Symposium: "Medicine Meets Millennium"

Alcohol Problems in Developing Countries: Challenges for the New Millennium

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Abstract. The focus of the paper is on alcohol problems in developing countries and specifically what needs to be done to reduce the burden of harm in such countries. It draws heavily on material coming out of the WHO supported Alcohol Policy in Developing Societies project. Focussing on recorded alcohol consumption may not be the best way to compare developed and developing countries as it excludes informally produced and traded alcohol and conceals the fact that there is heavy drinking in some localities and in some groups in many developing countries. In the latter the replacement of traditional and locally produced beverages with industrial beverages has facilitated a pattern of regular heavy drinking. Along with its pleasures and benefits drinking brings many problems for developing societies, including trauma, violence, organ system damage, various cancers, unsafe sexual practices, and injuries to the brain of the developing foetus. These are in addition to negative economic and social consequences. The paper goes on to set out some broad principles which might be useful in guiding intervention efforts in developing countries as well as specific strategies for consideration at both a country and global level. It is argued that in the 22nd century we can expect the use of alcohol to be far more circumscribed than at present.

Keywords: Alcohol consumption; alcohol policies; alcohol problems; developing countries

1 Introduction

How are we to view alcohol as we enter the new millennium? A colleague said a very interesting thing to me last year. He said "If alcohol was to be discovered today, it would probably be banned as a dangerous substance." He went on to say, "We may well find that in a hundred years time alcohol consumption will no longer be tolerated and that people will find it curious that past generations consumed so much alcohol." Sometimes someone says something unusual that makes you sit up and think. Well this was one of those moments. My colleague is not a teetotaler. In fact he is a wine connoisseur and a regular beer drinker. My first reaction was that he must be mistaken, after all alcohol has been drunk for thousands of years! As I thought about it I realized that what he said was not at all far-fetched. Let us consider the attitude towards alcohol held by some young persons in Europe and elsewhere who are part of the rave scene. Here we have a group of persons who are starting to think of alcohol as "un-cool". As technological advances take place at an even more rapid pace and as the world as a whole, including developing countries, becomes more of a global village, alcohol may well come to be replaced by more "sophisticated" mood enhancing drugs.

I am not here to talk about the rave scene, but to talk about alcohol problems in developing societies, and specifically about what needs to be done to reduce the burden of harm in such countries. In my presentation I will draw heavily on material coming out of the Alcohol Policy in Developing Societies (APDS) project, a collaborative project of an international group of scholars under the aegis of the World Health Organization (WHO). My time is short, so rather than trying to cover everything I will address those issues that I think are the most important, or provocative.

2 Global Trends in Alcohol Consumption

Data from the United Nations Food and Agriculture Organization (FAO) indicates that recorded alcohol consumption in most developing countries is considerably lower than in most developed countries (**fig. 1**).

The main reason for this is widespread poverty in many developing countries. It must nevertheless be borne in mind that recorded alcohol consumption figures underestimate consumption in most developing countries. For one thing a considerable proportion of consumption in many developing countries comes from informally-produced and traded alcohol which does not appear in the FAO data. Furthermore, in many developing countries per capita consumption understates the actual consumption of drinkers because the majority of the population, particularly women, does not drink.

Fig. 1 also reflects the trend towards decreasing consumption in most developed countries (with the exception of Japan and some parts of the former Soviet Union) since 1980 and the steady rise in recorded alcohol consumption in most developing countries, albeit from a low base. Low averages however should not be taken as an indication of the absence of heavy and problematic use of alcohol. The data are likely to conceal heavy drinking in some localities and in some groups in the population in many developing countries. This is certainly our experience in South Africa where we have found that while a half of the adult population do not drink, about a third of men and women who do drink

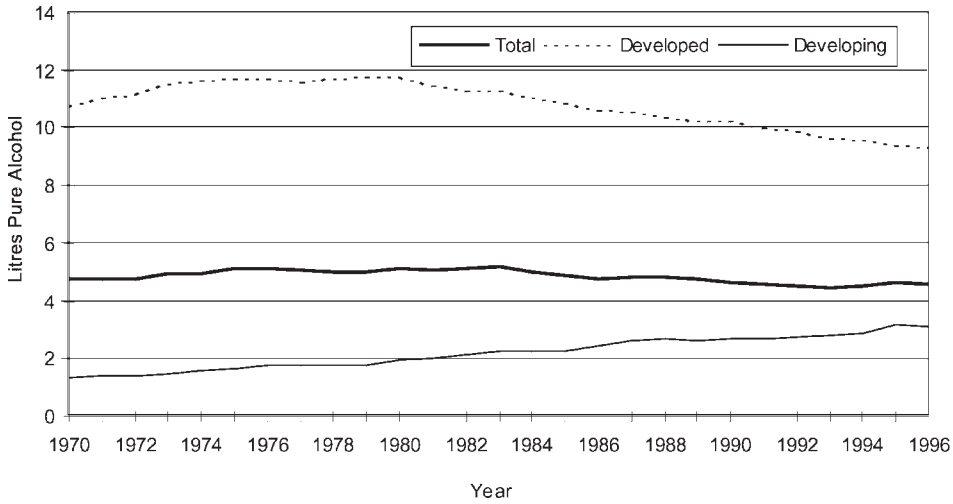


Fig. 1: Recorded adult (age 15+) per capita consumption 1970-1996 by economic region (in litres of pure alcohol; Sources: FAO Statistical Databases; Produktschap voor Distilleerde Dranken 1997, UNIDO 1998)

do so at risky levels, particularly at weekends. For many drinkers drinking to intoxication is the norm.

In the three macro-regions of the developing world, recorded alcohol consumption has in general fluctuated with regional economic fortunes (**fig. 2**). In Eastern and South-Eastern Asia, from the 1960s until very recently, alcohol consumption grew rapidly. Latin America and Africa saw increases from the 1960s through the early 1980s when global recession began to depress national economic development and alcohol consumption.

In tracking changes in the quantity of alcohol consumed in developing societies over time it is important to understand the key dimensions of change that have taken place in the past 500 years. Most important among these has been the replacement of traditional and locally produced beverages with industrial beverages, in particular Western-style commercially produced beer (Riley and Marshall 1999). A major outcome has been that regular heavy drinking has become a sustainable pattern, where it often was not before because alcoholic beverages did not last long in warm climates and each batch was consumed within a relatively short period of time. Furthermore, the amount of alcoholic beverage available was typically limited by the amount of agricultural surplus (Room et al., in press). Other factors which have substantially affected patterns of drinking in developing countries include urbanization, changes in gender and age roles, and high intensity mass marketing and promotion of alcoholic beverages by multi-national corporations.

3 The Impact of Alcohol on Health in Developing Countries

In both developed and developing societies, alcohol plays a significant role in leisure activities and in certain cultural and religious traditions. The alcohol beverage industry is also often directly and indirectly a large provider of formal and informal employment and generates substantial amounts of tax revenue for governments, particularly in certain developing countries. In recent years there has been much debate regarding the health benefits from moderate alcohol consumption. However, it must be noted that such benefits have at best only been established for limited populations, typically in developed countries (Parry and Bennetts 1998). The pattern of drinking to intoxication by many drinkers in developing countries is unlikely to have the same effect as moderate, regular drinking in terms of providing protection against cardiovascular disease.

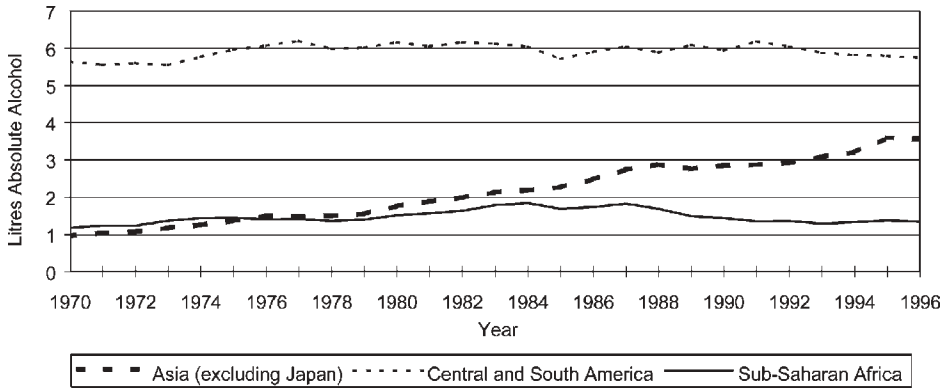


Fig. 2: Recorded adult (age 15+) per capita alcohol consumption in developing macro-regions (Sources: FAO Statistical Databases; Produktschap voor Distilleerde Dranken 1997, UNIDO 1998)

Along with its pleasures and benefits, drinking brings many problems for developing societies. The term "epidemiologic transition" describes the complex and inter-related changes that we observe over time in the health and disease patterns of a society/country. As a result of the epidemiologic transition, in recent years in developing societies a shift has occurred in the relative importance of infectious diseases versus chronic and degenerative conditions. Chronic conditions are assuming increasing prominence as problems such as heart disease, liver cirrhosis and malignancy are recognised as important causes of mortality and morbidity (Lozano et al. 1995). Alcohol misuse is a contributing factor in many of these disorders, and hence it is likely to be included as a significant component of the health profile of developing countries in the future.

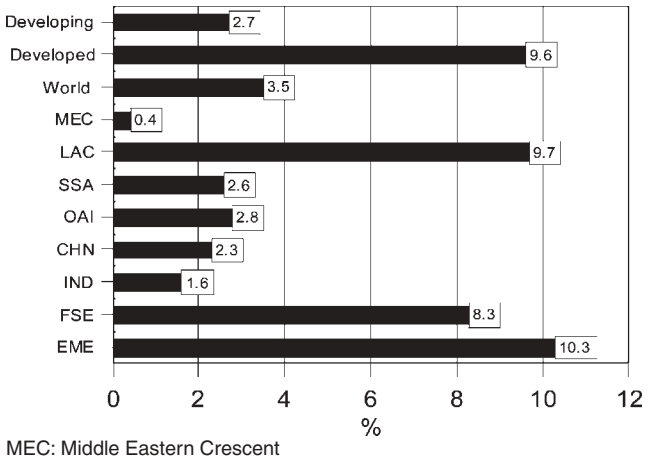
Currently, in developing countries alcohol-related problems commonly result from trauma, violence, organ system damage, various cancers, unsafe sexual practices, injuries to the brain of the developing foetus and general poor nutritional status of families with a heavy drinking parent/parents. Many of these problems are associated with intoxication episodes. Besides medical consequences, alcohol use also impacts negatively on the family, the criminal justice system, the employment sector, and the economic and social development of developing countries (Jernigan et al., in press).

Internationally, as a result of the work of research funded by the World Bank and Harvard University (Murray and Lopez 1996) there has been greater quantification of the burden of harm associated with the use of alcohol. Over all countries the global burden of alcohol use in 1990 was estimated to be 3.5% of the total disability adjusted life years lost (DALYs), on a par with unsafe sex (3.5%), and more damaging than tobacco (2.6%). The burden of harm of alcohol use in developing countries specifically was estimated to be 2.7% of total DALYs, as compared to 9.6% in developed countries. It was estimated that in 1990 net deaths from alcohol totaled three quarters of a million persons worldwide, with 80% of this excess mortality occurring in developing regions of the world (Muray and Lopez 1996).

Fig. 3 shows the global burden of harm attributable to alcohol use for different world regions defined by the World Bank. The highest estimated burden for a developing region is for Latin America and the Carribean (9.7%), and the lowest the Middle Eastern Crescent (0.4%) and India (1.6%) – countries known to have small proportions of the population consuming alcohol. An analysis of trends in different macro-regions suggests that as economic development increases buying power, levels of alcohol use and related harm increase (Jernigan et al., in press).

Time does not permit me to provide examples from various developing countries of the health, social and economic consequences associated with problematic alcohol use. Several examples are given in a recent WHO publication, *Alcohol and Public Health in 8 Developing Countries* (Riley and Marshall, 1999), but in general recent information from developing countries is scarce. I will instead document selected consequences pertaining to one particular developing country, South Africa:

- **Alcohol-related mortality.** A study of alcohol-related mortality in five of South Africa's nine provinces was conducted in the first half of 1999. Almost 50% of cases involving death due to homicide and traffic collisions had blood alcohol concentrations ≥ 0.08g/100ml. Just over one quarter of deaths resulting from suicide or other "accidents" had blood alcohol levels ≥ 0.08g/100ml (Peden et al. 2000).
- **Alcohol-related trauma.** A 1999 study conducted in state hospitals in Cape Town, Durban Umtata, and Port-Elizabeth found that 61% of patients admitted to trauma units in these cities were alcohol positive with a mean alcohol level of 0.12g/100 ml. The study showed that 74% of violence cases were alcohol positive, 54% of traffic collisions and 30% of trauma from other "accidents" (Peden et al., unpublished).
- **Fetal Alcohol Syndrome (FAS):** In 1997 992 children in their first year of school were screened in the rural community of Wellington outside Cape Town. A very high rate of FAS was found in the sample, 40.5 to 46.4 per 1000 children (and age-specific rates for the entire community of 39.2 to 42.9 per 1000). These rates are 18 to 141 times greater than prevalence estimates for the USA (May, in press).
- **Alcohol and crime.** In a study conducted in 1999 among 960 arrestees in nine police stations in Cape Town, Durban and Johannesburg, 22% reported being under the influence of alcohol at the time the alleged crime for which they were arrested took place (Parry et al. 2000).
- **Economic costs.** The economic cost associated with alcohol abuse in South Africa is estimated to be in excess of $1.7 billion per year (2% of GNP), roughly three times the amount of revenue received by the government in the form of excise taxes (Parry and Bennetts 1998).



MEC: Middle Eastern Crescent
LAC: Latin America and Carribean
SSA: Sub Saharan Africa
OAI: Other Asia and Islands
CHN: China
IND: India
FSE: Formally Socialist Economies of Europe
EME: Established Market Economies

Fig. 3: Burden of harm attributable to alcohol use (by region; source: Murray and Lopez 1996)

Developed and developing societies often differ in terms of various dimensions which are likely to shape the negative consequences of alcohol consumption, either to the individual or to the community/society in which they live. These include

levels of per capita consumption of alcohol, patterns of drinking (e.g. abstention, moderate consumption, and drinking to intoxication), the age structure of society, the general level of nutrition in the population, the proportion of homebrew versus industrially brewed alcohol consumed, and the capacity of the country to treat/prevent alcohol abuse.

4 Promising Strategies for Reducing Alcohol-related Harm in Developing Countries

Countries in the developing world and even provinces or states within developing countries have had widely differing responses to managing the production and distribution of alcohol and addressing alcohol-related harm (Riley and Marshall 1999). The *Global Status Report on Alcohol* (WHO 1999) outlines various alcohol policies of WHO member states. The specifics of each vary from country to country, but there are some commonalities. For example, all countries permitting alcohol consumption typically have limits on the minimum age for alcohol purchase or consumption, varying between 16 and 21 years. There are, however, major differences with regard to matters like restrictions on alcohol advertising, with eight of the nine countries reported to have health warnings on alcohol containers being developing countries (International Center for Alcohol Policies 1997), whereas all but two of the 19 countries reported to have alcohol monopolies come from developed countries or former countries of the Soviet Union (WHO 1999).

My aim here is not to be prescriptive, but rather to set out some broad principles which might be useful in guiding intervention efforts in developing countries and some specific strategies that might be of use. I have drawn heavily on the South African Medical Research Council's 10-Point Alcohol Action Plan (Parry and Bennetts 1998), published literature, as well as material generated as part of the APDS project. Based on the experience of different developing countries, the view of the APDS group is that much can be done to reduce the reduce burden of alcohol-related harm over time.

In terms of principles, my firm belief is that the following principles deserve careful consideration by developing countries interested in decreasing the burden of harm related to alcohol use:

- Countries need to formulate an explicit and comprehensive national alcohol policy. Local/regional strategies may also be required.
- The implementation of a national strategy will be best facilitated by a coordinating agency dedicated to alcohol and alcohol problems.
- Alcohol needs to be placed on other national and local planning agendas.
- Public health strategies are needed which will focus on the agent (alcohol), the host (not just individuals abusing the alcohol, but also persons at risk of alcohol abuse and the broader public), and the environment (e.g. weaknesses in legislation, poverty, trade liberalization).
- There is a need for short-term, more direct strategies as well as those that are more long-term, less direct.
- There is no single policy formula. Instead a mix of strategies is needed. Each country (perhaps community) will need to determine which strategies are likely to work for them taking into account factors such as the country's capacity to respond, political feasibility, feasibility in different cultural contexts, public acceptance and likelihood of impact.
- The difficulties of enforcing alcohol control policies, especially in developing countries should not be underestimated and enforcement needs to be specifically planned for.
- Empowering community to mobilize around alcohol and related issues can be a powerful spur for government and other action.
- A national strategy should be informed by research and itself should be subject to ongoing evaluation.

In terms of specific strategies the following appear to hold the most promise for developing countries:

- Increasing the real price of alcohol products by *increasing excise taxes*. This should, however, not be so high as to push consumers into the unregulated homebrew market or to encourage cross-border smuggling. Disallowing marketing expenses associated with alcohol advertising should also be considered.
- *Restricting alcohol consumption* by controlling the availability of alcohol through use of measures such as:
  - raising the minimum drinking age;
  - restricting the number of outlets, types of outlets, and hours of outlets serving or selling alcohol;
  - restricting the location of outlets to non-residential areas or at least not in private residences where many are currently located. In a country like South Africa it will probably first be important to bring the unregulated liquor outlets into the regulated market before attempting to decrease the number of outlets or attempting to move outlets out of private houses;
  - restricting points of sale in outlets serving a variety of products;
  - improving the training of servers of alcohol (with regard to general policies and in how to refuse service to persons who are intoxicated);
  - restricting the public settings where alcohol may be consumed.
  - Increasing attention will also need to be given to e-commerce/trade as this will impact on the ability to enforce regulations regarding the sale of alcohol to minors and hours of sale.
- *Deterring alcohol-related harm* through measures such as drink-driving laws and "dram-shop" laws (i.e. legal liability for serving alcohol to intoxicated persons). Random breath testing should be increased and consideration should be given to mandatory testing in the case of road-related injuries. Punishment should be quick, certain and evenly administered.
- Increase access to affordable and effective *treatment and rehabilitation*, including for example, access to detoxification services in public hospitals and brief intervention therapy through primary health care services aimed at changing cognitions and drinking behaviour.
- *Instituting work place interventions* to address alcohol misuse, including work place alcohol policies, training supervisors in policy application, setting up employee education programmes, random testing, and treatment referrals.

- *Restricting or forbidding the advertising of alcoholic beverages*. Restrictions can be placed on the types (e.g. only beer and wine), location (e.g. no billboards), and times of alcohol advertising (e.g. after 9 p.m.).
- Placing strict *controls on product safety* (including homebrew alcohol) and placing strict *controls against illicit production and sale of alcoholic beverages*.
- *Community development* in general, including upgrading infrastructure (e.g. recreational facilities) in communities where there are high levels of alcohol abuse so as to encourage alternative activities to drinking. Particularly important are job creation and skills development initiatives (e.g. adult literacy training).
- *Education and persuasion aimed at high risk groups* (e.g. teenagers, pregnant women, persons in certain occupations) or persons who work with high risk groups (e.g. the police, servers at liquor outlets). Programmes aimed at school-going youth should go beyond knowledge and involve resistance skills training and values clarification and should be targeted broadly at lifeskills rather than narrowly at alcohol. Initiatives should span a reasonable length of time and are likely to benefit from parallel initiatives involving parents and the broader community.
- *Public education programmes aimed at the community at large*, both active measures (e.g. mass media and social marketing campaigns – including counter-advertising) and passive measures (warning labels). Counter-advertising could be paid for by a levy on alcohol advertisements in cases where alcohol advertising is permitted.

In an increasingly globalized world a global public health message is also needed (WHO 1999). Jernigan (1997), Jernigan et al. (in press), and Room and Jernigan (under review), and others have articulated several policies that should be considered as part of such a global alcohol policy:

- The WHO, World Trade Organization, International Labor Organization, International Monetary Fund, and World Bank should provide leadership in dealing with alcohol as a special commodity and alcohol problems as a global priority issue.
- There is a need to express public health interests in alcohol issues at the international level, both in trade agreements and settlement of trade disputes, and in creating mutual obligations for one nation to back up rather than subvert the alcohol regulations and policies of another – despite the restrictions of free trade which may be involved.
- Decisions by international development agencies on investment in alcoholic beverage production or distribution should take into consideration, (i) the net contribution to national development and living standards from any project, (ii) the potential for the project to increase/decrease the net adverse social /health consequences of drinking in the society, and (iii) the extent to which market regulatory structures and other programmes which limit the harm from alcoholic beverages are effective in society.
- There should be no incentives, subsidies or tax breaks for overseas marketing of alcoholic beverages.

5 Conclusion

As we have seen in South Africa, it is not enough just to have policies to address alcohol abuse. It is equally important to have mechanisms for translating policy into action (Parry and Bennetts 1998). Some of these have been alluded to in the principles above.

It remains to be seen if in the 22nd century my colleague is correct in his view that we may experience the "post-alcohol" society. As with the tobacco industry, the golden age for the alcohol beverage industry has already started to wane in developed countries. Globally, we can expect that the use of alcohol is likely to be far more circumscribed in future than it is at present.

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