Survey on Addictions of 1993 reported that in the two years prior to the survey, 54 per cent of the population between 12 and 18 years old had used alcohol, compared with 70 per cent of those between 19 and 65 years old. In both groups

males were three times more likely than females to use alcohol (Medina-Mora 1999). Similar results were found by surveying high school students. Approximately half had used alcohol at least once, one-third during the previous year, and 15 per cent in the past month. Drinking five or more drinks per occasion once or twice per week was reported by four per cent of boys and one per cent of girls (Medina-Mora et al. 1995).

The Second National Household Survey in 1989 found that 11 per cent of the population between the ages of 12 and 18 had tried the newer types of alcohol increasingly being marketed to young people and women, two groups that have traditionally drunk less than the general population. These products include “coolers,” prepared cocktails and canned beverages combining rum or brandy and cola (Medina-Mora 1999).

The 1990 National Survey on Addictions showed that 28 per cent of those aged 12 to 17 (32 per cent of males and 23 per cent of females) were current drinkers. Approximately 4.4 per cent of 12 to 17 year olds (7.2 per cent of males and 1.4 per cent of females) and drank once a week or more (Medina-Mora & Villatoro 1995).

**Panama** A 1991 survey interviewed 1 026 people in Panama City, San Miguelito and Colon, urban areas holding approximately one-third of the country’s population. Lifetime prevalence for those from age 12 to 14 was 59.9 per cent, and 79.5 per cent for those aged 15 to 19 (Jutkovitz et al. 1992b).

**Peru** A 1992 survey of a representative sample drawn from the country's 15 largest cities interviewed 1 794 people between the ages of 12 and 50. Of those from age 12 to 19 years, 79.6 per cent had used alcohol (Ortega 1993). A 1986 household survey carried out in Lima and the provinces with a sample of 7 425 persons found that 54.6 percent of those from age 14 to 16 had tried alcohol, while 81.3 per cent of 15 to 18 year-olds had drunk alcohol (PAHO 1990).

**Trinidad and Tobago** A school survey conducted in 1985 showed that 91 per cent of students (age not given in source) had used alcohol (PAHO 1990).

**United States of America** Young adult (18 to 25 years old) drinkers surveyed in the 1996 National Household Survey were the most likely to binge or drink heavily. About half the drinkers in this age group were binge drinkers and about one in five were heavy drinkers. Among young people from ages 12 to 17, the rate of current alcohol use was 49.8 per cent in 1979, 32.5 per cent in 1990, 21.1 per cent in 1995, and 18.8 per cent in 1996.

Researchers at the University of Michigan measure alcohol and other drug use among a random sample of the nation’s young people (grades 8, 10 and 12 and college) annually. In 1999, 52.1 per cent of 8th graders (approximately 13 to 14 years old), 70.6 per cent of 10th graders (approximately 15 to 16 years old), and 80.0 per cent of 12th graders (approximately 17 to 18 years old) had tried alcohol. Annual prevalence was 43.5, 63.7 and 73.8 per cent for 8<sup>th</sup>, 10<sup>th</sup> and 12<sup>th</sup> graders, respectively; and 30-day prevalence was 24.0, 40.0 and 51.0, respectively. Prevalence of daily use (defined as 20 or more times in the past 30 days) was 1.0, 1.9 and 3.4 per cent, respectively. Prevalence of binge drinking (defined as five or more drinks in a row at

least once the past two weeks) was 15.2, 25.6, and 30.8, respectively (Johnston et al. 2000).

**Uruguay** As of 1989 no national surveys of drinking prevalence had been done. It was reported that young people were starting to drink from age 14, and increasingly drank beer (Alterwain & Curbelo 1989).

**Venezuela** Drinking is slightly higher among young adults than among the general population. In a survey of 5 401 university students in 1996, 80.5 per cent of the respondents had drunk alcohol, 66 per cent in the past year and 28.8 per cent in the past month (Ministry of Health 1997). When younger ages are included, as in a 1996 survey of 6 697 students in basic, middle, diversified and professional schools, 70.4 per cent of students report using alcohol (Amesty 1997).

**Eastern Mediterranean Region**

As Table 8 below shows, the dominant religion in all countries of the Eastern Mediterranean Region except Cyprus is Islam. This has the effect of maintaining relatively low levels of alcohol use throughout the population, including young people. Where young people are consuming alcohol, they are far more likely to be male than female. Evidence is insufficient to comment on trends in alcohol consumption among young people in this region.



**Table 8. Muslims as per cent of population in the Eastern Mediterranean Region**

Country	Per cent Muslim	Country	Per cent Muslim
Afghanistan	99	Morocco	98.7
Bahrain	100	Oman	85
Cyprus	18	Pakistan	97
Djibouti	94	Qatar	95
Egypt	94	Saudi Arabia	100
Islamic Republic of Iran	99	Somalia	100
Iraq	97	Sudan	95
Jordan	96	Syrian Arab Republic	90
Kuwait	85	Tunisia	98
Lebanon	70	United Arab Emirates	96
Libyan Arab Jamahiriya	97	Yemen	99

Sources: CIA World Factbook 2000 ([www.cia.gov/cia/publications/factbook/index.html](http://www.cia.gov/cia/publications/factbook/index.html)); Encyclopaedia of the Orient Online ([www.lexicorient.com](http://www.lexicorient.com))

**Cyprus** In a 1995 study of 632 15 to 16 year olds, 85 per cent of respondents had drunk any alcoholic beverage in the last 12 months, and 27 per cent had been drunk in the last 12 months. Lifetime prevalence of alcohol use was 90 per cent (92 per cent for boys and 88 per cent for girls) (Hibell et al. 1997).

**Egypt** A standardised questionnaire was administered to a representative sample of

3 686 male technical school students in Greater Cairo. Results, published in 1982, showed that about 33 per cent had used alcohol at least once (Soueif 1982).

**Morocco** In the late 1980s, an adaptive open questionnaire was administered to 595 medical students, 64 per cent of whom were male, 36 per cent of whom were female, and 79 per cent of whom were between the ages of 21 and 26. Approximately 25 per cent had tried alcohol, and 23 per cent were current users: eight females and 125 males. The overall figures were less than those in a similar 1985 study in which 27 per cent had reported using alcohol (Touhami & Bouktib 1990).

**Sudan** The most recent data found on drinking among young people in the Sudan dates from 1979. Reports from that time mention newer Western lifestyles as the reason for the increase in problem drinking among young males, whereas consumption among women was still very rare (Nadim & Rahim 1984).

### European Region

There have been more co-ordinated efforts to survey and track alcohol use over time among young people in Europe than in any other region. The Health Behaviour in School-aged



Children Project asked 11, 13 and 15 year olds in 22 European countries in 1997/98 about whether they had tried alcohol, whether they drank weekly, and whether they had ever been drunk. Alcohol use increased with age in all countries. Table 9 shows the results for 15 year-olds. In this age group, girls were nearly as likely or more likely than boys to have been drunk twice or more in five countries. However, boys were more likely to drink weekly in all countries.

**Table 9. Alcohol use among 15 year-olds in 26 European countries in 1997.**

Country	Lifetime Prevalence		Weekly Prevalence		Drunk twice or more	
	M %	F %	M %	F %	M %	F %
Austria	94	96	39	23	49	36
Belgium (Flemish)	94	92	38	22	33	22
Czech Republic	98	97	32	19	36	22
Denmark	95	96	46	38	71	63
England	96	96	47	36	51	52
Estonia	96	96	21	10	44	23
Finland	94	95	11	8	52	58
France*	87	85	31	15	29	20
Germany*	94	94	29	22	36	31
Greece	96	96	52	31	24	21
Hungary	91	93	29	11	43	22
Ireland	93	94	27	12	42	29
Israel	78	62	26	10	18	10
Latvia	97	95	28	12	47	23
Lithuania	97	97	16	9	32	20
Northern Ireland	94	90	33	20	53	44

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Norway	84	86	16	12	37	41
Poland	82	81	20	8	39	21
Portugal	88	95	29	9	35	16
Russian Federation*	94	95	28	24	32	25
Scotland	98	98	37	33	53	56
Slovak Republic	97	98	32	16	49	31
Sweden	96	95	17	11	40	40
Switzerland	87	83	19	9	25	16
Wales	98	98	53	36	72	63

\*France, Germany and the Russian Federation are represented only by regions.

Source: *Gabhainn & François 2000.*

The European School Survey Project on Alcohol and Other Drugs (ESPAD) used a standardised data collection instrument and consistent survey methodologies in the spring of 1999 to produce comparable results on alcohol use among 15 and 16 year olds in 26 European countries and one capital city. As Table 10 below shows, with the exception of Ukraine, boys are more likely than girls to have used alcohol 40 or more times in their lifetime. Without exception, boys are also more likely than girls to have used drunk alcoholic beverages on ten or more occasions in the past 30 days. Binge drinking, consumption of five or more drinks in a row, is more common among boys as well, with the exception of Iceland.

**Table 10. Alcohol use among 15 to 16 year olds in selected European countries, 1999**

Country	Lifetime Use (40 Times or More)			Used 10 Times or More in Last 30 Days			Binge Drinking <sup>1</sup> in Last 30 Days		
	M %	F %	Total %	M %	F %	Total %	M %	F %	Total %
Bulgaria	21	12	16	6	4	5	12	6	11
Croatia	24	10	18	9	3	6	15	7	12
Cyprus	32	12	21	14	4	8	18	8	12
Czech Republic	51	32	41	21	8	14	25	11	17
Denmark	66	53	59	23	13	18	37	22	30
Estonia	27	17	21	5	3	4	18	12	14
Faroe Islands	29	17	23	3	2	4	21	8	15
Finland	21	19	20	2	1	1	21	15	18
France	28	13	20	12	5	8	16	7	12
The former Yugoslav Republic of Macedonia	14	5	9	6	1	3	14	4	9
Greece	54	33	42	19	11	13	13	5	9
Hungary	17	9	13	6	2	5	18	8	12
Iceland	15	14	14	1	1	1	18	15	17
Ireland	41	39	40	18	16	16	32	32	31
Italy	23	13	17	12	4	7	-	9	-
Latvia	24	17	20	4	2	2	19	5	14
Lithuania	29	17	23	9	6	8	12	8	9
Malta	44	29	36	25	16	20	25	23	22
Norway	18	13	16	3	1	3	26	23	24
Poland	35	18	26	12	5	8	41	23	31
Portugal	21	10	15	9	4	6	10	4	6
Romania	27	12	18	7	2	4	9	2	5
Russian Federation (Moscow)	34	26	30	11	5	8	20	12	16

## PREVALENCE: EUROPEAN REGION

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Slovak Republic	31	23	27	9	5	7	12	7	8
Slovenia	29	16	23	10	5	8	29	19	25
Sweden	23	15	19	2	1	2	22	13	17
Ukraine	18	18	18	5	4	5	12	8	10
United Kingdom	51	43	47	17	13	16	33	27	30

Source: Swedish Council for Information on Alcohol and Other Drugs (CAN) web site: [www.can.se](http://www.can.se).

<sup>1</sup>Binge drinking: five or more drinks in a row.

The country-specific summaries below describe other studies that have investigated drinking among young people in the European Region.

**Austria** A survey published in 1994 of more than 3 000 15 year old students found that of boys, 79.3 per cent had tried alcoholic beverages and 52.4 per cent had drunk alcoholic beverages more than 10 times in ninth grade. Of girls, 78.6 per cent had tried alcoholic beverages, and 43.1 per cent had drunk alcoholic beverages more than 10 times in ninth grade (Uhl & Springer 1994). A 1993/1994 WHO study among 15 year old boys and girls showed that 96.2 per cent of boys had tried alcoholic beverages, 40.2 per cent drank alcoholic beverages at least weekly and 45.6 per cent had been drunk at least twice. Of girls, 94.6 per cent had tried alcoholic beverages, 24.9 per cent drank alcoholic beverages at least weekly and 30.4 per cent had been drunk at least twice (WHO/EURO 1996).

**Belgium** A dozen epidemiological studies of drinking patterns were carried out between 1961 and 1984. It was found that the age at which young people first come in contact with alcohol had sharply declined over the years. Working youths consumed more alcohol than students of the same age group. There were also notable regional and sub-regional differences in drinking patterns (linked, for example, with the degree of urbanisation) (Casselmann & Moorthamer 1985).

A survey published in 1990 by the Cancer Programme of the European Commission found that six per cent of boys and three per cent of girls ages 11 and 12 drank weekly, and 18 per cent of boys and 16 per cent of girls between the ages of 13 and 15 drank weekly (Commission of the European Community 1990). A study of Flemish-speaking 15 year olds published in 1993 found that of boys, 92.6 per cent had tried alcoholic beverages, 43.3% drank alcoholic beverages at least weekly, and 31.2 per cent had been drunk at least twice; of girls, 90.7 per cent had tried alcoholic beverages, 24.4 per cent drank alcoholic beverages at least weekly, and 16.1 per cent had been drunk at least twice (WHO/EURO 1996).

A survey on the use of alcohol and drugs among 2 103 young people from age 12 to age 22 in Brussels published in 1994 reported that 52.3 per cent were abstainers (47.2 per cent of males, 57.3 per cent of females), 13.1 per cent drank at least monthly (16.9 per cent of males, 9.4 per cent of females), and 3.6 per cent drank at least weekly (5.7 per cent of males, 1.4 per cent of females). Of the drinkers, at least seven of ten drank beer, one of three adolescents drank it regularly and one of fourteen drank excessively. One of two males drank beer the previous week compared with one of three females. Wine was drunk by 77 per cent of the drinkers, and one of eight adolescents drank it regularly. Of the wine drinkers, 1.2 per cent drank more than nine glasses per week. About four of five alcohol drinkers had drunk spirits in the preceding week. One of 14 drank spirits drank regularly. Males (31.9 per cent) had

drunk spirits more often in the previous week than females (24.9 per cent) (Lambrecht et al. 1996).

**Bulgaria** In a 1993 four-city survey of 14 to 18 year olds, 77 per cent were alcohol drinkers and six to seven per cent drank “often.” One per cent drank daily and 1.2 percent were dependent on alcohol. The average age of first use ranged from 13 to 16 years old (Ferrer et al. 1995). That same year, a WHO-sponsored pilot study of 99 students from age 14 to age 18 in Sofia found that two-thirds drank alcohol and one-fifth drank regularly. Another one-fifth had increased their consumption recently. One-third disapproved of drinking alcohol (Lazarov 1994).

**Czech Republic** In a 1993 school survey of 14 and 16 year olds, 87 per cent and 88 per cent, respectively, had used alcohol in the past year. The majority first used alcohol before the age of 12. This represented an increase in consumption since the 1978 survey (Ferrer et al. 1995).

Another study done in 1993 among 15 year old school children found that 95.4 per cent of boys had tried alcoholic beverages, 38.3 per cent were drinking alcoholic beverages at least once a week, and 35.6 per cent had been drunk at least twice. Among girls, 96.6 per cent had tried alcoholic beverages, 18.5 per cent drank at least weekly, and 19.1 per cent had been drunk two or more times (WHO/EURO 1996).

**Denmark** A WHO study of 15 year old schoolchildren in 1993/94 found that 94.9 per cent of boys had tried alcoholic beverages, 40.1 per cent drank at least once a week, and 64.7 per cent had been drunk at least twice. Of girls, 95.6 per cent had tried alcoholic beverages, 33.4 per cent drank at least once a week, and 66.7 per cent had been drunk at least twice (WHO/EURO 1996). A decade earlier, in 1983, a survey of 4 700 young people from age 13 to 19 found that practically all had had experience with alcohol. Boys consumed approximately twice as much as girls, with children from higher-income families consuming the most (Lybne & Sabroe 1986).

**Estonia** A study carried out in 1991 randomly selected 538 urban and rural families, and also interviewed adolescents from 14 to 16 years of age. The study showed that the proportion of alcohol users, as well as of heavy drinkers, increased significantly with age, and that girls consumed alcohol less frequently and less heavily than did boys (Narusk 1991).

A WHO study for 1993/94 showed that 92.5 per cent of 15 year old boys had tried alcoholic beverages, 13.2 per cent drank alcoholic beverages at least once a week, and 25.8 per cent had been drunk at least twice. Of 15 year old girls, 91.9 per cent had tried alcoholic beverages, 3.3 per cent drank at least once a week, and 9.6 per cent had been drunk at least twice (WHO/EURO 1996).

Several surveys have indicated that younger people in Estonia, unlike their vodka-preferring parents, are more likely to choose from the wide array of beers and other lower-alcohol products now available. A study of young people ages 11 to 15 done between 1992 and 1994 found that 15 percent of 15 year old boys and 8 percent of girls had been drunk, and five and one percent respectively had been drunk between four and ten times in the past month. Estonian children were also far more likely to drink beer than vodka (Kepler & Maser 1996). In another study of ninth and tenth

graders (roughly, 14 and 15 year olds), daily and weekly drinkers were most likely to drink beer and the new “long drinks,” sweet flavoured gins and vodkas with approximately five per cent alcohol (Kardiol Instituut 1994).

**Finland** Further data were available from the ESPAD study in Finland. In that same sample, 21 per cent of the respondents had drunk weekly. About one quarter of the respondents had drunk one to three drinks the last time they had had a drink (defined as equal to 1.5 cl. of pure alcohol). More than half of the boys and a little under half of the girls had consumed at least seven drinks the last time they drank. Approximately 16 per cent of boys had consumed 13 drinks or more, compared to 5 per cent of girls. About 12 per cent of girls and 42 per cent of boys who drink alcohol usually take at least seven drinks at a time (Ahlstrom et al. 1996).

A 1993/94 WHO study of 15 year old schoolchildren found that of boys, 92 per cent had tried alcoholic beverages, 12.9 per cent drank beer weekly, and 52 per cent had been drunk twice. Of girls, 92.3 per cent had tried alcoholic beverages, 5 per cent drank beer weekly, and 51.1 per cent had been drunk twice (WHO/EURO 1996).

Drinking among young people increased markedly between the early 1960s and the early 1970s, but in 1984 their average consumption was less than in 1976, though still higher than in the 1960s. Over the 16-year period, boys of all ages became far more likely to drink until they reached a stage of intoxication (Simpura 1987). By 1992, drinking to intoxication was the norm for both boys and girls. According to a general population survey conducted in that year, the proportion of consumption occurring during occasions leading to a BAC over 0.20 g% for all alcoholic beverage types was highest among the 15 to 19 age group: 65 per cent for females, and 88 per cent for males (Simpura et al. 1995).

**France** In 1995, 65 per cent of young people between the ages of 12 and 18 drank alcohol, compared with 47 per cent in 1991 (Enterprise and Prevention 1996). A survey published in 1990 found that of boys from age 13 to 15, 13 per cent drank alcohol weekly, while six percent of girls in the same age group drank weekly (Commission of the European Community 1990).

A WHO study in 1993/94 of 15 year old boys and girls in the regions of Nancy and Toulouse showed that of boys, 88.9 per cent had tried alcohol, 38 per cent drank alcohol at least once a week, and 23.8 per cent had been drunk at least twice. Of girls, 89.9 per cent had tried alcohol, 17.5 per cent drank alcohol at least once a week, and 12.9 per cent had been drunk at least twice (WHO/EURO 1996).

A 1993 study by INSERM (Institut National de la Santé et de la Recherche Médicale) surveyed 5 357 boys and 5 590 girls between the ages of 11 and 18. Beer was the preferred drink, with hard liquor in second place. Of boys between the ages of 11 and 14, 39 per cent had tried wine, and 1.65 per cent drank it daily; 47 per cent had tried beer, and 1.71 per cent drank it daily; and 24 per cent had tried hard liquor, and 1.72 per cent drank it daily. Of boys from age 15 to 18, 43 per cent had tried wine, and 1.69 per cent drank it daily; 70 per cent had tried beer, and 2.3 per cent drank it daily; and 45 per cent had tried hard liquor, and 1.25 per cent drank it daily. For girls between the ages of 11 and 14, 27 per cent had drunk wine, and 0.45 per cent drank it daily; 52 per cent had tried beer, and 0.52 per cent drank it daily; and 51 per cent had



tried hard liquor, and 0.23 per cent drank it daily. Regional differences were less marked than expected, leading the authors to conclude that European drinking patterns are converging. The authors also discerned a distinct upward trend in alcohol abuse between 1983 and 1991, which along with a doubling in the consumption of distilled spirits suggested that young people were using alcohol as “a private vehicle for a trip, just as heroin or LSD for drug addicts” (Arvers & Choquet 1999:152).

**Germany** A 1993 study in the region of Nordrhein Westfalen found that 90.6 per cent of boys had tried alcohol by the age of 15. More than 25 per cent drank beer at least weekly and 33.7 per cent had been drunk at least twice. Of girls, 93.8 per cent had tried alcohol by the age of 15, 17.9 per cent drank beer at least weekly and 26.4 per cent had been drunk at least twice (WHO/EURO 1996).

A survey conducted in Munich in 1995 interviewed 3 021 persons between the ages of 14 and 24 in order to assess the prevalence of DSM-IV alcohol abuse and alcohol dependence. Lifetime prevalence of use, defined as 24 or more standard drinks (nine grams of absolute alcohol) in a year, increased with age and was higher among men than women in every age group except the youngest. Of 14 and 15 year olds, 14.5 per cent of males and 13.9 per cent of females fit the study’s definition for prevalence; the same was true of 56.4 and 47.0 per cent of 16 and 17 year old males and females, and 79.6 and 66.3 per cent of 18 to 21 year old men and women. Regarding DSM-IV diagnostic categories, 1.7 per cent of men and 0.7 per cent of women fit the diagnosis of alcohol abuse without dependence from age 14 to 15; 11.3 per cent of men and 6.6 per cent of women from age 16 to 17; and 17.8 per cent of men and 4.9 per cent of women from age 18 to 21. A diagnosis of alcohol dependence would have been appropriate for 0.9 per cent of men and 1.4 per cent of women aged 14 to 15; 5.8 per cent of men and 2.1 per cent of women from age 16 to 17; and 10.2 per cent of men and 3.2 per cent of women from ages 18 to 21. Both men and women had a significantly higher risk for an alcohol diagnosis if they began drinking before age 15 (Nelson & Wittchen 1998).

**Greece** In March and April 1993 a study that was very similar to those conducted in 26 countries under the auspices of the ESPAD project (Hibell et al. 1997) surveyed 2 617 15 year olds (1 205 boys and 1 412 girls). In this survey, 95 per cent of the respondents had tried alcohol in their lifetime (96 per cent of boys and 95 per cent of girls); 91 per cent had drunk an alcoholic beverage in the last 12 months (92 per cent of boys and 89 per cent of girls); and 74 per cent had used alcohol in the previous 30 days (79 per cent of boys, 69 per cent of girls). Thirty-four per cent had drunk to intoxication in the last 12 months (34 per cent of boys, 33 per cent of girls); and 16 per cent had been drunk in the last 30 days (16 per cent of boys, 15 per cent of girls). Seventeen per cent (19 per cent of boys, 15 per cent of girls) had been drunk by the age of 13 (Hibell et al. 1997).

A 1993/94 study found that 83.1 per cent of boys had tried alcohol by age 15, 8.3 per cent drank alcoholic beverages at least weekly, and 46.3 per cent had been drunk at least twice. Of girls, 87.1 per cent had tried alcohol by age 15, 7.5 per cent drank alcoholic beverages at least weekly, and 46.4 per cent had been drunk at least twice (WHO/EURO 1996).

**Hungary** Based on a sample of 17 055 secondary school students, most of whom were age 16, a 1995 survey concluded that 21.4 per cent of boys and 7.4 per cent of girls had had five or more drinks on three or more occasions during the past 30 days. Approximately 44.3 per cent of boys and 54.5 per cent of girls had had no alcoholic drinks during the past 30 days (Elekes & Paksi 1996).

A 1993/94 sample of 15 year olds found that 93.3 per cent of boys and 93.6 per cent of girls had tried alcoholic beverages, 22.8 per cent of boys and 13.4 per cent of girls drank at least once a week, and 35.5 per cent of boys and 19.7 per cent of girls had been drunk at least twice (WHO/EURO 1996).

**Iceland** Questionnaires were sent to random samples of students who were 15 and 16, 17 and 18, and 19 and 20 years of age, in 1984 and 1986 (nearly 2 000 responses each time). Alcoholic beverages were used by 85 per cent and 87 per cent of students in the respective years. Each time about 90 per cent of the drinkers said they had often been intoxicated and a majority had experienced a loss of consciousness in connection with drinking (Briem 1985, 1988, 1990).

**Ireland** A 1990 survey showed that none of the 11 and 12 year old boys drank alcohol weekly, compared with one per cent of girls. In the 13- to 15-year age bracket, the percentage of girls drinking weekly remained at one, while the percentage of boys jumped to two (Commission of the European Union 1990). Surveys of comparable samples of 2 000 post-primary students in Dublin in 1984 and 1991 indicated that among boys the percentage who had ever drunk alcoholic beverages rose from 74 per cent to 83 per cent, while girls remained stable at 57 per cent. In 1991 the percentage of boys who were regular drinkers by the age of 15 was 36, compared with 22 per cent of girls. By age 17, 63 per cent of boys and 40 per cent of girls were regular drinkers (Usher 1994).

**Israel** A cohort of 1 276 male and female undergraduate students was surveyed at a major university. Among the study participants, 21 per cent reported regular, weekly use of alcohol. Men were much more inclined to drink on a weekly basis than women, and seven per cent of the students who used alcohol regularly did so on a daily basis (Isralowitz et al. 1996).

Results of a WHO study of schoolchildren in 1993/94 indicated that 68.2 per cent of boys had tried alcoholic beverages, 22.8 per cent drank at least weekly, and 8.1 per cent had been drunk at least twice. Of girls, 52.6 per cent had tried alcoholic beverages, 10.4 per cent drank at least weekly, and 5.6 per cent had been drunk at least twice (WHO/EURO 1996).

**Italy** Data from a 1990 survey showed that at age 11 to 12 years, 34 per cent of boys and 18 per cent of girls drank alcohol weekly. At age 13 to 15 years, 39 per cent of boys and 21 per cent of girls drank alcohol weekly (Commission of Europe 1990).

**Latvia** A 1993/94 study among 15 year old boys and girls showed that 93.2 per cent of boys and 93.1 per cent of girls had tried alcoholic beverages. Approximately 16 per cent of boys and 3.2 per cent of girls drank alcohol at least weekly (WHO/EURO 1996).

**Lithuania** A 1993/94 study among 15 and 16 year old boys and girls showed that 95.3 per cent of boys and 95.1 per cent of girls had tried alcoholic beverages, while 13.8 per cent of boys and 5.7 per cent of girls drank alcohol at least weekly (WHO/EURO 1996). In a 1984 higher school survey of two cities, 11 per cent of males and 6.4 per cent of females drank twice or more weekly; while a 1985 school survey of 15 to 16 year olds showed that 80 per cent had ever used alcohol, 20 per cent had drunk alcohol in the previous month, and 3.3 per cent had drunk in the previous week (Ferrer et al. 1995).

**Luxembourg** A 1990 EC survey found that five per cent of 11 to 12 year old boys and 16 per cent of 13 to 15 year old boys drank alcohol weekly. None of the 11 to 12 year old girls, and four per cent of 13 to 15 year old girls drank alcohol weekly (WHO/EURO 1996).

**Netherlands (the)** A 1996 national survey of 9 957 schoolchildren between the ages of 10 and 18 from primary and secondary schools found an increase in prevalence in all sectors of substance abuse, including the fact that 30 per cent had drunk at least five glasses of alcohol on a recent occasion (Zwart WM et al. 1997).

In a 1992 survey of more than 10 000 school pupils aged 10 years and over, 64 per cent had drunk alcohol by the age of 12, down from 69 per cent in 1988. In 1992, 28 per cent had consumed at least five glasses of alcohol on their last drinking occasion, up from 12 per cent in 1984. In all age groups, boys drank a much more than girls (Van Reek et al. 1994).

Data from a 1990 survey showed that 11 per cent of boys from age 13 to age 15 drank alcohol weekly, compared with 7 per cent of girls in the same age group (Commission of Europe 1990).

**Norway** A 1993 study among 15 year old boys and girls found that 80.1 per cent of boys have tried alcohol, 9.5 per cent drink alcohol at least weekly, and 30.4 per cent have been drunk at least twice. Of girls, 79.3 per cent have tried alcohol, 6.8 per cent drink alcohol at least weekly, and 29.1 per cent have been drunk at least twice (WHO/EURO 1996).

**Poland** Studies of young people in the early 1980s showed that, by the age of 14, 50 per cent drank periodically and that, by the age of 15 to 19 years, the number of boys who drink had increased by 100 per cent (Moser 1992). A 1993/94 survey among 15 year old boys and girls found that almost 90 per cent of boys and 87 per cent of girls had tried alcoholic beverages. Twenty-two per cent of boys and 9.2 per cent of girls drank at least weekly; and 33 per cent of boys had been drunk at least twice, compared with 18 per cent of girls (WHO/EURO 1996).

**Portugal** In a series of surveys in public schools in various regions between 1987 and 1993, lifetime prevalence of alcohol use among 12 to 18 year olds was estimated at approximately 60 per cent. Prevalence of use in the previous 30 days varied between 27 and 42 per cent (Muchado-Rodrigues & Mendes 1994). A 1990 survey showed that 7 per cent of 11 and 12 year old boys, and 19 per cent of boys between the ages of 13 and 15 drank alcohol weekly. Of girls, three per cent of 11 and 12 year

olds and seven per cent of those between the ages of 13 and 15 drank alcohol weekly (Commission of the European Community 1990).

**Russian Federation** A pilot sociological study surveyed 151 schoolchildren in St. Petersburg between the ages of 9 and 17 (fifth to eleventh forms) in 1997. Overall, 30 per cent reported occasional use of alcohol, ten per cent of those between the ages of 9 and 14, and 53 per cent of those between 15 and 17 years of age (Korchagina 1999).

Results of a study of 15 year old boys and girls in the region of St. Petersburg for 1993/94 indicated that 80 per cent of boys had tried alcoholic beverages, 17.3 per cent drank at least once a week, and 20.8 per cent had been drunk at least twice. Of girls, 83.5 per cent had tried alcoholic beverages, 6.2 per cent drank at least once a week, and 12.3 per cent had been drunk at least twice (WHO/EURO 1996).

**Slovakia** Surveys in 1995 and 1996 under the auspices of the ESPAD project indicate that the percentage of secondary school students in Bratislava who had drunk alcohol during the 30 days preceding the interview increased from 60.7 to 61.8 among boys and from 59.2 to 65.1 among girls over the years of the study (ESPAD 1997). In a 1993 survey of 8, 10 and 12 year old primary school students, 51 per cent, 61 per cent and 73 per cent respectively had tried wine. About 71 per cent of each age group had tried beer (Ferrer et al. 1993).

A 1993/94 study of 15 year old boys and girls found that 95.4 per cent of boys had tried alcohol, 33 per cent drank at least weekly, and 46.3 per cent had been drunk at least twice. Of girls, 93 per cent had tried alcohol, 10.3 per cent drank at least weekly, and 0.2 per cent had been drunk at least twice (WHO/EURO 1996).

**Slovenia** Results of a study published in 1994 on the drinking habits of 941 students from age 12 to age 15 in the community of Litija showed that 51.3 per cent of the sample drank alcohol more than once a year, 24.6 per cent drank more than once a month, 14.6 per cent drank more than once a week, 3.5 per cent drank every day, and 6 per cent did not drink alcohol. There were no statistically significant differences in alcohol use by sex or by age (Kolsek 1994).

A 1990 school survey found that 5.5 per cent of 16 year olds and 9.5 per cent of 18 year olds drank several times a week (Ferrer et al. 1995).

**Spain** A 1996 survey of a random sample of 35 10th grade classrooms (958 students whose mean age was 15.8 years old), stratified by academic or vocational studies, public or private school, neighbourhood socioeconomic level, and school size, found that 31 per cent drank alcohol weekly (Diez et al. 1998).

A survey published in 1990 reported that three per cent of boys and one per cent of girls 11 or 12 years of age, and 22 per cent of boys and 17 per cent of girls 13 to 15 years old drank alcohol weekly (Commission of the European Community 1990). A WHO study of schoolchildren in 1993/94 found that more than 90 per cent of 15 year old boys and girls drank alcohol at least once a week, and that 22.8 per cent of boys and 19.1 per cent of girls had been drunk at least once (WHO/EURO 1996).

**Sweden** National surveys of schoolchildren conducted annually from 1971 to 1998 have shown that while the proportion of alcohol consumers in the 15 and 16 year old age group is not increasing, the average quantity consumed has been rising in recent years. Proportions of frequent intoxication and binge drinking were highest in the 1970s, but have increased steadily during the 1990s. From 1989 to 1998 the proportion of boys reporting drinking in the past week grew from 29 to 37 per cent, while the proportion of girls rose from 24 to 32 per cent. In 1998, 50 per cent of the girls and 43 per cent of the boys either abstained or drank less than 0.5 litres of alcohol per month, the equivalent of 1.5 pints of beer a month or less. Beer accounted for more than half of total consumption among boys, and the plurality of consumption among girls (41 per cent), followed by spirits (31 per cent and 36 per cent of total consumption for boys and girls respectively). Of those who drank, most (more than 40 per cent of boys and approximately 38 per cent of girls) drink until they felt intoxicated on every or nearly every drinking occasion. Mean age of first intoxication has remained steady from 1989 to 1998 at approximately 13.6 years for boys and 13.8 years for girls (Andersson et al. 1999).

A 1993/94 survey of 15 year olds showed that 94 per cent had tried alcoholic beverages. Nineteen per cent of boys and 11.3 per cent of girls drank weekly, and 27.4 per cent of boys and 22.4 per cent of girls had been drunk at least twice (WHO/EURO 1996).

**Switzerland** Data reported in 1997 indicated that eight per cent of 11 to 16 year olds drank beer at least once per week, two per cent drank wine at least once per week, three per cent drank spirits and four per cent drank aperitifs. Nearly three per cent of those from age 11 to age 16 drank alcohol daily, and four per cent drank to excess regularly. Boys were more likely to drink daily than girls, but whereas drinking rates remained stable among young males, for females the rate nearly doubled since 1978. In contrast to adults, the beverage of choice among young people is beer (Müller et al. 1997).

Surveys of young people reported on in 1994 indicated that 60 per cent of those between the ages of 11 and 12 and 90 per cent of those between 15 and 16 had had some experience of alcohol. About 25 per cent of 10 year old boys and more than 40 per cent of 15 to 19 year old boys were drinking alcohol at least weekly. Seven per cent of 10 year old girls and 25 per cent of girls from age 15 to age 19 drank at least weekly. Five per cent of boys aged 15 to 19 reported having at least one drink per day (Schmid 1994).

**The Former Yugoslav Republic of Macedonia** Surveys in 1994 in second level schools in Skopje, Bitola, Kavadarci and other towns found that 54 per cent of adolescents between the ages of 14 and 18 used alcoholic beverages periodically, while a 1993 survey indicated that most Macedonians had their first contact with alcohol at the age of seven (Jovev 1994).

**United Kingdom of Great Britain and Northern Ireland (the)** According to a decade-long survey of more than 8 000 boys and girls published in 1997, four children in five started drinking alcohol at home by the age of 14 or 15. By the tenth year of compulsory schooling, male drinkers averaged more than 10 units of alcohol a week – equivalent to 5 pints of beer or 10 measures of spirits – and female drinkers

averaged 10 units. Three per cent of 12 or 13 year old boys and more than seven per cent of 14 or 15 year old boys reported drinking more than 21 units of alcohol per week. Beer and lager were the most common alcoholic beverages for boys, while wine was the most popular among girls. Alcopops were the second most common for both sexes. Among 14 to 15 year olds, 76 per cent of boys and 79 per cent of girls said they drank “to get drunk” (Carvel 1997).

A two-year prospective study of young people 14 and 15 years of age in the North West of England also found that increasingly young people were drinking for a “big bang” similar to that which could be gained from illicit drug use. While the vast majority of both 14 and 15 year olds had tried alcohol (90 and 93 per cent respectively), the prevalence of heavy or “sessional” drinking (11 to 40 units – the equivalent of between five and twenty pints of beer) rose from 22 to 31 per cent of the sample. The study concluded that although mean consumption of alcohol did not change, the distribution of consumption did, with light drinkers drinking less while a growing number of young people moved to a pattern of regularly drinking to intoxication (Measham 1996).

### **Southeast Asian Region**

Despite the fact that it is home to more than a quarter of the world’s population, there have been very few surveys done of drinking among young people in the Southeast Asia Region, and there were no data available for the largest country, India, after the early 1980s. Data from 20 years ago should be viewed with caution, since particularly in the last decade India has been the site of numerous changes in alcohol availability. Several states have experimented with prohibition, while the national government has removed many of the market controls on the alcohol trade. These changes in availability have most likely influenced drinking patterns among young people, and monitoring of the changing drinking patterns is sorely needed.



**India** There were no recent data available. Studies from late 1970s and early 1980s found that 12.7 per cent of high school students, 32.6 per cent of university students, and 31.6 per cent of non-student young people were using alcohol. Medical students in the same era reported much higher prevalence of between 40 and 60 per cent (Bergman & Brismar 1994). A large study of college students conducted in seven Indian cities 20 years ago found that between 9.3 and 15.1 per cent were current drinkers (Mohan 1981).

**Nepal** Surveys of school and college students have found that between 3.5 per cent and 25 per cent have consumed alcohol (Saxena 1997).

**Sri Lanka** A 1992 study surveyed 8 058 students between the ages of 12 and 20 in six districts. Between 19 and 29 per cent had ever used alcohol, and between 3.9 and 17.2 per cent were current users. In four of the districts, more than 70 per cent of males used alcohol at least once a month, usually at parties. More than a quarter of the male users had begun drinking by age 11. Most of the users were male (Alcohol and Drug Information Centre 1993).

**Thailand** In a sample of 564 juvenile delinquent boys in Metta, Muthita, Karuna and Ubekkha Homes and 123 juvenile delinquent girls in Pranee Home, regular drinking of alcohol by the father was reported by 60 per cent and 26 per cent, respectively. One third of the sample reported ever drinking alcohol, and "liquor dependence" was reported by five per cent of boys. The age of the sample ranged from 8 to 24 years (Jamthavorn VDUPS 1996).

### Western Pacific Region

In the developed countries of the Western Pacific Region, prevalence of alcohol use increases with age. Males are generally more likely to drink and to drink heavily than females. Japan offers a case study of the increase in alcohol consumption generally and among young people in particular as economic development has occurred in the past four decades. There is little survey information available for much of the region: Table 11 below summarises some of the survey findings.



**Table 11. Summary of survey findings, Western Pacific Region**

Country	Population	Year	Lifetime use	Current use	Heavy use	Notes	Source
Australia	Ages 14 to 19	1998		66	23	Current is use in past year; heavy is seven or more drinks at least once per week	NEACA 2000
China	High school seniors, Weifang	1997	84.5 (m) 54.9 (f)				Guang-Ren 1997
Japan	Junior high school students Senior high school students	1996	60 70		5 10	Heavy is one or more times per week	Suzuki et al. 2000
Malaysia	Ages 13 to 15	1988		9	1	Current is less than monthly; heavy is daily	Hoo & Navaratnam 1988
New Zealand	Ages 14 to 18	1997			28	Heavy is five or more drinks in a row in the last fortnight	Boyd 1998
New Zealand	15 year olds in Christchurch	1994	71.6	44.3	6.7	Current is at least monthly use, heavy is	Fergusson et al. 1994

## PREVALENCE: WESTERN PACIFIC REGION

						weekly use	
Papua New Guinea	High school, average age 16	mid-1980s	39 (m) 14 (f)				Marshall 1999
Philippines	Urban high school students	1989-1990	37.8				Mendoza & Ponce 1991
	Rural high school students		34.5				

**Australia** According to the 1998 National Drug Strategy Household Survey, more than 66 per cent of those between the ages of 14 and 19 consumed alcohol in the past 12 months, while 23 per cent consumed seven or more standard drinks at least once per week (compared with 10 per cent of adults) (National Expert Committee on Alcohol [NEACA] 2000).

The 1995 National Household Survey found that males from age 14 to age 24 and females from age 20 to age 24 were more likely to drink to excess than males and females in any other age groups (Drugs of Dependence Branch 1996). In 1989, the National Heart Foundation reported that 12 per cent of male drinkers between the ages of 20 and 24 drank nine drinks or more on a drinking day, compared to only 3 per cent of men over 45. Twenty per cent of women from age 20 to age 24 drank five or more drinks per drinking day, compared to two per cent of women over 50 (Brazeau & Burr 1993).

In 1997, the University of Queensland Psychology Department conducted a study of 2 000 Queensland high school students between Years 8 (13 to 14 years of age) and 11 (16 to 17 years of age). The study found that boys were drinking twice as much alcohol as girls by the time they reached Year 11, despite consuming equal amounts in Year 8 (Courier Mail 1997).

A national survey of young drinkers gathered information from young people in school Years 7 through 12 in 1990. At age 12, 8 per cent of girls and 13 per cent of boys had had at least one drink in the past week. By age 17, 51 per cent of boys and 46 per cent of girls were drinking weekly. Among the 17 year olds, boys averaged 8.9 drinks per week, and girls 5.7 drinks per week (Hill et al. 1993).

Drinking among young people appears to have declined in the 1980s. Among secondary school students, a 1989 survey of students in New South Wales aged 12 to 16 found that 22 per cent of males drank weekly, and 26 per cent had had five or more drinks in a row at least once in the previous fortnight. This compared to 34 per cent weekly consumption and 27 per cent binge drinking in 1983. Eighteen per cent of girls drank weekly and 15 per cent were binge drinkers, down from 32 per cent weekly drinkers and 24 per cent binge drinkers in 1983 (Department of Health, Housing and Community Services 1996).

In a 1989 survey of 10 000 secondary students in Victoria, 35 per cent of seniors stated that they usually drank at least five drinks per drinking occasion, and 9 per cent had consumed five or more drinks more than once in the previous two weeks. Sixty per cent of those in Year 7 (the youngest level) had never consumed alcohol, compared to 44 per cent in a 1985 survey (Brazeau & Burr 1993).



**China** A health survey of 445 seniors at a high school in Weifang found that 83.5 per cent of boys and 54.9 per cent of girls consumed alcohol (Guang-Ren 1997).

A study designed to assess patterns of alcohol use and attitudes towards alcohol problems among Chinese adolescents surveyed sixth, eighth and tenth grade adolescents (spanning the ages from approximately 11 to 16). The study found that by the 10th grade, more than 80 per cent of the students had tried alcohol. A large percentage began using alcohol prior to the sixth grade (age 11 or 12). Alcohol use increased with age. More males reported use than females in every category. Sixty-three per cent of the students had tried beer, 54 per cent wine, and 11 per cent distilled spirits (Li et al. 1996).

Questionnaires about alcohol use collected from a sample of 190 students between the ages of 18 and 35 (mean age of 21.1) at two universities in Nanning revealed that men consumed more and were more likely to report alcohol-related problems than women. Beer was the alcoholic beverage of choice for both genders. Of males, 10 per cent reported daily use, 19.1 per cent reported weekly use, 33.6 per cent reported monthly use, and 8.2 per cent were abstainers. Of females, 2.6 per cent reported daily use, 7.6 per cent reported weekly use, 24.4 per cent reported monthly use, and 52.6 per cent were abstainers (Lu et al. 1997).

**Japan** The first national survey focusing solely on Japanese adolescent drinking behaviours was conducted in 1996. 42 183 junior high school and 72 396 senior high school students from randomly selected schools representing all areas of the country responded to questionnaires. Among junior high school students, 60 per cent reported having drinking experiences, and five per cent drank one or more times per week. Seventy per cent of senior high school students had tried alcohol, while ten per cent drank one or more times weekly. Although junior high school students reported that they usually drank with their parents and in small amounts, senior high school students drank in a variety of settings and in larger amounts. Drinking was assessed to have increased among adolescents in the past 20 years (Suzuki et al. 2000).

In a 1993 national survey, it was estimated that over 80 per cent of school children between 13 and 17 drink, 55 per cent of them to intoxication or unconsciousness (Brazeau & Burr 1993). A 1990 survey of 1 062 students of second year high school found that 24 per cent of males and 17 per cent of females abstained from alcohol. Of males, 13.3 per cent were determined to be alcohol mis-users, while 0.9 per cent drank in an alcohol dependent fashion. For females, the figures were 11.7 per cent and 1.0 per cent respectively (Suzuki et al. 1991).

**Malaysia** A 1988 study of 1 614 secondary school pupils from age 13 to age 15 found that the vast majority never drank alcohol, 1 per cent drank daily, an additional 1.3 per cent drank weekly, and 9 per cent drank less than once a month (Hoo & Navaratnam 1988).

**Micronesia (Federated States of)** In a survey of a sample of the general population on Moen Island, Truk in 1985, more than half of 15 to 19 year olds did not drink, but in the age cohort from 20 to 24, the great majority drank (Marshall 1987).

**New Zealand** The Alcohol Advisory Council of New Zealand recently studied the drinking habits of teenagers (1997). It was found that in a survey of 500 New Zealanders between the ages of 14 and 18, 28 per cent reported binge drinking (five or more drinks in a row) in the past fortnight. Thirty-four per cent reported binge drinking the last time they drank (Boyd 1998).

In a 1995 general population survey of persons from age 14 to age 65, males ages 18 to 24 years were over-represented in the heaviest drinking 10 per cent, comprising 33 per cent of the heaviest drinkers but only 9 per cent of the total survey. Fifty per cent of females who drank heavily (in the top 10 per cent) were also in the 18 to 24 age group (Wyllie et al. 1996).

A 1994 report reviewed findings from a cohort of 965 Christchurch children studied annually from birth. At the age of 15 a questionnaire revealed that 28.4 per cent did not drink during the previous year, 23.9 per cent drank once or twice during the previous year, 20.4 per cent drank once a month, and 6.7 per cent drank at least once a week. Over half the respondents said that a typical drinking session involved the consumption of at least 30 grams of pure alcohol (Fergusson et al. 1994).

**Papua New Guinea** A survey done in the mid-1980s of the drinking histories and consumption habits of 677 Papua New Guinea high school students with an average age of 16 years found that 39 per cent of males but only 14 per cent of females had tried drinking (Marshall 1999).

**Philippines** From 1989 to 1990, a nation wide survey among 15 082 high school and first and second year college students from all 13 regions of the country was conducted by the Dangerous Drug Board and the University of the Philippines College of Public Health. About 36 per cent of high school students and 34.9 per cent of college students had used alcohol in their lifetime. Of high school students, 2.3 per cent had used alcohol that same day, 5.6 per cent in the past 2 to 7 days, 5 per cent in the past 8 to 30 days, 5.7 per cent in the past 31 to 365 days, and 11.2 per cent had last used alcohol more than a year ago. Of college students, 3.7 per cent had used alcohol that same day, 16.2 per cent in the past 2 to 7 days, 14 per cent in the past 8 to 30 days, 10.6 per cent in the past 31 to 365 days, and 18.4 per cent had last used alcohol more than a year ago. Urban high school students showed a slightly higher lifetime prevalence of alcohol use than rural students (37.8 per cent compared with 34.5 per cent). Among college students, however, 51.3 per cent of rural students had ever used alcohol, compared with 30.8 per cent of urban students. Male and female lifetime prevalence rates were identical among high school students. Among college students, female lifetime prevalence rates were 35.6 per cent compared with 34.3 per cent for males (Mendoza & Ponce 1991).

**Viet Nam** According to information sent to WHO in 1998, epidemiological surveys have been carried out in 21 sites, including rural, urban and mountainous areas covering a total population of 80 892. Most of those who eventually abused or became dependent on alcohol began drinking between the ages of 21 and 30. Initiation in adolescence was rare. White wine was the most commonly used beverage, followed by beer. Abusers tended to drink frequently. From 50 to 100 per cent reported drinking daily, and most reported drinking with evening meals (Tran 1998).

### **Monitoring**

As the above sections on prevalence and problems suggest, there are myriad gaps in the information available to assess the level and trends of alcohol use and related harm among young people. WHO's recently published *International Guide for Monitoring Alcohol Consumption and Harm* (WHO 2000) stresses the need for individual countries to develop their own capacity and empirical base for national alcohol monitoring. The guidelines are flexible enough to permit customisation for local input and assumptions, but provide sufficient standardisation to facilitate the production of internationally comparable data.

The recommendations are structured to suit the resources available in Member States for monitoring of health problems. At a minimum, access to reliable mortality data using the first three digits of the ICD (International Classification of Diseases) diagnostic categories will permit recording of a small number of alcohol-related causes of death. If further resources were available, more comprehensive approaches would include the addition of two or three questions regarding alcohol in national health surveys, ICD coding to four digits, and reliable data on the number and timing of road crashes. Finally, optimal monitoring would include the capacity both to convert mortality and morbidity data into annual estimates of Person Years of Life Lost (PYLLs) and Disability Adjusted Life Years (DALYs), and to conduct detailed national alcohol surveys as well as estimate the full economic impact of alcohol on the national economy.

### **Policies**

Numerous approaches have attempted to alleviate alcohol-related problems among young people. Perhaps most widespread have been the use of one or more of a variety of educational methods, often in school settings. Whether seeking to change attitudes or levels of knowledge about alcohol use and consequences, to improve young people's ability to resist pressures to drink, or to give a more accurate picture of how many young people actually drink and thereby change the norms of drinking among young people, these approaches have generally shown mixed results at best. Evaluations have found that in some cases they may result in changes in beliefs and attitudes, but little if any change in actual behaviours around drinking (Paglia & Room 1998; Grube 1998).

An area which has been less explored is that of brief interventions or advice for young people with hazardous levels of alcohol consumption. In the adult population, brief interventions have been proved to be effective in reducing levels of alcohol consumption and related harm in both dependent and non-dependent populations (US Department of Health and Human Services 2000b). These do not require specialist professionals and can be integrated in primary health care settings. These services, however, need to be young people-friendly and provide wide access to them.

Studies with college students (Marlatt et al. 1995) and senior high school students (Marlatt et al. 1998) in the US have tested the efficacy of brief interventions with positive results.

Numerous evaluation research studies have found that changing certain public policies results in significant effects both on young people's behaviours and on negative outcomes of alcohol consumption. Evaluation of full-scale community-level intervention, including community mobilisation and media advocacy aimed at supporting changes in policies on drinking and driving, access and sales of alcohol to young people, and general control over and training regarding how and where alcohol may be made available, has shown very promising results (Holder et al. 2000).

There is also strong evidence for the impact of specific policy changes on young people's drinking behaviour and resulting harms. Perhaps the most common policy approach to preventing alcohol problems among young people is the setting of a legal minimum age for purchase or consumption. Several studies, most undertaken in North America, have indicated that such restrictions are effective at reducing motor vehicle crash fatalities among young people, even at relatively low levels of enforcement (Edwards et al. 1994; Wagenaar & Wolfson 1995). More recent work in the USA has also found a link between the minimum legal drinking age and incidence of suicide among young people. Suicide rates were eight per cent higher among 18 to 20 year olds in states with a legal drinking age of 18 than in states with a legal drinking age of 21 (Birckmayer 1999).

At least 67 countries have some kind of minimum age legislation in place. The most common minimum age for legal purchase of alcoholic beverages is 18, although at least eight countries require drinkers to wait until age 21, while 15 permit drinking at age 16. Germany and Switzerland permit purchase of fermented beverages at age 16, but drinkers must be 18 to buy distilled spirits.

**Table 12. Examples of countries with laws that set minimum ages for alcohol purchase or consumption**

Country	Age	Legislation
Argentina	18	Bans consumption
Australia	18	Bans purchase and sales
Austria	18	For consuming spirits in public in all 9 federal states; in 8 federal states age limit for drinking wine and beer in public is 16; in one, 15
Belarus	21	Bans purchase of alcohol
Belgium	16	Bans purchase of alcohol
Bhutan	18	Bans sale of alcohol
Brazil	18	Bans consumption
Bulgaria	18	Bans purchase of alcohol
Canada	19	Exceptions: 18 in Quebec, Manitoba, Alberta
Chile	21	Bans consumption
Colombia	18	Bans consumption
Cook Islands	18	Bans sale or other supply
Croatia	18	Bans purchase
Czech Republic	18	Bans purchase
Denmark	18	Bans purchase in restaurants and bars
Egypt	21	Bans consumption
Estonia	18	Bans purchase
Fiji	18	Bans possession or consumption in public or in licensed premises
Finland	18	Bans purchase
France	16	Bans purchase
Gambia	16	Bans sales
Greece	18	Bans purchase in public places such as bars and discos

## POLICIES

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Honduras	21	Bans consumption
Iceland	20	Bans purchase
India	18	Bans sale
Israel	18	Bans sale
Italy	16	Bans sale
Japan	20	Bans consumption and service in public
Kenya	18	Bans sale
Kyrgyzstan	18	Bans purchase
Latvia	18	Bans purchase
Lithuania	18	Bans purchase
Luxembourg	16	Bans purchase
Malta	16	Bans purchase
Mexico	18	Bans sales
Morocco	16	Bans sales
Mozambique	18	Bans purchase
Netherlands	18	Bans purchase; 16 for buying beer or wine
New Zealand	18	Bans purchase, sale, and supply
Norway	20	Bans purchase; 18 for buying beer or wine
Panama	18	Bans consumption
Peru	18	Bans consumption.
Poland	18	Bans purchase
Republic of Moldova	18	No further information available
Romania	18	Bans purchase
Russian Federation	18	Bans purchase.
Samoa	21	Bans possession or consumption on licensed premises, in any other public place
Seychelles	18	Bans purchase
Slovakia	18	Bans purchase
Slovenia	18	Bans consumption in restaurants and bars; no age limit for purchase in shops
Solomon Islands	21	Bans sales or other supply
South Africa	18	Bans sales
Spain	16	Bans purchase; 18 in some regions
Sri Lanka	18	Bans consumption
Sweden	20	Bans purchase in state liquor stores; 18 for purchase in restaurants and purchase of medium strength beer sold in grocery stores
Switzerland	18	Bans sale or purchase of distilled beverages; 16 for fermented beverages
Thailand	17	Bans purchase
The former Yugoslav Republic of Macedonia	16	Bans purchase
Tonga	18	Bans possession or consumption on licensed premises or in other public place
Trinidad and Tobago	16	Bans consumption
Turkey	18	Bans purchase
Turkmenistan	18	Bans purchase
Ukraine	21	Bans purchase
United Kingdom	18	Bans purchase; possible to consume some alcoholic beverages in bars or restaurants at 16
United Republic of Tanzania	16	Bans presence on premises where alcohol is served
United States of America	21	Details vary by state
Uruguay	18	Bans sale

Another policy approach that has shown evidence of effectiveness in reducing alcohol-related problems among youth is taxation. Because young drinkers tend to be

on limited budgets, their alcohol consumption is more sensitive to price changes. Increases in alcohol taxes in some developed countries have been shown to be effective in reducing harmful consequences of drinking such as traffic casualties, cirrhosis deaths, and violence (Cook 1981; Cook & Moore 1993). US researchers have found a significant relationship between beer tax increases and decreases in gonorrhoea rates among 15 to 19 and 20 to 24 year olds, suggesting that this policy may be effective in reducing unsafe sexual practices among young people (Harrison & Kassler 2000).

### **Summary and recommendations**

- Alcoholic beverage marketers have intensified their targeting of young drinkers in recent years, introducing an array of inexpensive new products, such as alcopops, alcoholic “energy” drinks, pre-mixed cocktails, and so on, with recipes and packaging designed to appeal to young people.
- At the same time, beverage preferences among young drinkers, at least in the developed countries where there is evidence, appear to be converging on heavily marketed and inexpensive products such as beer and cider, as well as the products mentioned above.
- There is evidence that young people are starting to drink at earlier ages. Longitudinal studies have found that the earlier young people start drinking, the more likely they are to experience alcohol-related injury and alcohol dependence later in life.
- Alcohol use may also cause physiological harm to young people. There is no evidence that alcohol use has any health benefits for young people.
- The patterns of alcohol use among young people in developed countries lead to a number of negative consequences, including alcohol-related motor vehicle crashes, homicides, suicides and drownings, that play a significant role in mortality statistics. The impact of these drinking patterns on youth mortality and morbidity as they spread into developing countries is as yet unknown, but likely to be of equivalent or greater magnitude as a result of the relative lack of health care services and other mitigating or protective factors.
- Marketing has played a critical role in the global convergence of patterns of alcohol use. In developed and developing countries, marketing activities include contests, games, and cartoons on world-wide web pages; use of popular music and the issue of alcohol-branded CD’s; promotions in hip clubs and magazines oriented to young people; sponsorship of sporting events; and the creation of alcohol-branded CD and comic books stores.
- Such marketing activities in developing countries diffuse in an environment with few of the health and safety protections available in developed countries.
- Boys are more likely than girls to drink and to drink heavily, except in several European countries, where levels of drinking among young females have risen to or surpassed those among young males.

- Trend data on drinking among young people in developing countries is relatively rare. Studies point to an increase in drinking in Brazil, Chile and Mexico, especially among young women. In Japan, drinking among adolescents reportedly increased along with rapid economic growth.
- Educational approaches have shown little effectiveness in reducing or preventing youth drinking and related consequences.
- The effectiveness of brief interventions for young people, in primary care settings as well as other places to which young people have easy access, needs to be further investigated.
- Experimental and evaluation research have found that policy approaches, including minimum drinking age, higher taxes, and regulation of marketing, can be effective.

These findings should be a powerful impetus for action world-wide. It is critical that countries begin to monitor alcohol use and consequences among young people, and WHO recommends that Member States use the *International Guidelines for Monitoring Alcohol Consumption and Related Harm* (WHO 2000) to begin to do so.

However, monitoring a ship that is sinking will not save the lives of those on board. Alcohol use among young people is approaching the status of an international epidemic. The global alcohol market is dominated by a few multinationals, whose concentrated resources fuel the world-wide expansion of alcohol marketing. Building a web of subsidiaries and joint ventures, these companies are using marketing technologies tested and in some cases banned in developed countries to promote alcohol consumption in the developing world (Jernigan 1997).

An international problem requires an international solution. Action must be taken, by the alcohol industry and its marketers, by public health policy makers in Member States, by non-governmental organisations, and by international organisations to avert replicating or exceeding in developing countries the already high levels of alcohol-related harm among young people in the developed countries. Specifically:

- Use of alcoholic beverages should not be promoted in any way among young people. This includes the creation of products oriented to young drinkers; the appropriation of activities, images and language such as games, cartoon characters and slang to promote alcoholic beverages; and the packaging of alcohol in amounts and at prices oriented to the limited financial resources of most young people.
- National governments should employ a culturally appropriate mix of policies to support the above, including restrictions on the content and placement of alcohol advertising and marketing materials, the promotion and implementation of health-oriented taxation policies, and limits on the availability of alcohol to young people such as minimum age drinking laws.

- International organisations should follow the lead of WHO and the World Bank, which has recently adopted a policy requiring the public health situation to be considered in approving any new investments in alcohol production. Alcohol is and should be recognised as a special product. International trade agreements must allow exceptions in order to restrain trade in alcohol, when such exceptions are taken to support the health of the public.
- WHO commits itself to the identification, documentation, publicising and building of capacity for the implementation of effective strategies; and to working with national and international governmental and non-governmental organisations to ensure the creation and preservation of alcohol controls that will prevent alcohol use and related morbidity and mortality among young people and the population at large.

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