

EDITORIAL

International Alcohol Control Study: Analyses from the first wave

A context of expanding alcohol harm and lack of policy response

Alcohol is a leading risk factor for the global burden of disease and contributes to a range of social and economic harms. Globally, alcohol is estimated to be the seventh leading risk factor in 2016 in terms of disability adjusted years of life lost, and alcohol use is the leading risk factor in disability adjusted years of life lost between the ages of 15 and 49 years [1]. The 2016 global burden of disease analysis has confirmed more limited preventive effects from alcohol than have been previously claimed and identified a much larger risk of cancer due to alcohol [1]. A non-communicable disease target of 10% relative reduction in alcohol consumption has been established by the World Health Organization (WHO) [2]; alcohol is also recognised by the United Nations as a threat to sustainable development [3] and contributes economic costs of approximately 1%–2% of gross domestic product in several countries where these have been assessed [4].

Policy measures to restrict alcohol availability, curtail affordability and restrict alcohol marketing, when implemented, have reduced alcohol-related harm [5–7], however, such policies have not, as yet, been widely implemented and, while summarised in the WHO Global Strategy to Reduce Harmful Use of Alcohol, they have not been encapsulated into an international health treaty comparable with the Framework Convention on Tobacco Control. Substantially less groundwork is available in alcohol control, when compared with tobacco, on monitoring and encouraging legislation and implementation of effective alcohol policy. For example, WHO developed the policy package MPOWER to monitor and assist with country-level implementation to reduce demand for tobacco [8]. The Global Information System on Alcohol and Health (also developed by WHO) makes country-level alcohol consumption and policy data available, but does not provide resources for intervention implementation (although there have been some efforts at regional level [9] and a tool on taxation and pricing was recently published by WHO [10]).

The lack of progress in alcohol control at the national and international levels is highlighted by the fact that alcohol attributable DALYs have increased by

more than 25% over the years 1990–2016, driven primarily by increased consumption in South Asia, Southeast Asia and Central Asia, among both men and women [1]. Africa is now experiencing similar impacts to those in Asia as a result of targeting by the supranational alcohol corporations [11,12].

The implementation of alcohol policies is not only often politically difficult [5], but also more complex than that of tobacco for a number of reasons, including the availability of a range of beverages of different potencies and a wide range of prices in on- and off-premise drinking contexts. In addition, unlike for tobacco, there are policies related to intoxication such as restrictions of sale to intoxicated patrons and drink-driving legislation.

International Alcohol Control study

The International Alcohol Control (IAC) study had its origins in several discussions with a colleague who participated in the International Tobacco Control (ITC) study [13], Professor Gerard Hastings, about the value of a study similar to the ITC pertaining to alcohol. A proposal was made to the Health Promotion Agency of New Zealand, and in 2010 New Zealand researchers, along with invited researchers from four other countries—three high-income (England, Scotland and Korea) and one middle-income country (Thailand), met in Scotland to plan the IAC; the planning drew on the expertise of staff in the Institute for Social Marketing, University of Stirling, who were participants in the ITC. The International Alcohol Control Study was developed by Casswell *et al.* [14] to provide detailed information on alcohol use, policy relevant behaviours and how these change in response to changing conditions.

Subsequently, each participating country needed to raise its own funding to participate and resources have differed, resulting in some differences in approach. The International Development Research Centre of Canada has been a particularly important supporter of the IAC, funding participation by four middle-income countries in the full IAC project, and by three African countries in the use of the Alcohol Environment Protocol, and funding training and much of the dissemination to date.

Design for policy evaluation

The methodology designed was comparable to the ITC. Longitudinal surveys of drinkers would collect information on consumption and policy relevant behaviour, allowing for assessment of the impacts of policy change when this occurred and comparison with countries in which the same policy change had not occurred. It also allowed, through the measures relating to specific policies, disentangling the effects of different policies if these were introduced as a package. Like the ITC, there was no attempt to collect measures of harm; rather, the IAC relied on very detailed consumption data as a proxy for harm.

While the methodology of the IAC study allows for the evaluation of policy change, the reality is that policy change does not always occur at all, or when it is hoped for or anticipated. The secondary aim of the IAC study, therefore, was to collect accurate and detailed information on alcohol consumption and information on the policy environment and policy-relevant behaviours to inform policy debate. This is the focus of the papers in this Special Issue.

A research platform for capacity building and data collection in low- and middle-income countries

Participation over many years in WHO meetings and consultations with officials and researchers in middle-income countries, particularly in Asia, made it apparent there was a growing level of concern about alcohol use. This reflected the expansion of the supranational alcohol corporations into new markets in middle-income countries with low drinking prevalence, growing economies and young populations, increasingly connected to the global youth culture, often in a digitally mediated environment. In these countries, as the need for research data to examine the use of alcohol became a priority, researchers new to the alcohol field often collected very basic consumption data. While this can be a useful first step (and the STEPS surveys supported by WHO in many countries was a valuable tool [15]) the research lacked detail on drinking and, importantly, any reference to the policy context. The goal, therefore, was to provide a research platform which could be made available to researchers in not only high-income but also middle-income countries to collect robust and comparable data which could inform policy discussion.

The policy focus of the study was on the 'best buys' of alcohol policy [16]; those which research had shown, at least in high-income countries, were likely to be cost effective in reducing alcohol-related harm if

implemented properly. These were policies restricting availability, control of price and affordability, restricting marketing of alcohol and legislating to prevent drink-driving. The areas for which there is less evidence, such as labelling, health warnings and education, were not included.

A unique cross-country study

The IAC study makes a unique contribution to the epidemiology of alcohol consumption. This is the first international collaborative project to collect general population survey data on alcohol consumption in such detail. It provides measures of typical quantities consumed, frequency of drinking and volumes consumed; the data are available by location of drinking and by beverages chosen. The survey instrument allows for very high coverage of alcohol available for consumption (based on sales or tax data) [17,18] and is designed to provide comparable consumption data in different alcohol markets, including those with a sizeable proportion of informal alcohol.

The IAC study also makes a unique contribution to alcohol policy research through the measurement of policy related behaviours. The survey data provide detail on key policy issues such as the prices paid, the location of purchase, time taken to access alcohol, the times of purchase and response to alcohol marketing. A second IAC tool is the Alcohol Environment Protocol which draws together data from legal and policy documents, administrative and commercial data, published research, observational studies and primary data collection of key informant perceptions. This framework allows for the collection of comparable data on policy settings and implementation.

Diverse participating countries

As of 2017, when the first cross-country analyses, published in this Special Issue, were carried out, 16 countries had engaged in some component of the IAC study, and of these 10 had successfully carried out at least one wave of a general population survey providing an insight into a wide range of alcohol markets. These were five high-income countries [Australia, England, Scotland, New Zealand and St Kitts and Nevis (St Kitts and Nevis transitioned to high-income during the course of the project)]; three high middle-income (Thailand, South Africa and Peru); and two low middle-income countries (Mongolia and Vietnam).

The countries participating in this project vary substantially in size, demography and social structure.

One caution is that the data presented and discussed here are referred to by the country name, although several of the surveys did not sample the whole nation. For example, the Vietnamese sample is drawn from a number of provinces, South Africa surveyed in one large municipality, Peru surveyed in one area of Lima and Mongolia surveyed only in Ulaanbaatar.

The countries vary greatly in population size and affluence (Table 1).

The more affluent countries in this study score higher on the United Nations Human Development Reports Education Index, which is calculated using mean years of schooling and expected years of schooling.

The per capita consumption based on those aged 15 + years in Table 1, taken from the Global Information System on Alcohol and Health, show that the high-income countries had the highest per capita consumption, the high middle-income countries next and low middle-income least, with the exception of South Africa, which is drinking aggregate volumes similar to New Zealand with much lower prevalence of drinking [22]. The proportion of abstainers among males, among females and among the total population is very different between the high-income and middle-income countries, with most of the high-income countries showing a prevalence of drinking at 80% or higher; the exception is St Kitts and Nevis. The gender ratio in prevalence is also very different, with high-income countries showing least difference between

men and women and Thailand the greatest difference. The countries also differ in terms of the estimates of unrecorded alcohol, with Vietnam, the least affluent country, showing the largest proportion of unrecorded alcohol. Note that in all of the international comparison tables in this Special Issue, country data are presented in order of decreasing affluence.

Overview of papers in the Special Issue

This Special Issue presents the first cross country analyses from 10 countries of the IAC. For a number of reasons, including omission of sections of the core questionnaire, programming issues (the survey is computer assisted) and lack of data to complete the Alcohol Environment Protocol, not all countries had data available for all analyses, and so the participating countries in each analysis vary.

After describing the methodology, the first section provides an insight into the alcohol policy environment and policy relevant behaviours. The second section reports on consumption patterns and the relationships with policy-related behaviours and support for policy.

The resources available and the context of the research varied across the 10 countries whose data are analysed in these papers. This affected implementation, but the goal of the methodology, described in the

Table 1. Population size, GDP per capita, prevalence of alcohol use and aggregate levels of alcohol consumption across countries

		Total population ^a (millions)	GDP per capita PPP (current international \$)	Education index ^b	Prevalence (%) of alcohol use: percentage of people consuming alcohol in the past 12 months (2010 data) ^c			Total per capita (15+) consumption (litres of pure alcohol) (2008–2010) ^c	
					Female	Male	Both	Total	Unrecorded
<i>High income</i>									
Australia	2013	23.1	\$45 668	0.927	80.1	88	84	12.2	1.8
England ^d	2013	53.9	\$39 016	0.86	81	87	83.9	11.6	1.2
Scotland ^d	2013	5.3	\$39 016	0.86	81	87	83.9	11.6	1.2
New Zealand	2011	4.4	\$32 986	0.917	74.5	84.8	79.5	10.9	1.6
Saint Kitts and Nevis	2015	0.1	\$25 681	0.638	31.5	54	42.5	8.2	0.5
<i>Middle income</i>									
Thailand	2012	67.8	\$14 714	0.608	14.9	45.4	29.7	7.1	0.7
South Africa	2014	54.1	\$13 127	0.695	26.3	56.3	40.6	11	2.9
Peru	2015	31.4	\$12 529	0.664	44	66.9	55.4	8.1	2
Mongolia	2013	2.9	\$11 093	0.694	35.1	56.5	45.7	6.9	2
Vietnam	2014	90.7	\$5657	0.513	28.6	48.5	38.3	6.6	4.6

^aWorld Bank DataBank [19]. ^bUnited Nations Development Programme Human Development Report 2016 'Education Index' [20]. ^cWorld Health Organization, Global Information System on Alcohol and Health [21]. ^dThe data on gross domestic product (GDP) and alcohol consumption of UK applied for both England and Scotland.

first section, was to provide a framework to allow data to be as comparable as possible in very different alcohol markets. In relation to aspects which necessarily differed—for example, the sampling designs employed—analytical techniques have been employed to minimise the effect in the analyses [23].

Results from the Alcohol Environment Protocol, as reported from seven countries, described differences in the legislative and regulatory frameworks, and in key informants' perceptions of the way alcohol policy was implemented and enforced [24]. The level of implementation and enforcement was lower in lower-income countries and, in high-income countries where enforcement was stronger, policy was more liberal; marketing regulation was largely absent in all countries.

Taxation systems and prices paid for alcohol by survey respondents from six countries were analysed; tax systems were seen to vary markedly, reflecting different objectives and histories [25]. Data on prices paid and tax collected enabled calculation of the contribution taxes made to the prices paid in both off- and on-premise drinking and allowed comparisons with tobacco taxation.

The final paper in this section gives an overview of survey data pertaining to access to alcohol, including by adults and those underage [26]. These data supported the findings from the Alcohol Environment Protocol showing ease of access was high and those under the minimum purchase age could purchase alcohol more easily in middle-income countries (except Mongolia). In most of the countries take-away alcohol was a larger proportion of the alcohol market than on-premises drinking, and alcohol was available for access by the majority within 15 min.

In the second section, an overview of drinking patterns by age and gender is provided for the 10 IAC countries [27]. The patterns varied across countries and the proportion of high-frequency drinkers was higher in high-income countries whereas there were higher odds of drinkers in middle-income countries consuming 8+ drinks for men and 6+ for women (one drink = 15 mL absolute alcohol) on a typical occasion. The ratio of men to women's consumption varied somewhat, but men were the heavier consumers overall. A pattern of increasing frequency with age and declining quantity consumed in a drinking occasion was common but not universal.

The relationship between heavy drinking and disadvantage (defined in terms of educational status and living in poverty) is examined in four high-income and three middle-income countries [28]. Disadvantage is related to heavier drinking in high-income countries, but the reverse is the case in middle-income countries.

A different approach was taken by looking at the alcohol market in each of the 10 countries and calculating what proportion of the market is consumed in harmful drinking occasions [29]. These comprised an important component of the market in all countries and were higher in middle-income than in higher-income countries. Informal alcohol was less likely to be consumed in harmful drinking occasions than commercial alcohol.

Policy-relevant behaviours (prices paid, time of purchase and liking for marketing) predicted larger typical quantities consumed in on-premise venues in a number of countries, and these behaviours were found to mediate the relationship between demographic characteristics and consumption, particularly in higher income countries [30].

Support for alcohol policies among drinkers in seven countries is the subject of the final paper in the Special Issue [31]. Across countries differences were found, with a cascade of support for alcohol-control policies, highest in low middle-income and lowest in high-income countries, suggesting the level of support was inversely related to the level of policy implementation.

A successful beginning

In this series of papers important differences were identified, often related to the level of affluence of the country and, in the case of Vietnam, the presence of a high proportion of informal alcohol. However, the other theme which emerged was the similarities between countries—for example, the easy access to alcohol, the widespread lack of regulation on marketing and the dominance and relative cheapness of take-away alcohol. The data allow comparison with tobacco, for example, in showing the proportion of alcohol's retail price which is made up of tax is much smaller than in the case of tobacco. A similarity with tobacco was the reliance of the industry on harmful use: in all of the countries a significant proportion of the alcohol market was consumed in harmful drinking occasions and this was a larger proportion, over half, in the middle-income countries. This reliance creates a conflict of interest for the producers of alcohol as sales would drop if effective policy reduced harmful drinking occasions and therefore these data support the exclusion of the alcohol industry from the policy environment.

The current global context has meant important anticipated policy changes such as the introduction of minimum unit price in Scotland and the legislation banning alcohol marketing in South Africa have been delayed for many years. This has reduced the opportunity for evaluation of policy changes, as envisaged as

part of the IAC study. However, the collection of policy-relevant data and the detail provided in the alcohol-consumption data have proven to be useful for individual participating countries and also in international comparisons.

The IAC study has provided a research platform for diverse countries to collect alcohol consumption and policy-relevant data in comparable ways. This was achieved by adaptation of the IAC's two research tools, a survey framework and Alcohol Environment Protocol, to allow for country differences. We believe the cross-country analyses presented in the Special Issue of *Drug and Alcohol Review* provide valid and policy-relevant data to inform national and international policy debate and further research using the IAC platform would be valuable.

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