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Alcohol and Public Health in 8 Developing Countries

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ABSTRACT

This book profiles the current situations concerning alcoholic beverages in eight developing countries: Brazil, India, Malaysia, Mexico, Nigeria, Papua New Guinea, South Africa and Zimbabwe. Each chapter author presents a brief historical sketch of alcohol in that country, describes the types of alcoholic beverages consumed, gives information on alcohol production, availability and marketing, discusses patterns of use, and then focuses on the particular alcohol-related problems that exist, along with whatever responses have been mounted to counteract them.

The contributors to the present book note the difficulties posed for public health planning by a relative lack of good scientific data about drinking that can be drawn upon for policy purposes, and they all urge that developing societies improve their record keeping and research capacity in this area. This becomes more urgent in the face of a number of consistent findings in the eight countries described here: (1) increases in consumption, with a concomitant growth in the number and variety of alcohol-related problems; (2) the recent and rapid development of new drinking populations (especially urban women and youth); (3) the increased power and influence of transnational corporations engaged in the manufacture and marketing of alcoholic beverages; (4) differential impacts on and disagreements among women and men over alcohol; (5) the continued presence of unlicensed, illegal production and its attendant problems of quality control and adulteration with harmful additives; and (6) marked increases in alcohol availability, especially via the number of retail outlets.

This book is one outcome of the Alcohol Policy in Developing Societies (APDS) project undertaken since 1996 by an international team of scholars in collaboration with the Substance Abuse Department of WHO.

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FOREWORD

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WHO has recognized the impact of alcohol on the health of the world's population for many years. WHA resolution 32.40, 1983, affirmed this by stating that "Problems related to alcohol consumption rank among the world's major public health problems and constitute serious hazards for human health, welfare and life." It has been estimated that alcohol's impact on global health is greater than that of tobacco or measles. In response to this reality, in 1992, all European Member States endorsed the European Alcohol Action Plan prepared by the WHO Regional Office for Europe. Two years later, the book *Alcohol Policy and the Public Good* (Edwards et al., 1994) was published, thoroughly reviewing the scientific evidence base for alcohol policies.

Most of the evidence available on the impact of alcohol use comes from research undertaken in developed countries. Much less is known from developing countries, where the majority of the world's population resides. Many countries have not collected epidemiological data that can show the impact of alcohol on individuals and communities at large, and this may have contributed to the low priority given to alcohol policy and a concerted national response.

In 1996, the WHO Substance Abuse Department began a project aimed at examining and summarizing the scientific base for and experience with alcohol policies in developing society contexts, in order to provide a clearer picture of the need for and the challenges involved in implementing effective public health policies about alcohol that are relevant to developing societies.

In depth case studies from Brazil, India, Malaysia, Mexico, Nigeria, Papua New Guinea, South Africa and Zimbabwe were prepared as part of that project and have been compiled in this book. The experiences reported provide a vivid account of alcohol problems and how complex the process of policy making and implementation may be in these societies. Looking at the quality and amount of work done by all the authors, I trust this book will have relevance to researchers and policy-makers in many other developing countries.

I am very grateful to all those who have contributed to this book for their commitment and top quality work. The WHO Substance Abuse Department aims at placing alcohol high on the global health agenda. The contributions of the scientists involved in *Alcohol Policies and Public Health in 8 Developing Countries* are indeed a critical part of the knowledge base for action. The understanding of the vast array of realities, cultures and settings where alcohol is having a negative impact will help in the formulation of effective global policies.

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PREFACE

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The present book is an early fruit of the WHO project on Alcohol Policy in Developing Societies (APDS), a collaborative project of an international team of researchers to draw together the evidence for developing societies on patterns of drinking, on alcohol-related problems, and on preventive policy measures. Each of the case studies in the present volume is authored or co-authored by a member of the project's international team.

Besides the present book, the APDS project will have several other products. These will include, of course, a co-authored volume reporting the main results of the project. A separate volume is also in preparation of analyses of drinking patterns and problems in general populations in developing societies, in which authors from a number of countries reanalyze the alcohol data in their existing data sets. Along with some journal articles by project participants, a bibliography with selected annotations has already been published (Ialomiteanu, 1998).

1. ALCOHOL AND THE BURDEN OF DISEASE

The recent World Health Organization estimation of the Global Burden of Disease (GBD) projects in stark terms the heavy toll of death and disability attributable to drinking. On a global basis, 3.5% of the total loss of disability-adjusted life-years is attributed to alcohol (Murray & Lopez, 1996). While the loss is proportionately greatest in developed societies, the estimated loss is also especially high in the Latin America and Caribbean region (9.7%) and in the eastern European and north Asian countries in transition (8.3%). No region of the world escapes some burden from alcohol-related death and disability. The high proportional loss in developed countries points to a potential for problems to grow, if not counteracted, in the course of development.

The burden from alcohol falls not only on the drinker, but also on those around him or her, in terms of adverse effects on health and social life. Deaths and disabilities due to drinking often occur to those in young adulthood. Such events are often seen and experienced as particularly tragic. They also represent a lost social investment for the society, when a person is removed from the active labour force when their potential future contribution is at a maximum. In such ways, drinking can silently subtract more from the potential development of a society than any net contribution from employment and taxes related to alcohol sales. Alcohol's role in social development is thus at best equivocal.

2. DIVERSITY AND CHANGE IN THE CULTURAL POSITION OF ALCOHOL

The case studies in the present volume illustrate the enormous diversity of developing societies, and the wide range in the cultural position of drinking in different societies. The volume's editors remark both on similarities and on

disparities in the histories of the societies and in the role of drinking in them. Any outside observer would be wise to keep in mind that in most of the societies, the history of the society's engagement with drinking is long. As is often noted, this means that aspects of drinking practices are often deeply culturally embedded. What is less remarked is that often drinking practices have changed considerably within the span of the recorded history, and that they continue to change today. A majority of the population in most developing countries lives in conditions substantially different from those of their great-grandparents, and changes in drinking patterns and customs have often accompanied these general social changes.

Even less noted is the fact that the history of social and cultural responses to drinking problems is also commensurately lengthy in developing societies. In many places, there is a rich archaeology of legislative and regulatory measures to limit damage from drinking. At the level of customs and of conventional responses by others to the drinker, societies and communities also often have a wealth of experience upon which to draw. These societal experiences of formal and informal responses to problems from drinking carry implications for present-day debates and sentiment on alcohol policies.

3. COMPETING GLOBAL INFLUENCES

Along with the enormous range of local variation, the global picture shows some common elements. With some nuances and variations, societies everywhere tend to find themselves facing two competing global forces with respect to drinking and alcohol problems. At the core of one force are commercial interests, both global and local, in maintaining and indeed increasing the consumption of alcohol. These interests often act in similar ways in very different societies, promoting the expansion of drinking into new social contexts and situations. Understandably, their central perspective on drinking and its place in the society is that of the market, and for them the dominant image of a developing society is as an emerging market. A major advantage for commercial interests is that, as a cost of doing business, they can afford to support advocates and propagandists, at global as well as local levels.

A second advantage for market interests, on balance in the current world, is that drinking, and often the drinking of particular alcoholic beverages, has become a symbol and vehicle of cosmopolitanism. Through the wide reach of the global mass media, North American and western European lifestyles are presented glamorously and attractively nearly everywhere, often with an unrealistic presentation of amounts and styles of drinking. In this context, there are few cheaper ways in many societies to advertise one's cosmopolitan identification than by ordering a western European brand of bottled beer.

The cosmopolitan identification of global brands of alcohol can be equivocal. There is a counter-tendency, dominant in some parts of the world, to a full-scale reaction

against symbols of western-oriented cosmopolitanism, including drinking. But unless alcohol becomes a specific target, as for instance for some Islamic revival movements, alcohol marketers have been able to respond to this challenge by fielding brands wrapped in the national colours or other symbols of local patriotism.

The competing global force is often called the "public health approach". At its core is an unwillingness to accept preventable disability and premature death. This approach is more explicitly committed to social transformation than market interests are, since its proponents often focus on taken-for-granted social customs, observing that they often carry heavy health and social burdens with them. However, in the end, market interests may accomplish at least as much social transformation, without necessarily intending it.

The public health approach can point to some great successes in reducing the burden of disease in recent decades, but also to some setbacks and to enormous remaining challenges. In the specific arena of alcohol, the record of global action in recent decades has been at best modest. Perhaps the most successful effort, led as much by law enforcement as by public health, has been at national and local levels in limiting deaths and disabilities from drinking-driving. Even here, there has been little global effort directed towards developing countries. For other alcohol-related problems, the situation is no better. Few indeed are those with a primary responsibility for alcohol issues at an international level. Since they are explicitly intended as a benchmark for priority-setting, WHO's estimates of the Global Burden of Disease may serve as a wake-up call for the need for attention to alcohol issues in global thinking about public health.

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Introduction

by
Mac Marshall and Leanne Riley

1. BACKGROUND

Problems associated with beverage alcohol have increasingly been recognized and addressed as a public health issue in countries all around the world. The 33 contributions to this volume were prepared as background materials for the Alcohol Policy in Developing Societies (APDS) project which began in 1996 and runs through 1999. From a public health perspective, APDS concentrates on alcohol-related problems and their management and prevention in developing countries. It is a sequel to a similar earlier project conducted in collaboration with WHO-EURO that resulted in the book, *Alcohol Policy and the Public Good* (Edwards et al., 1994). Although the authors of that earlier volume drew widely on the general international literature, the primary focus of their studies was on developed societies, "leaving open the question of the applicability of its conclusions in developing societies" (Room, 1996). An explicit goal of APDS is to engage this issue by producing a jointly-authored companion volume to *Alcohol Policy and the Public Good*. The APDS project description also states that "an effort will be made to stimulate case studies and new analyses as contributions to the knowledge base for the project's work" (*Ibid.*), of which this monograph is an example.

The APDS project is being carried out by an international team of scholars who come from every inhabited continent and who are collaborating with WHO's Substance Abuse Department in Geneva. The chapters in this monograph have been written by some of these scholars, all of whom are recognized experts on alcohol issues in the countries that are profiled, and most of whom are also citizens of the countries of which they write. This volume contains much information of relevance to public health workers and policy makers who must grapple with alcohol-related problems in developing societies, and it is they who comprise the book's main intended audience. The eight "snapshots" to follow all present a brief historical sketch of alcohol in that country, describe the types of alcoholic beverages consumed, give information on alcohol production, availability and marketing, and discuss patterns of use. Each author then focuses on the particular alcohol-related problems that exist, along with whatever current responses have been mounted to prevent or treat these problems. Although only eight countries from around the world are represented here, the many similarities that are revealed in patterns of alcohol consumption, availability, marketing and problems

carry important implications for all developing societies. In part, this is because of the particular cases we have selected.

2. COUNTRIES PROFILED

The eight developing countries profiled in the chapters to follow provide examples from Africa (Nigeria, South Africa and Zimbabwe), Asia and the Pacific (India, Malaysia and Papua New Guinea), and Latin America (Brazil and Mexico). Not only are these eight countries scattered widely about the globe, but they also vary considerably in population size. Four are extremely large, two are mid-sized, and two are rather small, being surpassed in size by some of the world's larger cities. With 953 million inhabitants, India is the second most populous nation on earth; Brazil, with more than 150 million citizens, is the fifth. Nigeria (100 million) and Mexico (92 million) are in the top ten countries on our planet demographically. Brazil is the most populous country in Latin America and Nigeria holds the same position in Africa; interestingly, the smallest country to be discussed—Papua New Guinea (4 million)—is far and away the largest nation in the Pacific Islands. In between these extremes are South Africa (38 million), Malaysia (c. 20 million) and Zimbabwe (11 million). All eight of these countries are ethnically and linguistically diverse and these cultural differences influence such things as patterns of drinking, beverages of choice, and styles of drunken behaviour. The countries also differ in their degree of urbanization: for instance, while approximately three-fourths of the populations of India and Papua New Guinea are rural, in Mexico and Brazil the same fraction is urban. Along similar lines, Gureje writes that “most Nigerians” continue to reside in rural areas.

Although these countries thus differ in a number of ways, and thereby represent some of the great diversity and variability that exists among the world's developing countries at the end of the twentieth century, they share many other things in common. All eight of these countries were colonized by European powers, with the majority of them (India, Malaysia, Nigeria, part of Papua New Guinea, South Africa and Zimbabwe) coming under British rule for different periods ranging from nearly 200 years in the case of India to fewer than 20 in the case of Papua. The Dutch also held sway for a time in South Africa, as did Germany in the New Guinea half of what is now Papua New Guinea. Australia eventually replaced both Germany and Great Britain as the colonial government in Papua and New Guinea, while Spain conquered Mexico, and Portugal took Brazil at a much earlier moment in the European expansion. These different colonial experiences, for different time periods, have influenced the place of alcoholic beverages in the eight countries under examination. The colonialists introduced particular beverages and brought their own attitudes and drinking patterns with them (see especially Gureje's chapter on Nigeria, Jernigan's chapter on Malaysia, Medina-Mora's chapter on Mexico, and Saxena's chapter on India in this regard). They also brought Christian missionaries, who had varying degrees of success in winning converts. The overwhelming majority of people in Brazil, Mexico, Papua New Guinea, South Africa and Zimbabwe are Christian. Malaysia and Nigeria each contain a substantial mix of Christians and Muslims, while India is primarily Hindu with a

considerable Muslim minority and very small percentages of Christians, Sikhs and Buddhists. These colonial-era religious conversions, along with some religious traditions already in place, have influenced subsequent patterns of alcohol use (including abstinence). Islam, for example, officially prohibits alcohol, and many Protestant Christian churches preach against its use as well. India is the only country of the eight in which conversion to Christianity has not played a significant role, but in any case alcohol was not a major substance of choice for most Indians in precolonial times.

All eight countries profiled also have in common that they are now independent nations, many having become so only quite recently during the era of decolonization that ushered in following World War Two. For example, India achieved independence in 1947, Malaysia a decade later, Nigeria in 1960, South Africa in the early 1960s, Papua New Guinea in 1975 and Zimbabwe in 1980. By contrast, Mexico and Brazil became independent from Spain and Portugal in the early nineteenth century.

With the exception of the inhabitants of Papua New Guinea, people in all of these countries manufactured traditional alcoholic beverages from local products prior to the colonial period. Like other Pacific Islanders, and the indigenous people of most of North America, Papua New Guineans were introduced to beverage alcohol by the foreigners who came among them. Due to a very effective colonially imposed prohibition, Papua New Guineans have only had access to alcohol and the right to drink for 35 years. By contrast, alcoholic beverages have been known in India for over 4000 years. In quite a number of the cases discussed in this volume traditional beverages continue to comprise a significant part of overall alcohol production, and these beverages tend to be used by poorer segments of the population, mainly because they are less expensive than industrially made alcohol. Thus Medina-Mora notes that *aguardiente* is consumed almost entirely by poor, rural drinkers in Mexico, Saxena observes that both country liquor and illicit liquor are cheap and therefore favoured by the lower classes in India, and Carlini-Cotrim states that *cachaça* is the distilled beverage drunk most commonly by the poorest and least educated social stratum in Brazil. All of these cases may reflect what Jernigan describes as a “bifurcation” of the alcohol market in Malaysia, where “a locally-produced and inexpensive alcoholic beverage, in this case [Malaysia] *samsu*, dominates consumption and seems to exact a heavy social toll on lower income and rural populations”.

Interestingly, not only are different kinds of alcoholic beverages consumed by different segments of national populations based upon socioeconomic measures, but in at least some of the countries discussed herein beverage preferences mark ethnic or “racial” differences. Thus Parry and Bennetts show that African, Coloured and White drinkers do not typically make the same beverage choices in South Africa, and Jernigan records this even more emphatically for Malaysia. In that multiethnic country, the tribal peoples of Sabah and Sarawak continue to drink traditional homemade rice wine, and members of the Indian rural plantation labour force indulge mostly in *samsu* (home distilled liquor) and toddy, while their middle-class urban counterparts mainly quaff lager beer and distilled spirits. Ethnic Chinese drinkers in Malaysia dominate the

market in consuming lager beer and distilled spirits. Although most ethnic Malays are reported not to drink, some clearly do, but their beverage preferences are not reported.

3. PROBLEMS AND ISSUES REVEALED

Every author notes the difficulties posed for public health planning by a relative lack of good scientific data about drinking that can be drawn on for policy purposes, and they all urge that developing societies improve their record keeping and research capacity in this area. This becomes more urgent in the face of reported increases in consumption in these eight countries, with a concomitant increase in the number and variety of attendant problems. Of particular concern is the recent and rapid development of new drinking populations—notably, urban women and youth—in many countries. Some of the authors call for studies of the effectiveness of approaches to prevention and treatment tried in different countries, and all concur that the development and use of uniform, widely agreed upon definitions and statistical measures would greatly facilitate cross-national comparisons of, for example, what is meant by “heavy drinking”.

Some of the contributors discuss how alcohol-related problems may be exacerbated by entrenched poverty, high rates of infectious disease, malnutrition, poorly maintained roads, a pedestrian-vehicle mix on roads, etc. Others give attention to the economic opportunity costs for households and countries alike of expenditures on alcoholic beverages, and to lax enforcement of existing alcohol control laws. Also of concern are apparent changes in the effectiveness of traditional community sanctions on untoward drinking behaviour as people migrate to more anonymous urban environments which may lack a sense of community, and to the absence of or gross inadequacy of effective treatment programs and facilities. Finally, the authors express concern over a lack of legal regulations or constraints in some countries. Carlini Cotrim notes, for example, that no license is required to sell alcoholic beverages in Brazil. Jernigan comments on what he views as an ambivalent government stance toward alcohol in Malaysia, resulting in part from the fact that government elites often have holdings in the alcoholic beverage industry that create an economic conflict of interest. Such a situation is doubtless much more widespread internationally, being found also in many developed countries.

The increased power and influence of transnational corporations engaged in the manufacture and marketing of alcoholic beverages is a topic of import that emerges in all eight profiles. While this has been highlighted in recent publications by Cavanagh and Clairmonte (1985) and Jernigan (1997), the public health implications of the heightened role transnationals have come to play in often fragile developing economies must be a cause for concern. This is particularly the case where they are able to blunt or counteract public health education efforts toward sensible alcohol use through highly aggressive advertising and other marketing techniques. The economic power and political clout of the alcohol industry is not the same in all countries, but often it is substantial. It is reflected in the revenues from alcohol that flow into government

coffers. For example, Jernigan states that the production of alcohol is the fourth largest manufacturing industry in sales in Zimbabwe, where it accounts for almost 4 percent of national government revenues. In Nigeria, according to Gureje, "a significant proportion of non-oil revenue accruing to governments at various levels...comes from the brewing industry". Likewise, Saxena writes that in India some state governments derive as much as 10 percent of their revenues from the alcohol industry.

The alcohol industry's political influence often allows it to prevent government restrictions from being imposed on alcohol advertising and other marketing practices. It is perhaps not surprising that in South Africa, home to the world's fourth largest international beer producer, Parry and Bennetts report alcohol to be mainly unregulated and that a great deal of money is spent on alcohol advertising. The same picture emerges from Nigeria and Zimbabwe. And Brazil presents an interesting case in which only beer, among all the kinds of beverage alcohol, can be freely advertised according to Carlini-Cotrim. Even in those countries where direct advertising of alcohol is not permitted in some or all of the media (as in India, Malaysia and Papua New Guinea, for example), various indirect methods have been developed. Writing about the situation in Malaysia, Jernigan discusses a wide variety of indirect advertising of alcohol, ranging from pre-recorded video cassettes, to person-to-person promotion of products by attractive young women hired to work as hostesses in pubs and restaurants, to bonus points awarded for consumption of certain alcohol products that can later be exchanged for gifts. Moreover, in a world bound ever more tightly together by communication networks, radio and television advertisements from neighbouring countries often may be picked up in a country that has banned such things.

In a manner similar to the transnational tobacco industry, the alcoholic beverage industry insinuates itself into public life through sponsorship of sports teams, athletic events, and sometimes other forms of entertainment and recreation, including the arts. Such sponsorship is particularly insidious because it allows the industry to claim that it performs good works, even as sponsorship provides avenues to advertise and market their products and to associate themselves with healthy pastimes like athletics. Concerning Nigeria, Gureje mentions advertisements for stout and spirits that promote them as invigorating and "good for health and vitality". Similarly, Jernigan writes that in Malaysia a distilled spirits company received approval from the Ministry of Health to advertise Benedictine D.O.M. liqueur as "good for mothers in confinement". Sponsorship of sports is reported to occur in Brazil, India, Nigeria, South Africa and Zimbabwe, and this is also common practice in Papua New Guinea. The authors also mention alcohol industry sponsorship of musical events (Brazil, India), fashion shows (India), the arts (Brazil), sweepstakes (Zimbabwe), and various charitable, educational and community programs and projects (South Africa and Zimbabwe). Another theme that emerges from most of the country profiles is the way gender is implicated in the contemporary alcohol scene. As we have known for a long time, men drink more and more frequently than women in most societies, and are more likely to become socially disruptive after consuming alcohol (Marshall, 1979). While women have been targeted by corporate alcohol manufacturers as a great "untapped market" for their products, and while this receives attention in the pages to follow (see Parry and Bennetts regarding

South Africa, for example), several authors also give attention to the fact that women in many societies actively oppose alcohol use. For example, Saxena reports that in India more than 95 percent of women are abstinent and that women have been in the forefront of renewed efforts to legislate prohibition in several Indian states. In Malaysia, as reported by Jernigan, hundreds of women have banded together into a "Women Against Alcohol" movement on rubber estates in Kedah to challenge the trade in cheap distilled liquor. Likewise, Marshall notes that the great majority of women in Papua New Guinea do not drink, that women often suffer physically (via domestic violence) and economically (via expenditures of scarce cash resources) from men's drinking, and thus that there is considerable difference between men and women in their attitudes toward alcoholic beverages. But while gender differences in quantity and frequency of alcohol consumed seem to characterize all of these case studies, Africa presents an unusual twist. The authors writing about African countries all note that prior to the colonial period, and in many cases continuing until the present, women were the primary producers of traditional alcoholic beverages (also see Colson and Scudder, 1988; Maula, 1997). Thus, unlike women in most other parts of the world, many African women have a vested economic interest in the alcohol trade.

Yet another issue that figures prominently in several of the chapters concerns the relative importance of unlicensed, illegal production, which varies from very little in places like Brazil and Papua New Guinea to a substantial proportion of all alcohol consumed in countries like South Africa and Zimbabwe. From a public health perspective a main worry over such illicit manufacture is that of quality control and of possible adulteration with harmful additives. For example, Jernigan discusses this in regard to *kachasu* in Zimbabwe, Medina-Mora's note it for *aguardiente* in Mexico, Saxena comments that industrial methylated spirit frequently is added to illicit liquor in India, and Marshall mentions occasional consumption of nonbeverage alcohols in Papua New Guinea. Unregulated outlets also often sell alcohol to underage drinkers and increase accessibility by selling alcohol outside of officially sanctioned hours, as Parry and Bennetts note for South Africa.

Many of the countries discussed in the pages to follow experienced colonially imposed prohibition against the manufacture, possession or consumption of alcoholic beverages. In Zimbabwe there was a prohibition only on the sale of European-style beer, wine and distilled spirits to black Africans (traditional opaque beer was allowed), whereas colonialists sought to enforce total prohibition on the indigenous population, with varying degrees of success, in Nigeria, Papua New Guinea and South Africa. In Papua New Guinea *deprohibition* became an important issue around which to rally on the road to national independence, but India presented a rather unusual situation in which the establishment of prohibition was one of the demands made by the Indian leadership and one of the foci of the struggle for independence there. This resulted in a prohibition plank being enshrined in India's constitution, even though it has never been enforced nationwide. All of the countries profiled in this volume have experienced a marked increase in alcohol availability, either as a consequence of rapid growth in the number of liquor licenses issued (as in parts of Papua New Guinea) or because of significant expansion of the informal illegal market (as in South Africa and Zimbabwe). Whatever

its source, this relatively recent phenomenon of greater availability often seems linked to the growth of specific alcohol-related problems in the cases to follow.

There are not data from among all of the countries profiled concerning the age at onset of drinking, but in some places it is quite young. Gureje summarizes several Nigerian studies that suggest many children have their first alcoholic drink well before age 15 years, and some as young as 8. Typically, this occurs in the context of a family festivity of some kind. In Brazil, too, as Carlini-Cotrim makes clear, girls and boys both begin drinking on average at 10 years of age, and as in Nigeria, this normally occurs in a family setting.

India is an exception to the generalization that emerges from these eight country profiles that “beer is king” Saxena describes Indians as favouring distilled spirits when they drink alcohol, although he notes that “beer production and consumption is increasing rapidly”, especially among urban young people. But explicitly or implicitly in the other seven cases, beer is indicated to be the most popular, or the most desired beverage of choice for a majority of all drinkers. This reflects the very rapid consolidation and expansion of the transnational brewing industry over the past 20 years, with a result that nearly every developing country around the world now has a brewery, which usually is linked directly to a transnational corporation in the developed world.¹ These breweries develop and aggressively promote “national brands”, that is, beers that are particularly identified with national symbols. Papua New Guinea’s South Pacific lager illustrates these things well. Since the early 1960s South Pacific Brewery has been a subsidiary of Malaysia’s Tiger Brewery, which is itself a subsidiary of Heineken Brewery of the Netherlands. South Pacific’s symbol is the same bird of paradise that is featured on the national flag, and this beer is marketed under the inclusive slogan, “*Bia blong yumi*” (‘our beer’).

4. FINAL THOUGHTS

These country profiles show alcohol to present a range of social and public health problems in all eight countries, although the particular problem mix and the specific efforts made to combat them vary considerably from one country to another. Underlying the situation in all cases, however, is a general and persistent increase in production (and often importation) of alcohol, and an increase in its availability, especially via the number of retail outlets. A paradox is revealed by the data presented in these case studies: in a number of countries, e.g. India, Malaysia, Mexico and Papua New Guinea, a majority of the adult population does not drink alcohol at all (usually mostly women), and yet considerable alcohol-related problems exist. The existence of

¹ This process extends even to some of the demographically small countries of the Pacific Islands. For example, Fiji, French Polynesia, New Caledonia, Solomon Islands, Tonga, Vanuatu and Western Samoa all boast breweries that are tied ultimately to such major international beer producers as Brauhaus International of Germany, Carlton and United Breweries of Australia, Heineken of the Netherlands, Pripps of Sweden and San Miguel of the Philippines (Marshall, 1993).

these problems in such paradoxical circumstances points to the strong need for good quality research data so as to gain a clearer picture of exactly who drinks, what and how much, when and where, and with what drinking outcomes. Once such general population survey and other data have been gathered it will then be possible for the public health community in each country to make soundly based recommendations to policy makers concerning prevention and treatment programs tailored to the specific drinking populations and the particular sociocultural circumstances found there.

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Country Profile on Alcohol in Brazil

by
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1. INTRODUCTION

Demographically the fifth largest country in the world, Brazil occupies half of the South American continent. According to the 1991 census Brazil's population is over 150 million, with nearly 75% living in urban areas. Brazil is a country of contrasts. The southeastern region boasts the best educational opportunities and health facilities, the biggest cities (São Paulo, Rio de Janeiro), the wealthiest population, and is mostly comprised of first and third generation descendants of European immigrants. Contrariwise, the northeastern region presents a mixed population descended from Portuguese colonizers, African slaves and native Indians. This region has the highest illiteracy and infant mortality rates, as well as the poorest populace. Indian tribes, who once lived throughout the country, now are concentrated mostly in reserves located in the Amazon and the far west. Their numbers today are estimated at 200 000.

There are thus strong differences in cultural and social backgrounds within the country. But despite this, Brazil has an absence of significant ethnic, religious, or political conflicts, high rates of racial admixture, and a single language—Portuguese—that is spoken nationwide. Although Brazil is officially a Catholic country, Afro-Brazilian cults such as *candomble* and *umbanda* are very strong. These cults do not clash with the official religion, and the majority of Brazilians accepts their presence. Other global religions such as Judaism, Protestant Christianity and Islam are also represented. Brazil's economy ranks among the world's largest. There is, however, an enormous contrast between the rich and the poor. Some people have access to the latest technologies and to lifestyles similar to those of any developed country, while others continue to rely on techniques passed down from colonial times and to live very simple, nearly subsistence-level lives.

Although the country has a presidential system of government, with a bicameral legislature, Brazilians have had relatively few opportunities to freely elect their president. As a matter of fact, between 1937 and 1945, President Vargas shut down the Congress, banned political parties, and censored the press. After less than two decades of democracy, the military overthrew President João Goulart in 1964, and ruled the country for about twenty years. Brazil went through a new period of press censorship and lack of political and civil rights. When the current president,

Fernando Henrique Cardoso, took office at the beginning of 1995, he was only the second president elected by popular vote in 28 years. These historical facts have helped shape the Brazilians' suspicious attitude toward legislation and law enforcement. With few opportunities to choose their own legislators, they often consider legal measures to be unrelated to the popular will, and some take pride in opposing or violating the law.

2. A BRIEF HISTORY OF ALCOHOL IN BRAZIL

Native Brazilians already knew alcoholic beverages when the Portuguese first arrived in 1500. In fact, many tribes made *cauim*, a beverage produced from corn or manioc and saliva. Saliva was spit into big containers filled with the starchy mash to aid fermentation. *Cauim* was produced on a small scale and for ritual purposes, and there are no data to indicate that it was used by other than native Brazilians. The Portuguese brought wine (*vinho do porto*) and *bagaceira*, a distilled grape beverage with them, and new shipments of these beverages arrived periodically from Portugal.

Cachaça—a very popular distilled spirit made from sugarcane—seems to have been discovered by chance sometime between 1532 and 1548 (Almeida, 1997). At first it resulted from natural fermentation of a mixture of cane trash and sugarcane juice left outdoors in big wooden tubs and meant as food for horses and other animals. Some years later it became a beverage given to African slaves. Later on, people began to distil it in a special place (*casa de cozer meis*) inside the sugar mills and it was used as a payment for the acquisition of slaves in Africa (Almeida, 1997).

The production, commercialization, and even the use of *cachaça* or *aguardente* were prohibited by the Portuguese several times during the 16th and 17th centuries. This suggests that *cachaça* had possibly replaced traditional European wines in Brazil, and around 1750 Portugal lifted the prohibition on *cachaça* and decided instead to tax it heavily. *Cachaça* eventually was taken as a symbol of Brazilian identity by two nationalistic movements—the Inconfidencia Mineira, a failed movement for Brazilian independence in 1792, and the Movimento Modernista, a cultural movement of 1922 (Almeida, 1997).

The country's first brewery—Bohemia—was established in Rio de Janeiro in 1853, and about thirty years later Brahma and Antarctica, currently the two major Brazilian beer companies, were established in São Paulo city. Beer companies have continued to expand in Brazil over the past century (Antarctica, 1997).

3. TYPES OF ALCOHOLIC BEVERAGES AVAILABLE

Currently, Brazil produces large quantities of *cachaça*, beer, wine, whiskey, vodka, liqueurs and champagne. It also imports almost every other kind of alcoholic beverage that is available in the modern world. Beer ranks first in national consumption by sheer volume. However, in terms of pure ethanol content, *cachaça* ranks first and it

accounts for more than 80% of all commercial distilled beverage consumption in the country.

3.1 Types of Alcoholic Beverages Available

As with many other developing societies, Brazil presents an upward curve in alcohol production and in the importation of beverage alcohol. This worldwide process—discussed by Jernigan (1997)—has been particularly intense in Brazil since 1994 when a new economic policy called “Plano Real” was implemented.

According to marketing publications (Meio, Mensagem, 1996a, 1996b; Mídia e Mercado, 1996), three ongoing processes support this trend: an increase in the buying power of the C and D classes, economic stability, and a sharp decrease in tariffs on imported beverages. Other contributing factors, not directly related to the new economic policy, include the availability of one-way and recyclable packages, market sophistication, and market segmentation (e.g. low price, bock and premium beers), new marketing strategies, and wider distribution. This general picture reveals important specificities when different types of alcoholic beverages are considered.

Cachaça comprises 86% of all spirits sold in the country, and amounts to 1.2 to 1.5 billion litres per annum in recent years. Most production is by several large companies; however, home and illegal production also occurs according to anecdotal reports. *Cachaça* producers must struggle to maintain their level of sales from year to year, and they recognize some switch of their consumers to beer or other kinds of spirits.

Imported and “national” whiskeys are the second most consumed distilled beverages, and Brazilians consider use of them to be very sophisticated. From 1994 to 1995 the sales of these “other spirits” increased by 30% (for imported ones) and 28% (for those produced in Brazil). The primary manufacturers and importers have invested in a number of marketing strategies and in several new products. They expect to increase sales rates for the next few years and to reach new population segments. Vodka, tequila, rum, and cognac all show modest but increased sales among Brazilians.

Wine sales have grown sharply in recent years, with a 35% increase from 1994 to 1995 due to a large influx of wines from Europe, Argentina and Chile. The national industry—which is made up of small producers—does not invest significantly in marketing campaigns and thus does not compete effectively with inexpensive and international wines. Therefore, the Brazilian winegrowers face economic difficulties at present. Four out of every 10 bottles of wine sold in Brazil come from abroad. Total wine sales in Brazil are about 240 million litres per year or 2 litres per capita. Importers are optimistic about further growth in sales.

Brazilians drank 7.5 billion litres of beer in 1995, 2.5 times more than in 1985. Per capita consumption doubled from 1985 to 1995, to 45 litres. According to the brewers, Brazilians never before drank that much beer. The breweries anticipate a 20% increase

per year over the next few years. This dramatic and consistent growth in beer consumption began well before the 1994 Plano Real economic plan took effect. Indeed, international brands of beer have been widely available since 1992, and they coexist well with national brands.

4. ALCOHOL AVAILABILITY AND MARKETING

Both national and international alcoholic beverage industries have invested in aggressive marketing campaigns. However, a July 1996 federal law banned radio and television advertisements of beverages that contain more than 13% ethanol between 06:00 and 21:00 hours. Consequently, only beer can now be advertised freely and sponsor sporting, musical and artistic events.

Pinsky (1994) studied the content and frequency of alcoholic beverage commercials shown on two major Brazilian television networks, and found that 5% of commercials and 27% of vignettes (5-second ads) that were aired during prime-time were for alcohol. This surpassed tobacco, cigarette, and non-alcoholic beverage advertisements. Beer was the most advertised beverage (note that her study was conducted before the 1996 federal law took effect). Most commercials claimed that alcoholic beverages brought relaxation and consensus, and portrayed their product as a national symbol. Alcoholic beverages are widely available in Brazil, since they are commercialized like any other manufactured product, and under few regulations and constraints. Alcoholic beverages can be purchased and drunk at any time or day of the week in parks, beaches, roads, streets, restaurants, bars, bakeries, drugstores, supermarkets, gasoline stations, school and hospital surroundings, during sports events, and at weddings and funerals (see section below on Societal Responses to Alcohol-Related Problems for discussion of the sparse legislation available). One needs no special license to sell alcohol in Brazil.

5. PATTERNS OF ALCOHOL USE

Brazil has few reliable data on alcohol use and associated problems, and the majority of those that do exist derive from urban areas in the southeast of the country. There is only one modest study on alcohol use among minors in a grape-producing region (Azevedo et al., 1991), and nothing more than the testimony of health care providers who work on Indian reservations to suggest alcohol problems among native Brazilians (Dr Sofia Mendonça, personal communication).

The available data—discussed in this and the next section—suggest some general patterns for the urban population: Drinking alcohol is a habit that begins early in life, with abstinence being relatively rare. Beer and *cachaça* are the beverages most widely consumed. Binge drinking or drinking for the sake of drunkenness seems not to be the norm. Cultural traditions and the presence of informal but strong family controls over people's drinking seem to integrate drinking behaviour into everyday life (Caetano, 1985). Of course, this does not necessarily mean that people drink in moderation. In

fact, occasions of excessive drinking are common, if data on alcohol-related problems discussed below are considered (see insert on Carnival, for instance). Moreover, one wonders how effective these informal controls will remain if the current growth in alcohol sales continues.

Drinking During Carnival

First celebrated in Brazil in 1641, Carnival is a national holiday and a popular festival that begins exactly 40 days before Easter and typically lasts for three days (Sunday, Monday, and Tuesday). The morning after Carnival is known as "Wednesday of ashes," and is meant to be a day for recovery (for example, the business workday begins after noon on that day). During Carnival the great majority of Brazilians, usually in groups, dons costumes, play, dance, drink, and sing loudly in either the streets or in clubs. Carnival is a time-out in which the rules and rites of everyday life are turned upside down. People play and sing all night long and rest during the daytime. Men wear women's clothes, housewives dress up as prostitutes, and the poor garb themselves as kings and queens. The social hierarchy is inverted, with the wealthy watching the poor take over the streets for their parades, and eventually joining them with the poor's permission. Carnival is the only Brazilian national holiday that is not grounded in civic or religious observance (Da Matta, 1978).

By definition, Carnival avowedly is *not* a time for moderation and control. Unsurprisingly, people drink heavily during this time, and they also sniff several different mixtures of ether and chloroform called *loló* or *lança*-perfume. However, Carnival is not at base about drinking or drunkenness, but rather about joy and happiness, with beer, *cachaça*, and *loló* simply among the ingredients of celebration. While records do not provide easily retrievable data on the matter, Carnival is well known to be a time when violent death, injuries, and accidents of all kinds occur much more frequently than is usual. To date no studies have examined the role of alcohol during Carnival. Some other Brazilian celebrations mimic the drinking style associated with Carnival, notably New Year's Eve and some soccer games. However, the other components of Carnival are not found on these occasions.

Most information on alcohol use in the Brazilian general population comes from surveys on psychiatric morbidity (Almeida-Filho et al., 1992; Santana and Almeida-Filho, 1987), on the prevalence of alcohol dependence syndrome (Santana et al., 1989; Almeida and Coutinho, 1993), and risk-factors for non-communicable chronic diseases (Rego et al., 1990; Duncan et al., 1993). These studies provide few data on patterns of alcohol use among various social groups, since they are more concerned with the detection of heavy and/or dependent drinkers. An exception is the recent study conducted by Moreira et al. (1996) on alcohol consumption and associated factors in Porto Alegre City, the state capital of Rio Grande do Sul.

They provide data specifically on alcohol use in Porto Alegre City, using a representative sample of residents aged 15 years and over. They found 9.3% to be alcohol dependent, 15.5% to be heavy drinkers, 12.3% to drink daily, and 12.3% to be

abstainers. Women consumed alcoholic beverages less frequently and in lesser amounts than men did. Heavy drinking (defined as a daily intake of 30 grams or more of pure ethanol) was positively associated with having started to drink before age 15 years and the presence of another heavy drinker in the household. Beer was consumed by 89% of the drinkers, followed by spirits (63%), and wine (61%). The most widely used spirit among the poorest and least educated was *cachaça*, while whiskey was preferred by the higher social strata. The authors pointed out that the consumption of wine detected in the study reflects a local and not a national pattern. Porto Alegre is located in Rio Grande do Sul state where almost all national wine production is concentrated, and it is also the place where the highest proportion of Brazilians of European descent reside.

There is evidence that men begin drinking at a younger age than women (modes of 15 and 20 years of age; Moreira et al., 1996), get drunk more frequently (12% of weekly episodes as against 7% among women in a mixed class area of Salvador city; Santana et al., 1989), and have a higher proportion of heavy drinkers (29% versus 4% in the Porto Alegre study; Moreira et al., 1996). Also, for both men and women, high alcohol intake seems to overlap with such other behaviours as smoking, a sedentary lifestyle, and obesity (Duncan et al., 1993). Data are also available on alcohol use among three segments of Brazilian minors: Secondary students (Carlini et al., 1989, 1990; Galduroz et al., 1994), adolescent residents of Porto Alegre (Pechansky, 1993, 1995; Pechansky and Barros, 1995), and "street children" (Noto et al., 1994).

The most comprehensive studies available are the 1987, 1989 and 1993 drug use surveys conducted by CEBRID among secondary students from public schools in 10 Brazilian state capitals (Carlini et al., 1989, 1990; Galduroz et al., 1994). These studies used the same questionnaire, data collection procedures, and sample methodology across the three studies, allowing for comparisons to be made (Galduroz et al., 1994).

Table 1 shows the lifetime prevalence of alcohol use among students in nine state capitals (Carlini-Cotrim & Galduroz, undated). There was a significant increase in alcohol use in seven out of nine surveyed cities from 1987 to 1993.

While male lifetime alcohol use increased in only three cities, it increased in eight cities for female students. Table 2 shows that alcohol experimentation is widespread from early ages in Brazilian society. Moreover, younger students (12 to 15 years old) seem to present a more consistent increase in alcohol use than do their older counterparts (Table 2).

2 - COUNTRY PROFILE ON ALCOHOL IN BRAZIL

Table 1: Lifetime prevalence of alcohol use among secondary students in nine Brazilian cities, according to gender (percentage).

CITIES	TOTAL (%)				MALES (%)				FEMALES (%)			
	87	89	93	p ^(a)	87	89	93	p ^(a)	87	89	93	p ^(a)
Belém	71.0	72.9	78.1	p<0.001	73.2	75.2	80.3	p<0.01	69.6	72.3	76.7	p<0.001
B.Horizonte	79.8	81.9	84.8	p<0.001	81.7	84.8	85.4	NS	77.9	79.5	84.3	p<0.001
Brasília	76.4	77.7	79.4	p<0.05	81.3	80.0	78.4	NS	72.9	76.6	80.4	p<0.0001
Fortaleza	68.4	73.5	78.4	p<0.0001	74.8	75.8	78.9	p<0.05	65.5	73.0	77.9	p<0.0001
P.Alegre	73.3	77.5	82.2	p<0.001	74.4	77.3	82.2	p<0.001	74.1	78.5	82.3	p<0.001
Recife	71.6	73.1	75.8	p<0.01	77.7	78.2	77.3	NS	66.2	70.5	75.6	p<0.0001
R.Janeiro	78.5	78.8	80.3	NS	78.7	79.9	78.6	NS	78.4	78.7	81.6	p<0.05
Salvador	79.9	80.0	77.2	p<0.05	83.0	82.3	74.8	p<0.0001	78.4	79.5	79.8	NS
S.Paulo	77.4	79.2	81.6	p<0.001	80.9	80.1	81.4	NS	77.4	78.8	82.1	p<0.001

^(a) χ^2 for trend

Table 2: Lifetime prevalence of alcohol use among secondary students in nine Brazilian cities, according to age groups (percentage).

CITIES	10-12 YEARS				13-15 YEARS			
	87	89	93	p ^(a)	87	89	93	p ^(a)
Belém	52.5	44.1	58.8	p<0.05	67.9	63.7	75.6	p<0.002
B.Horizonte	68.4	72.7	68.0	NS	80.0	80.8	84.3	p<0.01
Brasília	58.7	55.5	68.4	p<0.001	77.9	81.0	77.6	NS
Fortaleza	44.1	53.5	58.1	p<0.01	64.0	70.5	78.9	p<0.0001
P.Alegre	57.6	62.7	61.6	NS	79.5	81.8	86.2	p<0.002
Recife	45.8	60.4	57.8	p<0.02	69.3	71.9	73.0	NS
R.Janeiro	66.8	67.0	68.8	NS	75.8	79.1	80.5	p<0.05
Salvador	57.9	65.9	60.4	NS	80.5	75.3	77.3	NS
S.Paulo	64.2	69.9	70.4	p<0.05	79.5	79.7	82.0	NS

Table 2 (cont.): Lifetime prevalence of alcohol use among secondary students in nine Brazilian cities, according to age groups (percentage).

CITIES	16-18 YEARS				> 18 YEARS			
	87	89	93	χ^2	87	89	93	χ^2
Belém	80.5	81.1	87.1	p<0.01	80.5	85.8	88.3	NS
B.Horizonte	87.2	86.0	91.5	p<0.01	87.2	84.9	91.5	NS
Brasília	85.8	88.7	87.1	NS	85.8	84.2	87.6	NS
Fortaleza	77.9	79.9	83.7	p<0.01	77.9	81.6	83.8	NS
P.Alegre	86.7	89.1	94.7	p<0.001	86.7	93.5	93.0	p<0.05
Recife	79.8	78.9	83.1	NS	79.8	78.1	85.9	NS
R.Janeiro	87.6	85.2	89.0	NS	87.6	89.5	90.1	NS
Salvador	82.9	84.4	84.3	NS	93.6	88.7	85.1	p<0.05
S.Paulo	89.2	86.7	88.1	NS	89.2	87.0	91.6	NS

^(a) χ^2 for trend

When prevalence during the last 30 days was considered (Table 3), a dramatic increase in alcohol use was found in all nine cities, and frequent use (six or more times in the last 30 days) increased from 1989 to 1993 in six of the cities surveyed (Table 3). The same trend was not found in regards to use of other drugs. Lifetime use of drugs other than alcohol and tobacco had increased in only two of the nine cities considered (Galduroz et al., 1994).

Table 3: Thirty-day and frequent alcohol use prevalence among secondary students in nine Brazilian cities (percentage).

CITIES	LAST 30 DAYS				FREQUENT USE ^(B)		
	87	89	93	p ^(a)	89	93	p ^(a)
Belém	22.5	31.5	37.1	p<0.0001	14.3	16.3	NS
B.Horizonte	38.3	41.1	53.1	p<0.0001	17.2	22.8	p<0.0001
Brasília	28.9	36.1	36.9	p<0.0001	14.6	16.6	NS
Fortaleza	18.8	27.7	41.2	p<0.0001	9.6	14.8	p<0.0001
P.Alegre	33.9	38.2	49.8	p<0.0001	15.9	20.6	p<0.0001
Recife	29.2	33.1	43.8	p<0.0001	13.4	18.2	p<0.001
R.Janeiro	30.2	34.7	41.9	p<0.0001	14.1	17.5	p<0.002
Salvador	34.1	42.6	44.0	p<0.0001	18.3	17.4	NS
S.Paulo	31.9	38.2	43.8	p<0.0001	12.7	19.3	p<0.0001

^(a) χ^2 for trend

^(b) 6 or more times during the last 30 days.

Pechansky (1993, 1995; also Pechansky and Barros, 1995) presents and discusses a household survey given to a representative sample of 950 adolescents aged 10 to 18 in the urban area of Porto Alegre. Alcohol use is frequent (71%). As in most societies, boys drink more and more frequently than girls, and drinking behaviour increases with age. Pechansky found that the mean age for first alcohol experimentation was 10.1 years, with no gender difference. Alcohol intoxication was uncommon (26% of those who had ever tried alcohol) and did not occur often (70% reported one or two episodes in their lifetime). The mean age for first alcohol intoxication is 13 years, with a gender difference only for the number of intoxication episodes (more boys than girls). Beer was the most common beverage used for intoxication (51% of those who ever got intoxicated), followed by spirits (32%).

When adolescents were asked which beverage they had experimented with first, they answered beer (54%), wine (20%), and spirits (9%). The beverage of preference among those who reported drinking in the previous 30 days was beer (65% of respondents), followed by wine (24%), and spirits (11%). These preferences did not change with gender. Beer was progressively preferred with increasing age, with the opposite occurring with wine (Pechansky, 1993,1995).

These findings are consistent with an earlier study conducted in Sao Paulo City among low-income students between 9 and 18 years of age (Carlini et al., 1986a, 1986b). They found that 56% of the subjects who had ever tried alcohol reported beer use,

while 46% reported wine use and 23% reported *cachaça* use. Also, beer remained stable over the different patterns of alcohol use, contrasting with *cachaça* and wine, both of which were used more by regular and excessive drinkers (Carlini et al., 1986a).

About 70% of drinkers in the Pechansky studies (1993, 1995) remembered the occasion of their first alcohol experimentation. Most frequently, alcohol initiation occurred in a family setting, typically at an adolescent or parent's birthday party or a home celebration of such events as a new job or a school achievement. The family also played an important role in the continuation of drinking by adolescents. When the 40% of the sample who reported drinking at least once in the preceding 30 days were asked about drinking situations the majority (70.1%) said that they usually drank with their family (half of those said "exclusively with my family") (Pechansky, 1993). As expected, the family setting was less central among the oldest segment of the sample (58.5% among 16- to 18-year olds). Also, 24.5% of the sample reported drinking at meals during daytime, which typically happens with parents in Brazilian society. For the youngest segment of the sample this percentage reached almost 60%, while among the 16- to 18-year olds it was only about 10%. Family drinking behaviour is also important in shaping minors' drinking habits. In both studies (Pechansky, 1993; Carlini et al., 1986a, 1986b) a positive association was found between adolescents' heavy drinking behaviour and parents "drinking too much," as perceived by adolescents.

The study by Carlini et al. (1986a, 1986b) suggests that the same process was at work among 9- to 18-year old students in São Paulo: Home was the most frequent setting for drinking among these minors (64% of the sample). This habit decreased with age (40% among the oldest segment) and was more prevalent among females (71% versus 58% for males). The study also detected a trend toward drinking in other settings (e.g., with friends, at parties) as students grew older, and this was more pronounced among heavy drinking students.

The availability of alcoholic beverages was also family-related in Porto Alegre (Pechansky, 1993, 1995): 62% of the sample said they had alcoholic beverages available at home. A considerable proportion of respondents reported that they asked their parents for permission to drink. The need to obtain such permission was more frequently reported by the oldest respondents (16% among 10- to 12-year olds versus 62% among 16- to 18-year olds), suggesting that family control is stronger over older adolescents who are probably more likely to drink.

When the data are broken down according to respondents' family incomes, alcohol experimentation, alcohol use in the last 30 days, and beer experimentation were seen to be more common among the highest economic stratum of the Porto Alegre sample (Pechansky, 1993). On the other hand, use of spirits was more often reported by the lowest economic stratum (Pechansky, 1993). Recall that beer is more expensive than spirits in Brazil, especially if the spirit is *cachaça*.

The only study on Brazilian youngsters living in rural areas was conducted in Rio Grande do Sul (Azevedo et al., 1991). As is typical in this state, the main economic activity in the survey site—Flores da Cunha, an Italian settlement from the beginning of the 20th century—is grape growing and wine production. Every household accessible by road (N=92) was visited. Forty-one of those had residents age 15 years or younger, and were therefore included in the study. Parents were asked to provide information on the drinking habits of one of their children, selected randomly. The results are consistent with other data presented above: Minors' drinking was basically done at home with family (Azevedo et al., 1991). According to the parents, 58% of the children had experimented with wine, the majority of them male. The average age for wine initiation was 3.7 years (SD=2.4 years). The mean weekly amount of wine consumed by children was 440 millilitres, and the range was between 3 and 1,330 millilitres. All fathers and three-fourths of the mothers of these children were themselves regular wine drinkers. Children's wine consumption was more common in families who practised home wine production (51% of the total households). However, this finding must be taken with caution since the numbers were too small to show any statistical significance.

Street children of Brazil's urban centres also seem to use alcohol regularly (Noto et al., 1994). A 1993 survey conducted in five Brazilian cities and using a convenience sample of children 6 to 18 years old showed last 30 days alcohol use prevalence that ranged from 24.5% in Fortaleza to 81.5% in Recife. These children, who are a high-risk group for substance abuse of all sorts (Noto et al. 1994), use inhalants, tobacco and marijuana in a similar manner.

6. ALCOHOL-RELATED PROBLEMS IN BRAZILIAN SOCIETY

Few studies exist to document alcohol-related problems in Brazil other than on prevalence rates of alcohol dependence syndrome and the physical sequelae of heavy alcohol use.

6.1 Alcohol Dependence Syndrome

In a cross-sectional study of the metropolitan areas of São Paulo, Brasilia and Porto Alegre, Almeida-Filho et al. (1992) selected a probability sample in each site of residents aged 15 years or older. To assess psychiatric morbidity they used a screening instrument, followed by the DSM-III checklist on all suspect cases and a proportion of non-cases. With this procedure, overall psychiatric morbidity from 30% to 50% was found. Anxiety and phobic states ranked first followed by major depression among women and alcohol addiction among men. Four percent of males showed alcohol dependence in São Paulo, 5% in Brasilia, and 9% in Porto Alegre.

Other cross-sectional studies using probability samples of residents of other Brazilian cities have found similar rates of alcohol dependence. Almeida and Coutinho (1993) discovered alcoholics to make up 3.2% of their sample in a district of Rio de Janeiro

(4.9% among men and 1.7% among women). In São Paulo, Rego et al. (1990) reported an overall prevalence for alcoholics of 8% (13% among men and 3% among women). In Porto Alegre City, Moreira et al. (1996) found 9% of their sample to be alcohol dependent (16% among men and 4% among women). All of these studies used the CAGE screening questionnaire (with a cut-off of ≥ 2 positive questions) to detect alcohol dependence. The Porto Alegre and Rio de Janeiro samples comprised residents aged 18 years or more, while in São Paulo residents between the ages of 15 and 59 years were included in the study. Finally, in a mixed low/middle class area of Salvador city (Bahia state, northeastern Brazil) Santana et al. (1989) reported a 3.4% alcohol dependence prevalence (6.3% for men and 0.9% for women). This last study used the DSM-III checklist.

6.2 Physical Sequelae of Heavy Drinking

The physical consequences of heavy alcohol use have been investigated in Brazil via “awareness” surveys and “risk factors” studies. “Awareness surveys” were designed to detect overlooked heavy alcohol use among patients in treatment for various physical problems. These survey results warned health care providers of the importance of carefully exploring their patients’ alcohol habits, and of taking this into account when suggesting treatment. Jandira Masur and colleagues first conducted “awareness surveys” in the early 1980s (Masur et al., 1979, 1980; Moreira et al., 1980), and they have been followed by other researchers more recently (Almeida and Coutinho, 1990; Fleck and Soares, 1990; Fotin et al., 1995; Kerr-Correa et al., 1985). All of these studies report similar findings: High rates of undetected dependent or heavy drinkers among patients in health service treatment.

Similar high figures of heavy alcohol use and alcohol dependence were *not* found in studies that surveyed primary care settings. Iacoponi et al. (1989) noted rates similar to those of the general population—overall 5% prevalence of positive CAGE screening test—among a non-biased sample of the adult population attending primary health clinics in São Paulo city. Comparable results were forthcoming from Saalfeld and Alvares-da-Silva (1993) in their study of 300 primary care patients in Triunfo (a small town in Rio Grande do Sul state). Iacoponi et al. (1989) suggested the existence of a “bypass” whereby alcoholics would seek direct specialist care only when they suffered from the physical and mental consequences of alcohol-related disorders, therefore “bypassing” the primary care level.

“Risk factors” studies of the physical sequelae of heavy alcohol use aim to detect etiological factors for diseases such as pulmonary tuberculosis, esophageal cancer, chronic pancreatitis, hypertension, and others. Leite and Puel (1985) studied 50 inpatients being treated for pulmonary tuberculosis and found that 52% of them showed alcohol dependence according to the MAST screening test. Twenty of those alcoholic inpatients had been under treatment for pulmonary tuberculosis before, yet in only 11.5% of the cases had health care personnel detected alcoholism.

Gimeno et al. (1995) conducted a case-control study in São Paulo city to assess the association between esophageal cancer and smoking and drinking habits. Eighty-five cases were compared with 200 hospital controls that had different diseases, including other kinds of cancer. The crude estimation of the odd ratio was calculated for all the variables. Logistic regression was used in the next steps of the analysis. An odd ratio of 3.68 for drinking spirits was found, 4.86 for tobacco smoking, and 2.48 for frequently eating hot peppers, all of these being important risk factors for the disease. They also detected a dose-response relationship—after controlling for potential confounders—with the risk for esophageal cancer rising steadily with increased spirits use and with smoking.

Mott et al. (1989) studied 407 cases of chronic pancreatitis in São Paulo city, and of these 93.6% had heavily used alcoholic beverages over several years. Along the same line, Dani et al. (1990) observed 797 consecutive cases of chronic pancreatitis from 1963 to 1987 in São Paulo and Belo Horizonte cities. Alcoholism was the main etiological agent, responsible for 714 cases (89.6%). Strauss et al. (1988) reported similar data for liver cirrhosis, where alcoholism was the main etiological factor in 71% of 200 diagnosed cases in São Paulo.

Silva et al. (1981) carried out a randomly selected analysis of 200 neonates born to mothers of low socioeconomic status to assess the intrauterine effects of alcohol consumption. They found a greater proportion of neonates presenting small size for gestational age, microcephaly, and short palpebral fissures—three signs of the prenatal effects of alcohol—among those born to heavy drinking mothers.

Finally, Lollo (1989) examined the prevalence of arterial hypertension by means of a household survey in Araraquara city (a town in São Paulo state) among the urban population between 15 and 74 years of age. She discovered a greater prevalence of high arterial hypertension among those who drink large quantities of alcoholic beverages when compared to those presenting other patterns of alcohol use.

6.3 Accidents and Violence

Anecdotal reports suggest that alcohol plays a major role in traffic crashes in Brazil, and that it significantly contributes to domestic violence, work accidents, homicides, and falls. Unfortunately, very few studies have been conducted on these matters. Nappo (1996) collected data from the São Paulo State Forensic Institute (Instituto Medico Legal), which is responsible for toxicological analyses of blood and viscera from victims of non-natural deaths and noted the presence of alcohol in the blood of 18,263 deceased persons from 1986 to 1993. This figure overwhelms the detected positive tests for cocaine and barbiturates during the same period: 407 and 190, respectively. Nappo concluded that alcohol appears to be the preponderant substance in drug-related non-natural deaths in São Paulo.

In 1980, Gonzaga-Junior and Curiati (1981) explored the files of the Social Services Section of the São Paulo State Police Department (Plantões de Serviço Social das

Delegacias de Policia). From 3911 new files they selected 1170 which were classified as "family conflict" cases based on the identification form of the Social Services' users and the social worker's report on the case. Some comment on excessive alcohol use appeared in 343 of these family conflict files (29%). Alcohol was most commonly involved in aggression against persons (71% of all cases), damage to or destruction of household goods (62% of all cases), and unemployment or job-related problems of a family member (62% and 54% of all cases, respectively). Alcohol was less frequently cited when the main problems were verbal aggression, an expelled spouse, or runaway family members.

A recent report from Minguardi et al. (1996) to the São Paulo State Police Department suggests that alcohol may play a significant role in homicides in some areas of the city. They analyzed 1549 police crime notifications on homicide attempts and actual homicides recorded during 1995 by 14 police districts located in the south end of the city. The victims were mostly male (90.6%) between 16 and 30 years of age. Guns were used in 90% of these crimes, which occurred primarily between 20:00 and 24:00 hours and/or on weekends. Some information on the "main reason for homicide" was found in 381 of the notifications. "Bar fights" and "alcohol" were reported 48 times (12.6% of the reported causes). "Bar fights" was a label used to report those crimes for which no other apparent reason than drinking in a bar could be found to explain the killing. Other reported reasons were fights (without any further specification), fights over a woman, couple fights, and assault. Unfortunately, no information exists concerning alcohol's possible role in these other homicides.

Data are also very scarce when alcohol-related accidents are considered: There are no data on alcohol-related falls, drownings, burns, and other kinds of injuries. It is possible, however, to locate some information on alcohol-related traffic crashes and on driving under the influence of alcohol.

Wafae (1985) analyzed 1136 traffic crash notifications from 1976 to 1985 and found that only 25% of these provided information on driver alcohol use, based either on self-reports or breathalyser instruments. Eighteen percent of the drivers either reported having used alcohol before driving or presented a blood alcohol concentration (BAC) over 0.8 grams/litre. Barros et al. (1988) randomly invited 113 Porto Alegre drivers to measure their BAC while waiting at a traffic light on a Friday and Saturday evening, and only three drivers refused to participate. Eighty-six percent had some alcohol content in their blood, and 1.8% of the total were considered drunk (no criteria for determining drunkenness are given). More recently, Nery-Filho et al. (1995) studied 500 people in Salvador, a coastal city in the northeast. As is typical of beach cities there, a main leisure activity on weekends is to go to the beach to swim, play, and spend time with friends and relatives. Beer and *cachaça* are both available by the seashore, being sold from stands and in bars or nearby restaurants. The people interviewed were randomly approached during the late afternoon over five consecutive weekends just as they were getting in their car to drive back home. A total of 30.3% had a BAC of over 0.7 grams/litre and 35% reported having drunk more than a litre of alcoholic beverage that day. Seventy-three percent reported that they felt able to drive

back home and were about to do so. One in every four admitted to having been the driver when a previous car crash happened, and 38% of those confessed to having had some drinks before the crash.

7. WORK AND SCHOOL PROBLEMS

There are few data from Brazil to indicate that heavy alcohol use during adolescence is associated with school and other youth problems. Likewise, almost nothing is available concerning alcohol-related problems in the workplace. Carlini et al. (1986b) studied the drinking practices of 3114 low income students from 9 to 18 years old in São Paulo city. They found 5% to be excessive drinkers, and 15.2% reported school problems or missing classes due to their drinking. Only four out of 100 teachers in the 15 schools surveyed had noticed any alcohol-related problems among their students.

In their survey in Porto Alegre city discussed above, Pechansky and Barros (1995) found that 30.5% of the subjects who had ever drunk alcohol admitted having experienced some kind of problem related to its use. In 70% of these cases the problem was a physical one such as headaches, dizziness and vomiting. However, 16.5% woke up late and 4.1% missed classes due to alcohol consumption.

Finally, although official reports frequently claim that alcohol plays a major part in absenteeism and work-related injuries, there are no reliable statistics on the topic. The Social Services Department of Brazilian Industries conducted a survey in Rio Grande do Sul to assess alcohol and other substance use among their employees (SESI, 1995). Among 834 randomly selected subjects they found that 84.4% were current drinkers and 34.4% showed a positive CAGE (screening test for alcoholism) score. A small but significant proportion (6.2% of drinkers) reported drinking during work breaks, and 1.8% drank alcohol during the morning hours. However, the authors found no association between a positive CAGE test score and self-reported absenteeism, work injuries, missed days, delays, or other widely used parameters to measure alcohol-related problems in the workplace. They suggested that this lack of association might be due to the way work injuries are defined in Brazilian legislation. An accident is only considered work-related if it results in days of absence for the employee. Another possibility, not discussed by the authors, could be a bias in self-reporting work problems. Considering how difficult it is to find a job in Brazil, the respondents might have been frightened to admit such behaviours as delays, absences, work injuries, etc. for fear of retribution or job loss.

8. ALCOHOL-RELATED ADMISSIONS TO MENTAL HEALTH HOSPITALS

Caetano (1981) analyzed national data on first admissions to psychiatric hospitals in Brazil. His 1974 data show that people with an alcohol-related diagnosis, including 4.5% of all female first admissions and 28% of all male first admissions, occupied 19% of beds. More recently, Noto et al. (1997) conducted a series of postal surveys on

alcohol and drug-related admissions to psychiatric services nationwide, covering eight consecutive years (1988-1995). An average of half of the services registered at the Federal Health Department sent data on alcohol and drug admissions during these years, and information was obtained on about 60 000 inpatients per year. Alcohol-related admissions accounted for 90% to 95% of all substance-related admissions. The remaining cases were mainly for marijuana (in the earlier years of the study) and cocaine (in the later years).

9. MORTALITY

According to official data from the Ministry of Health Department (Ministerio da Saude, 1996), 887 594 people died during 1994 in Brazil. Of those, 4561 (0.5%) were due to mental health disorders, and the alcohol dependence syndrome represented 79% of these mental health-related deaths. A recent bulletin from PRO-AIM (1996)—the São Paulo funeral services mortality databank—published a note on 1112 deaths directly associated with alcohol use in 1995. Of these, 52.8% were from alcohol dependence, 46.7% from alcohol-related liver cirrhosis or hepatitis, and 0.5% from alcoholic psychosis. These deaths accounted for 1.7% of São Paulo's total mortality in 1995, and ranked thirteenth among reported causes (ninth among males).

Finally, the work of Vianna and Monteiro (1991) suggests that a considerable proportion of unrecorded deaths is due to excessive alcohol use. They used the CAGE screening test to interview close relatives of 327 deceased women in Diadema (a part of the São Paulo metropolitan area) to get information on their past drinking habits, and they found 24 positive CAGE tests among those women as reported by relatives (7.3% of the total). Interestingly, alcohol use was not noticed on any of these women's death certificates. After contrasting death certificate and relatives' information the authors suggested that 11 out of the 24 CAGE positive women probably died from alcohol-related causes which were overlooked by the health care system.

10. SOCIETAL RESPONSES TO ALCOHOL-RELATED PROBLEMS: LEGISLATION, PREVENTION, AND TREATMENT

Brazil lacks a tradition of social movements concerned with alcohol abuse. The only sign of the temperance movement in the country was a timid branch of the Women's Christian Temperance Union established in 1925 that remained active until 1950 (Musumeci, 1994). Brazil also has only a small number of academics engaged in alcohol studies, the majority of them psychiatrists. Largely as a consequence of this, alcohol problems in Brazil are viewed mostly as medical problems (Caetano & Carlini-Cotrim, 1993).

As has been noted above, Brazil is a society where alcohol can be sold and consumed nearly anywhere by anyone, if legislation alone is taken as a reference. There are few restrictive regulations, and those that exist are rarely enforced. The main restrictions are: It is unlawful to sell alcoholic beverages to persons under age 18 years, to those

with visible mental health problems, or to already intoxicated persons. It is also against the law to sell alcoholic beverages on election days or to drive a vehicle with a BAC of 0.8 grams/litre or higher. "Recurrent drunkenness" during working hours gives a company grounds to fire an employee without the latter's normal legal rights coming into play, and public drunkenness is considered unlawful. The state of São Paulo has a specific law that bans alcohol sales along state roads, but alcoholic beverages are sold freely along all other roads in the rest of the nation, as well as along those federal roads that cross São Paulo state.

Regrettably, alcohol issues are seldom discussed in drug education classes or activities, where illicit drugs of little epidemiological relevance remain the primary focus (Carlini-Cotrim & Rosemberg, 1990, 1991). The same is true of newspaper articles about substance use among adolescents: Alcohol use was conspicuous by its absence from 1711 newspaper articles published by Brazilian print media between 1960 and 1989 in which illegal substance use among students was the main topic. The few articles that discussed alcohol consumption approached it not as an issue per se, but rather as a gateway to other drug use. Meanwhile, articles on illicit drugs insisted that any use of these substances is extremely dangerous and inevitably leads to crime, prostitution, physical and moral degradation or madness (Carlini-Cotrim et al., 1994).

In the treatment domain, inpatient services based on a 12-step Minnesota model (for employee assistance programs) prevails, and Alcoholics Anonymous groups exist for the great majority (Pechansky, 1994). Still, some religious groups offer a set of beliefs and norms that have helped some recovering alcoholics (Mariz, 1991). Some new initiatives working with multiple treatment approaches have been developed recently, mainly in university centres.

11. FINAL COMMENTS

In my opinion the epidemiological research discussed above raises more research questions than it did answers. Relying basically on cross-sectional studies, bivariate analysis, and an insufficient characterization of drinking patterns and problems, the reality of alcohol use in Brazil remains undiscovered. This is not to say that alcohol epidemiology research in Brazil has not improved in its methods and approaches over the last decade (Caetano & Carlini-Cotrim, 1993). Rather, it is to emphasize the enormous lacunae that must be filled to reach the stage where we can suggest policies and prevention measures based on scientific knowledge instead of just common sense.

Achieving this is not simply a matter of working harder. First, in a country that keeps poor records of almost every aspect of social life—including health statistics—the possibilities for monitoring behaviours over time are scarce. Second, although financial support for modest research proposals is usually available, it rarely includes funding for the researchers themselves. It is just assumed that they hold positions in a university or research institute, and therefore do not need additional support. As such positions have become fewer and fewer over the last 10 years, a bizarre situation has arisen in which funds exist to purchase computers and pay for data processing, but not

for the support of the professional research team. Third, the current tendency toward thinking that abuse of *any* substance is basically a single issue has had a perverse side-effect on alcohol epidemiology research in Brazil: Since both international funding and local public attention have favoured illegal drugs, this has diverted attention and resources away from the alcohol research field.

One might argue that this critical perspective is of little help in moving things forward so I will conclude this review by offering a few comments on the richness of some reported data, and by pointing out future research that would contribute to a better understanding of Brazil's relationship with alcoholic beverages.

First, the family's role in shaping alcohol use seems to be particularly strong in Brazil. Many families allow children to drink at social activities or even during everyday meals. This occurs under adult supervision and consent, and benefits from Brazilian legislation, which does not prohibit drinking at any age. The role of families should be explored more in the future, broadening data collection to other social groups, and gathering data on the family's contribution to preventing heavy or binge drinking among minors, even after they become adults.

Sociological and anthropological research could produce data on how informal family controls relate to weak legislation. My informal observation suggests that Brazilians see alcohol use as a private matter, where state regulations can be of some help but nonetheless should not intrude into the family and personal domains. Where, when, and how much to drink should not be decided by anyone other than parents (if for minors), or by individuals themselves. This relates to drinking behaviour of both minors and adults and may have important implications for controls on alcohol availability.

Second, several papers cited above note that beer has become the most widely used beverage among Brazilians. This contrasts with the widely held idea that *cachaça* is consumed more than any other alcoholic beverage in Brazil. However, more research is needed to clarify some points, e.g.: Is this valid for all regions of the country? As discussed above, Brazil is huge and diverse and alcohol research has been concentrated mainly in the southeast. Is beer the most used beverage even by heavy drinkers or those who are alcohol dependent? Borini and Silva (1991) and Moreira et al. (1980) observed that inpatients in treatment for alcohol problems reported drinking mostly *cachaça*. This might be a result of their alcohol use pattern or due to their socioeconomic stratum, since both samples drew from low-income groups. The shift from one beverage to another may also explain these findings, when one takes into account the industry data reported above.

Lastly, Brazilian researchers are accustomed to gather data through surveys, since it is difficult for them to obtain the information needed by other means. Surveys are expensive and time-consuming, but also a rich source of data. Therefore, Brazilian researchers should be encouraged to collect data that allow delineation of risk curves

for alcohol problems. International cooperation and exchange can help improve the already rich findings of Brazilian surveys.

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Country Profile on Alcohol in India

by
Shekhar Saxena

1. INTRODUCTION

Large, underdeveloped, and economically poor, India comprises 2.4% of the world's land area and 15.5% of the world's population (953 million people). After independence from British rule in 1947, a federal democracy was established with a central government in New Delhi and 25 state governments. India remains multiethnic, multilingual (with 18 official languages), and multi religious (with five major religions). Eighty-three percent of the national population is Hindu, 12% Islamic, 2% Christian, 2% Sikh, and 0.8% Buddhist. There is no state religion and citizens are free to practice their religion without restriction. Three-fourths of India's populace lives in rural areas, but this proportion has decreased over time. Nearly half are illiterate and more than a third live below the poverty line, defined as being unable to afford necessary food for survival. Overall, India remains poor, with a per capita Gross National Product of US\$335 and about US\$200 in per capita income. There is a marked economic disparity, with a large number of poor people and a few very wealthy ones. In between these extremes is the large, rapidly growing middle class, estimated to consist in more than 200 million people at present. Beginning in the early 1990s an economic structural readjustment programme was initiated which has led to liberalization of industrial licensing, privatisation of public industries, and promotion of imports and exports.

Although alcohol consumption has existed in India for many centuries, the quantity, patterns of use, and resultant problems have undergone substantial changes over the past 20 years. These developments have raised concerns about the public health and social consequences of excessive drinking. Alcohol-related data remain scarce in India, and so far there have been very few scientific studies. Even routine data collection on alcohol production and sales is difficult to obtain and collate. Significant regional, gender, and social class differences also pose serious limitations on the extrapolation of findings based on small samples. Nonetheless, in this chapter I attempt to describe the current state of alcohol consumption and associated problems in India. The available scientific literature is summarized to describe the situation and draw some conclusions. In so doing it has been necessary to make certain assumptions and estimates in order to fill in significant lacunae in information. A public health-oriented approach is adopted throughout.

2. HISTORICAL ASPECT

2.1 The Ancient and Medieval Periods

Beverages believed to contain ethanol are mentioned in ancient Indian literature dating back to the Vedic period around 2000 B.C. (Chopra and Chopra, 1965). Two varieties of drinks are described—*soma* and *sura*—along with their effects and the harms that might result from excessive consumption. *Soma*, the drink of the social elite, was credited with positive qualities. On the other hand, *sura* (a fermented beverage made from rice and sugarcane) was consumed by warriors to enhance their valour and courage, among other things. *Soma* receives no further mention in post-Vedic literature, but *sura* and its variants have remained a part of Indian literature ever since (Prakash, 1961). For example, South Indian literature contains descriptions of fermented palm sap drinks that may be similar to present day toddy (Dikshitar, 1951). Alcohol was also an ingredient in many medicinal preparations in the traditional Ayurvedic medical system. Ancient Indian medical texts describe in detail the harmful effects of excessive or indiscriminate drinking on the mind and body. For instance, Charak Samhita (Anonymous, 1949), a 2000-year-old treatise on medicine, states that “if a person takes it in right manner, in right dose, at right time, and along with wholesome food, in keeping with his vitality and with a cheerful mind, to him wine is like ambrosia.” However, “to a person who drinks whatever kind comes in hand to him, and whenever he gets an opportunity, this very wine acts as a poison.”

Despite the knowledge and availability of alcoholic beverages, they were never a routine part of the diet in India. Strict rules and guidelines governed who could drink and under what circumstances. Manu, the ancient Hindu sage, strictly forbade drinking by Brahmins, the learned ones. Members of other social classes were allowed to drink, but only on specific occasions (e.g. wars, religious and festive ceremonies). Abstinence was considered virtuous for the common people, but alcohol consumption by specific groups in a socially approved manner took place and was tolerated (Tekchand, 1972).

Although the Islamic tradition has stronger prohibitions against alcohol than the Hindu does, drinking was common among the Mughal emperors and their subjects (Singh & Lal, 1979). Soldiers were encouraged to drink habitually and other social sectors were allowed to join in mass drinking at festivals or other public functions. While it does not favour alcohol use, the Sikh religion tolerates drinking, especially by the military class. Therefore it comes as no surprise that Punjab—the traditional Sikh homeland—has one of the highest alcohol consumption figures in contemporary India. In contrast to these other religious traditions, the Buddhist and Jain religions strictly forbid alcohol use in any form and under any circumstance.

In sum, ancient Indian society had the knowledge of how to prepare beverage alcohol, but did not support routine alcohol use and regarded abstinence as a virtue for most people. Although alcohol never became a part of daily food and drink, its occasional use was permitted. The available evidence suggests that alcohol use did not pose a

significant health or social problem in ancient and medieval India. Further information on these historical aspects of drink can be found in Singh and Lal (1979), Mohan (1990), and Sharma (1996).

2.2 The Colonial Period

India remained under British rule for almost 200 years before gaining independence in 1947. This period of colonial rule saw a slow but steady rise in alcohol consumption, with significant changes in the beverages consumed, the pattern of drinking, and social attitudes toward alcohol use. Distilled beverages of a much higher alcohol content gradually replaced traditional fermented beverages. Better fermentation and distillation processes and the introduction of new packaging technology resulted in alcoholic beverages becoming mass-produced commercial items.

Improved transportation facilities contributed to wider alcohol availability everywhere in India. While this played a role in increasing alcohol consumption, there was a more fundamental change in the pattern of drinking. As conventional rules and guidelines for alcohol use weakened, drinking changed from ritualistic and occasional to become a part of routine everyday social intercourse and entertainment. This European pattern of drinking was accompanied by a change in attitude toward alcohol, which came to be regarded more positively.

Since the British were more familiar and comfortable with alcohol than with other intoxicants such as cannabis and opium, they promoted alcohol use and tried to control local cannabis and opium consumption (Saxena, 1997). Strict laws against the latter substances also contributed to a shift in popular means of intoxication toward beverage alcohol. Besides giving licenses to big distilleries, the colonial government also allowed local production of liquor. The cumulative result of these developments was a gradual increase in alcohol consumption so that when India gained her independence in 1947 alcohol occupied a definite place in many Indian social strata and was associated with a Western way of life (Wig, 1994). It is noteworthy that alcohol prohibition was among the demands voiced by India's native leadership and prohibition became one plank upon which the independence struggle was fought.

3. TYPES OF ALCOHOLIC BEVERAGES AVAILABLE

Because India has great variety in topography, climate, vegetation, culture, and traditions, it is unsurprising that hundreds of kinds of alcoholic beverages are made and consumed. All of them, however, can be grouped into the following four broad categories.

3.1 India-Made Foreign Liquor (IMFL)

This category, created for revenue purposes, consists in Western-style distilled beverages such as whiskey, rum, gin, vodka and brandy. These are made in India under

government licenses and the maximum alcohol content allowed is 42.8%. Whiskey is by far the most popular drink in this category, with hundreds of brands available, at least 20 of which have an all-India presence. Several dozen brands of rum, gin and brandy are also available. Wines fall under this category of liquor too, although until recently wine production and consumption in India was almost nonexistent. Some wines are now made in the country, and small amounts of wine are imported for select consumers.

3.2 Country Liquor

These distilled alcoholic beverages are made from any cheap raw material available locally, e.g. sugarcane, rice, or coarse grains. Country liquor is produced in licensed distilleries and sold from authorized outlets within the same district. Common varieties of country liquor are *arrack*, *desi sharab*, and *tari* (toddy). Excise duties are paid, but since production costs are low the retail prices are also low. The licensing system and some governmental monitoring of the production process ensures a uniformity in alcohol content (around 40%) and basic safeguards against adulteration with other harmful intoxicants. Northern and western India are sugar-producing areas, and a large amount of molasses is available in these states at a very cheap price. Consequently, molasses is the main raw ingredient for country liquor there. In south India, coconut and other palms are used for the same purpose. In addition, inexpensive grains are used for country liquor all over India.

3.3 Illicit Liquor

Besides licensed distilleries, a number of small production units operate clandestinely. The raw materials they use are similar to those in country liquor, but since they evade legal quality controls the alcohol concentration in their products varies and adulteration is frequent. It is common to find samples containing up to 56% alcohol. One dangerous adulterant is industrial methylated spirit, which occasionally causes mass poisoning of consumers who lose their lives or suffer irreversible eye damage. Since no government revenues are paid, illicit liquor is considerably less expensive than licensed country liquor, and thus finds a ready market among the poor. In many parts of India illicit liquor production and marketing is like a cottage industry, with every village having one or two illegal operations. In addition to the commercial production of illicit liquor, home production for personal consumption also is common in some parts of the country. For example, in a survey of Punjabi alcohol users Lal and Singh (1978) found that 45% of them reported home liquor production for their own use. Home fermentation and distillation are also common in several tribal areas.

3.4 Beer

Beer is a relatively recent arrival in India, which remains largely a spirits-consuming society. However, beer production and consumption have grown rapidly. Indian beer is manufactured in large licensed breweries and is available under more than 60 brand

names whose alcohol content ranges from 5% to 9%. Beer is available mostly in bottles, but cans have been introduced recently. Since for the same amount of alcohol the price of beer is much higher than distilled liquor, beer is a drink for the middle and upper economic classes. Beer also has become a favourite beverage of the urban young.

4. THE ALCOHOL INDUSTRY

Based on beverage type the Indian alcohol industry has three prominent sectors: the IMFL and beer sector, the country liquor sector, and the illicit liquor sector. The structure, marketing and sales practices, and economic issues differ for each of these.

The IMFL and beer sector is the most visible part of the alcohol industry, boasting a few large companies with multiple production units and nationwide marketing networks. These companies control much of the market, have been present in India for several decades, and have established several brand names regionally or nationally. These companies aggressively advertise and promote their brands and their corporate identities, and constantly monitor and protect their products' market shares. They are also cash rich, since profit margins are high in this industry.

Beginning in 1992 under liberalized industrial laws, some Indian alcohol companies developed collaborative ties with international corporations. Joint ventures have been established to use local production capacity to manufacture international brands under a technology transfer and licensing system. These joint ventures have served a dual purpose: They have brought international alcohol brands to India, and they have utilized the existing production and marketing strengths of Indian industry. Hence they have been mutually beneficial. Nearly all of the major transnational alcohol companies now have a presence in India and many internationally popular brands of whiskey and beer have become available. These have been accepted well by the upper middle and higher socioeconomic classes, who can now purchase these famous brands locally rather than having to carry them back from trips to other countries or to buy them from illegal importers (Saxena, 1994a). The price of these products remains high, but since they carry high social prestige value there is good demand in this premium range.

The IMFL and beer industry spends much effort and money to promote and advertise their brands. Since direct advertisement of liquor is not permitted in the print and electronic media, the industry has found methods to advertise indirectly (Saxena, 1994a). Alcohol brands are advertised in the form of same or similarly named other products (e.g. mineral water, soda, and playing cards) made by the same company. The advertisements display the alcohol product prominently. In addition, beverage ads have become common on satellite cable television beamed to India from neighbouring countries. IMFL and beer producers also financially sponsor major sporting events that attract sustained media attention, including live television coverage of the event. With its new international linkages, the Indian alcohol industry has also gotten into the entertainment and fashion worlds. It is now common for a liquor company to sponsor a fashion show or a musical event. Hence the Indian IMFL and beer industry has

initiated a high level of sustained marketing and promotional activities, and these have become especially aggressive in the 1990s.

In contrast to the IMFL and beer sector, the country liquor industry is more decentralized. There are many regional producers and most brand names have only a local presence. These producers do not indulge in advertising or sponsorships since manufacture and retailing is under local licensing with little competition. They more or less have a captive market in their area and their low costs ensure high sales. Profit margins are high, and it is widely believed that a part of the profits goes to the licensing authorities.

The illicit alcohol industry also has a local presence and is run with the help of local criminals. They either operate this industry themselves or provide protection for a price of those who do. It is believed that regular payments are also made to law enforcement authorities. Illicit liquor is bought mainly for its very low price, and hardly any marketing is necessary. The whole operation is kept low-key to avoid visibility and possible legal action.

The Indian alcohol industry produces a large amount of revenue for the government. It has been estimated that direct collections of excise and sales taxes are approximately US\$5 billion per year for the country as a whole. This money goes largely to state governments, and some states derive as much as 10% of their total revenues from the alcohol industry. In addition, the industry contributes indirectly by promoting entertainment, travel, tourism, and sports, all of which are independently taxed at high levels. The alcohol industry also is a source of employment, and it is estimated that about 1.5 million people work directly in the production and sale of alcoholic beverages in India. Besides the generation of legal revenues for the government, the alcohol industry is thought to create an approximately equal sum in "black money" that takes the form of bribes, protection payments, and profits from illicit alcohol. This gives the alcohol industry enormous political power and clout, which may be used to help influence and maintain government policies beneficial to the industry.

5. PRODUCTION AND AVAILABILITY OF ALCOHOL

5.1 Production and Availability Estimates

National production and availability data are very difficult to obtain in India, since there is no single agency responsible for this task. The production and sale of alcohol is a state, not a federal, responsibility, and so the 25 different state excise departments keep the records. Unfortunately, these are not routinely collated at the national level. The Ministry of Chemicals maintains data on alcohol production, and has a separate head that oversees potable alcohol, but there are gaps in their information because of non-reporting by some states. The Ministry of Welfare is responsible for tracking alcohol-related problems, but it does not focus on the amounts of alcohol consumed. The

3 - COUNTRY PROFILE ON ALCOHOL IN INDIA

Indian Distillery Association keeps data on licensed production from industrial sources, and claims to have accurate figures.

The figures for distilled spirits presented in table 1 below have thus been derived from several different sources and crosschecked against each other. They are based on an estimated average alcohol content of 42.8% for IMFL and 40% for country liquor. Beer and wine are not included in this table. As can be seen, the data are incomplete, and the apparent decrease from 1991-1992 to 1993-1994 is inexplicable. Perhaps it is a result of gaps in reporting by some states, rather than an actual decrease in production.

Table 1: Annual Distilled Spirits Production in India, by Year (April to March)

YEAR	AMOUNT OF ABSOLUTE ALCOHOL PRODUCED (IN THOUSANDS HECTOLITRES)
1982-83	2,862.55
1983-84	3,104.75
1984-85	3,310.64
1985-86	3,407.49
1986-87	3,204.80
1987-88	3,432.48
1988-89	4,190.45
1989-90	no data
1990-91	no data
1991-92	4,895.00
1992-93	3,467.00
1993-94	3,626.00
1994-95	6,056.00
1995-96	7,888.04

The following unconfirmed data are available on beer production in India (see table 2). Wine is not included in this table either, but wine consumption in India is negligible and would not appreciably alter the quantities shown.

Table 2: Annual Beer Production in India, by Year

YEAR	AMOUNT OF ABSOLUTE ALCOHOL PRODUCED (IN THOUSANDS HECTOLITRES)
1970	17.8
1980	66.6
1990	86.2
1991	96.1
1992	100.5
1993	136.1

India has recently permitted importation of beverage alcohol for commercial purposes, but the figures for these are unavailable. Indian nationals returning from abroad as a part of their personal baggage bring in significant amounts of alcoholic beverages. In addition, it is believed that illegal imports may contribute to overall consumption in India as well. These are mostly premium international brands of spirits that are consumed by the rich. India has negligible alcohol exports to other countries.

As has been described above, a good deal of alcohol is produced illegally. While the quantities of this vary from state to state and from time to time, illicit and home production, together with illegal imports, probably are equivalent to about half again the nation's legal production. Taking the figure of 8000 thousand hectolitres (800 million litres) of absolute alcohol as the annual legal production, an estimate of 1200 million litres of annual consumption seems likely.

5.2 Per Capita Consumption

Based on an estimated national consumption of 1200 million litres of absolute alcohol in 1996, and a total national population of circa 953 million in that same year, a per capita figure is obtained of approximately 1.2 litres. This seems low when compared to figures from developed countries, but since drinking is very unevenly distributed in Indian society it is necessary to make some adjustments to this figure in order to arrive at a more accurate idea of the amount drunk by an average drinker.

Since 38% of the population is under age 15 years, adult (over age 15) per capita consumption comes to almost 2 litres. If women are excluded, among whom the abstinence rate is >95%, then adult male per capita consumption becomes 3.5 litres. Several surveys (described below) demonstrate that even among adult men about 60% abstain. Hence, if the per capita consumption figure is recalculated for adult male drinkers alone it rises to approximately 9 litres of absolute alcohol per annum. This compares well with estimates by Lal and Singh (1978) based upon sales figures and survey results from Punjab. They estimated the per capita consumption of drinkers at 10 litres, but Skog (1980) reanalysed their data and produced an estimate of 12.5 litres. These figures are of the same order as those for many European countries.

In light of these observations India should be viewed as having a minority of heavy drinkers within a majority of abstainers, rather than as having a low level of overall drinking as the gross national per capita consumption figure suggests. As will be shown below, this pattern has some serious public health implications.

6. PREVALENCE AND PATTERNS OF ALCOHOL USE

No nationwide systematic epidemiological surveys have been conducted on alcohol use, but a number of smaller studies have been completed in different regions whose results are quite consistent. The available studies can be sorted into psychiatric surveys, general population drinking surveys, and special population drinking surveys.

6.1 Psychiatric Surveys

Many psychiatric morbidity surveys have been conducted on India's general population, and prevalence data for alcohol dependence have been obtained along with those for other mental disorders. In one of the earlier studies Surya et al. (1964) surveyed 510 households (2731 individuals) in southern India and found the prevalence of "alcoholism" to be 3.6 per 1000. In another part of rural southern India, Gopinath (1968) reported a prevalence of 2.36 per 1000. Another study in a neighbouring state used a stratified random sample of about 2900 individuals and observed an ICD-8 diagnosis of alcoholism to be 4.8 per 1000 (Varghese et al., 1973). In contrast to these studies, Dube and Handa (1971) found that 1.38% of the population they studied in northern India habitually abused alcohol. A similar figure of 1.3% was produced in a small survey in eastern India by Elnagar et al. (1971).

These psychiatric surveys were carried out to discover the prevalence of mental illnesses in general, and the screening procedures used were designed to detect only the most severe cases of alcohol dependence. However, these studies created an awareness of alcohol-related problems and paved the way for more focused investigations of alcohol use.

6.2 General Population Drinking Surveys

Several general population studies have examined the prevalence and pattern of alcohol use. Deb and Jindal (1975) found that 74.2% of adult men in rural Punjab had used alcohol at least once from among a sample of 1251 individuals. In a similar survey from the same region Mohan et al. (1978) reported that 32.9% of all adults had used alcohol at least once during the past year. Lal and Singh (1978) studied about 7000 people from rural Punjab and 25.6% of them drank alcohol, while the rate of drinking in males over age 15 years was nearly 50%. Sethi and Trivedi (1979) surveyed 2010 general population adults from northern India and discovered that 21.4% had abused at least one drug, usually either alcohol or cannabis. Varma et al. (1980) questioned 1031 people from both rural and urban areas of northern India and reported that 60% of these adults had never drunk alcohol. The prevalence of drinking once or more in the previous year was 23.7%, and of past use, 16%. In yet another study among a rural general population, Mohan et al. (1980) found that 58.3% of adult males drank, while only 1.5% of adult females did so. Probable dependence among current male drinkers was 3.9%, and per capita consumption was estimated at 6.62 litres of absolute alcohol. In a methodologically sophisticated general population study in western India, 24.7% of adults drank (Sundaram et al., 1984). The rates for males were 36.1% and 13.4% for females. Probable alcohol dependence rates were 3% (5.6% for males and 0.5% for females). Mathrubootham (1989) in a southern India study found 33% of the men to be current drinkers. The drinking prevalence was higher among those of lower socioeconomic status. Chakravarthy (1990) reported alcohol use to be from 26% to 50% among rural southern Indian males, and the prevalence was higher among those who were illiterate. Ponnudurai et al. (1991) used the Michigan Alcohol Screening Test

(MAST) to estimate problem drinking in a large city of southern India and found a prevalence of 16.7% among males. In another large community study of approximately 400 000 people, Bang and Bang (1991) estimated that about 25% of their sample were drinkers. Mohan et al. (1992), using rapid survey techniques, assessed substance abuse in poor urban areas of Delhi to be 26%, a majority of whom abused alcohol (with or without tobacco).

6.3 Special Population Drinking Surveys

Some studies have looked at alcohol use among special populations (e.g. students). For example, Mohan et al. (1979) conducted one of the earlier studies among high school students and found that 12.7% were drinking. Another early study by Dube et al. (1978) among university students noted that the prevalence of ever having used alcohol was 32.6%. Varma and Dang (1980) reported a similar prevalence of 31.6% for drinking by non-student youth. A large study of college students from seven Indian cities found that between 9.3% and 15.1% were current drinkers (Mohan, 1981). The positive features of this multicentre collaborative study were its methodological strengths and the consistency of the results across cities.

Unlike the relatively low figures for drinking by the general university student population, medical students have shown a higher drinking prevalence of from 40% to 60% (Sethi and Manchanda, 1977; Singh, 1979). There are no data on drinking by industrial workers, but a study by Gangrade and Gupta (1978) mentioned that nearly 10% of the factory workers studied near Delhi drank alcoholic beverages.

The findings of these various studies must be treated with caution because their samples are relatively small, they are all regional (rather than nationwide), and the operational criteria for "ever used," "currently use," and "dependent" differ considerably. However, some conclusions can still be drawn. The studies generally agree that 60% or more of the adult population is abstinent. This contrasts markedly with most developed countries, where complete abstinence rates are much lower. A second common finding is the striking gender difference, with women showing drinking rates of fewer than 5% in most of the studies, compared to much higher rates for men.

No clear associations of drinking with socioeconomic categories are available for India, but indications suggest that drinking may be more prevalent among the lower classes and the poorly educated. Drinking is still much more prevalent among males than females, although some evidence indicates that educated urban females are being initiated into drinking. Clinic data also suggest that more young people now indulge in heavy drinking than before. In this regard it needs to be emphasized that the available figures are mostly for "ever used" or "used within the last year," and do not necessarily indicate problem drinking. Alcohol dependence may be present among 1% to 2% of the adult population in India.

There is a need for national level epidemiological studies of drinking, alcohol abuse and alcohol dependence. These studies should be more advanced and employ uniform instruments and standard, internationally accepted criteria and definitions so that comparisons can be made across regions and sociodemographic groups within India and with other countries.

7. ALCOHOL-RELATED PROBLEMS

It is probable, given equal amounts of drinking, that developing countries like India experience more problems than developed countries (Saxena, 1997). Among the reasons for this may be such things as a highly skewed distribution of drinkers in the society, the prevalence of nutritional and infectious diseases, economic deprivation, more hazardous and accident-prone physical environments, and a lack of any organized support system. Although conclusive scientific evidence for alcohol-related health and social problems is lacking for India, there are enough indications in the available literature to infer that these are substantial. The rapid rise in alcohol consumption in recent years has increased the likelihood of further growth of these problems in the years to come.

7.1 Health Problems

Few scientific studies from India deal with the health problems linked to alcohol use. Most of the extant studies are hospital-based and can only be used to derive population-level problems in an indirect way.

Mortality

In a four-to-five-year follow-up study of patients diagnosed as alcohol dependent after being examined in a hospital, Sharma and Murthy (1988) found that 11.3% of those who could be traced had died. In another study, Desai (1989) documented a mortality of 5.5% during an 18-month follow-up among hospital patients with alcohol dependence. Since the majority of these patients were middle-aged or younger, these are high mortality figures.

Liver Disease

Cirrhosis figures are not systematically recorded in India, and even if they were they might not correlate with alcohol use, since most such cases result from other causes, e.g. viral hepatitis sequelae, poisons, and other drugs. A review of Indian studies during the period from 1933 to 1975 reveals that among biopsy-proven cirrhosis cases, between 0.0% and 66% (cumulative mean = 16%) had alcoholism (Bhagvat and Islam, 1980). Another study among patients who presented with cirrhosis found only a minority of them to have had excessive alcohol intake (Rajwanshi et al., 1985). However, for all of these studies, since drinking history often is not elicited or reliably recorded, these proportions may be underestimates.

Studies of heavy drinkers have revealed a much higher prevalence of liver disease. Based upon liver biopsies from 41 clinic alcoholics from southern India, Shankar et al. (1986) reported a normal liver in only 12%, while hepatitis was present in 56.1%, fatty liver in 14.6%, and cirrhosis in 9.7%. Another investigation of 49 alcohol dependent patients from northern India revealed similar findings: normal 12.2%, hepatitis 44.9%, fatty changes 34.7%, and cirrhosis 8.2% (Sarin et al., 1988).

Cancer

There has been much concern that heavy drinking may have increased the incidence of certain cancers. Although at about 75 per 100,000, the overall cancer incidence in India is lower than in most developed countries, oral cavity and esophageal cancers are particularly common (Indian Council of Medical Research, 1992). Confirming evidence links these cancers with tobacco chewing and smoking, but some studies have also pointed out the contributory role of drinking alcoholic beverages. For instance, Jussawalla (1981) was one of the first to draw attention to alcohol's role in the high incidence of esophageal cancer in India. Subsequently, Rao et al. (1989) conducted a case-control study of 503 esophageal cancer patients and concluded that, along with tobacco use and some dietary factors, drinking alcohol increased the relative risk of cancer. In another case-control study on upper alimentary tract cancers, Notani (1988) calculated the adjusted odd ratio of alcohol consumption in the under age 60 years group to be between 1.5 and 2.7 for esophageal cancer, 1.3 and 3.6 for oral cavity cancer, and 1.9 and 5.4 for pharyngeal cancer. A synergistic effect between alcohol and tobacco use was observed.

A general population study of more than 10 000 individuals from Kerala State showed the effects of tobacco and alcohol use on the incidence of leukoplakia (Gupta, 1984). The prevalence was significantly higher among regular (5.7%) and occasional (3.9%) drinkers than among non-drinkers (2.9%). Moreover, the figures were higher among drinkers in each age group and in each tobacco habit category, clearly demonstrating alcohol's independent effect. Sankaranarayanan et al. (1989) investigated 187 cases of gingival cancer, along with 895 controls, to show a significant positive association with alcohol use ($p < 0.001$), as well as all forms of tobacco use. A recent study by Rao et al. (1994) on 713 oral cancer patients from Bombay reported a relative risk with alcohol use of 1.42. An association of oral carcinoma with drinking alcohol has also been demonstrated in patients older than 60 years by Kuriakose et al. (1992). In a laboratory-based study, Zariwala and Bhide (1994) reported that some samples of commercial country liquor in India led to mutagenicity, raising the possibility that ingredients in these beverages may be carcinogenic. It seems apparent that drinking contributes to the higher prevalence of some kinds of cancer in India, although the exact public health impact of this remains to be ascertained.

Accidents and Injuries

Alcohol is held responsible for a substantial proportion of accidents and injuries in India, including road traffic crashes (with motorized and other kinds of vehicles).

India, including road traffic crashes (with motorized and other kinds of vehicles), pedestrian injuries, farm machinery accidents (e.g. threshers, tractor equipment), and household accidents. Unfortunately, scientific studies are unavailable to document this, but estimates made by the responsible agencies paint an alarming picture. The National Road Research Institute surmised that a third of all drivers on intercity roads were under the influence of alcohol, and that a quarter of all major traffic crashes is alcohol-related. The Agricultural Research Institute estimated that half of all farm machinery accidents that led to loss of limb or life were related to alcohol, with or without the presence of other drugs. Increased traffic congestion on roads, poor vehicle and road maintenance, and the presence of unlicensed and unskilled drivers on the roads are contributory factors, but alcohol consumption certainly adds another potent influence to India's high accident rates.

Neuropsychiatric Disorders

Alcohol seems to play a significant part in precipitating many neuropsychiatric disorders, including cognitive deficits, epilepsy, psychiatric emergencies, depression, and suicides. Unpublished data from Chennai (a city in Madras State) and Bangalore reveal that a majority of clinic patients who sought help for chronic alcohol problems had neuropsychological deficits. Data from Delhi corroborate this and also demonstrate a high prevalence of epilepsy in such persons. Narang et al. (1992) found a correlation between cognitive impairment and duration of drinking among 30 clinic patients who were alcohol dependent. A study of psychiatric emergencies in a large general hospital showed that 17.6% of these were related to drink (Adityanjee & Wig, 1989). Alcohol dependence also is a common reason for inpatient referral to a psychiatric unit (Srinivasan et al., 1987).

The death rate from suicide in India per 100 000 grew from 6.8 to 9.9 between 1984 and 1994, and it is believed that this is at least partially related to the increase in alcohol consumption during this same period. Between 5% and 10% of males who attempt suicide are under the influence of alcohol (Adityanjee, 1986), and a much larger number of both male and female attempted and completed suicides may be related to excessive drinking.

Among their psychiatric inpatient referrals, major hospitals have reported a rise in alcohol-related problems from 1% to 20% over the last 30 years (Wig, 1994). Babu and Sengupta (1997) showed that problem drinking was present in 14.6% of general hospital inpatients, although only a fourth of these were referred for psychiatric treatment.

Health Effects of Impurities and Adulterants in Alcoholic Beverages

A lack of quality controls results in many impurities and adulterants being present in or added to illicit alcoholic beverages. These include heavy metals like lead and arsenic (Narang et al., 1987), organic solvents, and sometimes sedative drugs like benzodiazepines and barbiturates. However, the most dramatic effects are seen when methyl alcohol (usually in the form of industrial spirit) is added. This almost always leads to deaths or serious organ damage, including loss of eyesight. An estimated 300 deaths per year occur in India from this type of poisoning, and these incidents get covered regularly in national newspapers. One such poisoning outbreak has been discussed in the medical literature (Ravichandran et al., 1984), and the pathological findings of such cases have been reported by Mittal et al. (1991).

Other Health Effects

Numerous other negative health consequences derive from or are exacerbated by excessive drinking. Nutritional deficiencies and infections are two common examples. Unpublished data from a Delhi hospital reveal that from 25% to 33% of alcohol dependent patients from poor families also suffer from pulmonary tuberculosis. HIV infection has increased at an alarming rate in India (Pandav et al., 1997), and alcohol is thought to contribute to this, as well as to the spread of other sexually transmitted diseases. A community-based survey of 450 sex workers in a large Indian city found that about 81% of them drank alcohol regularly and about 80% had a sexually transmitted disease of some kind (Chakraborty et al., 1994; Pal et al., 1994). Regular alcohol consumption has been identified as a significant risk factor for hypertension in India (Gopinath et al., 1994), and a rural community study found drinking to be significantly related to mean blood pressure (Joshi et al., 1993).

7.2 Social Problems

Excessive drinking produces a variety of closely interrelated social problems in India. For ease of description these have been divided into the following broad categories.

Violence and Crime

Violence within and outside the home is frequent in India and a substantial proportion of it is believed to be alcohol-related. Wife beating and child abuse under the influence of alcohol are common, and street brawls and group violence also happen often after drinking. Clear statistics are not available, but it appears that about half of serious violent crime is related to alcohol use, although alcohol may not be the only factor that contributes to the criminal act.

Workplace Effects

Heavy drinking affects work performance in a number of negative ways. When compared to their sober counterparts, drinkers are more frequently absent, are less efficient, have more accidents at work, and also show maladjustment with other workers which leads to overall decreased performance. A study by Senthilnathan et al. (1984) demonstrated maladjustment among alcohol-dependent workers when compared to non-drinkers. Indian industry has recently begun to recognize the problems related to alcohol and some programmes have been instituted to help excessive drinkers, although most of the work force still does not have access to these.

Economic Effects

While alcoholic beverages are inexpensive in India, their purchase may still require a substantial portion of a poor person's meagre income. With one in three people in India falling below the poverty line, the economic consequences of expenditures on drink attain special significance. Besides the money spent on alcohol, a heavy drinker also suffers other adverse economic effects. These include fewer wages (because of missed work and lowered efficiency on the job), increased medical expenses for illnesses and accidents, legal costs of drink-related offences, and decreased eligibility for loans. Most individuals with severe alcohol dependence find it difficult to reduce their expenditure on drink, and hence their families often must do without essential necessities. Although the overall economic effect of alcohol use at the national level has not been estimated, it is likely that it represents a substantial proportion of India's national income.

Family Effects

Excessive drinking by one or more family member results in several negative consequences for others in the family, especially for the wife and children of a male drinker. These effects are particularly serious for poor families. As has been mentioned above, much of the family income may be used to buy alcohol, wages may decline, and the drinker may eventually lose his job. In such situations the wife and children are forced into work, often in low-paid, hazardous jobs. Children may be unable to continue their schooling and may also suffer from nutritional deficiencies because there is not enough to eat at home. Wife and child battering are common, which lead to physical and mental trauma. Failure of the man to use contraceptive methods often leads to unwanted pregnancies, further increasing family size. These factors contribute toward greater poverty, often to the point of destitution.

Strong family ties and social disapproval of divorce save many of these families from a formal breakdown, but the prevalence of intermittent or prolonged marital separation, as well as suicide, in heavy drinking families is high. Problems faced by housewives of alcoholic men have been studied scientifically by Ganihar et al. (1983), but the many

descriptive accounts by the lay press offer more vocal testimony of these phenomena. Wives of alcoholic men show a high degree of depression (Devar et al., 1983) and of suicide (Ponnudurai & Jayakar, 1980).

8. CURRENT RESPONSES

8.1 Legislation and Policy

India is one of the rare countries where prohibition has been incorporated into the national constitution as one of the directive principles of state policy. Article 47 of the Constitution of India reads that “the state shall endeavour to bring about prohibition of the consumption except for medicinal purposes of intoxicating drinks and of drugs which are injurious to health.” However, the various national governments that have been in power since independence have followed this policy inconsistently. Alcoholic beverage production and sale is controlled by the states, and not the federal government, with a result that there are different, often contradictory, policies among the 25 states. Gujarat State, in western India, the birthplace of Mahatma Gandhi, has had complete prohibition continuously since 1947. But most other states have promoted the production and sale of alcohol, fulfilling the constitutional requirement of prohibition by token symbolic measures such as designating some days in the year as “dry days.” Given this situation it is hardly surprising that the quantity of alcohol consumed has increased rapidly.

The main reason for ignoring the constitutional prohibition is the large amount of revenue that the state governments derive from alcoholic beverages. As mentioned above, the proportion of revenues from alcohol is considerable, with some states obtaining as much as 10% of their total revenues from this source. Legislative debates have repeatedly focused on this, with government ministers expressing their unwillingness to forego these monies despite the felt need to reduce alcohol availability. Alcohol producers and retailers also have lobbied to maintain policies favourable to them, using their money and political clout to get their way.

Quite recently, three states (Tamilnadu, Andhra Pradesh and Haryana) have implemented total prohibition. Political parties who won elections on this issue, and who—upon coming to power—implemented this policy took these decisions. These examples show that increased attention is now paid, as part of electoral calculations, to those social sectors such as women and the rural populace who have opposed alcohol. Even so, economic difficulties have already forced Andhra Pradesh to partially repeal its prohibition policy, and debates over the positive and negative results of prohibition are ongoing in Haryana.

Beyond the rather drastic step of prohibition, governments have a number of other policy options at their disposal to reduce alcohol consumption and alcohol-related problems, but these are not used in any meaningful way. Laws ban the sale of alcohol to minors, but they are not strictly enforced. Retail licenses are granted increasingly by

open auction, thus fetching a high price. This, in turn, forces retailers into promotional activities so as to increase their sales and profits. Licenses for the production of beverage alcohol, especially beer, are now granted in large numbers. Public drinking is banned, but action usually is not taken against offenders unless a fight breaks out. One powerful tool governments have is the tax levied on alcoholic beverages, which eventually affects retail price and therefore consumption levels. The actual price of beverage alcohol in most of India has decreased in real terms over the last 20 years. Governments have resisted tax increases on alcohol in order to maximize their revenues from higher sales. This is especially true for the cheapest alcoholic beverages, where there is believed to be considerable price elasticity.

A health warning printed on alcohol containers is mandatory and this legal provision is followed. But such warnings are of no help to the large proportion of illiterate consumers who cannot read them. No units or other measures of alcohol are mentioned on the containers. Liquor advertisements are banned from the print and electronic media, but as discussed above, liquor companies have found ways to get around these rules, including surrogate advertising, sponsorship of sports and other events, and satellite television. The net result is a consistent level of high-pressure promotion of premium and middle sector beverages.

Driving a vehicle with a blood alcohol level of more than 100 mg percent is a crime, but a lack of proper measuring equipment assures that only the obviously drunk are caught. In any case, police are too busy investigating more serious crimes to give much attention to such "minor" infringements of the law.

In recent years the Indian government has relaxed rules concerning alcoholic beverage imports, along with those for the local production of foreign brands under collaborative agreements. This has provided an unprecedented opportunity for multinational alcohol producers to establish themselves in India. Not only is this likely to increase alcohol sales in India, but it also will give Western-style drinking even more social legitimacy and a more positive image than before. These policy decisions completely disregarded public health considerations.

8.2 Prevention Efforts

The Ministry of Welfare is primarily responsible for preventing alcohol consumption. Among its many other responsibilities (e.g. the tribal and lower castes, women, the disabled, and the elderly), substance abuse has been relegated to a low priority. Whatever efforts are made are targeted more toward illegal drugs and less toward alcohol. In practical terms, alcohol prevention programmes amount to media advertisements and the financing of some nongovernmental organizations to operate counselling and rehabilitation centres. Most of these centres are located in urban areas, leaving large areas of rural India unserved by any organized activity in this field. At present, preventive education does not target commercially inspired media stories on controversial and potentially harmful suggestions for "sensible drinking" or "drinking for your heart" (Saxena, 1994b), with a result that these go unchallenged.

8.3 Treatment Facilities

Treatment falls under the Ministry of Health. Over the last 20 years a number of drug and alcohol detoxification centres have been set up in all major regions of the country. While these have been established under the enhanced threat of illegal drugs, they have also provided integrated management to individuals requiring help for alcohol problems. These facilities are available for no or a very small fee and offer detoxification and follow-up care. Some of the larger centres provide specialized psychological and investigative support. These centres also run community extension clinics, where treatment facilities—usually domiciliary—are provided within the community. Although these centres serve a very useful role in the treatment of alcohol dependence and alcohol-related problems, they are grossly insufficient to cover even a small part of the population that needs help. It has been estimated that there are fewer than 2000 beds for drug and alcohol-related problems, which is a minuscule number for the several million individuals who need such assistance in India. Private medical facilities have somewhat filled this gap, but they are so expensive that only a few wealthy patients can use them. These services are also completely concentrated in the large cities.

The detection and treatment of alcohol-related problems in health care facilities is extremely poor. Health care workers under the supervision of doctors run primary health care in rural areas. Awareness of alcohol problems and skills in the recognition and treatment of them at a primary level is highly deficient. Some training programmes to improve the skills of primary care personnel in this field have begun, but in the absence of follow-up support or monitoring they have not had much impact on the services rendered.

8.4 Research Activities

Little research was conducted in India on alcohol-related problems until the early 1970s. Subsequently, isolated studies have been completed, mainly epidemiological or on hospital patients. These studies have documented the extent of alcohol problems and also have conducted treatment trials on those seeking help. Some of these studies have been briefly reviewed above. During the 1990s, more organized efforts have been mounted to investigate the causes, manifestations, and management strategies suitable for the alcohol dependent. However, the focus is still on the heavy drinking dependent individual, and the orientation is still medical. Psychosocial research remains scarce and the public health model is missing.

One reason for the lack of good research is inadequate financial support. Alcohol does not seem to compete well against other pressing health and disease priorities. The Indian Council of Medical Research has provided some funds, but has yet to establish a centre fully devoted to this area.

8.5 Community and Nongovernmental Activities

Spontaneous community action on socially relevant issues in poor developing countries like India is rare, and alcohol was not on the community action agenda until about 10 years ago. But in the past decade a number of movements have sprung up in opposition to excessive drinking. Perhaps the best known of these is the anti-alcohol action by rural women in Andhra Pradesh (Saxena, 1994a). These poor illiterate women had tolerated excessive drinking of country liquor by their menfolk for a long time. This drinking led to less time spent on farming, less money, and frequent episodes of domestic violence. In the early 1990s women of one village organized themselves and picketed the local liquor vendor. They also ostracized the drinking men and finally were able to force the district administration to shut down the liquor shops. Observing the success of these women, women in other villages joined the movement and finally the state government was persuaded to declare prohibition throughout the state. Inspired by this success, many other groups—mostly led by women—have resorted to direct action, but so far they have not had much success. Even in Andhra Pradesh, the state government has now had to partially rescind prohibition due to the economic losses from no alcohol sales.

Some nongovernmental organizations have entered the alcohol field and have been supported with government finances. They have provided counselling and rehabilitative services, but their impact has yet to be felt nationally.

9. CONCLUSION

Alcohol has been used in India for a very long time, but the amounts consumed and problems associated have increased in recent years. Distilled alcoholic beverages are the ones drunk most frequently, although beer has become more popular among the young. Besides licensed beverages, illicit alcohol is widely available and may amount to half again the quantity of legal alcoholic beverages. The recent economic liberalization policy has allowed multinational liquor brands entry to the Indian market, which may further increase the quantities of alcohol consumed.

Although most of the population is abstinent, available evidence points to high levels of drinking with associated health and social problems among those who do drink. These have already created serious public health problems and they also impede the development of poorer regions of the country. Policy responses to date from the federal and state governments have been inadequate and inconsistent, resulting in the unopposed promotion of alcohol in most of the country, while a few states maintain partial or complete prohibition. Prevention programmes and treatment facilities are wholly insufficient to meet India's needs. It can be anticipated that alcohol use and related problems will grow in India in the future. Unless planned policy changes are designed and vigorously implemented these problems are likely to produce an excessive burden on this developing country's resources.

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Country Profile on Alcohol in Malaysia

by

David H Jernigan and Saroja K Indran

1. INTRODUCTION

Malaysia is a country of nearly 20 million people located on the southernmost tip of peninsular Southeast Asia and on the western edge of the island of Borneo. The country resulted from the amalgamation of British colonial possessions in the region after World War II. Independent since 1957, the country has three main ethnic groups: Malays, comprising just under 60% of the population; Chinese, 28% of the population; and Indians, approximately 8%. The country is ruled by the Barisan Nasional, an alliance of 13 parties dominated by three large parties each representing one of the major ethnic groups. In keeping with its Malay majority, the country and its laws show the influence of Islam, but the official policy is one of tolerance for all races and religions.

2. A BRIEF HISTORY OF ALCOHOL IN MALAYSIA

Prior to the advent of the Europeans, there was very little alcohol production or consumption in Malaysia. The Malay sultanates of peninsular Malaysia adhered to Islamic attitudes regarding alcohol, and abstention was the norm. In the states of Sabah and Sarawak on Borneo, indigenous people traditionally drank a home-made rice wine called *tuak* or *tapai* in conjunction with harvest celebrations and social or communal gatherings (Arokiasamy, 1995). People in these states are reportedly still vulnerable to heavy drinking as a result of the use of large quantities of alcohol to indicate the hospitality and quality of a long house (Tan, 1994).

Most of the alcoholic beverages drunk in Malaysia today came with the European merchants and later colonials beginning in the 17th century. The local Malay population in the main eschewed the wine-type beverages brought by the Portuguese and Dutch in the 17th and 18th centuries. As the British developed plantation agriculture and mining in the 19th and early 20th centuries, they used alcohol as a colonizing and proletarianizing force, as British colonials did elsewhere in the empire (see e.g. Van Onselen, 1982). To Indian labourers brought over from southern India to work in the plantations, the British made alcohol readily available. It served a dual purpose of entertaining the workers and returning their wages to the plantation's coffers

(Arasaratnam, 1970). As workers became more dependent they began to produce their own palm wines. In response, the British began a government monopoly on palm wine or "toddy" production that continues to this day.

The British brought in Chinese to work the tin mines. Chinese consumption of opium and spirits went a long way towards financing the British administration of the Straits Settlements, as the colony was known (Jesudason, 1989). The Chinese community also quickly spawned rural entrepreneurs who produced alcoholic beverages, either independently or for the mine or estate owners. This class of beverage became known generically as *samsu*, a term whose original meaning was rice wine, but which today encompasses a wide range of locally-distilled alcoholic beverages, with strengths ranging from 30 to 70% absolute alcohol.

The British also brought with them traditions of drinking beer and its higher-alcohol cousin stout. The market for these beverages began via imports from Europe. By the 1930s the first major industrial brewery was in production in neighbouring Singapore. Others followed on the Malay Peninsula. Prestige alcohol products, distilled spirits such as Scotch whisky and cognac, also arrived with the British.

3. TYPES OF ALCOHOLIC BEVERAGES AVAILABLE

The tribal societies of East Malaysia still consume *tuak*. Today, government shops hold a monopoly in the rapidly dwindling market for palm wine. *Samsu* is widely available in urban and rural areas. Historically, sales of this cheap and often unsanitary alcohol provided a significant part of the revenue of the rural small shopkeepers. Today, such shops also do a strong business in beer, particularly stout. *Samsu* and beer are the two leading alcoholic beverage categories nationwide measured by volume of absolute alcohol. There is a range of beers available, and nearly all of them come from the country's two breweries. Aside from *samsu*, distilled spirits are imported, with foreign cognac and whisky being the most popular.

4. THE ALCOHOL INDUSTRY

In 1968, the two leading brewers, Guinness and Malayan Breweries, merged to form Guinness Anchor Berhad. Shortly thereafter, in the early 1970s, Carlsberg built a brewery outside of the capital of Kuala Lumpur. Today the two companies split the malt beverage market, with Carlsberg holding roughly 60% to Guinness' 40%. The leading distributor of branded industrially produced spirits is Riche Monde. A descendent of the Boustead and Co. trading house, Riche Monde is jointly owned by a holding company whose leading shareholder is the Armed Forces Cooperative Society (Lembaga Tabung Angkatan Tentera), and by a joint venture between Mœet-Hennessey, one of the world's largest wine makers, and United Distillers (Guinness), the second largest purveyor of distilled spirits in the world. According to the Consumers Association of Penang, there are now eight principal distillers of *samsu*, all of whom

are Chinese, selling to a primarily Chinese distribution network (M. Assunta, Consumers Association of Penang, interview, 4/27/95).

5. ALCOHOL AVAILABILITY, MARKETING AND ADVERTISING

Sales director Lee Kee Hock of Guinness Anchor Berhad, which brews Guinness and Heineken as well as Singapore-based Asia Pacific Brewery's flagship brand Tiger and Anchor, told Jernigan he estimated there are approximately 200 000 heavy consumers of his company's product (interview, Kuala Lumpur, 4/18/95). Brewery personnel have regular personal contact with each one of these drinkers. Both leading breweries hire young women to work in pubs and restaurants representing the brewer. Their sole purpose is to greet customers and offer them the company's beer. Carlsberg spends more than RM5 million (US\$2 million) per year on this person-to-person promotion.

Unlike many developed countries, in Malaysia the majority of alcohol consumption occurs on-premises. In addition to the bar and restaurant women, the brewers sponsor tours of beauty queens and rock bands through the bars, and seasonal tours such as the Anchor beer "Santarinis" at Christmas. The biggest seasonal promotions occur in early January, in time for Chinese New Year. Promotions in bars can carry strong sexual overtones. Tiger beer, made by the Guinness-Heineken affiliate, called its Christmas tour of women "Xmas Xpose" and featured low-cut cleavage prominently on the tour poster. A recent promotion for Jose Cuervo tequila bore the title "Lick, Shoot and Suck", and offered patrons the opportunity to lick salt from a woman's breasts, take a shot of tequila, and then suck a lime from her mouth (Teoh, 1995).

Approximately 80% of non-duty free sales of high end distilled spirits occur in hostess clubs catering to local and foreign businessmen. These clubs have an elaborate incentive system worked out with the spirits marketers to boost consumption of particular brands, especially cognac. According to a leading cognac marketer, the club manager receives a bonus over and above his or her profit if sales exceed a certain number of cases. The clubs employ women as hostesses to entertain the businessmen. These women are supervised by a "mama-san" who also receives a bonus pegged to the amount of cognac consumed. Finally, the businessmen earn points for each bottle consumed. The points may be exchanged for gifts -- watches, perfume, and leather goods -- which are then traditionally given to the hostesses. Thus virtually everyone working in the club has a personal interest in seeing to it that large amounts of cognac are consumed.

Alcohol companies, particularly the cognac marketers, also provide incentives for alcohol consumption in conjunction with functions, such as weddings, anniversaries, family or business association meetings, and the like. Depending on the amount of cognac expected to be consumed at a wedding, for instance, a cognac marketer will provide glasses, tables, servers, tents, photographer, entertainment, and even the wedding cake.

Although advertising is banned on broadcast media, both beer and distilled spirits companies advertise in cinemas and in the print media. Some companies also advertise on Chinese-language pre-recorded videocassettes. The alcohol companies spent an estimated RM31.1 million (US\$12.75 million) on advertising in 1994 (Shunmugam, 1995). In addition, beer and spirits companies sponsor sporting events, rock concerts and charitable events. Carlsberg's success in the Chinese community has built on the good will it has won in the past decade by funding a local rock and roll band competition that culminates in a tour by the winning bands to the privately-run and financed Chinese language schools. Carlsberg pays all costs for the concerts, enabling the schools to keep all of the proceeds.

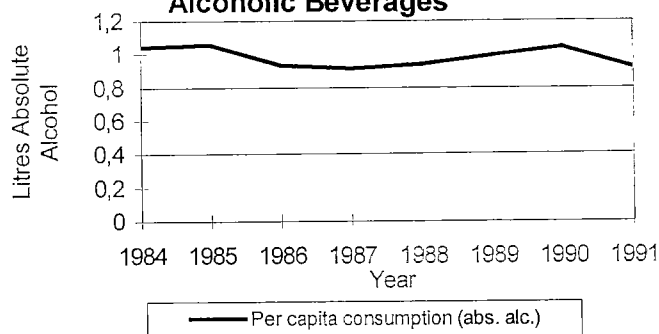
While in developed countries such as the United States making health claims about alcohol in advertising is illegal, in Malaysia at least one company won approval from the Ministry of Health to claim in print and on-premise advertising that its product is "good for mothers in confinement." Benedictine D.O.M., a liqueur marketed internationally by Bacardi, has an average alcohol content of 40%. Its supermarket campaign targeted to women features a mother holding her infant. The newspaper ad for the campaign claims the product is "good for mothers in confinement". The civil servant responsible for alcohol problems in the Ministry of Health told Jernigan that the food division had given the ministry's approval for this claim, and that her division had not been consulted.

In response to even tighter advertising restrictions than the alcohol companies face, Malaysia's cigarette marketers engage in "indirect" advertising, promoting their brands with products other than cigarettes in order to keep the brand in front of the public. Philip Morris advertises Marlboro clothing, Peter Stuyvesant runs a travel company, and Salem has a chain of CD stores. Government officials in 1995 and 1996 made statements threatening to ban direct alcohol advertising. In response, Carlsberg is trying out its own chain of CD stores, the Carlsberg "Hot Trax" stores, which display the Carlsberg logo on every wall and at the end of every aisle of shelving and display cases containing compact discs, comic books and sports trading cards.

Alcohol industry sources estimate that there are 35 000 major retail outlets selling or serving alcohol in the country. In addition, smaller outlets such as coffee shops are not permitted to sell beer for on-premises consumption, but will customarily provide the customer with a beer bottle and a bottle opener.

Per capita consumption estimates range from less than one litre to as much 6.5 litres for adult consumption of spirits alone (UNDP, 1991). Figure 1 represents an attempt to derive per capita consumption estimates by using data on overall alcohol availability. Working from import and export figures provided by the Malaysian Office of Statistics, domestic production estimates drawn from UN sources, and estimates of the size of the *samsu* market from Consumers Association of Penang, figure 1 below shows

Figure 1: Per Capita Consumption of Alcoholic Beverages



apparent per capita consumption in Malaysia from 1984 to 1991. These estimates are higher than those of two market research firms, Datamonitor and Impact Databank (Datamonitor, 1995; Impact Databank, 1995). They would be roughly in line with the estimates of *World Drink Trends*, the most widely quoted global source on per capita alcohol consumption, if the latter had made similar assumptions regarding duty-free and *samsu* sales (Produktschap voor Gestilleerde Dranken, 1996). Even with generous assumptions about the size of the *samsu* and duty-free markets, per capita consumption hovers around one litre of absolute alcohol per year. By comparison, the French consumed more than 11 litres of absolute alcohol per capita in 1995, and relatively temperate Norway consumed 4.1 litres of alcohol per capita (Produktschap voor Gestilleerde Dranken, 1996).

The graph gives some sense of trends in the market. The economic recession of the late 1980s probably contributed to the drop in consumption during that period. The turn downward again in 1991 is most likely the result of a major increase in both import duties and alcohol excise taxes effective at the beginning of that year. For three consecutive years the government raised taxes on alcohol. However, by 1995 alcohol industry officials indicated in interviews that sales had returned to their former levels and were increasing again (beer sales growing at between 5 and 7% per year, well ahead of the roughly 2.4% annual population growth).

But such an estimate of per capita consumption has many problems. First, Malaysia has a higher proportion of its population under age 15 (roughly 38% in 1990) (ESCAP, 1991) than most developed countries. Second, the 60% of the population that is Malay and Muslim is reputed not to drink, and the Malays as a whole probably drink less than other ethnic groups. Third, men drink far more than women do. If one assumes that no women and only 20% of the Malay population drink, the per capita estimate for 1990 rises to 4.3 litres. However, even this does not give an accurate picture.

6. CURRENT DRINKING PATTERNS

Surveys of subpopulations show that drinking patterns vary by gender, race and income. Most of the drinkers are men. Observers report increasing numbers of younger urban women from all ethnicities are beginning to drink, but there are no survey data to confirm this. Government attitudes towards alcohol compromise the ability of researchers to study drinking practices. In interviews conducted by Jernigan with a variety of government officials in 1995 and 1996, alcohol was repeatedly termed a "sensitive" subject because of the racial issues raised by drinking. Malay officials termed the problem "an Indian issue", emphasizing Islam's prohibition against use of alcohol by the Malay majority. Indian officials responded to the blaming of the problem on their community by pointing to evidence that others, in particular Malays, were known to drink heavily. The predominantly Chinese professionals in the alcohol industry blamed problem drinking primarily on *samsu*, consumed in the main by Indians. A national household mobility survey in progress in 1996 includes questions about quantity and frequency of alcohol consumption. However, the government decided to omit this section of the survey when interviewing Malay respondents.

General population surveys of drinking patterns in Malaysia thus either do not exist or are unavailable. The only available random population-based survey used purposive sampling to obtain an urban-rural balance is a sample of 1001 elderly Malaysians in peninsular Malaysia. Only 11% of the subjects drank alcohol. Of this number, nearly half reported thinking they drank too much, and that their families complained about their drinking. However, this could as easily result from cultural bias against drinking as from consumption of alcohol at problem-inducing levels. A smaller study of rural Malays and aboriginal people in an area 50 km from the capital found that 5% of the Malays and a third of the aborigines drink alcohol. Quantity consumed and frequency of drinking were not assessed (Ali et al., 1991).

Although government researchers do ongoing random sampling of secondary schoolchildren regarding drug use, including alcohol and tobacco, the most recent year for which figures regarding alcohol use were published was 1976. At that time, in two states with substantial urban populations, 19% of secondary schoolchildren reported drinking alcohol, with 1% drinking "often". Three percent of sample respondents drank distilled spirits at least once a month, and 5.6% drank beer at least that frequently (Spencer & Navaratnam, 1976).

Type of beverage consumed varies by race and social class. Rural low-income Indian workers are the primary consumers of *samsu* and toddy. As with other low-income drinkers, their drinking is defined by price and prestige. To this day, the alcohol economy on the agricultural estates guarantees a stable workforce:

“It is common for these estate labourers to buy hard liquor at the beginning of the month, when they receive their salary; to shift to the less expensive beer toward the middle of the month, when they have less money; and to end the month with cheap toddy or *samsu*. Many of the drinkers on these estates spend their entire income on alcohol. It is also common for them to take advances on their salary to buy liquor, resulting in virtual debt bondage” (Ariokasamy, 1995).

According to beer industry officials, blue-collar workers, seeking higher alcohol content for the money, are the largest consumers of stout, which comprises about 40% of malt beverage sales. As one industry marketing official remarked, the decision to drink stout is “I think primarily economic - a beer would cost me RM4.50. A Special Brew [Carlsberg’s entry into the stout category] would cost me RM\$4.70, and I get almost double the shot of alcohol”. (Cha Boon Lim, director of market management, Carlsberg Brewery Malaysia Berhad, interview with Jernigan, Shah Alam, 8/29/96).

The Indian population is actually comprised of two groups: the rural workforce and their descendants, overwhelmingly Tamil and Hindu, and the middle class civil servants, doctors, lawyers and other professionals who came to the country during British rule, but who trace their ancestry to an array of other Indian groups, including Muslims, Christians and Sikhs (Rabushka, 1973). Drinkers from this group occupy the middle of the drinks market, consuming lager beers as well as distilled spirits.

Chinese consumers dominate both the beer market (Carlsberg estimates 80% of their sales are to Chinese) and distilled spirits, the high end of the market. What may be an apocryphal story circulating within the beverage industry recalls that when the French first came to Hong Kong to market cognac, the fact that Chinese tended to down their fine beverage in a single motion at first shocked, and then delighted them. Distilled spirits, particularly cognac, are the lubricant of major events in the Chinese community, ranging from weddings to anniversaries to office parties, family or small merchant association dinners, or birthdays. At such events, the grade of the cognac signals the importance of the event and its sponsor. The host is expected to circulate to and toast each table with a “Yam Seng” (bottoms up)-style toast. Heavy drinking is thus common at such events, but solitary drinking is relatively rare among the Chinese. Chinese women are not known for their drinking. However, there is a group of alcoholic beverages targeted specifically to Chinese women. These beverages, like Benedictine D.O.M. mentioned above, claim to contain the Chinese herbs traditionally taken by women in the sixty days following giving birth.

7. ALCOHOL-RELATED PROBLEMS

Data collection on drinking practices and problems in Malaysia has been done primarily in hospital and other medical care settings. Shortcomings of this methodology include under sampling on those less likely to seek medical treatment (e.g. women) and, since the hospital studies have all been done in urban public hospitals, over sampling on lower income urban groups, notably Indians. The single available study of psychiatric admissions at a general hospital reported less than 2% of admissions were for alcohol dependence (Chin et al., 1993). However, the study's authors noted that the low numbers of this and other diagnoses may be attributable to severe overcrowding in the psychiatric ward, a general tendency not to seek treatment for mental health problems, and bias on the part of both physicians and the general public toward reserving psychiatric admission for those suffering from problems that appear more serious and dangerous, such as schizophrenia and other psychoses.

Saroja (Saroja and Kyaw, 1993) conducted the most thorough hospital-based study of drinking practices to date. She interviewed all patients over age 16 admitted to the orthopaedic, surgical and medical wards of the General Hospital in Kuala Lumpur over a period of three months. Using first the CAGE screening device, and then subjecting those with at least one positive CAGE response to a diagnostic interview based on DSM-III-R and a brief quantity/frequency questionnaire, Saroja found that 48% of the sample consumed alcohol, and that a third of this group (12% of the total sample) could be determined abusers or dependents. All of the abusers and 90% of the drinkers were male. Sixty-one percent of Chinese, 60% of Indian and 30% of Malay inpatients were drinkers. Nine percent of Chinese, 22% of Indian, and 6% of Malay inpatients were abusers or dependent. All of the abusers or dependents were male, with a mean age of 54 as opposed to 45 for the drinkers as a whole and 42 for the non-drinkers. Of the abusers, 67% drank beer, 17% spirits and 16% *samsu*. The drinkers were more likely to be beer drinkers, and far less likely (2%) to drink *samsu* (Krishnaswamy, 1992).

Another study at the General Hospital in Kuala Lumpur took blood alcohol levels of 883 patients admitted for head injuries (Mohammed Azman et al., 1989). Thirty percent of these had blood alcohol levels greater than 50 mg./100 ml. Ninety-one percent of these were male, three-quarters were between 20 and 50 years of age, and all three ethnic groups were represented: 41% were Chinese, 39% were Indian, and 18% were Malay.

Maniam (1994) studied 562 consecutive patients visiting an urban general practice. There is no evidence that his sample is representative of the general population. Seventy percent of the Chinese, 11% of the Malays and 42% of Indians had used or were currently using alcohol. Six percent of the Chinese and 22% of the Malays seen at his practice drank more than 14 units of alcohol per week.

The Ministry of Transport estimates 200 crashes occur per day in the capital city of Kuala Lumpur alone. There are no data available on the percentage of these that are

alcohol-related. A study of 155 consecutive cases undergoing post-mortem examination at the General Hospital in Kuala Lumpur in 1988 and 1989 found 59 of the deaths (38%) were from road traffic injuries (Shahrom et al., 1991). Thirteen of these (22%) had blood alcohol levels in excess of 50 mg./100 ml. Indians again are over-represented in the alcohol-related fatalities, with seven of the deaths versus six Chinese and one Malay.

From these slim data it is apparent that, although per capita consumption of alcohol in Malaysia may be low, there is a sub-population that drinks heavily and suffers and causes substantial alcohol-related problems.

8. CURRENT RESPONSES

8.1 National Alcohol Policies

As discussed above, the national government's attitude towards alcohol is complex. In addition to its religious sensitivities, the Malay ruling class also has financial interests in alcohol. Racially-motivated rioting between Chinese and Malays in the wake of the 1969 general elections led to a series of laws passed in the last two decades to improve the economic position of the Malay majority. Requirements that local non-Malay firms have a minimum of 30% ownership in the hands of Malays and that foreign firms could only hold 30% equity led to a Malay elite with holdings in virtually every sector of the economy, including alcoholic beverage production. This elite also dominates the government (Jesudason, 1989). Thus for example the Malay-dominated Armed Forces Cooperative Society holds a controlling interest in the corporate parent of the leading distilled spirits importer as well as 11% of the leading brewer. The Malay elite is also heavily invested in the plantation system benefiting from the *samsu* economy. Finally, the government continues to have a strong interest in alcohol tax revenues. In 1994, alcohol excise and import duties brought in more than RM 601 million (US\$246 million). In addition, the government levies a 15% sales tax on alcoholic beverages at the retail level.

The ambivalent position of the government regarding alcohol creates a disjointed national approach to alcohol policies. On the one hand, government officials justify alcohol tax increases on health and crime prevention grounds (*New Straits Times*, 1993), and in 1991 one minister called for licensing authorities to "strictly enforce the conditions governing the sale of liquor". (Choong, 1991). In the more Islamic states such as Kelantan, alcohol sales are banned in public places.

However, in the capital city of Kuala Lumpur and the key production centre of Penang, alcohol outlets abound. Nationwide, the ratio of major outlets selling some kind of alcoholic beverage to population is one for every 575 people, based on alcohol industry estimates. Small purveyors without alcohol sales licenses also commonly hide behind an exemption in the law permitting possession of unlimited amounts of alcoholic beverages for personal consumption. Occasional efforts to tighten the licensing

process, or to block new licenses on the basis of over concentrations of existing ones, have met with no success and in some cases have led to the dismissal of the instigating civil servant from license-giving bodies.

There is no requirement for alcohol education in the schools, although it is sometimes covered in a general substance abuse curriculum. Government officials told Jernigan that raising the subject of drinking alcohol in classes with Malay children present would offend the Malays. The government maintains an extensive network of treatment centres for illegal drug users. There are no government-sponsored treatment facilities for those with alcohol problems, despite calls by health professionals and the news media for their establishment (Ismail, 1994).

Minimum age for consuming alcohol is 18. A strict drinking-driving law, setting the legal limit for driving at 80 mg./100 ml. and prescribing a penalty of RM2000 (equivalent to US\$792) or six months in jail or both for the first offence along with loss of license, was implemented in 1996. A spokesman for the Road Transport Ministry pointed out, however, that all but the most serious alcohol-related crashes are probably not reported, since drivers have 24 hours within which to report a crash, permitting drunk drivers to sober up before appearing before police. In addition, several informants told Jernigan that arrestees for drinking-driving were commonly paying the arresting officer directly between RM300 and RM700 (equivalent to US\$119 and US\$277, respectively) in order to avoid the larger official fine. Even if this is the case, the law would be expected to have a deterrent effect.

The government has also put in place a comparatively strong set of controls on the alcohol market. Duties and taxes on both imported and domestically-produced alcohol are substantial, resulting in high alcohol prices by international standards. These levies are not indexed to inflation, and so their effect on alcohol consumption will tend to be temporary. Direct alcohol advertising is forbidden on broadcast media, and on billboards except in Sabah and Sarawak.

8.2 Non-Governmental Resources

The Alcoholism Foundation of Malaysia (YAM) receives a small amount of government funding (supporting less than one full time employee), does some educational work, prepares responses to questions that arise regarding alcohol in Parliament, has sponsored conferences on alcoholism in Malaysia, and provides a limited amount of counselling and referrals to what treatment and self-help groups exist. The Consumers Association of Penang (CAP) regularly publishes educational materials and news stories about alcohol and alcohol promotions and sales in its journal *Utusan Consumer*. It lobbies the government for tighter controls on alcohol. Staff from CAP have also been instrumental in backing the organization of the "Women Against Alcohol" movement on the rubber estates in the state of Kedah. This movement has brought together hundreds of women to challenge what they consider to be an exploitive *samsu* trade, using public rallies, the burning in effigy of *samsu*

bottles, and the like. There are two Alcoholics Anonymous meetings weekly in the capital city - members of that group knew of no other meetings in the country.

9. CONCLUSION

Malaysia provides a snapshot of a country in the midst of rapid social change trying to define its relationship to alcohol. Consumption of alcohol is low but seems likely to grow, albeit at a relatively slow pace due to the abstention of the majority of the population. Measurement of health problems from alcohol falls into a problem definition feedback loop: if a problem is not defined as such, it is difficult to muster resources to support its measurement, but without statistics attesting to a problem's severity, government bodies are often reluctant to devote resources to the problem's alleviation, or for that matter to its measurement.

Despite its small size, the Malaysian alcohol market is profitable. Even with major tax increases in the three preceding years, both beer companies reported profits after taxes in excess of 12% of sales. The government reported legal imports of alcoholic beverages worth more than RM255 million (US\$104.5 million) in 1995, and tax receipts from alcohol of more than RM601 million (US\$246 million).

The national government's disposition towards alcohol is shaped by religious, political and economic factors. Government statements refer to health concerns as a justification for such policies as higher taxes and advertising restrictions. Given that the Ministry of Health has been unable to secure funding for any programme regarding alcohol, the priority given to health concerns in government decisions about alcohol must be questioned. The recent strict drinking-driving law will certainly make some difference in the incidence of this adverse consequence of drinking. However, in the absence of baseline data or stringent reporting requirements, it will be impossible to assess the law's effectiveness with any certainty.

Malaysia's alcohol market exhibits a bifurcation common in many developing country settings. On the one hand, a locally-produced and inexpensive alcoholic beverage, in this case, *samsu* dominates consumption and seems to exact a heavy social toll on lower income and rural populations. Tax increases seeking to reduce alcohol consumption but affecting only the higher-end products such as beer and globally-branded distilled spirits most likely channel consumers back to *samsu*.

On the other hand, a small number of companies, all linked to at least one of the top twenty transnational producers and marketers of alcoholic beverages, dominate the rest of the market. Their profits accrue both to the local shareholders and to the global parent corporations. Although the government has taken a number of steps to limit their marketing activities, the companies continue to grow the market. Their marketing activities – advertising based on health claims, targeting the heaviest drinkers, encouraging heavy consumption, and so on -- cry out for greater corporate responsibility, and for a more comprehensive and coordinated approach on the part of

governmental and nongovernmental organizations to alcohol and alcohol problems in the nation.

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Country Profile on Alcohol in Mexico

by
Maria Elena Medina-Mora

1. INTRODUCTION

Alcohol policy has received close attention in the scientific literature, but much of what has been written refers to developed societies. Consequently, an issue that needs careful attention in less developed societies when recommendations derived from these studies are to be implemented is related to differences in patterns of drinking. Some societies, including Mexico, have high proportions of abstainers and drinking tends to be concentrated in one group, mainly young and middle-aged males, with manifestations of problems that differ somewhat from those observed in more developed nations.

Following Room's (1989) characterization of cultural responses to alcohol, Mexico can be categorized as a "dry" culture, as intake is typically infrequent and very heavy, binge drinking is common, with a high proportion of deaths due to poisoning, violence and social disruption. Nonetheless, alcohol use is integrated in Mexican national culture and there is no temperate tradition that supports the high rate of abstention. There is also a high rate of mortality from liver cirrhosis linked to chronic use, as occurs in the so-called "wet" cultures.

The aim of this chapter is to review alcohol availability, the way alcohol is consumed, the problems that result from drinking patterns and the social responses to alcohol in Mexico. Finally, some considerations related to alcohol policy will be presented, derived from the available information

2. A BRIEF HISTORY OF ALCOHOL IN MEXICO

In Mexico alcohol intake has been documented since the sixteenth century. Several major influences have modified patterns of drinking and social responses, such as Spanish colonization; circular migration to the United States; the increasing presence of Christian religions, especially among rural and Indian communities; and more recently, changes in gender roles and the international trend toward globalization.

During pre-colonial times, before the sixteenth century, different types of fermented beverages were consumed by the various Indian cultures that inhabited what is now

Mexico, and apparently strong regulations controlled who could drink, how much, and on what occasions. Distilled beverages were unknown before the Spanish Conquest. After reviewing original sources of information (Taylor, 1979) concluded that:

“Taken together, these sources suggest a general pattern of restricted use but also a rich variety of rules and drinking occasions when drinking was permitted. Indian notions of moderation seem to have focused on the occasions when alcohol could be used and by whom rather than on how much was drunk. On ritual occasions when drinking was permitted, adult male participants could apparently drink themselves into a stupor without shame. There were few if any totally abstinent communities in Central Mexico and Oaxaca before the conquest” (1979:30).

“... There were various drinking patterns before the conquest...two main types: drinking only by the nobility, with harsh sanctions imposed on violators; and popular drinking on ritual occasions with milder punishment for violators, ... with rough regional division”(1979:33).

The beverage most often consumed was *pulque*, a fermented drink, usually in communal rituals associated mainly with agriculture, religion and life cycle events. *Pulque* was used for religious purposes and produced a ritual inebriation accepted by society; was the popular lay beverage for restricted use (and abuse was condemned and punished by society); and was also considered a fatal beverage, with those males and females born under the sign of the rabbit, thought to be inevitably inclined to drinking (Taylor, 1979).

Other authors suggest differences in norms toward drinking and inebriation for different subgroups of the population and for different circumstances during pre-colonial times. Inebriation was allowed during some festivities for males and females, and old and young alike according to Corcuera de Mancera (1991). Also, the Mendoza Code mentions that people had to be at least age 60 years to start drinking without restrictions, while other sources mention 50 years of age, for both genders: apparently, old people were allowed to get drunk.

According to some historians (Corcuera de Mancera, 1991), violation of norms was severely punished, and the offender was rejected by society as a whole. The price for momentary loss of individual control and for the social repercussions of this behaviour was isolation; although the severity of the punishment could vary, it was always immediately applied by society as a whole without an opportunity for appeal. The European Christian culture also had regulated ritual and lay use of alcohol, but had no effective means for limiting immoderate drinkers.

The Spanish conquest modified indigenous patterns of alcohol use, changing them from occasional use, limited to certain festivities, to regular indiscriminate use. The Spaniards introduced distilled beverages, and the proportion of the population who drank alcohol and got drunk grew. Beverages consumed included *pulque*, wine and brandy. According to Taylor (1979), three main factors accounted for the increase in

consumption: the inclusion of a bigger proportion of *macehuales*¹ in the group of drinkers, the adjustment of ritual inebriation to numerous festivities in the Catholic calendar, and the commercialization of *pulque*. Other reasons might be related to an absence of laws or dispositions that limited alcohol abuse, and the lessened rigour employed by Indian authorities who had lost their prestige and political liberty. The rigour in the prosecution of abuse also diminished (Rojas, 1942). On the other hand, the Spaniards immediately imposed no substitute regulations, and they often considered alcohol to be the reason for all wrongdoing by the Indians.

Patterns of alcohol use among some indigenous cultures have shown important variations, an example being the complete integration of alcohol use in all its aspects into life among the Chamulas of Chiapas (Bunzel, 1940), and the strict restrictions that limit alcohol use to certain occasions among the Tarahumaras of Chihuahua (Kennedy, 1963). The increase in the number of people who practice religions with temperance traditions and values, especially among rural and Indian communities also have influenced changes in drinking practices.

Seasonal migration to and from the United States, is a phenomenon that deserves closer attention. A study conducted among Mexican Americans in the US and Mexicans in Mexico (Caetano & Medina-Mora, 1988) suggested that when Mexicans cross the border they modify their drinking habits; after living in the US five years, they increase the frequency and maintain the high quantities associated with drinking occasions. Other studies have documented how the increase in consumption of seasonal workers is a major issue of concern among the females left behind in the local communities when males temporarily migrate to the United States (Salgado de Snyder, 1996).

The 1993 National Survey on Addictions reports a rate of alcohol use in the two years prior to the survey of 54% among the population between 12 and 18 years of age, and of 70% among the age group between 19 and 65. In both groups, males report higher rates of use than females (around one female per 3 males). Changes in gender roles and the international trend toward globalization have also made an impact on drinking patterns especially among the young and females, groups that have traditionally consumed less.

National surveys among high school students² report similar results: around half of them have consumed alcoholic beverages at least once in their lifetime, one-third drank during the previous year, and 15% during the past month. Four percent of the boys and 1% of the girls reported having five drinks or more per drinking occasion, once or twice a week (Medina-Mora et al. 1995).

¹*Macehuales* were the lower social group formed by the poorer and simpler citizens, those who could only travel by foot.

²Ninety-five percent of the students in the national survey and 90% in Mexico City were under 18 years of age, the legal age to buy alcohol.

Comparing data from the National School Surveys of 1986 and 1991, no variation was observed in the rates of use among urban students: 57% and 50% respectively, reported drinking alcohol. In Mexico City the proportion who report any alcohol intake is quite a bit higher than the national average, with a definite trend toward an increase in annual and monthly prevalence that changed from 33% and 15% in 1989 to 65% and 24% in 1993 (Table 1). Among female students the main increase in use occurred between 1989 and 1991, from 13% to 19% (Table 2).

Table 1: Trends of alcohol use among high school students, Mexico City, 1989-1993

	1989 (N=2771)	1991 (N=3501)	1993 (N=10879)
Ever use	73%	65%	74%
Use in the last 12 months	33%	42%	65%
Use in the last 30 days	15%	21%	24%
5+ per sitting once a week or more often	2%	3%	2%

Source: Secretaría de Educación Pública, Instituto Mexicano de Psiquiatría.

Table 2: Trends in alcohol use among high school students variations by gender, Mexico City, 1989-1993

USE IN THE LAST 30 DAYS:	1989	1991	1993
Males	21%	23%	31%
Females	13%	19%	17%

Source: Secretaría de Educación Pública, Instituto Mexicano de Psiquiatría.

General population studies also support an increase in the proportion of females participating in the drinking population. Different surveys have shown that drinking and getting drunk is considered part of masculinity, but that females should abstain. Both males and females, independent of their age support these double standards. Behaviour follows these norms, females drink less than males, and when they do they drink less frequently and smaller amounts. Nonetheless, younger better-educated working females are now drinking more (Medina-Mora, 1993).

2.1 Social Responses to Alcohol

Local studies (Calderon et al., 1981, Medina-Mora et al. 1993) have shown that nowadays in Mexico norms are still more related to stating who may drink than toward moderation. Through the NSA (Secretaría de Salud, 1989), it was observed that males drink more than females, and permission for drinking is greater for 21-year old males and females than for 60-year old persons. In a comparison report of gender norms of the four countries involved in the WHO Community Response project (Roizen et al., 1980), it was observed that responses given by Mexicans indicated that both genders thought that males could drink more than females. In general, males were more willing to permit drinking than were females. Young and old persons of both sexes supported restriction in relation to females and liberalism toward male drinking behaviour. Only

22% of the people in the Mexican sample thought that males and females had the same right to drink, feel alcohol's effects or get drunk.

3. TYPES OF ALCOHOLIC BEVERAGES AVAILABLE

Alcoholic beverages have been available in Mexico for a very long time, although the type of beverage and patterns of intake have been greatly influenced by other cultures. Distilled beverages were unknown until the arrival of the Spaniards. Before that time, alcohol was produced by means of fermentation and there was a ritual in the production and in the consumption of a short-lived product. The most popular fermented beverage, *pulque*, was made from a Mexican agave, and it continues to be consumed today, mainly in the central part of the country.

Other local beverages are traditionally consumed by different groups of the population, mainly among the different Indian cultures that produce these fermented beverages. It is also common to mix distilled beverages with local fruits, and such concoctions are consumed in rural and urban regions of the country alike.

Nowadays, most alcohol produced is in the form of commercially manufactured international brands. Beer occupies the first place (comprising 73% of the total), followed by spirits (23%), with low representation of table wines (1%) and of other industrialized and registered beverages (2%) (Rosovsky & Borges, 1996).

The national distilled beverage is *tequila*, produced from a type of agave in the state of Jalisco, located in the central part of the country. This beverage is expensive, as it requires a high quantity of agave and the process is quite elaborated. Among distilled beverages, *tequila* comes third in sales, after brandy and rum.

Data from the 1989 National Household Survey are an additional source of information about beverages available, with the advantage that these include the use of local beverages not registered in the statistics on industrial production.

Results³ from these surveys show that beer represents among the urban population 50% of the total per capita consumption, spirits 32%, *pluck* 9%, table wines 5% and 96 proof alcohol or *aguardientes*⁴ 4%. More than half of male *pulque* drinkers are heavy drinkers, while female *pulque* drinkers are more often frequent low drinkers; more moderate drinkers most often consume wine.

³ This information was obtained by adding information on total intake per type of beverage derived from frequency and amount of alcohol ingested, transformed in total ethanol.

⁴ Usually includes beverages produced from sugar cane alcohol, agave such as *mezcal* and *sotol*. Literally, the word means something like "burning water".

Unfortunately, these surveys do not include the rural population⁵ that represents around 25% of the national population. Data from the National Budget Survey (INEGI, 1994), shows that *pulque* (6.4 litres in average), was the beverage most often consumed by this group, followed in order by beer (3.7 litres), spirits (1.3 litres) and *aguardiente* (1.4 litres). The National Budget Survey also shows an interesting characterization of the preferences of different sectors of the population, with table wine being drunk by the population in the highest social levels and *pulque* and *aguardiente* found among the poorest ones (Table 3). For instance, only around 1% of the households that reported the use of *aguardientes* had a telephone as compared to 75% of those that reported having purchased rum; 53% had no running water inside the house as compared to 1% of the ones that acquired brandy; in 71% of the households that paid for *aguardiente* the bottom surface of any room is pure soil, as compared to 4% in the case of rum.

Table 3 : Preferences of type of beverage among various groups of the population

	CHARACTERISTICS OF THE HOUSEHOLDS (AVAILABLE SERVICES)				
	Telephone	Water supply		Materials of the floors:	Electrical supply:
	inside the house	running water inside the house	water sources: rivers, wells, etc.	bare soil	inside the house
Beer	32%	64%	9%	10%	97%
Wine	87%	97%	0%	0%	100%
Brandy	59%	73%	1%	14%	98%
Rum	73%	87%	4%	4%	100%
Prepared beverages	44%	72%	2%	13%	100%
Other beverages	58%	82%	12%	0%	90%
Pulque	0.9%	20%	45%	21%	80%
Aguardientes	1.3%	11%	53%	71%	69%
National Data	28%	58%	14%	14%	95%

Note: Only households with consumption were considered

Source: INEGI, 1994. Data processed by FUNSALUD, 1994.

More recently new types of beverages were introduced to the market, mainly aimed at the younger sector of society and at women, both groups who traditionally consumed less alcohol. These beverages include "coolers", prepared cocktails and canned beverages that combine rum or brandy and coke. According to the second National Household Survey, 11% of the population 12 to 18 years of age and 9% in the group 19 to 65 years of age consumed these types of beverages.

⁵ Defined as those places with fewer than 2,500 inhabitants.

4. THE ALCOHOL INDUSTRY

Mexico's alcoholic beverage industry has increased rapidly as a result of the expansion of transnational producers and local industrial growth. A few powerful corporations have dominated the industry, with beer production virtually in the hands of two firms. This industry has led to development of other economically important manufacturing industries such as refrigeration and glass, which are vertically integrated. Since 1980, the alcohol industry has witnessed a huge increase in market concentration, such that today two firms alone, Domecq and Bacardi, control over 90% of the brandy and rum market respectively.

The beer industry is oligopolistic and the trend for the production and sale of other beverages is also increasingly concentrated in a smaller number of firms. A few firms have gradually replaced small or family firms, competing for the consumer market by means of numerous promotional strategies, effective distribution and costly advertising. The *tequila* industry is more widely distributed than is the case with other alcoholic beverages.

From 1970 to 1994 there was a 200% increase in the total production of alcohol from 100 934 million to 302 907 million litres. The greatest increase occurred in the market for beers with efficient commercialization and distribution strategies.

Important changes have been observed over the last few years regarding trade policy. Former controls over the volume of imports permitted have been eliminated, and for the past several years there has been a significant influx of all kinds of alcoholic beverages, compatible with the current economic policy of opening up the market. The volume of imported alcoholic beverages has risen enormously. For instance, beer imports rose from 304 litres in 1971 to 33 million in 1993; spirits from 5 to 46 million and wines from almost 2 to 13 million. Two major events occurred in these years. The international commerce agreement (GATT) that reduced taxes for exported alcoholic beverages from 80% to 10% of price, and the NAFTA agreement. Exports of beer and wines also show an increasing trend, while the total volume of distilled beverages exported has diminished considerably.

In Mexico considerable unregistered alcohol has traditionally been consumed. Although there are no estimates of the amount of the alcohol market that these beverages represent, some data suggest that they play an important role in overall consumption, especially among the more disadvantaged.

Recent unfortunate incidents of increased mortality due to the use of non-drinkable alcohol sold as *aguardiente* (e.g. 49 deaths in a small rural locality in 1996), the identification of illegal production plants, and retail stores that sell non-canned alcohol, have increased concern over the production and distribution of unregistered alcohol.

The 1991 National Survey on Addictions (NSA) estimated that 0.5% of the urban population of the country drank *aguardientes*. Data from the 1989 NSA showed that the population who drinks these types of beverages was mainly males who were heavy drinkers.

An observational study conducted by Natera et al. (1997) in downtown Mexico City, showed that 47% of the bottled alcohol sold in small outlets had no official register. The alcohol industry has provided evidence of the proliferation of alcohol sold in recycled bottles of known brands of alcohol, where the name has been slightly changed. This market is possible in part due to the fact that there is no required destruction of bottles, as is the case in some other societies, and thus the report of distilled beverages may also include unregistered alcohol.

5. ALCOHOL AVAILABILITY, MARKETING AND SALES

Per capita consumption in Mexico has been estimated, through information on taxed production to be 5.12 litres for the population 15 years of age over and is characterized by a rising trend with some fluctuations. It rose steadily from 1970 until it reached a peak in 1980, when the amount of ethanol doubled. It began to fall after 1980, but rose again after 1986.

Per capita estimates through household surveys⁶ result in similar figures: the National Household Survey of 1989 estimated a per capita intake of 4.6 litres⁷, the per capita intake of drinkers was 5.6 litres, and when only males were considered, the per capita intake of drinkers reached 8.1 litres. Excluding 96 proof alcohol, *aguardientes* and *pulque*, which are not included in the data from taxed production of beverages, the per capita estimate was 3.7 litres. This last figure is only somewhat lower than the one derived from taxed production that was estimated at 4.4 litres for the same year.

Availability of alcohol in terms of access has also grown in recent years, and in 1970 there were 303 outlets for each 100 000 inhabitants. In 1985 this number reached 378 (Borges et al., 1997).

⁶ The total amount of ethanol consumed was estimated on a yearly basis. Thus for instance, drinking "3 or more times per day" was converted to 1095 drinking occasions per year, and "never" to 0; the occasions of drinking were multiplied by the number of drinks consumed, (5, 3.5 and 1.5), and the resulting figure was then corrected by the average ethanol content of each type of beverage.

⁷ This figure does not include consumption among the rural population (25% of the total population), nor are those over 65 years of age included in this survey.

6. DRINKING PATTERNS

In the Second National Survey on Addictions in Mexico (Secretaría de Salud, 1993), abstinence, defined as no alcohol consumption in the previous 24 months, was estimated at 25% in 1989. Where the rate of abstinence was defined as no alcohol in the last 12 months, the figure was 46% (27% of the males and 63% of females 18 years of age and older).

Alcohol is more or less integrated in the culture but daily consumption of alcohol is not a common practice. The most typical pattern is infrequent drinking, but in high quantities. The National Household Survey of 1989 showed that 25% of the heaviest drinkers drank 78% of the available alcohol (Medina-Mora et al., 1991). Only 17% report drinking once a week or more often, but consumption to the point of intoxication is frequent, with 31% of drinkers reporting at least one event of intoxication in the year previous to the survey and in 4.3% of the cases this occurred at least once a month.

Overall 7% of drinkers reported the same frequency of drinking and of getting drunk. When this was controlled by frequency of use it was found that 72% of those persons who drink daily or almost daily got drunk with the same frequency. This was also observed in 17% of cases drinking once a week, and in 10% of those drinking once a month.

The typical pattern of alcohol intake among males is one of moderate frequency but with high quantities occasionally observed. Frequent intake in low quantities is almost non-existent in the country. Females drink less often and when they do, they more often limit the amount consumed.

The average percent of abstainers is similar between those who are 18 and 49 years (43%-45%), and it increases in an important manner after the 50's (58%). Among males the highest proportion of heavy drinkers is observed in the group from 30 to 39 years of age (17%), and among females there are no important variations (Table 4).

Table 4: Alcohol drinking patterns according to gender

ALCOHOL DRINKING PATTERNS	MALES	FEMALES
Abstainers	27.6%	63.5%
Infrequent	14.5%	21.5%
Moderate low	6.7%	7.2%
Moderate high	20.9%	2.7%
Frequent low	3.8%	3.1%
Frequent high	13.1%	1.4%
Heavy	14.2%	0.6%

Source: Dirección General de Epidemiología, Instituto Mexicano de Psiquiatría, Primera Encuesta Nacional de Uso de Drogas, 1989.

7. ALCOHOL-RELATED PROBLEMS

Family or health problems are often reported consequences of alcohol intake for both males and females, and among men the participation in fights also occurs (Table 5).

Six percent of the total sample meet three criteria of alcohol dependence according to ICD-10, and this was true for 12.5% of the male population and for only 0.6% of the female population (Medina-Mora et al., 1991). Death by hepatic cirrhosis is among the top ten causes of death in Mexico and ranks first among males between 35 and 54 years (Narro-Robles et al., 1992). Alcohol-related casualties and other social problems are also elevated in the general population. This high incidence of problems is thought to be related to drinking patterns and to bouts of acute intoxication.

Table 5: Alcohol-related problems according to gender

ALCOHOL-RELATED PROBLEMS	MALES	FEMALES	TOTAL
Family	24%	4%	15%
Work	10%	*	5%
Health	18%	6%	12%
Police	8%	*	4%
Car accident	6%	*	3%
Other accident	6%	1%	4%
Fight	15%	2%	9%
Lost/nearly lost job	4%	*	2%

* \leq 0.5% Source: Dirección General de Epidemiología, Instituto Mexicano de Psiquiatría, Primera Encuesta Nacional de Uso de Drogas, 1989.

Data from emergency rooms show that alcohol-related injuries have more to do with acute intoxication than with chronic ingestion. Twenty-two percent of the traumatic events evaluated in a representative sample of emergency rooms showed positive alcohol readings through a breath-analyser, but only 6% were among heavy drinkers (Rosovsky et al., 1988). A similar study conducted by Cherpitel et al. (1993), showed an opposite distribution in California, where 11% of the cases with traumatic injuries who entered emergency rooms had positive alcohol levels (about half of what was observed in Mexico) but where the proportion of all admissions due to these type of events for heavy drinkers was more than three times higher.

According to a National Survey on Addictions, negative consequences of drinking are more prevalent among non-dependent drinkers; for instance only 18% of those who reported being involved in a car accident or having work problems due to alcohol intake, were dependent on alcohol (Medina-Mora et al., 1991). This evidence suggests that the burden of alcohol in Mexico is linked with both chronic use and frequent events of acute intoxication.

It has been estimated that alcohol is responsible for 9% of the total burden of disease in Mexico, estimated as days of healthy life lost due to premature death or disability.

Alcohol is especially related to cirrhosis (39% of the burden), car accidents (15%) and dependence (18%) (Frenk et al., 1994).

8. CURRENT RESPONSES

In Mexico there is no government alcohol monopoly, but the state regulates prices through taxes, limits the number and location of establishments, controls presentations of beverages, regulates the hours and days of the week that liquor outlets may be open, and the age and other characteristics of the persons that may buy alcohol. Other regulations determine the legal blood alcohol content for driving. The General Health Law and the Labour Federal Law contain regulations that apply nationwide, while some other laws have only a local application.

Current regulations prohibit sale of alcohol to persons under 18 years of age or to intoxicated persons or those in uniform; the establishment of outlets that sell alcohol in open containers within 500 metres of schools or work places, is forbidden, but beer can be sold in an open bottle at sporting or art events. Local authorities issue liquor licenses for new establishments: in Mexico City by the head of each of the 16 administrative sectors, and in the states by the head of the municipalities that are the smallest administrative division of the public administration. These licenses are one of the few sources of direct income for municipalities. Beer and wine can be sold without a license in places where food is served.

There are no regulations that limit commercial practices that promote heavy intake. For instance in discos there is a general cover charge and then all beverages are free. Some other places require purchase of a bottled distilled beverage for admission. Still others offer free drinks that are supposed to be consumed quickly to the bottom of the glass, or sell beer by the bucket.

The Labour Law and the Traffic Regulation of Vehicles include recommendations on alcohol and drug issues. For example, in the latest version of the Traffic Regulation a specific blood alcohol level (0.05) is considered the safe limit for driving in Mexico. Other legal measures are included in the Advertisement Law and in the Trade Regulations, with the purpose of limiting some marketing activities of alcohol and tobacco companies.

8.1 Prevention and Treatment

During the late 1960s and early 1970s, when an increase in drug use among young people was observed, the government established some institutions to deal with different aspects of the problem. On the other hand, although problems derived from alcohol consumption have long prevailed in the country they have received little attention.

Prevention has been a major goal of national institutions such as the Juvenile Treatment Centres (CIJs), which undertake preventive activities at the community level. However, these institutions do not treat alcohol use/dependence except in cases of co-morbidity with other drugs.

An increasing number of institutions and social agencies in Mexico are involved in preventive efforts. From a public health perspective, there is a new broader focus on prevention. Recent trends are oriented to include not only prevention of extreme problems, such as the chronic misuse by individuals suffering from dependency, but also problems related to the occasional misuse by non-dependents. This wider perspective emphasizes the interaction of environmental influences with individual vulnerabilities that may result in a variety of harmful behaviours.

Prevention has always been considered a priority in laws and programmes dealing with substance use and misuse in Mexico. The General Health Law of 1984 introduced an important new chapter on addictions, giving the same emphasis to drugs, alcohol and tobacco and stressing the obligation of the health sector to develop programmes related to these substances, with prevention an important issue.

This law superseded the Sanitary Code of 1973. Its most important advance perhaps was the introduction of health protection as a civil right in the Mexican Constitution (Constitución Política de los Estados Unidos Mexicanos, art. 4°). According to the General Health Law, this civil right comprises, among others a medical attention, defined as prevention, treatment and rehabilitation including attention to emergencies, and mental health (art. 27°). Addictions and substance use are included under this last heading.

Title XIII regulates addictions and substance use through special programmes. The first chapter is devoted to the Program Against Alcoholism and Abuse of Alcoholic Beverages. The Law establishes that the Ministry of Health and other institutions within the Health Sector will coordinate their functions for the execution of the Programme Against Alcoholism and Abuse of Alcoholic Beverages (art. 185), that comprehends, among other actions, the prevention and treatment of, and in its case, the rehabilitation of alcoholics.

In order to develop the Programme, General Councils Against Alcoholism and Drug Abuse were installed in 1986; later in the same year, they all became a National Council Against Addictions that replaced the individual councils. This Council is coordinated by the Minister of Health and has representatives from the public, private and social sectors concerned with these problems, including all the Secretaries of State who directly or indirectly deal with the problem. The first action of the Council was programme development.

The General Health Law indicates that "... an alcoholic beverage is the one that contains a proportion greater than 2% of ethyl alcohol per volume". It also indicates that "... all alcoholic beverages should clearly show, on containers, a warning label, that

reads: the abuse in the consumption of this product is harmful for the health.” The Health Law also establishes that “...the location and service hours permitted to alcohol outlets, would be determined by the governments of each state of the country”. Another important measure marked by the Law on a national level, was that “...under no circumstances will alcoholic beverages be sold to minors...(people younger than 18)”.

The National Programme against Alcoholism and the Abuse of Alcoholic Beverages, includes among its strategies: to develop regulatory measures to control alcohol availability, and to enforce their application; to modify the patterns of alcohol consumption, trying to reduce incidence of intoxication and use; to develop prevention programmes aimed at the early detection and intervention of problem drinkers; to improve treatment resources for the alcoholic and the family; and to perform research projects on different aspects of the problem, and on the evaluation of prevention programmes.

Treatment services for drug users are also regulated through the General Health Law of 1984. The programmes against alcoholism and alcohol abuse and of drug dependence have as a main objective: “To diminish ... alcoholism or drug dependence, damages and risks to health and the psychological, economical and social problems related to the ... abuse of alcohol or use of psychotropic substances”. The specific objective, related to treatment reads: “... diminish prevalence of cases due to the abuse of alcoholic beverages and dependence, mainly in high risk groups, providing integral attention....”

Strategies related to this subject are: (a) “To develop programmes that enable the adequate and opportune identification of those individuals whose alcohol use is damaging for himself and his family”, with provision of treatment and of identification of resources for attention to these problems, and (b) “to provide integral attention to the alcoholic and to the individual who abuses alcohol, considering aspects of treatment, rehabilitation and social reinsertion.”

The National System on Treatment (NST) has made important advances in the identification and registry of public and private services including self-help groups and services offered by NGOs. Self-help groups play an important role in the treatment of these types of problems. Alcoholics Anonymous (AA) appeared as a treatment alternative for the Spanish-speaking population of Mexico in the late 1960s. It is estimated that by 1990, there were approximately 13 000 AA groups in Mexico, with an average of 22 members each, representing a total of 286 000 AA members. This means that approximately 5 of every 1000 Mexicans above 15 years of age are AA members, and it is believed that the rate of annual increase in AA membership is 10% (Rosovsky et al., 1992). A recent trend indicates an increase in the number of young people becoming members, who, according to older members, have not hit bottom, but whose membership coincides with an increase in the use of other substances.

A study conducted in a representative sample of registered AA groups in Mexico City by Rosovsky et al. (1992), found that half of the sample had also used drugs other than alcohol without implying dependence. The most frequent such drugs were illegal use

of sedatives and tranquillizers (29%). Twenty-three percent had used marijuana, 19% had used inhalants, 14% heroin, 11% stimulants, and 9% cocaine.

Addicts attend AA groups either because they feel that alcohol is their main drug problem or because they feel comfortable in the group to which they belong (the group is often selected in terms of age and sociocultural preferences).

Unfortunately, attention provided by treatment institutions available in Mexico is segmented in nature, that is, there are hospitals where the addict is detoxified, other institutions where pharmacological psychiatry treatment is provided, etc. At the moment no referral system is available and thus addicts receive treatment at the place they choose instead of treatment tailored to their needs, although efforts are now being made to overcome this problem.

8.2 Research

Initially, research to support preventive action was the main responsibility the Mexican Centre for Drug Dependence (CEMEF), founded in 1972 with the aim of undertaking research and training, and guiding policy making. Epidemiological and psychosocial research on alcohol and drugs began at that time, with important efforts to adapt and develop instruments and methodologies. From 1972 on, international collaboration has been a major influence in research development in Mexico.

Later, the CEMEF became the Mexican Institute of Psychiatry, which since 1980 has been a National Institute of Health. Early lines of research were continued and new ones were begun, partly as a result of the diffusion of drug use and of the availability of more funds, and also because the authorities and the society at large became more aware of drug problems.

Other National Institutes of Health have also addressed alcohol abuse as it relates to their areas of competence. The National Institutes on Nutrition, Public Health, Perinatology, and Paediatrics, among others have important lines of research that address alcohol problems. Other institutions such as national and local universities include addictions among their fields of interest. The government makes important contributions through the National Council on Science and Technology, the organization that is in charge of supporting research.

Research development in substance use and misuse in Mexico was, for many years, devoted to epidemiological studies with the purpose of evaluating the prevalence of drug use, patterns of consumption, and related problems in different populations. Results of these studies, as well as those carried out by scholars from other countries, had some influence on policy making in Mexico and, in general, inspired some preventive actions and interventions.

However, most research in Mexico has been of the pre-intervention type⁸. Some of these studies were carried out with the specific purpose of detecting risk/protective factors among students (Medina-Mora et al., 1995; Sánchez Sosa and Hernández, 1992). Other studies were conducted to test the validity of screening instruments, such as the AUDIT, for the early detection of alcohol problems in Mexico with promising results (Babor et al., 1989).

Intervention activities carried out in Mexico mainly correspond to the "research driven" type⁹ (Howard, 1993) Some efforts were aimed at i) the development of educational preventive materials adapted to the characteristics of different contexts: (Velasco Fernández, 1988); ii) the development of models (Natera & Orford 1992, WHO, 1996; Compel et al., 1992)

Several studies provided data that gave support to policy making. Research that was carried out at the Mexican Institute of Psychiatry on the structure and evolution of the alcohol industry, and the sales and rates of per capita consumption provided data for the National Programs. Research that described the prevalence and patterns of alcohol intake (Calderon et al., 1981; Medina-Mora, 1993), or the estimation of alcohol-related casualties in emergency rooms (Cherpitel et al., 1993; Rosovsky et al. 1988), were useful to support the above mentioned preventive measures.

9. DISCUSSION AND CONCLUSIONS

The information included in this chapter provides data regarding alcohol availability, describes the patterns of alcohol intake in Mexico, relates the high degree of serious consequences to the specific way alcohol is consumed, points out important areas where more information is needed, and especially supports the need for a firmer policy regarding alcohol use.

The chapter describes Mexico as a mixed alcohol culture, that could be categorized as a "dry culture", since patterns of infrequent, very heavy, binge drinking are common, with a high proportion of deaths due to poisoning, violence and social disruption.

⁸ Pre intervention research includes a variety of studies aimed at the development of a data base/line for the planning of effective preventive interventions, and of the techniques to measure their impact. Research of this kind provides information that allows identification of prevalence of use and misuse of substances by different groups in a society; the related problems, risk factors, environmental characteristics, the opportunities for intervention, and the viable approaches for interventions.

⁹ Intervention research is the actual testing of preventive strategies to prevent or reduce problems related to the use of substances. These may be "research driven"- when the researchers control the starting and implementation of the intervention to be tested, as well as the process of research; "policy driven" -when interventions are out of the control of researchers, and studies are carried out in natural experiments. This type of study, although having many advantages, presents many methodological challenges. Both of these intervention research methods require an appropriate foundation of pre-intervention studies.

Nonetheless, alcohol use is integrated in the culture, there is no temperate tradition that supports the high rate of abstinence, and there is a high rate of mortality linked to chronic use characteristic of “wet cultures”, opening interesting avenues for research.

In this country a high rate of abstinence and of heavy drinking coexist. This drinking pattern is associated with a high degree of problems, suggesting the need to consider alcohol intoxication as an important target for intervention, more than chronic use or dependence. Although local beverages have been linked to the culture since before colonial times, nowadays most alcohol intake is of industrialised western types of beverages. Important differences are observed among population groups in regard to the preferred type of beverage; those with the highest levels of income and quality of life prefer wine while at the other end of the socio-economic scale low priced local beverages known as *aguardientes* are more often consumed.

The alcohol industry has increased rapidly as a result of an expansion of transnational producers and local industrial growth, and a few powerful corporations have dominated it, with important increases in the production of some brands and important decreases in others. An additional important trend is an increase in the proportion of imported beverages specially influenced by international agreements such as GATT and NAFTA. With some fluctuations, per capita consumption has increased 34% from 1970 to 1994. Though no definite figures are available related to unregistered alcohol, evidence suggest a possible increase, indicating an urgent need to study and introduce policies oriented to its control.

Various major influences, not all fully studied, have modified the pre-Colonial traditional ways of drinking: the Spanish colonization; an important back and forth pattern of temporal migration to the United States; the increasing representation of religions with temperate traditions, especially among rural and Indian communities and more recently, the changes in gender roles and the international trend toward globalization. The first, perhaps, had a major impact in norms and occasions of drinking, while the last transitions have influenced mainly the groups of the population that have access to this practice. An important trend that deserves close attention is the increase in alcohol use/abuse among adolescents.

Studies have also shown that nowadays in Mexico norms are still more related to stating who may drink than toward moderation. Alcohol fulfils an important function as a means of social integration as these are the more frequent reasons for drinking endorsed by the people interviewed. There is also an important ambivalence toward drinking, alcohol is simultaneously considered as an important social lubricant that might not be excluded from social gatherings but at the same time it is considered the source of all evils. In the public perception, alcohol is considered as an excuse for bad behaviour, though legally it does not have this status. It is believed that alcohol brings out the worst in people, but also that the bad behaviour of a drunk should not be taken into account.

Norms differ in what is expected from males and females, it is acceptable for males to feel the effects of alcohol or even to get drunk, but females should limit the amount consumed. Eventual intoxication is permitted among males, but not among females.

A few studies have addressed norms of behaviour after drinking alcohol. Some studies have inquired about public perceptions of consequences of behaviour derived from alcohol use. Some others have addressed the problem of drinking and driving, while others have addressed the situational norms that define drinking and non drinking occasions, but there is lack of information regarding these issues, in spite of their importance for policy making.

Despite limitations of the information available, enough evidence exists to support a more comprehensive policy aimed at promoting moderation of alcohol use and diminishing these consequences.

Unfortunately, many health-inspired actions are difficult to practice, due to several reasons: there are opposite interests not only between the health authorities and the alcohol industry, but also among different sectors of government. The alcohol industry is very important for the country's economy, with large tax revenues to the State and the promotion of other related industries.

One of the main limitations of controlling alcohol availability is the poor enforcement of the law. Minors can easily get drinks in pubs, discos and other outlets. There is still a large field of problems in need of preventive actions, such as in the area of alcohol distribution and sales.

It is important to consider that some measures for availability control could have negative impacts. For example, if alcohol prices were higher, or alcohol imports were limited, the population might turn to beverages lacking sanitary control, with potential dangers to their health.

Prevention research should be oriented to support and orientate national policies, but more demonstration programmes or intervention research are required. Among the areas that should be included, are: (i) risk reduction in accidents and violence; (ii) evaluation of current public health policies in consumption problems, and the control of availability, among others; (iii) treatment resources: their impact on substance use and related problems; (iv) studies in high risk groups: (e.g. children of alcoholics); (v) family studies: risk/protection role; (vi) special needs of women: adapting instruments and programmes for them; (vii) programmes to reduce dangerous drinking habits and to diminish related problems; (viii) risk and protective factors addressed through longitudinal studies with interventions; (ix) programmes of early detection and intervention, including understanding barriers and pathways to treatment; (x) programmes for migrant workers in the USA and those returning to Mexico; (xi) post-benefit issues concerning policies; (xii) NAFTA's impact on the availability of alcohol and other drugs.

One main objective should be to reduce the gap between health researchers and policy makers. Multinational collaboration is especially important; the globalization of culture and markets result in the sharing of problems by nations, and solving these problems should become a collaborative task.

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Country Profile on Alcohol in Nigeria

by
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1. INTRODUCTION

Nigeria, with a population in excess of 100 million people, is the most populous country in Africa. Composed of many ethnic groups with distinct languages and overlapping cultures, it is a country which, like many in Africa, came to be through the deliberate political manoeuvres of colonialists. While the process of forging a country from diverse nation states may have resulted in some blurring of cultural differences among the constituent groups, Nigeria is still a country of immense diversity. Post-colonial influences in education, religion, and urbanization have not been uniform across the country. Thus, for example, while pre-colonial Nigeria was a country of diverse non-deistic animistic beliefs, post-colonial Nigeria is characterized by a predominantly Muslim north, a Protestant southwest and a mainly Catholic southeast.

Nigeria is a country of immense natural resources. Up until the early 1970's, the country depended on its rich agrarian soil for income, producing cash crops in the forms of groundnuts, cocoa, palm oil, and rubber. A gradual shift away from agriculture started in the '70's with the large exploration of petroleum and the consequent drift of active young Nigerians from the farms into the cities in search of both blue- and white-collar jobs. The process has today produced an economy that is heavily reliant on just one commodity and is a passive victim of the consequent vagaries of the world market for that commodity, oil.

The story of alcohol in Nigeria is in large measure a story of country's diversity, both in terms of culture and of religion, and also of its recent economic fortunes. In particular, the regional attitudes to alcohol, either in regard to banal use or to official policy, largely reflect contrasting contemporary religious dictates. Also, the sharp increase in local production of industrial beers and spirits has followed the increased urbanization and the sudden, but now largely short-lived, spurt of the economy. Of course, as a result of the shrinking of the economy, the alcohol industry has also shrunk just as consumer tastes have had to change to accommodate the reality of a declining purchase power.

2. A BRIEF HISTORY OF ALCOHOL IN NIGERIA

Alcohol played an important social and cultural role among the different groups long before traders from Europe came with their own brands of alcohol. The use of palm wine probably dates more than 150 years in the country. Jeffreys (1957), tracing the origin of palm wine in West Africa, quoted sources suggesting that its focus might have been in the Valley of the Nile. He cited writings in which references were made to the use of palm wine in Abyssinia in 1629 and in Egypt in 1870. In many traditional Nigerian cultural groups, the use of traditional alcohol beverages at important social and religious events was the norm. Indeed, most drinking was done in such contexts. Thus, the Ibo of Onitsha in the eastern part of Nigeria would offer palm wine to the visitor, at engagement and marriage ceremonies, to signify the settlement of a quarrel, and at funerals (Umunna, 1967). The Kofyar in the escarpment of the Jos Plateau in northern Nigeria would reward important civic services with beer, exact it from those who break social rules, repay voluntary labour in beer, and use it as the offering in ancestral worship (Netting, 1964). Most major ceremonies among the Yorubas in the southwestern part of the country also involved the drinking of palm wine. Palm wine is important in the worship of the deity, Ogun, by the Yorubas.

It would appear that the most common traditional beverage was palm wine. However, in some parts of the north, *burukutu*, made from maize, and *pito*, made from millet or guinea corn were common. Local distillation of beverages apparently came on the Nigerian scene relatively recently. Distillation was virtually unknown among the Kofyar in the early 1960's (Netting, 1964). From Jeffrey's account, distillation may have started among the Ibibio in the southeastern part of Nigeria only in the late 1950's or early 60's (Jeffreys, 1957). However, the Ijaws are reported to have started distilling spirits from palm wine in the latter 1930's (Leis, 1964). Such distillation was illegal by the rules of the colonialists, apparently out to protect the market for the spirits imported from the "home" country.

A major historical effect of the contact with Europeans was the introduction of new brands of alcoholic beverages, in particular spirits. Initially, these beverages were traded with Africans more or less in response to local demand for them. However, as colonialization took root, and the proselytizing goals of missionaries intermingled with the paternalism of racism, other factors became important in these transactions. As highlighted by Olukoju (1996), the liquor question for the colonialists was influenced by factors such as the need to comply with international conventions drawn up by themselves, the exploitation of the demand for indigenous alcohol beverages for the purpose of revenue generation, the need to project a picture of fairness in the face of obvious racist policies, and local pressures working to either limit the availability of alcohol or liberalize it.

For a number of the policies enunciated by the colonialists, there was the underlying stereotype of Africans being unable to exercise control over their use of alcohol and so

in need of the protective influence of restrictions and laws. This stereotype of course had no basis either in the nature of traditional alcohol use or in any widespread alcohol-related problems at the time (Akyeampong, 1995).

For Nigeria, an important historical development was the adoption at the Convention of St. Germain in 1918 of the policy, which prohibited "importation, distribution, sale and possession of spirituous liquors.... in those regions where their use has not been developed, except in limited quantities for consumption by non-natives". In this context, areas presumed to have no knowledge of alcohol were territories above the seventh latitude north of the equator. As Britain was a signatory to this policy, its administration in Northern Nigeria sought to implement its application by the enactment of the Liquor Amendment Ordinance No. 26 of 1919. The whole of the northern part of Nigeria thus fell under a different set of rules than the southern part in regard to alcohol. As illustrated by Olukoju (1996) the resulting controversy between Nigerian workers, subsequently galvanized by unionists and nationalists from the south of the country, and colonialists on the interpretation of "non-natives", the racism behind the policy, and the exploitation of Muslim sensibilities regarding the use of alcohol by the colonial rulers all combined to polarise the country into two. The divisions resulting from this polarisation have transcended issues relating to the use of alcohol and are still incipient in the country today.

Apparently, the new beverages brought by European traders and, later, colonialists, did not quite acquire the same level of reverence in traditional ceremonies as local beverages, becoming instead items for leisure drinking. They were nevertheless more intoxicating. These beverages soon became socially harmful commodities. By 1884, a local chief was raising alarm, complaining to the colonialists that alcohol "has ruined my people". "It has made them mad", and asking for a ban on its importation (Pan, 1975). Still, until very recently, widespread consumption of large quantities of alcohol was relatively uncommon.

Traditionally, in many parts of the country, drinking was invested with communal ritual and excessive drinking was rarely tolerated. Most drinking was done in groups. Odejide and Olatawura (1977) described a pattern of convivial drinking in a rural Yoruba community. Umunna (1967), describing the rituals associated with drinking among the Ibo of Onitsha in the southeastern part of the country, highlighted the hierarchies followed in passing the traditional wine cup around during communal drinking groups, with primacy given to age and title. Netting (1964) suggested that the communal or group drinking pattern among the Kofyar, with emphasis on sociability and with imposition of sanctions against disruptive and socially disapproved behaviour, meant that pathologies relating to drinking were avoided. Drinking by the very young was commonly disapproved. For example, the Kofyar would substitute beans and palm oil for beer in rewarding work parties of adolescent boys (Netting, 1964). However, in some cultures, alcohol beverages that were often quite nutritious and low in alcohol content were offered to children.

3. TYPES OF ALCOHOLIC BEVERAGES AVAILABLE

Traditional beverages consist of palm wine, *burukutu*, and *pito*. Palm wine is by far the most common of these. There are two forms of palm wine: one obtained from the oil palm (*Elaeis guineensis*), the other from raffia palm (*Raphia Hookeri*). These plants grow in various parts of the country, sometimes growing wild. The difference in the wines produced from these two sources is principally that the wine from the raffia palm is sweeter and has lower alcohol content. In either case, the alcohol content of the fresh wine is rarely higher than 4%. Tapping is done by cutting into the base of the palm frond and attaching a vessel to the tree to catch the sap. Sap yields are collected twice a day and a tree can be tapped for about three to five months. Water is often added to the sap, but the more water, the poorer the quality. Fermentation increases the alcohol content of an undiluted sap, when left for varying lengths of time. Most of the palm wine consumed in the country still goes straight from the tappers to the consumers, with little storage of the product following tapping. However, in recent years, a number of local entrepreneurs have established small-scale industries to bottle palm wine, thus increasing its shelf life and making it more available to inhabitants of urban centres where little or no tapping takes place. *Burukutu*, a thick, frothy and tasty brew, and *pito*, the forms of traditional beer, are made from fermented millet and guinea corn, respectively. Their alcohol content is about 3%.

Ogogoro is a traditionally distilled gin, made from palm wine. It was commonly produced by passing the steam of boiling palm wine through water-cooled logs, this process being repeated twice to obtain a distillate of appropriate alcohol strength. However, in recent years, relatively more sophisticated methods of distillation are employed and a number of the bigger producers package their products in labelled bottles. Colonialists banned its production and consumption and the ban was lifted by the independent national government only in the 1970s. Industrial spirits are produced by a few local distilleries. Their products commonly bear the names of international brands under licence.

Two major types of industrial beer are available in Nigeria: lager beer and stout. It is estimated that, using sale volumes, the former accounts for 80% and the latter 20% of the market. Many brand names of lager beer are produced in the country, with their alcohol strengths ranging between 4% and 6%. Importation of beer is very negligible, with imported brands being found only in a few hotels. Imported beers are usually distinguishable by being sold in cans as opposed to locally produced beers, which are sold in bottles.

Beer is by far the most commonly used alcoholic beverage in Nigeria. The results of two large-scale general population studies conducted in the country, one in the south by the International Council on Alcohol and Addictions (ICAA, 1988), and the other by Obot (1993b) in the middle-belt region in the northern part of Nigeria, showed that the respective proportions of adults who reported using beer were 32.3% and 43.5%. For *burukutu*/palm wine, the proportions were 21.9% and 21.4%, for spirits (including

traditionally produced *ogogoro*) the figures were 5.9% and 5.4%, while for wine 4.2% and 3.5% were the respective proportions of users. The study by Obot had a sample of 1552 while that of the ICAA involved 1052 adults. In an earlier survey of literate civil servants in the southern part of Nigeria, Odejide (1982) reported that beer was consumed by 45.7%, imported wine by 43.2%, imported spirits by 32.8%, and traditional spirits (*ogogoro*) by 22.2%. The difference between Odejide's figures and those of Obot and the ICAA may reflect differences in drinking patterns between literate and non-literate Nigerians. Nevertheless, Odejide's figures are unlikely to reflect current drinking patterns among even the literate as the economic downturn in the country has ensured that imported alcoholic beverages are now within the reach of only the very rich. Today, beer is the beverage of choice not only because it remains relatively affordable but also because, relative to traditional beverages, it is perceived as modern and carries no widespread stigma.

4. THE ALCOHOL INDUSTRY

There is an acknowledged difficulty in trying to obtain reliable data on production, and consequently consumption, of alcohol in Nigeria. In an examination of the problem, Akerele (1993) suggested that because the alcohol market was not organized, data for satisfied (or realized) demand and of consumption expenditure (retail sales) were lacking. He noted that the other component in the computation of effective demand, unsatisfied consumer demands, which could only be available by survey methods (e.g. family budget survey) was also lacking in Nigeria because no large-scale surveys of such nature had been conducted. For a number of factors relevant to the computation of consumption level, no data are obtainable and, for others, the available data are inconsistent, with different sources giving different figures for the same feature. The informal alcohol industry (mainly dealing with traditional brews and spirits) is almost completely omitted in official figures. Traditional drinks such as palm wine are of course not accessible to any accounting process. The apparent dominance of palm wine in the informal alcohol market, particularly in rural areas where most Nigerians still reside, (Kortteinen, 1989) means that computation of consumption levels that exclude information on palm wine would be significantly in error. There is also smuggling of what may be substantial quantities of alcohol, mainly spirits and wines, into the country.

Authors who have published figures on alcohol production have relied on sources such as publications of the Federal Office of Statistics, annual reports of breweries and distilleries, and journals such as the Nigerian Trade Journal, the United Nations published Statistical Yearbook and African Socio-Economic Indicators. None of these sources is comprehensive since they rely on figures of industrially produced beverages.

Production of traditionally distilled spirit has not received the attention of official statistical reviews. The official policy of prohibition by the colonial government, which was continued for several years after independence by the national government, meant that production was done in secrecy and no official data could be obtained. Apart from

the north-south difference in attitude to alcohol, with the south being generally more permissive to alcohol use, there were also variations in local attitude to the production and consumption of *ogogoro*. It would appear that even during the period of prohibition, production of what was then "illicit gin" might have been a major form of livelihood in some localities in the south. For example, Leis (1964) estimated that by 1958, almost 50% of the men in Ijaw were engaged in the distilling or transporting of *ogogoro*. Prohibition was reversed in the late '70s as a result of nationalist agitation against what was perceived as a discriminatory policy of the former British rulers. While the lifting of prohibition has resulted in more open production (and consumption) of the beverage, the local industry remains poorly controlled and monitored. In essence, the pattern and trends of production of traditional spirits remain a matter of conjecture.

The oldest two brewing companies in Nigeria are subsidiaries of multinationals. The first brewing company, the Nigerian Breweries Limited, went into production in June 1949. Guinness Nigeria Limited, first incorporated in 1950 to distribute Guinness Stout then produced in Dublin, Ireland, started brewing in Nigeria in 1962. It was the third Guinness brewery in the world and the first outside the United Kingdom. Between them, the products of these two companies account for about 80% of the beer market today.

The first indigenous brewing company went into production in 1963. A gradual growth of the brewery industry followed and led to a total of nine breweries in 1978 when the national government banned the importation of beer. Following the ban, and with the oil-driven economic boom of the 70s and 80s, the local industry grew rapidly. By 1982, there were 34 breweries. From 1986, the Federal Government compelled the industry to progressively substitute local raw materials for imported ones, and imposed a total ban on imported raw materials (especially malted barley) in January 1988. The resulting investments in plant and machinery necessary to convert production lines to suit local materials (mainly maize and millet), the competition for local raw materials, and the dwindling purchasing power of the populace in the face of national economic recession, all combined to kill off some of the breweries. On the other hand, the two dominant players consolidated their positions. Today, some years after the ban on importation of raw materials was lifted, even though there are 25 surviving brewing companies owning 33 breweries and producing about 40 brands of beer, the intensity of competition for market share means that many of these companies are not serious market contenders. Competition for the beer market in Nigeria is through advertising rather than through price differentials and has tended to favour the big players.

The brewery industry in Nigeria is a highly profitable one, especially so for the dominant companies. It is estimated that the average industry turnover grew by over 73% in 1993 and that the operating profit margins have continued to rise, increasing from 21% in 1992 to 24% in 1993. In 1993, the after tax returns on average assets in the industry were higher than on the national Treasury bills. As reported by the Federal Office of Statistics, even though the aggregate index of industrial production in the country fell in 1993 by 3.1%, with manufacturing production declining by 4.1%, the

brewery industry actually grew by about 8.5% in the same period. A significant proportion of non-oil revenue accruing to governments at various levels therefore comes from the brewery industry. Akerele (1993) estimates that, in 1984, the brewery industry in Nigeria paid a total of two billion naira in taxes to the Federal Government, a figure representing 2% of the total non-oil sector of the economy. He estimated that, in the same year, the industry employed about 30 000 people directly and 300 000 indirectly.

The ripple effect of these factors on the economies of the localities where these industries are sited, along with the direct effect accruing from various sales and licensing taxes, is considerable. In addition, given an economy struggling to diversify from a reliance on oil, the perceived benefits of what might be seen as efforts at industrialization give the industry a political importance that probably outstrips its real contribution to the national economy. Indeed, the success of the industry in rising to the challenge of adapting local grains in substitution for imported raw materials which were banned in the early years of the Structural Adjustment Policy to conserve foreign reserves and thus promote local agriculture has added to its clout. In a number of localities where breweries are sited, the beer trade has become the prime economic activity of the people. In particular, it has raised the economic profile of women who constitute the greater proportion of retailers.

Production levels of industrial beer have fluctuated quite significantly in the last decade, due mainly to changes in government policies and to economic instability. It is estimated that the industry produced 11 million hectolitres of beer in 1985. A period of steady decline followed until 1990 when production plummeted to less than 8 million hectolitres. Production has since gradually increased, reaching 8.5 million hectolitres in 1993. However, this level represents only 50% of the combined installed capacity of the industry. The scope for growth is thus quite considerable and demand is unlikely to outstrip supply capability for some time.

Official statistics report the importation of a total of 1.3 million litres of alcohol in 1970, the figure skyrocketing to an annual value of 132 million litres in 1976 (Odejide, 1993), two years before the imposition of a ban on imported beer. It would appear that the growth in local beer production that increased dramatically after the ban did not adequately satisfy local demands. Statistics show that the level of importation continued to rise for wine and spirits, jumping from 1.0 million hectolitres in 1982 to 5.9 million hectolitres in 1983 (Odejide, 1993).

Along with the breweries, the country had by 1985, four distilleries and nine wineries (Federal Office of Statistics, 1985). The market for their products is relatively small since those who can afford to drink industrial wine and spirits often prefer the imported brands.

Possibly reflecting demand pattern and differential attitudes towards the use of alcohol between the north and the south of Nigeria, 27 of the 33 brewing plants in the country are located in the southern parts.

5. ALCOHOL AVAILABILITY, MARKETING AND PROMOTION

Lager beer is sold primarily in 60cl bottles while stout is sold in either 30cl or 60cl bottles. Outlets include hotels, clubhouses, bars, shops and stores. Most towns and villages would have small-scale street-corner shops, often run by women, for the sale of beer and soft drinks. Most are legally permitted to offer off-licence sale, but it is not unusual for many to have a refrigerator and a few chairs and tables for on-site consumption. Consequently, especially in most parts of the southern region of the country, beer is easily available. Also, most of these outlets would sell alcohol beverages at most hours of the day and far into the night. Even though the licence granted them for sale requires that no alcohol beverage be sold to underage persons, the rule is never obeyed. Indeed, most hotels in Nigeria would also not turn back an underage person asking to purchase alcohol beverage.

The situation is somewhat different in many parts of the north. There, both legal and (Moslem) societal restrictions have confined the sale of alcohol to certain areas of the cities and to hotels. Except in areas designated for the residence of non-indigenous persons, so-called "*Sabon Gari*", where outlets are many and fairly unregulated, other parts of the cities in the far north of the country tend not to have widely available alcohol outlets.

The picture in regard to other alcohol beverages is somewhat different. Industrial spirits are commonly available only in settings patronized by middle-class consumers: hotels, up-market bars and restaurants, and supermarkets. Traditionally distilled spirits are not sold in large hotels, bars, or supermarkets, but in small outlets, street-corner bars, and have found particularly popular but dangerous outlets in public motor parks and along highways.

Traditional beverages (palm wine, *burukutu*, *pito*) are generally less commonly available in the big towns and cities than they are in the villages and smaller towns. They are sold in small bars and food stalls. They are commonly stored in big containers, calabashes being the traditional vessel for palm wine, and sold in old beer bottles or in jars and cups. Bottled palm wine, still a relatively young entrepreneurial product, is now found in large supermarkets and stores, being outlets where the targeted clientele, city-dwelling middle-class people, can find them.

There are no restrictions on alcohol advertising. Billboards, newspapers, radio and television are all used as media of alcohol advertising. Advertisement commonly plays on the depiction of drinking as a modern and enlightened form of recreation, with young well-dressed men shown drinking with young ladies. This image may have become popular as a recent study suggests that the lay view of drinking as a substitute for other forms of recreation is widespread (Gureje et al., 1996). Advertisements also use the notion that some types of alcohol beverage, especially stout beer and spirits, are invigorating and are good for health and vitality. In addition, the beer industry in Nigeria has become visible in the sponsorship of various sporting activities. In

particular, a number of the companies have established soccer clubs and actively promote national soccer league competitions. Soccer is the major sport of mass appeal in Nigeria and the country has done particularly well in international soccer competitions in recent years. The major breweries have capitalized on this popularity to get their message across to the public, especially that segment of the society with the largest proportion of drinkers: young males.

6. PATTERNS OF ALCOHOL USE

It is estimated that per capita consumption of beer rose from 3250.8 litres in 1977 to 10 689.1 litres in 1981 and, after a period of fall to about 7500.0 litres between 1983 and 1985, was back to 9220.6 litres in 1989 (Akerle, 1993). This author presented figures for the entire population, rather than for adults and so the figures did not represent the average level of consumption in the drinking segment of the population. Even if it did, it would still not show whether the increase was due to either the same drinkers drinking more or to more people in the community beginning to drink. There is some evidence for the latter: Oladimeji and Fabiyi (1993) showed that over a four-year period (1984-1988), there was a significant rise in the proportion of undergraduates in a Nigerian university drinking alcohol.

Abstinence is a desired and extolled virtue in some parts of the country, particularly in the Moslem north. On the other hand, in some communities, abstinence in a man is viewed with some suspicion, being regarded as a social deficit (Umunna, 1967). In a self-report survey in the Middlebelt region of the country (Obot, 1993b), 37.5% of 1562 respondents described themselves as abstainers. Abstainers were more likely to be female, over the age of 40 years, and to be Moslem. Obot's study found that Christians were not only over-represented among drinkers but were also more likely to be heavy consumers of alcohol. While 45% of Christians drank nearly every day or more, only 18% of Moslems were so classified. An identical observation was made in respect of the employed versus the unemployed, with the former more likely to drink and drinking more frequently.

Many school and college surveys find alcohol use to be quite common among students, with a large proportion of drinking students having their first drink while still children (Oshodin, 1981a; Pela, 1986; Ebie, 1990; Adelekan, 1989; Abiodun et al., 1994). Odejide et al. (1987) found that, at the age of about 8 years, many of their respondents in a school survey had been given an alcohol beverage, mostly during family festivities. Surprisingly, and contrary to observations made among adolescents by another author (Pela, 1986), *ogogoro* seemed to be the first beverage for their sample. Their studies were conducted in two large cities in the southern part of the country. However, such observation is not confined to urban centres only. Oshodin (1981a) reporting on another school survey conducted in a rural area, found that 79% of students aged between 10 and 15 years had used alcohol. Problem drinking may also have started quite early among students. Oshodin (1981b), describing the drinking habit of 500 high

school students in Benin City, reported that 50% of his respondents indicated that they had been drunk three or more times in the previous year.

Umunna claims that sex is reflected in the quantity of alcohol taken and in behaviour after drinking. A woman is expected to drink very little. During ceremonies, women take ritual sips (Umunna, 1967), as is true of many traditional Nigerian communities. Most contemporary studies also find that more males than females drink alcohol (Asuni, 1975; Oshodin, 1981a; 1981b; Gureje, Obikoya & Ikuesan, 1992; Abiodun et al., 1994). Males aged between 20 and 39 years constitute the largest group of alcohol users. In a survey conducted in primary care, Gureje, Obikoya and Ikuesan (1992) found that every case of alcohol dependence or abuse was a male. This finding has since been replicated in a larger sample of primary care patients (Gureje et al., 1995). In the latter study conducted among 926 consecutive patients attending primary care facilities, while the overall prevalence of ICD-10 diagnosis of alcohol abuse or dependence was 0.4%, all the identified cases were males, thus giving a prevalence of 4.5% among men. Using a classification based on self-report of pattern of use, Oshodin (1981a) classified 27% of male students who drank alcohol as against 9% of female students as having indicators of alcohol abuse. Also, in a community-based survey, Obot (1993b) found that while 36.2% of men reported drinking nearly every day or more, only 31.7% of women did so. In that study, 42% of men were abstainers, compared with 51% of women. However, there is evidence that female involvement in drinking may be rising, especially among the young. Odejide et al. (1987) reported a male/female ratio of 1.1:1 for a sample of students in one city and a ratio of 1.2:1 for another city. Adelekan and colleagues (1993) reported identical figures among undergraduate students and, in an earlier study, Adelekan (1989) had found that while the reporting of lifetime use was higher among males, current use was identical for the two sexes.

Even though the convivial or ritualistic pattern of drinking reported by earlier workers (Odejide & Olatawura, 1977; Leis, 1964; Umunna, 1967) might no longer be the typical pattern of drinking, drinking is still rarely a solitary activity. In Obot's study (1993b), only 18% of drinkers reported drinking alone most of the time. However, a shift in the pattern of traditional drinking was noticeable with about 66% reporting that the public bar, as opposed to private homes or social gatherings, was their regular place of drinking. Most of the school children that reported using alcohol in the study by Odejide et al. (1987) said they had their first drink at a family festivity. There is a large variety of festivities that provide opportunity for drinking in many parts of the country: the birth of a baby, engagement and marriage, traditional title taking, and traditional and religious festivals. In some areas of the south, the funeral of an adult, especially one with adult children, is a particularly common occasion for extensive drinking by participants. In a relatively new trend, many of such ceremonies are celebrated in all-night parties and road traffic accidents are common when drunken participants take to the road in the early hours of the morning after such parties.

Traditional communities differ in the type of alcohol that is most commonly in use. Thus, while the Ibos of Onitsha would prefer palm wine to *burukutu* and *pito* and would

generally shun the use of *ogogoro* (Umunna, 1967), *burukutu* is a popular drink for the Kofyar of Jos Plateau. In the areas adjoining the Niger Delta, especially among the Ijaws and Urhobos, *ogogoro* is a widely used beverage. Reports of recent surveys reflect this diversity and also suggest that the age and sex of the drinkers may have a bearing on the type of beverage used. While 44% of Obot's community sample of drinkers used industrial beer, 21% reported drinking traditional beverages of palm wine, *burukutu*, and *ogogoro*. Only 5% drank industrial spirits and 4% wine (Obot, 1993b). In that study, 26% reported they had no particular choice of drink, drinking whatever was available. Among the younger samples studied by Odejide et al. (1987), palm wine was surprisingly much more popular with 39% and 48% reporting a preference for this beverage in Abeokuta and Ibadan, respectively. A fairly consistent finding in most studies is that while men generally drink every form of alcoholic beverage available on the Nigerian market, with industrial beer closely followed by traditional beverages topping the list, females tend not to drink the locally produced spirit, *ogogoro* (Oladimeji & Fabiyi, 1993; Isichei et al., 1993). It would appear that a degree of stigma is still attached to drinking this previously illicit beverage and this may be keeping female drinkers away from it (Umunna, 1967).

Very few data exist in respect of norms on levels of drinking and behaviour following use of alcohol. In view of the previous illicit status of *ogogoro* and the association of traditional beers with low socioeconomic status, popular folk view would tend to associate heavy drinking with the consumption of traditional beverages (Bennett et al., 1995). However, the literature is not consistent on this. The ICAA (1988) study of the general population suggested that, among drinkers, those who expressed preference for industrial forms of alcohol (beer, wine, and spirits), consumed more quantity at one episode of drinking than those who used traditional beverages (i.e. palm wine, or *burukutu*). Obot (1993b) observed the opposite. Using identical measures to describe usual quantity consumed at one sitting, he reported higher proportions of heavy drinking among users of traditional beverages than among users of industrial beers. While about 54% of users of industrial beer reported drinking eight or more pints of the beverage at one sitting, 68% of drinkers of traditional beers reported drinking as much. It is likely that preferences for alcohol types would be influenced not only by the socioeconomic and educational status of respondents, but also by where they reside in the country. Clearly, the stigma associated with some traditional beverages in some parts of the country is not always found in other parts.

7. ALCOHOL-RELATED PROBLEMS

Even though the alcohol industry in Nigeria contributes to the national economy, there is a negative effect of its activities that is not commonly appreciated. In many localities where breweries are sited, beer as an economic commodity, an item of trade, is of more importance than beer as a form of alcohol with potential for a variety of problems among its users. In a number of such localities, beer as a consumer item has supplanted other items of commerce: industrialists and retailers would rather produce and sell beer than establish, for example, publishing houses and distribute books. With the economy in dire straits and cost of imported goods frequently unaffordable, importation of books

has ceased being a profitable activity. Local industrialists have not filled the gap in supply. Rather, their efforts are directed at establishing industries with easy market, quick profit, and relative government protection. The brewing industry happens to be one of such. It is therefore no surprise that the number of bookshops has dwindled considerably in Nigeria, with traders shifting from book selling to beer retailing. Essential textbooks have become largely unaffordable to most students and reading for pleasure is becoming a dying interest.

The effect of the use of local raw materials for beer production on food supply has not been studied, but may be considerable. With dwindling agricultural productivity as a result of the drift to urban centres by young active men, it is not unlikely that the utilization of locally produced grains such as maize and millet by the brewery industry would lead to a shortage of these staple food materials in the open market. Obot (1990) has speculated on the possibility of this situation exacerbating the inadequate food supply in the country and thus increasing the incidence of malnutrition.

A disproportionate part of the total admissions to tertiary hospital beds is linked to alcohol misuse (ICAA, 1988). Hospital data show that acute intoxication, withdrawal syndrome, physical dependence, delirium tremens, psychosis, polyneuropathy and liver damage are common forms of presentation in emergency units and medical wards by people with history of heavy alcohol use (Odejide, 1978; Obembe, 1988; Isichei et al., 1993). In this regard, the northern part of the country is not spared in the extent of hospital morbidity attributable to drinking (Ifabumuyi, 1986; Ahmed, 1986). Obot (1993b) found kidney problems, and that drinkers of alcohol in the community more frequently report stroke, nerve and blood problems, and various forms of trauma (including those resulting from road accidents). Epidemiological surveys in primary care show that a significant proportion of those attending for diverse medical problems, especially males, would have evidence of ICD-10 or DSM-III-R diagnoses of alcohol abuse or dependence (Gureje et al., 1992; 1995). At the level of social functioning, physical violence, loss of jobs, and marital disharmony are more commonly associated with alcohol abuse (Obembe, 1988; Obot, 1993b).

Certain factors may increase the predisposition of Nigerian drinkers to the physical dangers of excessive alcohol use. In a comparison of the profile of problems between alcohol users in Nigeria and in Germany, Isichei et al. (1993) reported a higher prevalence of pathological liver functioning among Nigerians even though there was no indication that they, on average, used more alcohol than their German counterparts. This finding may reflect a higher vulnerability to such changes among Nigerian drinkers many of who may be in a state of sub-nutrition. Indeed, in an earlier report, Falase (1979, 1980) had found evidence of malnutrition as a possible conditioning factor for the development of heart muscle disease among a group of Nigerian alcoholics. On the other hand, alcohol may increase the likelihood of illness among those exposed to putative risk factors. Oleru (1987), for example, reported that a large proportion of the variance in reduced pulmonary function among workers in a cotton factory was accounted for by the estimated alcohol bottle-years of use.

Nigeria has one of the highest per capita rates of road traffic accidents in the world. Analysing the fatality and injury rates resulting from road traffic accidents over a ten-year period in developing and industrialized countries, Jacobs and Fourace (1977) showed that, while the rates were declining in most industrialized countries, they were rising in developing countries. In their report, Nigeria had the highest rates. Demehin (1984), using newspaper reports of road traffic accidents and resulting fatality in Nigeria, estimated that over 100 such accidents occurred every day and that at least one person died from them every hour. These figures are old but nothing in the Nigerian traffic landscape has changed to affect them for the better. Rather, the economic difficulties in the country has meant that an increasing number of vehicles that are not road worthy are plying the roads and further increasing the risk. While the exact contribution of alcohol to the accident statistics remains inadequately studied, there are indications that it may be considerable. Hospital-based studies have shown that drivers of motor vehicles involved in traffic accidents are often likely to have used alcohol (Ayeni, 1980; Asogwa, 1980). This is hardly surprising given the association between drinking and accident reported in other parts of the world. The situation in Nigeria is compounded by a lack of legal restraint on drink driving: the country has no legally imposed blood alcohol limit for drivers and does not practice routine breath checks on the road. Also, for those who die on the road, there is no mandatory blood alcohol level determination at post mortem. In Nigeria, infant mortality is falling but its place is being taken by youth accident mortality. The enormous economic waste that the loss of a large proportion of the young, often well-trained, and active labour-force constitutes is still lost on the government. Even though a national body for the enforcement of traffic laws, the Federal Road Safety Commission, is in existence, lack of necessary tools to implement its mandate has hampered its activities and reduced its impact on accident rate.

An important consideration in examining the health implications of alcohol use in Nigeria, and in most developing countries, is the availability of health care facilities and services to mitigate the negative consequences of excessive alcohol use. The thinness of available services is exemplified by the fact that the country, with a population of about 100 million people, has fewer than 100 psychiatrists and 60 orthopaedic surgeons working in both public and private health care sectors. Thus, at the communal level, morbidity associated with alcohol use draws on resources that are better utilized elsewhere. At the individual level, excessive alcohol users expose themselves to health problems for which adequate intervention may be unavailable, even if affordable by the individual (see below).

8. CURRENT RESPONSES

Prevention of alcohol misuse has traditionally been a part of the cultural approach to drinking. Solitary drinking was uncommon and the habit of sharing with others ensured that not enough drink would be consumed by one individual at one drinking episode to lead to drunkenness. Also, an individual who frequently got drunk was stigmatized and ridiculed in gatherings as to make them approach drinking with caution. Traditional

extended family structure provided for early intervention if drinking was perceived to be impairing the individual's social or occupational responsibilities. These traditional strictures have mostly disappeared in large urban settings where family ties have become fragmented and the pressure of urban living has brought new stresses. Opportunities for traditional forms of leisure are generally not available in the cities and most of the urban centres have inadequate amenities for leisure and games. The pattern of drinking has changed and opportunities now exist for the emergence of drinking habits that are not monitored by peers and family members.

It is probably still true to say that drunkenness is generally condemned by the Nigerian public. It is particularly abhorred in people who are expected to provide examples to others (Obot, 1993a). On the other hand, consumption of large quantities of alcohol that is not associated with behavioural evidence of intoxication is seen as a desirable quality by a large segment of the society, particularly by the youths (Gureje et al., 1996). Once a drinker is still standing on his feet and not grossly uncoordinated, it is unlikely that he would be perceived as a dangerous driver by majority of the people. Other than the more obvious evidence of drunkenness, the public does not often appreciate the range of impairments that a drinker is potentially likely to have after a heavy bout of drinking. This high threshold for the recognition of problem drinking contrasts poorly with the very low threshold associated with perceived problems from use of drugs such as cannabis (Gureje et al., 1996). It has meant that pressure from the public on the government to formulate policies relevant for the control of alcohol abuse is at best lukewarm. The upsurge in public debate about the use and trafficking of hard drugs in recent years has led the government to formulate laws for the control of these drugs and to set up a body to implement such laws. As part of its response to the drug problem, the national government established in 1990 the National Drug Law Enforcement Agency to control the supply of and reduce the demand for illegal drugs. In many instances, the actions taken by the government and its agencies have been disproportionate to the problems attributable to these drugs but have reflected the wish of the government to respond to public outcry. Similar actions on the problems relating to alcohol use are regrettably lacking. Laws attempting to regulate the opening hours of drinking outlets and the sale of alcohol to underage children exist in government statutes at various levels but, except in some parts of the north, are not enforced. Most of such laws are indeed hardly known to the public. On the other hand, there is no law in any part of the country on drink limits relative to driving and no laws for mandatory blood alcohol level determination in accident victims. There are no enforceable laws on the quality and alcohol content of the poorly monitored traditional alcohol industry. Indeed, information on alcohol-related morbidity is generally conjectural because no detailed and comprehensive records are kept of reasons for death or illness. Other than in a few hospitals, there are no records that would allow a researcher to determine the trends in such disorders as liver cirrhosis or pancreatitis in order to make meaningful inferences about the contribution of alcohol.

An annual programme of training for the prevention, recognition and management of alcohol and drug-related morbidity's has been organized for several years in the country by the International Council for Alcoholism and Addictions (ICAA). The trainees,

drawn from various parts of the country and diverse professional backgrounds, are expected to disseminate skills and knowledge acquired during the training in their local areas. The programme stands out as the only one of its type in the country and fills one of the important gaps that lack of government initiative has left open. Another such gap relates to funding for alcohol research for which there is virtually no central provision, a situation not unrelated to the low premium placed on research in general by governments at various levels. Again, it has fallen on agencies such as the United Nations International Drug Control Programme (UNDCP) to attempt to fill such gaps by sponsoring local research into alcohol use.

Specialized treatment settings for alcohol-related problems are few. These are mainly located in a few tertiary centres in urban areas. Most of these have a few dedicated beds for alcohol-related morbidities in psychiatric wards. Apart from one or two of these (Makanjuola, 1986), the treatment offered is short-term detoxification. Public-funded facilities for rehabilitation are few. Other than orthodox medical intervention, traditional and religious healing methods are the other forms of treatment that individuals with alcohol health problems often consult (Odejide et al., 1989). The methods employed by their practitioners are commonly non-specific and with unproved efficacy. They are often based on an understanding of alcohol problems that is rooted in mythology and fatalism. However, Odejide et al. (1989) have highlighted the inherent rehabilitative component of some of these approaches with patients kept in the healing centre for many months and encouraged to engage in creative and productive activities. Also, the operation of one rehabilitation centre funded by a religious mission has been described (Yali, 1993).

9. CONCLUSION

Alcohol is not alien to the Nigerian society. To various degrees, the use of traditional alcohol beverages was common in most pre-colonial communities. Drinking was often done in the context of elaborate rituals and it served many social and religious functions. Even though drinking was often a predominantly male activity, females were often involved, but most times in token numbers. In communities where the common beverage was perceived as being nutritious and very weakly alcoholic, children were sometimes offered alcohol but otherwise, drinking by the young was frowned upon. The pattern of drinking, convivial or communal, coupled with traditional strictures by family and friends ensured that drink-related problems were rare.

Colonization brought new forms of alcohol beverage, commonly more intoxicating than traditional forms. Even though colonial powers made international treaties to protect the colonies against the scourge of alcohol misuse, the treaties were often based on paternalistic and wrong premises. Their implementation was influenced by derogatory stereotypes of the colonized people, a need to secure a market for the beverages imported from the home country, and a need to appease religious sentiments both of groups in Europe and in the colonies. Some of the divisions promoted by the way

alcohol policies, among others, were implemented in Nigeria by the colonialists are still evident today in the political structure of the country.

Post-colonial Nigeria has been unable to rise to the challenges of the new drinking habits of the people. The beer industry has grown in size and in influence. Traditional alcohol beverages have diminished in status but are still widely used. The production, marketing, and sale of alcohol are poorly controlled or regulated such that more drinking is taking place in an environment devoid of both traditional strictures and government control. There is evidence that alcohol-related morbidity for the individual and for the society is on the increase but comprehensive data gathering and research are lacking because of poor government support. Health-related morbidity resulting from alcohol use is a drain on sparse resources and, in view of rudimentary health care services, is unlikely to receive adequate and appropriate intervention.

The current challenge is to collate and disseminate evidence of the growing dangers of alcohol misuse in order to awaken the public who in turn would spur the government to action. This is being successfully done in respect of other drugs of abuse, some of which presently cause fewer harms to the society than alcohol does. The time to act is now because Nigeria, with its enormous potentials, cannot afford the scourge of alcohol preventing it from fulfilling those potentials. It can also not wait till the realization of those potentials puts more money in the pockets of a people who, in the meantime, have acquired a health-damaging habit: excessive drinking.

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Country Profile on Alcohol in Papua New Guinea

by
Mac Marshall

1. INTRODUCTION

Papua New Guinea (PNG), the largest country in the Pacific Islands with a population of approximately 4 million people in 1997, became independent of Australia in 1975. PNG comprises the eastern half of the main island of New Guinea, together with an assemblage of major and minor islands mostly located further to the east, and including the large islands of New Britain, New Ireland and Bougainville. PNG is extremely diverse linguistically and culturally, having over 800 mutually unintelligible languages and nearly as many separate cultures. The country is also made up of great many different natural environments that range from coral atolls just above sea level to snow-clad mountain peaks of over 4,000 metres in elevation.

Blessed with rich natural resources, PNG's economy relies heavily on the mining of gold, copper and other metals and on substantial reserves of petroleum and natural gas. These resources have been developed mostly by transnational corporations in joint ventures with the national government. Export crops of coffee, cacao and copra also are important. At least three-fourths of the populace resides in rural areas and engages in subsistence agriculture, or in a mix of this with small holder cash cropping. The two largest cities are Port Moresby (the national capital), located on the south coast, and Lae, situated on the east coast at the terminus of the Highlands Highway. The latter is the major road system in the country and it links the five Highlands provinces to Lae's seaport. Air and sea transport are at least as important as land transportation, and many parts of the country can only be reached via aeroplane or ship. There are nineteen provinces, each with its own provincial government, and most of these establish and regulate the laws pertaining to the availability and control of alcoholic beverages. Every province has at least one town that serves as the provincial capital, and several such towns have grown rapidly in recent years, although all remain much smaller than Lae and Port Moresby. Nevertheless, these towns form the transportation and communication hubs and marketing centres for their surrounding areas, factors that are pertinent to the distribution of alcoholic beverages.

Prior to colonization by Great Britain and Germany in the late nineteenth century, Papua New Guineans practised a variety of traditional non-deistic religions based mostly on animistic beliefs. Along with colonialism came Christian missionaries, and while active conversion continues in some of the more remote parts of PNG, most

citizens are Christians. The great majority of them belong either to mainline Protestant denominations or the Catholic Church; however, evangelical Christian churches have made substantial inroads to this domination in the past twenty years. Such churches, along with others like Seventh Day Adventists, actively preach against the use of alcoholic beverages, and most of their members avoid alcohol.

2. A BRIEF HISTORY OF ALCOHOL IN PNG

All available historical records indicate that the people of PNG, like other Pacific Islanders, had no knowledge of beverage alcohol before contact with Europeans in the nineteenth century (see Marshall, 1980 for evidence in support of this). Nowhere in the country did people manufacture traditional alcoholic beverages. However, by the late 1830s or early 1840s in New Ireland, the Admiralties, and possibly the Gazelle Peninsula of New Britain, islanders learned of rum from visits by European ships and from the beachcombers who began to live among them (*Ibid.*: 2). Gold miners, and *beche-de-mer* and pearl fishermen, primarily from Queensland, entered the coastal and island areas of southeast Papua in considerable numbers by the 1870s and 1880s, and by the turn of the century their drinking exploits were legion (Monckton, 1921; Nelson, 1976; Roe, 1962). By 1901, stores in the mining settlements were licensed to sell liquor to the foreigners, but it appears that little if any alcohol made its way to Papuans (Marshall, 1980). In part, this was because of immediate measures taken by the Crown to protect indigenous interests after Britain declared a Protectorate over Papua in October 1884. Indeed, the first ordinance enacted following annexation in 1888 was the Arms, Liquor and Opium Ordinance designed to keep Papuans from obtaining these commodities (Oram, 1976).

Similar conditions were obtained in German New Guinea to the north with trade in alcoholic beverages banned by decree of the imperial chancellor after Germany took possession of the area in October 1884, and via a series of regulations issued in 1887 that included a prohibition on the sale of liquor to "natives" (Marshall, 1980). This prohibition remained in effect after Australian soldiers took over the colony in September 1914. In spite of the early influence of whalers and beachcombers in the New Guinea Islands, there was little demand for alcohol and the right to drink did not emerge as an issue during the German administration.

In both British (and later, Australian) Papua and in German New Guinea alcohol was available to whites, while access to it was controlled for "coloured persons" (e.g. Chinese and Malays), and prohibited to the indigenous people. This prohibition policy based on skin colour that began in the 1880s was maintained throughout the colonial era, and "by the late 1950s the perceived racist overtones of the privilege to drink legally became a burning issue in Papua and New Guinea" (Marshall, 1980). The right to drink became caught up in anti-colonialism and the movement for self-government and independence, and these historical events surrounding access to alcoholic beverages continue to influence the ways such drinks are used and symbolized today.

Until World War II, when Japanese and Allied soldiers shared drinks with their Papua New Guinean counterparts, alcohol was not much of an issue in either Papua or New Guinea. Leadley (1976) claimed that New Guinea Islanders often drank illegally produced alcohol before the war but “managed to keep the affair quiet” and avoid government attention (cf. Schwartz and Romanucci-Ross, 1974). He also noted that the Japanese occupation forces taught the Tolai people of East New Britain to make both fermented and distilled home-brew from coconut sap, bananas, pineapples and sweet potatoes, and that the Japanese themselves produced *sake* (rice wine) at Vunairima on the Gazelle Peninsula. But this activity was localized to one small area of what is now PNG.

In 1942 Japan captured most of the New Guinea Islands and a considerable portion of the north and east coasts of the main island, and numerous battles between Japanese and Allied forces were fought in PNG with great losses on both sides. Papua New Guineans in the war zones also suffered deaths, injuries and serious disruption to their lives, although the war had a relatively light impact in the Highlands and in what are now Gulf and Western Provinces. Following World War II, the Australian military unification of Papua and New Guinea was continued under the Papua-New Guinea Provisional Administration Act of 1945. The pre-war prohibitions against access to alcohol by the indigenous people were likewise continued unaltered, as if the impact of the war on people's perceptions of the outside world (including alcoholic beverages) remained unchanged.

But, of course, matters were changed forever by this cataclysmic event, and pressure for changes of many sorts began to build during the 1950s in PNG as elsewhere in the colonized areas of the Pacific (Marshall, 1980). A Select Committee of the Legislative Council was appointed in 1955 to consider a proposal that was contained in the 1955 Native Liquor Bill to issue drinking permits to certain Papua New Guineans. The administration accepted the Committee's recommendation that the issue be deferred for a period of three years, and complete prohibition continued in Papua and New Guinea. From this time onward, though, the issue of the right to drink gained ever-greater attention. Its political volatility was exacerbated, and its racist underpinnings were clearly exposed to view in 1956, when “open-go” drinking without permits became possible for the minority of “mixed-race” persons in the Territory (Burton-Bradley, 1968).

An administrative committee again reviewed the subject of liquor laws in 1957, but once more nothing came of this. By April 1959, Papua New Guineans were the only South Pacific islanders for whom there was a blanket ban against alcohol of any kind. Joined as it was with other forms of institutionalized racism, “as the decade of the 1950s drew to a close, the right to drink had become a major, perhaps *the* major, issue on which was focused much of the resentment Papua New Guineans felt toward their colonial rulers” (Marshall, 1980).

The 1960s was a time of change in the liquor laws of several Pacific Island colonies, and pressures grew on the Australian administration to liberalize the drinking law. In

July 1962, a Liquor Commission was appointed to explore the matter and make suggestions to the government for changes in the law. The debate surrounding this action was very emotional, even before the Commission began to meet in August. Hearings were held in East New Britain and New Ireland, in the towns of Madang and Wewak on the north coast, in the Highland centres of Goroka and Mt. Hagen, and in Lae and Port Moresby, and the Commission's report was presented in mid-October 1962. The recommendation was to repeal the ordinance that had maintained prohibition since the 1880s and to pass a new, comprehensive liquor law for the Territory, with transitional legislation to be enacted immediately that essentially allowed any male or female over age 18 to drink. Such interim drinking laws were approved by the Legislative Council in late October and took effect on 2 November 1962. Finally, after approximately 75 years of restrictions, Papua New Guineans had the legal right to drink alcoholic beverages.

A new permanent ordinance legalizing drinking came into effect on 26 September 1963, and less than a decade later (in 1971) the government convened a Commission of Inquiry into Alcoholic Drink to assess alcohol's impact. That Commission found, on the whole, that the dire predictions of mayhem and social dislocation had not come to pass. Not long thereafter PNG gained its independence from Australia in 1975, by which time the act of drinking together had come to symbolize equality, and beverage alcohol (especially beer) had become a highly desired prestige commodity (Marshall, 1982a). Following independence, the Organic Act of 1977 decentralized many government functions, one of which was liquor licensing, and by 1981 twelve of the nineteen provinces had passed their own Liquor Licensing Acts (Marshall, 1982b). Subsequently, in 1979 the PNG national government made funds available to the Institute of Applied Social and Economic Research (IASER) to conduct a detailed study of alcohol use and abuse in the country. Carried out during 1979-1981, this project resulted in numerous publications (e.g. Marshall, 1982c), and in a set of formal recommendations presented to the national and provincial governments (Piau-Lynch, Sumanop & Marshall 1981). In 1990, the PNG Ministry of Health and the Western Pacific Regional Office of the World Health Organization jointly sponsored a follow-up assessment of alcohol's impact on the country, by which time a variety of familiar alcohol-related problems had begun to take their toll (Marshall, 1990).

3. TYPES OF ALCOHOLIC BEVERAGES AVAILABLE

Lager beer is by far and away the most popular kind of alcoholic beverage consumed in PNG, mostly that manufactured by South Pacific Brewery (SP) at its facilities in Port Moresby and Lae. Imported beer, which comes mainly from Australia and Japan, accounts for only a very small portion of all beer consumed (see Marshall, 1982b; 1990 for statistical summaries). After beer, rum and Scotch whisky are the most popular alcoholic beverages among Papua New Guineans. Bacardi Light Puerto Rican rum, an

Australian brand called Rhum Negrita, and Johnnie Walker Red Label Scotch are the most widely consumed of these. White wines, primarily from Australia, enjoy some popularity among the small number of modern, educated, urban women who drink regularly.

"Jungle juice", a distillate of fermented fruit first introduced to New Guinea Islanders by whalers and beachcombers in the mid-nineteenth century, is still made in small quantities in that region. Likewise, a few men continue to drink methylated spirits ("meths"), a practice that likely predates World War II on the Gazelle Peninsula of New Britain and in the vicinities of Port Moresby and Lae (see below).

4. THE PRODUCTION OF ALCOHOL

South Pacific Brewery (SP) began operation in Port Moresby in 1952, and greatly expanded its production following the November 1962 legalization of drinking by Papua New Guineans. Since before 1962 SP has been a subsidiary of Tiger Brewery of Malaysia, itself a subsidiary of Heineken Brewery of the Netherlands. SP absorbed a second expatriate-owned brewery established in 1958, in 1965-1966. Yet a third foreign-owned company began to brew beer in PNG in 1971-1972. After struggling unsuccessfully to gain much market share this brewery entered into a consortium with the major Philippine brewer, San Miguel, and by 1974 the latter was in full control of the company (for details of the first twenty years of brewing in PNG see Wylie, 1975). After marketing blitzes and a series of beer price wars in the early 1980's, SP bought out San Miguel's PNG holdings in February 1983. Since that time SP has continued to produce and market San Miguel in PNG under a licensing agreement.

Before 1985 all distilled alcoholic beverages sold in PNG were imported; however, in that year Fairdeal Liquors, with Malaysian capital and high-level sponsorship in PNG, was granted a first ever licence to manufacture distilled beverages within the country. The primary motivation for this commercial venture was to side step PNG's steep excise duty on imported liquor. Fairdeal arranged to import raw ingredients, for which excise duties were much lower, and to then "assemble" various beverages at its plant in Port Moresby. These beverages included a number of international brands produced under formal licensure agreements, and more importantly, Fairdeal's own local Gold Cup brands. These latter beverages, gin, rum and whisky, sold for approximately half the price of comparable imports (Marshall, 1990).

Soon after Fairdeal began operation in 1985 the company began to market 38 ml plastic sachets of Gold Cup beverages at a price of 30 each (approximately US 25 cents). Coupled with the much cheaper price of their own brands, this seemed to contribute to a nationwide increase in consumption of distilled beverages of nearly 17 000 gallons in 1985 over 1984. In October 1985 the Prime Minister requested that Fairdeal withdraw the plastic sachets after they had been on the market for only two months. This request followed a public outcry over the easy access the sachets gave children to hard liquor, and the company complied (Marshall, 1990). Late in 1986 the national government increased the excise duty on Fairdeal's imported raw ingredients by 1,200%, an action

that led the company to temporarily close its plant (*Ibid.*). Despite this government action, Gold Cup brands still cost approximately half the price of imports in 1990.

The SP Brewery in Port Moresby supplies its products, which now include San Miguel, to the southern half of the country (Papua) via the road system that emanates from Port Moresby and, more importantly, via coastal shipping. Beer brewed in the SP brewery in Lae reaches the New Guinea Islands and the north coast provinces primarily from ships that sail from Lae. Beer from the Lae facility also is trucked up the Highlands Highway to the five Highlands provinces that contain nearly a third of the country's population. Before San Miguel lost out to SP in 1983, it was at a distinct disadvantage in marketing its product because it only had a brewery in Port Moresby. This meant that all San Miguel beer sold in the Highlands and the northern and New Guinea Islands provinces had to be shipped from Port Moresby, which added considerably to their costs when compared to SP's with their strategically located Lae brewery. Today, SP runs distribution depots in most major towns, from which they sell beer to local licensees who, in turn, sell it to the public.

5. ALCOHOL AVAILABILITY, MARKETING AND ADVERTISING

Alcoholic beverages are widely available in most parts of PNG today, although a few isolated rural pockets remain where they are very difficult to obtain mainly because of transportation problems. Since drinking was made legal for Papua New Guineans in November 1962, the number of licensed premises in the country has grown very rapidly (Marshall, 1982b). Such outlets nearly doubled in number from a 1958 baseline year during prohibition to 1963, more than doubled again between 1963 and 1969, more than doubled once more from 1969 until 1978, and then began to grow exponentially following the Organic Act of 1977 and the decentralization of liquor licensing. From well under 200 licensed premises Territory-wide in 1960 before de-prohibition, the number of licensed premises reached over 2,100 nationwide in 1980 and was way beyond 2,500 a decade later (Marshall, 1982b; 1990).

This overview of the increase in alcohol availability masks a truly phenomenal growth in the number of licensed premises in certain provinces. For example, in Chimbu Province these increased from 20 in 1975, to 307 in 1980, to 472 in 1985; and in East Sepik Province they went from 56 in 1975, to 140 in 1980, to 300 in 1985. Numerous unlicensed outlets also exist in many parts of PNG from which purchases can be made outside of existing hours of sale or in defiance of periodic liquor bans. Although recommendations were made in 1990 (Marshall, 1990) for provincial governments to control the continued expansion of liquor licenses, to make the issuance of liquor licenses more consistent nationwide, and for the police to shut down black markets, none of these recommendations seems to have been acted upon.

PNG has had reasonably strict laws governing the advertising of alcoholic beverages since 1977, with relatively minor restrictions having been imposed three years earlier (Conroy, 1982). Such advertisements are not permitted in newspapers and other print media, on the radio, or on television. Legal advertising is restricted to licensed

premises and to officially sanctioned sponsorships of sporting events and athletic teams. One consequence is that the outside walls of licensed premises often are covered with advertisements for imported and domestic brands of alcohol, accompanying those for tobacco products and soft drinks. Another is that billboards for SP and San Miguel beer routinely encircle rugby and soccer stadia, and beer logos also appear on the jerseys of teams the breweries sponsor.

The primary way the breweries have gotten around these advertising restrictions is to establish widely recognised colours and designs for their products. Thus green and yellow are known to represent SP beer (often accompanied by a "happy face" uttering, "Have a nice day"), while red, black and white symbolize San Miguel (usually arranged in a particular traditional art motif). Neither colour combination directly mentions beer or alcohol, but every adult knows exactly what these colours stand for. The breweries often provide licensees with either free green and yellow or red, black and white paints with which to paint the exterior of their buildings. As a result, a majority of licensed premises in the country is bedecked in one or the other of these colour combinations.

6. PATTERNS OF ALCOHOL USE

As a generalization, those who live in or within easy access of PNG's cities and towns have much greater opportunity to drink and tend to drink more often than their rural counterparts. This generalization must be qualified, however, by whether the rural areas can be reached easily by road or sea, and by whether people live in a province that has encouraged the establishment of licensed premises in rural village areas.

The basic pattern of drinking in PNG is that males drink beer in groups of other men, usually beginning in their mid- to late teens. Men typically do not drink every day, but when they do drink weekly or fortnightly their goal is to get drunk. This frequently results in a day-long or weekend-long binge, "during which they drink until the alcohol runs out or until they pass out, whichever happens first" (Marshall, 1990). Sizeable quantities of beer (12 or more bottles) are drunk at a sitting. Drunkenness is widely held to be an excuse for otherwise socially unacceptable behaviour, and drunken belligerence and brawls are a common accompaniment of drinking bouts.

In urban areas much drinking takes place in bars, taverns and drinking halls, although groups of men also gather out of doors to drink informally in wooded areas, near beaches (if it's coastal) or in and around their homes (e.g. Herdt, 1982; Smith, 1982). In rural areas men may begin a drinking bout at hotel pubs in town and then carry alcohol with them as they make their way home to the village (Grossman, 1982), drink in area taverns (Strathern, 1982), imbibe in the village drinking clubs that have been established in some provinces (Roscoe, 1982; Sexton, 1982; Sumanop, 1982), or consume alcohol at competitive feasts and exchanges, or at parties (Boyd, 1985; Darrouzet, 1982; Grossman, 1982; Warry, 1982). In some parts of the country village drinking may simply occur as an informal weekend pastime (Carrier, 1982; Schwartz, 1982; Sexton, 1982).

Many rural men had their first exposure to alcohol when they hired on as contract labourers on plantations that are located mostly on coastal or island areas (Hayano, 1982; Josephides and Schiltz, 1982; LiPuma, 1982). Although alcohol has become more available in rural areas since 1980, at that time there were still parts of the country where it was extremely difficult to obtain (e.g. Hayano, 1982; Lepowsky, 1982; LiPuma, 1982; McDowell, 1982; Ploeg, 1982; Zelenietz and Grant, 1982), where villagers eschewed its use (Josephides and Schiltz, 1982), and even places where *no one* had yet experienced alcohol (Poole, 1982). In addition, many rural people either do not yet participate in cash cropping or do so only minimally, with a result that a lack of cash may also limit their access to alcohol.

In many rural parts of PNG, beer, and occasionally other forms of commercially made alcohol, has entered traditional competitive exchange relations among kin groups (e.g. Roscoe, 1982), something that is especially true in the Highlands (Grossman, 1982; Sexton, 1982; Warry, 1982). There a carton of beer often is referred to as "little pig," and alcohol use appears to increase during and after the seasonal coffee flush when people have more cash and hold most of their exchange ceremonies (Dernbach and Marshall n.d.). The consensus at the IASER Alcohol Conference, from which *Through a Glass Darkly* emanated, was that beer mediates between the modern cash economy and the traditional prestige economy. Cash is used to buy beer, which is then "exchanged via traditional avenues and patterns of gifting to demonstrate power, achieve higher status, reciprocate previous prestations and advance political careers" (Marshall, Piau-Lynch and Sumanop, 1982). This use of beer to convert "cash into prestige via exchange is a distinctive feature of alcohol use in contemporary Papua New Guinea" (*Ibid.*). While drinking is mostly a male activity in PNG, some women occasionally imbibe and there do not seem to be any formal rules to prevent their drinking in most parts of the country (e.g. Carrier, 1982; Chowning, 1982; McDowell, 1982; Montague, 1982; Reay, 1982; Sexton, 1982). Nevertheless, there is a widespread belief in PNG that women who drink are sexually available or promiscuous, and most PNG high school students in an attitudinal survey thought that women should not drink (Wilks, Callan and Forsyth 1985). That rural women typically abstain is reported in nearly all of the chapters in *Through a Glass Darkly*, and these ethnographic observations are also supported by survey research in both rural and urban populations.

For example, in their survey of the drinking histories and consumption habits of 677 PNG high school students with an average age of 16 years, Wilks and Callan (1984a, 1984b) found that 39% of males but only 14% of females had tried drinking. Moreover, male and female students together were in general agreement about close relatives who drank: 57.6% reported that their fathers used alcohol, while only 3.3% said that their mothers did so. Likewise, 39.4% said they had brothers who drank, while fewer than 1% indicated that their sisters did so. Two of the three self-reporting survey samples gathered in Port Moresby as part of the IASER Alcohol Project included women: those from the University of Papua New Guinea (UPNG) and Burns Philp (BP), the country's largest commercial firm. Concerning these samples, of the UPNG women students who filled out the questionnaire, 84.2% classified themselves as nondrinkers; the same is true for 89.4% women in the BP sample. Thus 86.5% of the

urban women for whom data are available are abstainers....By contrast, only 22% of the males surveyed reported themselves to be nondrinkers (Marshall et al., 1985).

It seems clear that the great majority of PNG women either do not drink alcoholic beverages at all or do so very rarely. It should therefore come as no surprise that gender figures importantly in the debate surrounding alcohol use in PNG as it does elsewhere in the Pacific (e.g. Marshall and Marshall, 1990). This matter will receive further comment in the next two sections of this report.

7. ALCOHOL-RELATED PROBLEMS

There has been a widespread perception for a long time that alcohol has spawned or exacerbated various problems in PNG. Some of this attitude goes back to colonial rationalizations for prohibition and some of it is a legacy of the ambivalence about alcohol on the part of Europeans who played a role in the colonial and post-colonial politics of PNG. Representatives of many of the Christian churches that are so influential in this new nation actively champion some of it. Whatever its precise sources, as Robin Room observed more than fifteen years ago, "Papua New Guinea is plainly a society that is worried about its drinking" (1982), and this national attention "reaches far beyond the church and women's groups that are identified conventionally as the locus of such concerns" (*Ibid*).

In the Conclusions to *Through a Glass Darkly* the situation in PNG in 1981 was described as "poised on the brink" of social, economic and health problems associated with alcohol abuse. While the authors of that chapter opined that such problems had "not got out of hand yet," they went on to suggest that then-present trends were worrisome and pointed in a troubling direction (Marshall, Piau-Lynch and Sumanop 1982). A decade later, in a report to WHO and the PNG government, the senior author of that earlier chapter reported that "it appears that the country has gone over the brink. It has developed a number of major alcohol-related problems" (Marshall, 1990). Six of these problems will be sketched below: (a) an apparent association between alcohol use and resurgent "tribal fighting" and related violence; (b) the role of alcohol in domestic violence; (c) the economic opportunity costs of expenditures on alcohol; (d) the negative health consequences of heavy alcohol intake; (e) the role of alcohol in motor vehicle crashes; and (f) the continued consumption of non-beverage alcohol.

7.1 Tribal Fighting

Over the past quarter of a century, after two decades of colonially imposed pacification in the Highlands region of PNG, there has been a resurgence of tribal fighting. Based upon the conventional wisdom that alcohol use *causes* violence, this renewed fighting has produced a variety of government responses, one of which has been periodic bans on the sale and consumption of beverage alcohol (Dernbach and Marshall, n.d.; Piau-Lynch, 1982; Talyaga, 1982). These bans have only slightly reduced the incidence of tribal fights, in part because they have been based on false premises of causality (see Iamo & Keran 1991). That there is often an *association* between alcohol

use and insults, altercations and vehicular accidents that may lead to the outbreak of tribal fights, however, is not in dispute (see, e.g. Strathern, 1982; Warry, 1982). Thus alcohol often contributes to or becomes an excuse for situations that result in intergroup hostilities, but drinking per se does not cause these battles.

7.2 Domestic Violence

As with tribal fights, so with domestic violence: alcohol use by men does not *cause* them to beat their wives or, much less frequently, their children. But when men return home after drinking and get into arguments with their wives, the beatings they mete out are often much worse than when they are sober. Based on a review of the major newspapers in PNG from January 1981 to March 1990, Marshall estimated that at least 25 women are beaten to death by their husbands each year, and this surely underestimates the problem (1990). But, of course, domestic violence more often results in injury than in death, and a study by Ekeroma (1986) provides a glimpse of this.

Ekeroma completed a 10-week survey of 94 victims who presented themselves at Angau Memorial Hospital in Lae due to spouse beating during 1981-1982. Six of these women required hospitalization, and 30% of the cases he examined were alcohol-related (thus 28 victims, 2 of whom were hospitalized, were alcohol-related). Given the relative brevity of this survey, and the fact that it reports information from only one location in the country, the magnitude of the problem makes an impression. And these figures also draw attention to a prominent reason that so many PNG women hold strong anti-alcohol views.

7.3 Economic Costs

The economic opportunity costs of expenditures on alcoholic beverages received much attention in *Through a Glass Darkly* (e.g. Darrouzet, 1982; Grossman, 1982; Marshall, Piau-Lynch and Sumanop, 1982; Schwartz, 1982; Sexton, 1982; Warry, 1982). To the extent that in the early 1980's "rural Papua New Guineans presently put a higher value on the prestige economy than on the modern cash economy" (Marshall, Piau-Lynch and Sumanop, 1982), this valuation "confounds efforts at real economic development (in the Western sense), for Western notions of the rational investment and expenditure of money do not necessarily hold in the traditional prestige economy" (*Ibid.*). Even allowing for this, however, husbands and wives often argue over spending money on beer *unless* the beer is to be contributed to exchanges that will benefit the entire family. Often, though, men arrogate control of cash and just spend it on drink for themselves and their cronies. Such expenditures are strongly resented and widely criticized by women, who would rather spend the money on trade store goods, school fees, and the like. Indeed, in one well described instance, women banded together, gained control over cash produced by their own labour, and instituted a special women's savings system known as *Wok Meri* "women's work" (Sexton, 1982).

Since many rural Papua New Guineans continue to rely primarily on their gardens for food, and on the local environment for housing materials and other daily needs, the cash they earn from cash crops or wage labour is largely disposable income. Given this, it is easy to argue that they should be able to spend such money any way they want, even on a (from a Western point of view) nonproductive commodity that is as expensive as beer in PNG. But to the extent that provincial and national governments in PNG “are serious about the overall, long-term economic development of the country, the fact that a great deal of the country's earned wealth...is literally 'trickling away' should be a cause for concern” (Marshall, 1990), as it is a huge economic loss to national development.

7.4 Physical Consequences

Human beings everywhere are subject to a variety of negative physical health consequences that result from chronic, long-term consumption of large amounts of ethanol beverages. In addition, alcohol dependence often has a psychiatric or mental health component for many heavy drinkers. Those who abuse alcohol also are at greater risk of accidents and injuries associated with their intoxication.

Writing in the mid-1970's, a little over a decade after de-prohibition, the first psychiatrist to serve in PNG reported that “although there are instances of acute alcoholism and drunkenness among the Papua New Guinean people...in my experience there have been no cases of the three major alcoholic mental disorders [delirium tremens, alcoholic hallucinosis, and Korsakow psychosis]” (Burton-Bradley, 1976). This conclusion was based on records of over 2600 mental patients admitted to the Laloki Psychiatric Centre between 1962 and 1974. Burton-Bradley attributed the failure to find any cases of alcoholic psychosis in Papua New Guineans at that time to the absence of chronic, continuous, heavy drinking over a long period of time.

A few years later, however, various warnings were being sounded concerning the physical and mental health consequences of alcohol abuse in PNG. Having served as a WHO consultant to PNG in 1984, another psychiatrist, Wolfgang Jilek, warned that the great increase in consumption levels during the 1970's and 1980's, and particularly the heavy drinking by many members of the national elite, meant that alcohol abuse was already causing major psychosocial problems. On the basis of his observations he predicted that alcohol abuse may “become the main mental health problem for the peoples of the South Pacific and cause significant mortality among them” (1987).

Using information on the pattern and amount of alcohol consumption in PNG from 1960 to 1980 and a set of assumptions about drinkers' age and gender, Marshall attempted to show that “those who consume beer in PNG tend to imbibe it in substantial quantity”-- an average of 220 litres per capita in 1979-1980 (1988). He then noted that many alcohol-related physical ailments such as cirrhosis and cancer take years to develop, and moreover, that PNG's overburdened and understaffed health service does not have the time, energy or facilities to diagnose such problems. Marshall concluded by speculating that “There is every reason to believe that the physical health costs of excessive drinking will begin to weigh more heavily on Papua New Guineans

in the years ahead" (1988), and that "there is no reason to think that Papua New Guineans, among all humankind, will be uniquely spared these illnesses." (*Ibid.*)

In fact, by 1990 many of the symptoms of clinical alcoholism, such as neuropathology, delirium tremens, blackouts and memory loss, alcoholic hallucinosis and alcoholic psychosis, were being treated in Papua New Guineans by physicians at Port Moresby General Hospital (PMGH) (Marshall, 1990). It also seemed likely by that time that alcoholic hepatitis and alcoholic cirrhosis existed in a considerable number of chronic heavy drinkers in PNG, "but that they go undiagnosed either because the victims do not present themselves at hospitals before they die or because the latter condition is masked by malarial damage to the liver" (*Ibid.*).

In a retrospective study of postmortem records at PMGH, Sinha, Sengupta and Purohit (1981) looked at all trauma deaths for the 1976-1980 period. In addition to alcohol's contribution to traffic fatalities (see below), they found that 21% of those who died from axe or stab wounds had a Blood Alcohol Level (BAL) >80 mg/100 ml, and that nearly 20% of blunt injury victims had BALs at this level or higher.

7.5 Motor Vehicle Crashes

High BALs also predictably play an important role in fatalities resulting from motor vehicle crashes in PNG. In an analysis of alcohol's involvement in such crashes, Wyatt (1980) examined only postmortem records for traffic fatalities recorded at PMGH for 1975-78 (N=121). Eighty-five percent of the victims were males, two-thirds of whom were ages 20-39 years, and Wyatt obtained BALs for 76% of the total sample over age 10 (N=85). This revealed that 5 of the 15 dead drivers, 69% of the male pedestrians killed, and a number of dead passengers had BALs >80 mg/100 ml. Sinha, Sengupta and Purohit (1981) corroborated Wyatt's findings. Based on the postmortem records from PMGH for all trauma deaths between 1976 and 1980, they discovered 86% were male, 82% below age 35, and found evidence of recent alcohol ingestion in 85% of the drivers involved in traffic crashes. The great majority of those killed in traffic crashes (including pedestrians) in the Port Moresby area were young men who had been drinking shortly before their death. Shepherd (1980) gathered figures at the Goroka Hospital in Eastern Highlands Province over five months in 1979, and showed that a third of all trauma admissions resulted from road accidents, with alcohol implicated strongly in these.

Between 1967 and 1979 PNG experienced a more than fourfold increase in road traffic fatalities, and in 1979 alcohol consumption was a factor in at least 20% of these cases (60 deaths) (Bouraga, 1980; Marshall, 1988). As one result of a collaboration among the Royal PNG Constabulary, the Department of Transport, and the Overseas Unit of the Transport and Road Research Laboratory of the United Kingdom, a technical memorandum was prepared on the cost of road traffic crashes in PNG (Transpotech, 1986). Using a formula that they specifically tailored to PNG, Marshall calculated the Kina cost of alcohol-related road crashes, estimating that such crashes cost the country K5.6 million in 1988, with a strong probability of a greater amount in 1989 (1990).

7.6 "Meths" Drinking

The final alcohol-related problem to be reviewed here is the consumption of non-beverage alcohol. There is continued use of methanol, especially that contained in methylated spirit or "meths" (95% ethanol and 5% methanol), and this practice seems to be concentrated mainly in coastal and lowland areas of the country (Marshall, 1988). There is extreme variation in individual response to a given quantity of methanol (Naraqi et al., 1979; Scrimgeour, 1980), and thus drinking "meths" is a kind of Russian roulette which may lead unpredictably to death or blindness in some who do so. Perhaps it is this unpredictability that has contributed to the mystique that surrounds this substance for at least to some drinkers (Pataki-Schweizer, 1976). Whatever the case, between 1983 and 1990 at least eleven persons were killed and thirteen blinded or otherwise permanently impaired from drinking "meths" in PNG (Marshall, 1990). Equally tragic, and equally preventable, are the results of consumption of pure methanol or a combination of methanol and isopropanol (Naraqi et al., 1979; Scrimgeour, 1980). Such drinking typically occurs out of ignorance that there are many kinds of alcohol, most of which are highly toxic and usually more lethal than the consumption of "meths".

8. CURRENT RESPONSES

Given the relatively short period of time during which it has been legal for Papua New Guineans to drink, it is perhaps not surprising that treatment and prevention programmes are not yet highly developed. The government has mounted two major efforts to assess alcohol's impact: first, the 1971 Commission of Inquiry into Alcoholic Drink during the colonial period, and second, the 1979-1981 IASER Alcohol Project post-independence. These efforts have been supplemented by jointly sponsored consultancies with WHO's regional office in Manila, and by a contract to the National Research Institute from the Highlands Secretariat to evaluate alcohol's role in law and order problems in that region of the country.

Through the Ministry of Health the government operated an Alcohol Rehabilitation Centre at Sogeri, outside Port Moresby, for a number of years. Unfortunately, this facility was closed in 1987 for want of funds and no proper facility exists in PNG for treating chronic alcohol dependence. Although many of the churches active in PNG preach against alcohol use by their members and take outspoken public stands in the media against alcohol, none of them operate treatment programmes and their efforts at prevention lie primarily in the development of educational materials.

A major means for attempting to intervene in what are perceived to be alcohol-related problems has been the imposition of temporary liquor bans by both the national and provincial governments. These have ranged from nationwide election day and holiday bans of a few days' duration to a three year long ban in Enga Province from 1981 to 1984 (Wormsley, 1987). Bans of several months' duration have also been common in various Highlands provinces (Dernbach and Marshall, n.d.; Piau-Lynch, 1982). While

these bans usually have not completely prevented drinking because of black markets, they do appear to have had at least one positive preventive impact.

The 1986 Highlands liquor ban appears to have produced a positive public health benefit. It lowered the percentage of serious alcohol-related traffic crashes (those involving fatalities and/or hospitalization for injuries) in the four provinces that honoured it, while the province that did not experience a rise in the percentage of such crashes (Marshall, 1990). From 1986 to 1988, the two Highlands provinces with continued liquor bans (Enga and Southern Highlands) had no overall increase in serious alcohol-related traffic crashes, whereas those without continued liquor bans (Eastern and Western Highlands and Chimbu) had substantial increases. The benefit from these reduced traffic crashes is not only the obvious one of fewer deaths and injuries with related medical costs, but also fewer compensation demands by relatives of the victims against those perceived to have caused the crashes. A failure to meet compensation demands of this sort frequently leads to an outbreak of tribal fighting between the two groups.

9. CONCLUSIONS

Papua New Guineans made no traditional alcoholic beverages, and colonially imposed prohibition worked effectively for 75 years to keep them from drink. The legal consumption of alcoholic beverages by Papua New Guineans has only been possible for 35 years, and people in many parts of the country have had easy access to alcohol for far fewer years than that. A result of this is that PNG represents an unusual instance of a country still in the early stages of developing its relationship to alcohol.

Alcohol's associations with equality, modernity, and the cash economy have all contributed toward making it a highly desired commodity, especially by men. Its incorporation into traditional intergroup exchanges and ceremonies mean that it often mediates between the cash economy and the prestige economy, giving it a perhaps unique position in the economic relations in a modern nation state. At the same time, the fact that alcohol production and marketing in PNG lies ultimately in the hands of transnational alcohol corporations suggests that in the long run the situation in PNG will come to resemble that in many other new nations of the world.

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Country Profile on Alcohol in South Africa

by
Charles DH Parry and Anna L Bennetts

1. INTRODUCTION

South Africa, the southernmost country in Africa, has a population of approximately 41 million people, distributed over nine provinces ranging from 840 000 (Northern Cape) to 8 417 000 (KwaZulu-Natal). It is estimated that 54% of the populace reside in urban areas (Statistics South Africa, 1998). The original occupants of South Africa were the Nguni people who reached the northern parts of present day South Africa by about the 14th century. Further south were the Hottentots and Bushmen. In 1652 the Dutch East India Company established a permanent refreshment station at the Cape of Good Hope. In 1805 the British took over the Cape for the second time. After a series of wars with the indigenous peoples and the Boers, the whole of South Africa came under British control in the early 1900s. The Union of South Africa was established in 1910, and until 1948 the country was led by a series of mainly pro-British governments. In 1948 the Nationalist (pro-Afrikaner) Party swept to power on the "apartheid" ticket, and in the early 1960s South Africa became a separate republic and left the British Commonwealth.

Apartheid was a legally enforced social order based on the principle that the colour of a person's skin should dictate their position in life. This institutionalized racism resulted in widespread political, economic and social segregation of the main racial groups in South Africa. Since a democratically elected Government of National Unity, with the African National Congress (ANC) as the main partner, was established in 1994, change in South African society has escalated. Among the new government's mandates is the task of trying to promote economic growth, while diminishing social and racial inequities.

2. A BRIEF HISTORY OF ALCOHOL IN SOUTH AFRICA

The history of alcohol in South Africa is an integral part of the history of apartheid and segregation. Conflict has long surrounded the production, distribution and use of alcohol and this continues today. In traditional African society the use of alcoholic beverages was well regulated. Drinking did not occur on a daily basis. People did not drink alone or just for the sake of drinking. Rather, drinking served a communal and ceremonial function (Gumede, 1986). After colonization, the British unsuccessfully

prohibited the use of alcohol by Africans in an attempt to prevent what they saw as social decay and disorder encouraged by its use (Parry & Bennetts, 1998). Laws were passed to make it illegal for Black Africans to produce and obtain liquor. Only in 1962 was it made legal for Black people to purchase alcohol from white liquor outlets. Paradoxically, alcohol was seen also as a means for establishing and maintaining economic and social control, particularly on the farms, mines and in urban industry. Employers on wine and other farms in the Cape, and in the emerging diamond and gold mines to the north, used alcohol (Ramsay, Son & Parker, 1996a; 1998) to attract and retain workers from rural areas.

The “tot” or “dop” system is still practised today on a large number of wine farms in the Western and Northern Cape Provinces. It takes many forms, including partial payment in lieu of wages and the provision of alcohol to supplement wages both during the week and over weekends (Dept. of Trade and Industry, 1997). Ironically, up until the 1980s much of South Africa’s economic strength was based upon the exploitation of its mineral wealth, and the wine industry now plays an increasingly important role in the export sector of post-apartheid South Africa.

In the townships, municipal beerhalls were established by local authorities to help finance township development/control. The responses to these and other controls included ambivalence, abuse, and social decay, as well as defiance and resistance. Many people turned to “illegal” activity related to alcohol, both brewing sorghum beer and setting up illegal outlets (called shebeens) where alcohol was sold for on- or off-premise consumption. Most shebeens are part of or attached to residential premises. For some, setting up a shebeen was a move of resistance against the apartheid government, while for others it was a way to make a meagre living. The establishment of shebeens was also a natural response to a situation in which there were 15 times as many legal liquor outlets per unit population in former White suburbs as compared to suburbs within which persons of other races resided (Dept. of Trade and Industry, 1997).

3. TYPES OF ALCOHOLIC BEVERAGES USED

It has been estimated that large proportions of the South African population consume alcohol, 49%-89% of males and 28%-77% of females (Rocha-Silva, 1997). Figures 1 and 2 show trends in the types of alcoholic beverages purchased by South Africans.

From 1970 to 1997, the greatest market growth was in malt beer and this is likely to continue to increase. Roughly two-thirds of the absolute alcohol (AA) consumed in the country is in the form of malt or sorghum beer, and roughly 87% of the alcoholic beverage consumed is malt and sorghum beer (+/- 4.2 billion litres per year) (Ramsay, Son & Parker, 1998). The country is likely to see an increase in the use of AA by African communities as a result of moves away from wet based sorghum beer to either malt beer or dry home brew, each of which have a higher alcohol content than the former.

Figure 1: Market for alcoholic beverages 1970
Based on alcohol content

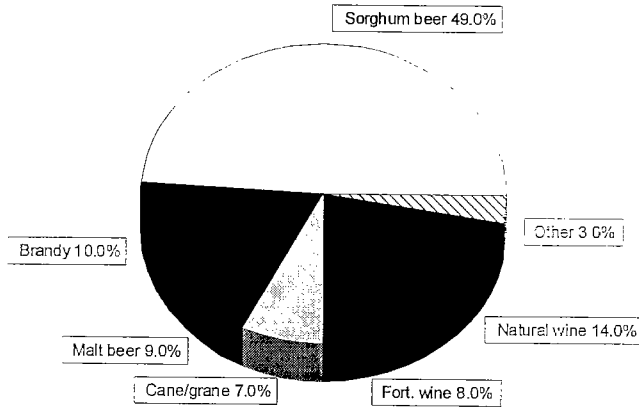
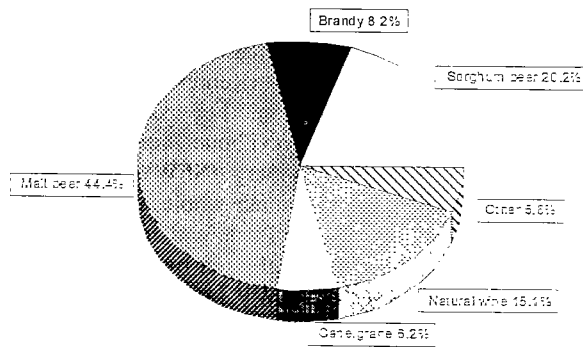


Figure 2, in particular, masks the fact that South Africa is now considered to be the world's fastest growing alcoholic fruit beverage market. Available statistics show that South Africans consumed 150 million litres of alcoholic fruit beverage between 1 July 1997 and 31 June 1998, a 10% increase over the previous 12 month period (Ramsay, Son and Parker, 1998)

Figure 2: Market for alcoholic beverages 1997
Based on alcohol content



Apartheid policies clearly delineated four major racial groups in South Africa: Black Africans, Coloureds, Whites, and Indians (South Asians). In order to assess the nature

and extent of alcohol consumption, risky drinking and related problems in South Africa, it is necessary to refer to key demographic variables. Because a strong association between race and socio-economic status has been encouraged by apartheid policies, race is in many ways the most informative variable. With the demise of apartheid, it is likely that over the next generation race and social class will diverge. Nevertheless, throughout this chapter many statistics will be presented by race.

Race, age and gender differences have been noted in regard to the types of alcoholic beverages used. The most popular alcoholic beverage consumed by Black male drinkers is malt beer. For women it is wine. Other commonly used alcohol beverages include distilled spirits, wine, cider and home made liquor.

For other racial groups, the picture is less clear, as research has not been done or is out of date. The most recent report is from 1985, which indicates that Coloured men and women typically used wine and malt beer, and also distilled spirits. For Indian men, malt beer was most commonly used, while information is unavailable for Indian women. For White men, malt beer was the most popular drink, followed by wine and distilled spirits. For White women, wine was most commonly used, followed by malt beer and distilled spirits (Rocha-Silva, 1989).

4. THE ALCOHOL INDUSTRY

Both in terms of production and distribution, the liquor industry in South Africa is made up of formal and informal sectors, the latter being largely unregulated and illegal. The informal sector comprises approximately 200 000 liquor outlets (largely shebeens) and hundreds of small home brewers of sorghum beer. With regard to retail sales there are roughly 22 900 licensed outlets, mainly comprising liquor stores, restaurants, taverns and grocers (Ramsay, Son and Parker, 1997). The State therefore controls and licenses only about 10% of the liquor outlets throughout the country (Dept. of Trade and Industry, 1997).

The formal liquor industry in South Africa has developed into a sector dominated by a few, until recently, White-owned and dominated corporations, such as the South African Breweries (SAB) and RK Investments (Rembrandt and KWV) having high levels of both horizontal and vertical integration. For example, with regard to wine, major producers are KWV (Koöperatiewe Wynbouersvereniging van Suid-Afrika Beperk), Distillers, Stellenbosch Farmers Winery (SFW), Gilbeys, Douglas Green Bellingham (DGB) and E. Snell & Co. The main wholesalers of wine are Distillers, SFW, Seagram, DGB, and Gilbeys (Dept. of Trade and Industry, 1997). KWV is a shareholder in SFW and Distillers, which through their ownership of Western Province Cellars are major players in the retail sector. KWV International handles about 50% of South Africa's wine exports to over 50 countries (KWV, 1996).

SAB is now the fourth largest international producer of beer (Jernigan, 1997). In 1997/1998 SAB produced 98% of the malt beer consumed in South Africa (2.4 billion litres) and had approximately 100 000 employees. In the last few years SAB has

expanded its operations into sub-Saharan Africa and also established beachheads in Eastern Europe and China. It also has major interests in wine and spirits. In 1996 mining giant Anglo-American sold a controlling interest in Jonnies Industrial (Johnnic) to the National Empowerment Consortium (NEC) in which New Africa Investments Limited (NAIL) plays a leading role. NAIL is a high-profile group of Black investors in which Cyril Ramaphosa, former ANC Secretary-General, is Executive Deputy Chairman in charge of NAIL's industrial interests and chairs the Johnnic board (Parry & Bennetts, 1998). Through Jonnic, the NEC now has a 15.7% stake in SAB. From 1990 to 1996 SAB's beer turnover increased at a compounded growth rate of 21% per year, and after-tax profit grew at 26% per year. The beer division's attributable earnings in 1996 was \$167 million (ZAR 1003 million), up by 24% from earnings in 1995 (Dept. of Trade and Industry, 1997). During the 1995/6 financial year, the beer division of SAB invested over \$83 million to maintain, upgrade and expand its facilities so as to be in a position to take full advantage of forecasted beer sales growth (South African Breweries, 1996).

South Africa's alcohol industry produces enormous amounts of alcohol each year (Table 1). As such, it is a large provider of both formal and informal employment and provides much tax revenue to the government approximately \$570 million per year, excluding Value Added Tax (South African Revenue Service, 1997). Table 1 provides an indication of the amount of alcoholic beverage produced according to industry statistics for 1997/1998 and the average alcohol content of each type of beverage (Wolmarans, Langenhoven, and Faber, 1993).

Table 1: Alcohol produced in South Africa (Litres) 1997/8

ALCOHOL CATEGORY	PRODUCED IN S. AFRICA: 1997/8 **	ALCOHOL (AVE. % VOL.)***
Malt Beer	2 450 000 000	5
Sorghum Beer (wet)	560 000 000	3
*Sorghum Beer (dry + homebrew)	1 220 000 000	?
BEER TOTAL	4 230 000 000	
Natural wine	319 100 000	12
Brown spirits	53 200 000	43
White spirits	24 900 000	43
Fortified wine	35 400 000	17
Cider/Alc fruit bev	150 000 000	6
Other (liqueur, whisky, rum, etc.)	28 890 000	30-43
GRAND TOTAL	4 841 490 000	

* - Estimate only. ** - Ramsay, Son and Parker (PTY) Ltd. 1998 Alcoholic Beverage Review. *Hotel & Restaurants Beverage Business*; October: 1-64; *** - Wolmarans P, Langenhoven M, Faber, M. *Food, facts and figures*. Cape Town: Oxford University Press, 1993.

5. ALCOHOL AVAILABILITY, MARKETING AND SALES

Access to alcohol in South Africa is extremely easy. This is largely due to the involvement of people outside the formal labour market in micro-enterprises engaged in home brewing of sorghum beer (production) and in the resale (distribution) of industrially produced alcohol. Taking into account formal and informal outlets, there is roughly 1 liquor outlet for every 190 persons in South Africa. If we consider the history of prohibition and restriction on alcohol sales to certain racial groups in South Africa, it is not surprising that illegal distribution of alcohol is so widespread. Another factor that helps to maintain this situation and that contributes to high alcohol availability today, is poverty. Informal sales of alcohol provide many people with a living and play an important role in the economy. Historically, women have sold alcohol to raise money, and this tradition continues today, with many women as shebeen owners.

Where alcohol is unregulated, as in South Africa, it is also uncontrolled. This leads to various problems including under-age drinking. Indeed, alcohol is highly accessible to young people through legal and illegal outlets. A study of 340 high school students in Cape Town, most of whom were 16 years or younger, found that 31% purchased their liquor directly from public outlets such as bars, clubs, bottle stores and shebeens (Parry et al., 1994). Unregulated alcohol sales also result in greater access to alcohol. No constraints can be put on unlicensed premises regarding, for example, opening hours.

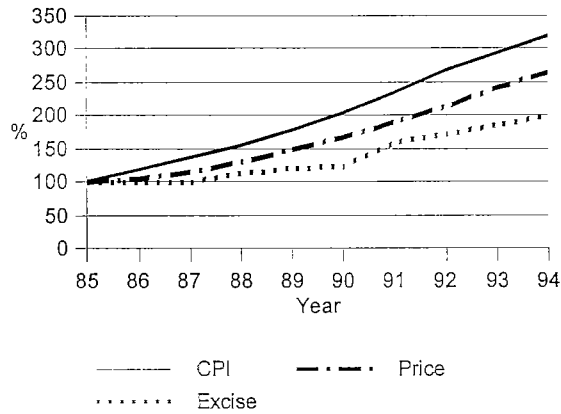
Another factor that encourages consumption is price. Certain forms of alcohol (e.g. beer and brandy) have become cheaper relative to the Consumer Price Index (CPI). Figure 3 shows the change in the price of beer and excise revenue on beer relative to the CPI. According to SAB the prices of its malt beer products have been halved in real terms over the past twenty years, making these more affordable and accessible (South African Breweries, 1996). Another factor that influences availability is the "tot" system whereby farm workers and mine workers in certain parts of the country are given easy access to alcohol.

The alcohol industry markets their products aggressively. During the period from July 1997 to June 1998, the alcohol industry spent about \$40 million on above-the-line advertising, for example television and radio advertisements and billboards. This is up 10.3% on the previous 12-month period (Ramsay, Son and Parker, 1998). According to the 1996 Alcoholic Beverage Review, most advertising expenditure is now spent on below-the-line advertising, for example sponsorships (Ramsay, Son and Parker, 1996a).

The alcohol industry argues that alcohol advertising only affects choices among different brands, rather than encouraging in those who do not drink. However, this runs counter to widely held advertising concepts (Aitken, 1989). Moreover, evidence suggests that alcohol advertisements target non-drinkers. For example, the introduction of light beer, "alcopops" and wine are clearly aimed at non-drinkers.

Below-the-line alcohol advertising is very popular in South Africa. The popularity of sports encourages sponsorships involving national sporting teams who are held in high esteem by young people. Such sponsorships promote a psychological association between alcohol and the heroes of young people, and in addition create a generally favourable attitude towards the alcohol industry within communities. A survey conducted by the alcohol industry in 1992, found that 59% of the Black population in metropolitan areas believe liquor companies make a positive contribution towards society, and that 65% felt liquor companies care for the community because they sponsor community programmes and projects (Markinor, 1992). In the study of young people in Cape Town referred to above, the number of heavy drinkers (46%) who reported that SAB makes a positive contribution to society, outnumbered the number of light drinkers who reported this (26%) (Parry et al., 1994).

Figure 3: Change in beer price & excise revenue on beer relative to the CPI (1985=100)



6. PATTERNS OF USE

Taking alcohol imports, exports and the percentage of absolute alcohol (AA) contained in different types of alcoholic beverages into account, Parry and Bennetts (1998) estimated that annual adult AA consumption in 1996/1997 in South Africa was over 10 litres (10.6 litres). Hurst, Gregory and Gussman (1997) in a comparative study of adult per capita AA consumption in 31 countries in 1995 placed South Africa in 21st position (with 8.4 litres), after Italy, but ahead of Japan, Finland, and the USA. Their figures, however, under-estimate the amount of sorghum beer consumed and it is much more likely that South Africa would rank between 10th and 15th on the list. Hurst et al. (1997) also compared over 23 countries (including Canada, France, Germany, Japan, Spain, the UK and USA) in terms of their average annual growth rate in per capita AA consumption between 1985 and 1995. South Africa ranked highest with a growth rate of 2%. According to the World Development Report, 60% of South Africa was urbanized in 1991 as compared to 48% in 1970 - a 25% increase (World Bank, 1993). Internationally, urbanization has been associated with high rates of alcohol use. During

the same period, per capita consumption of malt beer in South Africa increased by 323% from 13.7 to 58 litres per person per year. Some of this increase may be explained by a change in preference from other liquor to malt beer during this period. However, this is also likely to represent an increase in consumption of malt beer (Parry & Bennetts, 1998).

Consumption of alcohol *per se* is not problematic. However, what is of concern is the overwhelming evidence that large numbers of South Africans do not use alcohol responsibly. Those defined as “problem drinkers” or “risky drinkers” are people who fulfil any of the following criteria: periodic binges; regular heavy consumption, or who match psychiatric diagnostic criteria for alcohol abuse or dependence.

Parry and Bennetts of the South African Medical Research Council (MRC) have reviewed 25 studies on the nature and extent of risky drinking in South Africa (Parry & Bennetts, 1998). The methodology used and quality of these studies varied significantly. From these studies, the following groups appear to be at particular risk for alcohol-related problems: men in general (though the difference between genders appears to be narrowing), the African population in general (and urbanizing sectors in particular), young people, and persons working in certain occupations (e.g. mine and farm workers). Research has also shown that tuberculosis patients, prisoners and parolees are also at high risk for developing alcohol-related problems (Schoeman et al., 1994, Rocha-Silva & Stahmer, 1996). Parry and Bennetts have also conducted a detailed review of South African data on the link between urbanization and alcohol misuse, and concluded that the link between urbanization and alcohol consumption is probably mediated by factors such as age, gender, length of time spent in an urban area, type of drinking (weekend versus weekday), and type of housing (Parry & Bennetts, 1998).

National research on 1378 persons aged 10-21 years and 1494 persons aged 14 years and older conducted by the Human Sciences Research Council (HSRC) has shown that a significant proportion of the African population drink at high risk levels, defined as on average the equivalent of 10 cl of absolute alcohol per day -- roughly five 340ml bottles of beer per day (Rocha-Silva & Stahmer, 1996). For example, in 1994, 30% of males and 12% of females aged 14 or over in metropolitan areas were shown to drink at this level (Rocha-Silva, 1991).

7. ALCOHOL-RELATED PROBLEMS

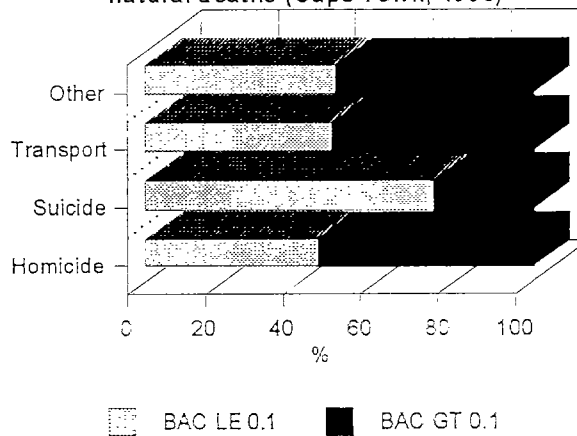
The following is a summary of alcohol-related problems based on research and information available in South Africa. Problems associated with alcohol misuse are discussed under the following headings: medical, family, criminal justice system, and economic and social development.

Medical

It has been estimated that 25%-30% of general hospital admissions in South Africa are directly or indirectly related to alcohol use (Albertyn & McCann, 1993). Research conducted in Cape Town, Durban, Port Elizabeth and Gauteng Province (which includes Johannesburg and Pretoria) in the first half of 1998 as part of the South African Community Epidemiology Network on Drug Use (SACENDU) found that alcohol is the substance for which the greatest number of persons in each of the four sites seek treatment from dedicated substance abuse treatment centres (ranging from 61% of persons treated in Durban to 74% of persons treated in Cape Town). Seventeen percent of persons discharged from Lentegour Hospital's psychiatric inpatient unit during the first half of 1998 received an alcohol-related discharge diagnosis. In Port Elizabeth 10% of discharge diagnoses for psychiatric inpatients at the Elizabeth Donkin Hospital involved alcohol (Parry et al., 1998).

Various studies have uncovered high levels of alcohol-related trauma. A clinical assessment of general hospital admissions in 1991 and 1992 found alcohol to be a contributing factor in general trauma cases, both in the Cape Metropolitan Area (38%) and in rural communities (49%) (Strydom, 1994). Using a biological marker, 48% of 80 consecutive trauma patients admitted to the casualty department of the Chris Hani Baragwanath Hospital in Soweto on a Saturday night were found to be "intoxicated" (Butchart et al., 1991). Almost 80% of all assault patients - both male and female - presenting at an urban hospital trauma unit in Cape Town were either under the influence of alcohol or injured because of alcohol-related violence (Steyn, 1996). Over 50% of non-natural deaths seen at the two state mortuaries in Cape Town in 1996 had blood alcohol concentrations (BACs) in excess of 0.08g/100ml. Data collected in 1995 from the same two mortuaries indicated that BACs were highest for homicide victims, followed by deaths due to transport-related injuries (see Figure 4) (Lerer et al., 1996).

Figure 4: Blood alcohol levels for non-natural deaths (Cape Town, 1995)



Injuries associated with trains in South Africa are common for various reasons, including crime, poor safety infrastructure, and alcohol misuse. Fifty-eight percent of people fatally injured in train-related trauma (who either fall from or walk in front of trains) in Cape Town in 1994 had elevated blood alcohol concentrations (BACs) (Lerer, 1994). Twenty-nine percent of drivers and 60% of pedestrians involved in collisional trauma on the road and then treated in a hospital trauma unit had BACs in excess of 0.08gms/100ml (Van Kralingen et al., 1991). Furthermore, a positive association was found between injury severity (both pedestrian and driver) and BACs (Peden et al., 1996; Van der Spuy, 1993). Over 50% of drowning victims in greater Cape Town between 1979 and 1981 had BACs in excess of the legal limit and this trend appears to have continued (Lerer, 1994).

Foetal Alcohol Syndrome (FAS) occurs in infants born to women who drink heavily during pregnancy. Signs of this syndrome include mental retardation, poor motor coordination, hyperactivity, facial abnormalities and malformation of organ systems (Stoudemire, Wallack and Hedemark, 1987). The overall incidence of FAS in advanced industrial societies is 1 in every 750 children. In South Africa, FAS is thought to be by far the most common cause of mental disability (Dept of Trade and Industry, 1997). A 1985 study found that the incidence of FAS in Cape Town is 1 per 281 live births (Palmer, 1985). When examining disadvantaged communities, the incidence of foetal alcohol effects is likely to be much higher. In their recent investigation of women attending antenatal classes in Cape Town, Saldahna-Vredenburg and Oudtshoorn-George found that 26.4% of women drank at levels high enough to put their babies at risk for FAS (Viljoen, personal communication).

Family

In a study of women abused by their spouses, 69% identified alcohol/drug abuse as the main cause of conflict leading to abuse (Strydom et al., 1994a). Statistics from the MRC's National Trauma Research Programme show that in 1990, 67.4% of domestic violence in the Cape Metropolitan Area was alcohol-related. In 1992, 76.4% of domestic violence in rural areas in the South Western Cape was found to be alcohol-related (Strydom et al., 1994b). In a survey of divorce conducted in South Africa in 1987 alcohol was cited as a contributory factor in marital discord and breakup by 24% of respondents (SANCA, personal communication).

Criminal Justice System

Despite a lack of research, the National Institute of Crime Prevention and Rehabilitation of Offenders (NICRO) believes that alcohol contributes substantially to politically and non-politically related crime in South Africa (Munting, personal communication). Thirty-eight percent of those sent for criminal psychiatric observation at a large psychiatric hospital in Cape Town over a six-month period were assessed to have been intoxicated at the time of the index offence, and most often the intoxicant was alcohol (Kaliski, personal communication). In 1997 in South Africa 27 806 cases of driving under the influence of alcohol or drugs were reported, up 16% from 1996

(Crime Information Management Centre, 1998). National research conducted in 1996 found that just under half of male prisoners (or parolees) had taken alcohol/drugs at the time of, or before committing, their most recent offence (Rocha-Silva & Stahmer, 1996).

Economic and Social Development

It is known that alcohol can have a negative effect on the business community due to absenteeism, increased use of medical benefits, worker's compensation claims, poor productivity, high job turnover, interpersonal conflict, injuries and damage to property. There has been limited research addressing this in South Africa; however the available data lend support to these ideas. In one study, 17% of sick days taken by sawmill workers were found to be alcohol-related (Louw, 1994). Another study conducted in the Orange Free State found that 20% of gold mine workers involved in occupational injuries had elevated BACs (McDonald, unpublished). Preliminary research conducted by the MRC found that roughly one-quarter of patients admitted to the trauma unit of a large mine hospital for occupational and non-occupational injuries had BAC levels higher than 0.08g/100 ml. Furthermore, higher injury severity was observed among patients with BACs higher than 0.08g/100ml, when compared to those patients with no sign of alcohol in their blood. It is thought that in developing countries, alcohol-related problems interfere with the attainment of national goals that is, that alcohol not only has a negative impact on public health, but also on national development (Curry, 1987; Curry, 1988). Answers to questions such as, "Is the net impact on the economy of alcohol positive or negative?" and "How large is that impact?", need to be sought. As mentioned, in South Africa alcohol excise taxes alone were estimated in 1996 to be roughly \$570 million (South African Revenue Service, 1997). In South Africa, as in many other developing countries, the government as a means of generating wealth often looks at the liquor trade. The liquor trade is also seen as a platform for stimulating small business development. Sound research, which would enable a valid estimate of the overall cost of alcohol abuse to South Africa, has unfortunately not been undertaken. However, we can estimate that, due to the rates of alcohol consumption in many communities, the high levels of alcohol-related trauma, and emerging data on the impact of alcohol on industry, the economic costs associated with alcohol abuse in South Africa are likely to be in excess of 2% of GNP (\$1.7 billion) per year (Parry & Bennetts, 1998). This may even be an underestimate if we consider information collected by the MRC's National Trauma Research Programme, which suggests that alcohol-related costs associated with pedestrian trauma alone are in excess of \$83 million per year. Furthermore, the Minister of Transport has estimated that motor vehicle collisions in total cost the country \$1.5 billion per year and that at least 50% are alcohol-related (Dept. of Trade and Industry, 1997).

8. CURRENT RESPONSES

8.1 Legislation

South Africa has a wide range of legislation designed to prevent alcohol abuse and to intervene in the cases of those who need treatment. As part of the process of democratization, much of this legislation is under review or is being changed. Several key policies are set out below.

Price and taxation policies

Alcohol products in South Africa are subject to excise duties. Imported products are also subject to customs duties. In addition, all products are subject to 14% Value Added Tax (VAT) at the point of sale. Products like beer and brandy have lagged dramatically behind the CPI over the past 12 years and a larger increase is needed to bring the level of taxation back to where it was before (Parry & Bennetts, 1998).

Alcohol is fairly inexpensive in South Africa. A 340-ml can of beer costs less than 40 US cents and, as stated above, this is approximately half of what it was 20 years ago in real terms. In other countries, increases in the price of alcohol have been found to decrease consumption (Anderson & Lehto, 1994). A common argument against increasing taxes to make alcohol less affordable is that those dependent on alcohol will just spend less money on essential items such as food. This argument is compounded in South Africa where it may be seen as socially and racially inequitable to raise such taxes. Other potential pitfalls of increasing taxes include the fact that homebrewing and smuggling from neighbouring countries may increase.

Workplace alcohol use is encouraged in subtle ways, such as through the taxation law, whereby companies can claim income tax deductions for the cost of alcohol purchased for a broad range of loosely defined business purposes. Public health professionals have urged the removal of such laws which would practically and symbolically signal that the public health interest is not served by government incentives to drink (Parry & Bennetts, 1998).

Regulation of production, distribution and point of sale/service

The last two years have seen a major initiative by the Department of Trade and Industry to restructure the liquor industry and to break existing monopolies and bring new entrepreneurs on board, while at the same time addressing the social and economic costs associated with alcohol misuse. A new Bill (Minister of Trade and Industry, 1998) was approved by both houses of parliament in November 1998.

The Bill makes provision for the establishment of a National Liquor Advisory Committee to be tasked with advising the national and provincial ministers on matters relating to the consumption of alcohol by youth and relating to problems that excessive alcohol consumption has on public health and family and social life, as well as

designing and ensuring the implementation of educational and social responsibility programmes on the potentially harmful effects of alcohol. The Bill also makes provision for the establishment of a National Liquor Authority whose primary function will be to consider and approve or refuse applications for the manufacture of liquor and the wholesale distribution and sale of liquor. The Bill also makes provision for Provincial Liquor Authorities whose task will be to consider and approve or refuse applications for each of the four categories of registration for the retail sale of liquor ("off-premise consumption", "on-premise consumption", "on- and off-premise consumption" and "special event"). The Bill tries to eliminate vertical integration by stipulating that a person with a vested interest in any one of the registration categories may not acquire an interest in any other type of registration.

From a public health perspective the Bill has several important implications. First, it recognizes the shared responsibility of various government departments for addressing alcohol abuse. The Bill also requires that proof be shown that applicants have given notice of the application through a widely accessible means of communication in the areas in which the liquor outlet is to be situated, at least 21 days prior to submitting the application. It also requires applicants to give proof that they have served the notice on the governing bodies of every education institution or place of worship in a certain radius of where the liquor outlet is to be located. This is to provide them with the opportunity to object to the application.

The Bill stipulates that no registered person may sell liquor to any person who is under the age of 18 or who is intoxicated. The Bill also indicates that liquor may be sold any day of the week and that persons who are registered to sell liquor may only sell liquor during the hours determined by the municipality into whose area of jurisdiction the premises is situated. It also makes the provision that the national Minister for Trade and Industry in consultation with the national Minister for Health may prescribe the contents and manner in which public health notices related to the manufacture, distribution, sale and consumption of liquor shall be displayed by a person manufacturing, distributing or selling liquor. The Bill also prohibits people from manufacturing or having in their possession or custody, or under their control any concoctions manufactured by the fermentation of any substance the consumption of which would in the opinion of the minister be prejudicial to health and well-being

Under general offences the Bill indicates that it is an offence to be violent or drunk and disorderly on any premises on which a certificate of registration has been issued, or to be drunk in various public places. The Bill also specifies that it is an offence to consume any liquor on any road, street, lane, or thoroughfare or on vacant land. It also indicates that it is an offence to introduce, possess or consume any liquor on a sportsground that is not a registered premise. It also makes it an offence to supply liquor to a person in his or her employment for his or her own consumption as wages or remuneration, as inducement to employment or as a supplement thereto.

Chapter 5 of the Bill spells out clear guidelines for how the Bill will be enforced. Among other things, it makes provision for the appointment of inspectors with powers to conduct an inspection and monitor and enforce compliance with the Act.

Regulation of alcohol promotion (advertising, sponsorships)

Advertising of alcohol products is permitted on radio, television and via the print media. The Advertising Standards Authority (ASA) of South Africa's Code of Advertising Practice sets out sixteen guidelines on advertisements that will not be accepted (Advertising Standards Authority, 1988). Examples include: advertisements specifically directed at children, advertisements suggesting or commending or making fun of over-indulgence or its after-effects, or advertisements suggesting disregard of safety or disregard of law and order.

The Industry Association for Responsible Alcohol Consumption (ARA), an association of most of the major alcohol producers, has set up its own advertising, packaging and promotions code, which goes beyond the standards set out by the ASA (Industry Association for Responsible Alcohol Use, 1996). For example, they specify that "no one associated with the act of drinking in an advertisement will be younger than 25 and that "advertisements will not imply that alcoholic beverage consumption is essential to business and social success or acceptance". With regard to promotions, they indicate, for example, that "events and competitions directed primarily at persons under the age of 18 will not be linked to any brand or product through sponsorship," and that "ARA members will not deliver or sell to unlicensed outlets". With regard to packaging, the ARA rules state that, for example, "the alcoholic strength of a product will not be used as the principal subject of a label". For the most part these guidelines and codes appear to be followed.

Product regulations

There are restrictions on the size of liquor packs and there are also regulations with regard to allowable additives and the information required to be provided on alcohol containers (Ramsay, Son and Parker, 1996b). There are currently no health warnings on alcohol containers. In May 1997 the Minister of Health indicated in Parliament that she would look into the need to impose such warnings.

Deterrence policies

Legislation is currently before Parliament which would decrease the current BAC for drivers from 0.08g/100ml to 0.05g/100ml. Unfortunately, there has been poor enforcement of the existing limit and as a result there is scepticism regarding the usefulness of further reducing the limit. Interventions which target drunk drivers, for example random breath testing, have worked well at decreasing drunk driving elsewhere (Hemel, 1988). Over the past few years the Department of Transport together with the South African Police Service and other stakeholders has embarked on an aggressive strategy to reduce road deaths and injuries in certain provinces and on

major national roads. One of the key elements of the "Arrive Alive" initiative has been to reduce drunk driving. Over 500 breathalysers and 125 alcohol evidentiary units have been purchased together with 11 "booze buses" (caravans containing all the technology needed to check breath and blood alcohol levels). The campaign also involved the training of police officers and public education campaigns. Comparison studies have showed a substantial decrease in the alcohol rate of drivers in the three experimental provinces (Cerff & Plüddemann, in press).

8.2 Health and Welfare Policies

During the second quarter of 1995 the Department of Welfare completed a lengthy series of consultative meetings and released the second draft of its White Paper titled *National Substance Abuse Strategy* (Dept. of Welfare, 1995). The White Paper provides general guidelines for how the welfare sector will address substance abuse, but is short on specifics, particularly on the role of provincial and district-level structures. In terms of prevention it calls for communities to take on greater responsibility. It stresses that media campaigns are needed for public education. Education programmes will be targeted at school children, youth and parents. The focus of secondary prevention will be on high-risk groups, using mechanisms such as employee assistance programmes and youth forums. In terms of tertiary prevention, the White Paper states that the focus should be on vulnerable and high-risk groups and disadvantaged communities, and that there is a need to develop community-based treatment approaches, especially those that promote empowerment and self-help. Specialized, accredited training units will be established to provide adequate training for allied personnel and volunteers (Dept. of Welfare, 1996). The national Department of Welfare has also been involved in driving the process of the development of a National Drug Master Plan (see below) and in developing the capacity of provincial Welfare Department substance abuse coordinators.

With regard to the health sector, 1995 also saw a restructuring within the national Department of Health, with its Mental Health Directorate reorganised to include substance abuse. In February 1995 the Department convened a consultative meeting to look at how the health sector could become more involved in addressing substance abuse, and by the end of June 1995 the Department completed a strategic plan to address mental health and substance abuse (Mental Health and Substance Abuse Committee, 1995). The national Department of Health has actively supported intervention projects aimed at addressing FAS and has been involved in stimulating research to investigate the health impact of homebrew alcohol and in initiating a committee to look into alcohol advertising restrictions.

8.3 Overall Policy Coordination and Implementation

The Prevention and Treatment of Drug Dependency Act of 1992 provided for the establishment of the Drug Advisory Board to "advise" the Minister of Welfare on matters related to alcohol and drug abuse. Its specific mandate was to plan, coordinate and promote measures related to combating drug abuse and the treatment of drug

dependent persons. Over the past five years there have been two Boards, each of which has put forward policy proposals (Drug Advisory Board, 1994, Drug Advisory Board, 1997). In October 1998 the second Drug Advisory Board released *The Draft National Drug Master Plan* (Ministry for Welfare and Population Development, 1998). The Plan aims to bring about the reduction of substance abuse and its harmful consequences. It has six main areas of focus: crime, youth, community health and welfare, research and information dissemination, communication, and international involvement. While the Plan does not give enough attention to directly addressing alcohol abuse, its implementation is likely to greatly strengthen national and local efforts aimed at addressing all forms of substance abuse (including alcohol).

8.4 Treatment and Rehabilitation

The State has provided resources for the treatment of persons having substance abuse-related problems. Statutory treatment takes place in terms of the Prevention and Treatment of Drug Dependency Act of 1992. Unfortunately, funding for treatment, both voluntary and statutory, has been inadequate and treatment facilities are poorly distributed throughout the country. Under the Apartheid system there were major disparities in the resources spent on substance abuse for the different races.

Numerous public and private alcohol and other drug treatment and rehabilitation facilities exist in South Africa. The Department of Welfare's *Directory of Services and Facilities for the Prevention and Treatment of Substance Abuse* (1977), for example, lists twenty-eight organizations which provide community-based services (e.g. Alcoholics Anonymous, Alateen, Adult Children of Alcoholics, Alcohol and Drug Concerns, and Alcohol/Cannabis Safety Schools), almost sixty centres throughout the country where outpatient services are provided, over thirty inpatient and day treatment facilities, and a dozen provincial and psychiatric hospitals providing treatment to persons dependant on alcohol or other drugs. Unfortunately, treatment facilities are concentrated in large, urban areas. Few evaluations of treatment programmes have been carried out, and it is likely that resources may not be well allocated.

Since 1995 welfare funding for NGOs and publicly funded treatment centres has been substantially cut, partly as a result of a government decision to redirect funds to under-resourced provinces. Over the past few years several state-funded treatment facilities servicing patients with alcohol problems have been closed. A shortage in the availability of detoxification services has also been noted. Furthermore, it does not appear that substantial changes have yet taken place within the health care sector to ensure the adequate training of primary health care staff in the detection, management and referral of substance abuse cases. In addition, the necessary institutional structures to enable the primary health care system to deal with alcohol problems have not been established.

8.5 Public and Private Prevention Activities on Alcohol Use and Problems

South Africa is fortunate in that there are numerous initiatives underway to prevent the misuse of alcohol. These include everything from development of a television sitcom (“Soul City”) directed at presenting education on a number of health problems, to an “I’m addicted to life” anti-drug educational campaign launched by the Department of Welfare in 1995.

Various fora have also been set up at national and provincial levels to improve networking and to assist persons who work in the substance abuse field to be more effective. New initiatives are also underway which may effect prevention activities in this area, including life skills education programmes in schools planned by the Department of Education as part of its curriculum reform, and the “Dopstop programme” initiated by farmers and health workers in the Stellenbosch wine producing area, which aims to eradicate the practice whereby some workers receive wine as part payment for their labour.

Most of these initiatives have been introduced by the private sector, sometimes with public support. Most operate with very small budgets in a limited geographic area. Very few have been evaluated, with a result that there is no solid information on their effectiveness. There is also little cross-fertilization of ideas, so that even initiatives, which hold promise, are unlikely to be implemented at a broader policy level. Major gaps exist in regard to a comprehensive approach to alcohol misuse prevention, for example programmes directed toward high-school dropouts, persons living in rural areas, health education programmes directed at the general population or to persons who work with at-risk populations (teachers, alcohol-retailers, etc.).

8.6 Research and Training

Public sector spending on research into alcohol abuse in South Africa is likely to be less than \$1 million per year (including salaries), which is wholly inadequate given the extent of alcohol-related harm to the country (Parry & Bennetts, 1998).

In South Africa there are six main foci of research: First, basic research investigating issues such as Wernicke-Korsakoff's disease and pancreatitis. Second, epidemiological research assessing the extent of, and risk factors for, problem drinking in different communities. A great many cross-sectional studies have been undertaken over the years focusing on the general population as well as specific subgroups such as prisoners, tuberculosis patients, mineworkers, and school-going youth. There has, however, been little systematic monitoring of alcohol abuse trends over time.

A third major area of research activity has involved investigating medical (particularly trauma) and other negative health consequences of alcohol use. Fourth, clinical research has been undertaken to inform the management of persons with alcohol problems. Fifth, there has been some treatment outcome evaluation research; and

finally, research to inform intervention programmes, particularly targeting school-age youth and developing communities is now underway.

The first three areas have gained the most attention. There is only a handful of researchers working full-time on the topic of substance abuse, mainly within the Medical and Human Sciences Research Councils, and the South African Brain Research Institute. Academics within universities, such as the University of Cape Town, the University of Stellenbosch and the University of Durban-Westville have shown more interest in research in this area. Some research are also carried out by NGOs, such as SANCA. What is particularly needed in South Africa is improved coordination of alcohol research to ensure adequate funding, effective use of funds, and better implementation of research findings.

9. CONCLUSION

Alcohol abuse has an enormous negative impact on public health of South Africans. Part of the solution to the abuse of alcohol will come from macro-level development (*indirect* strategies), such as job creation, establishment of better recreation facilities, improvement of literacy and the provision of educational opportunities. However, of greater importance is the policy process aimed at *directly* addressing alcohol-related problems (Parry, 1997). Advances are being made, for example in the policy area in setting up provincial and national substance abuse fora to bring together persons working in a variety of different sectors and disciplines; other advances have been in terms of innovative prevention initiatives and new research initiatives. However, the absence of a well thought out national alcohol and drug master plan, the lack of dedicated and empowered leadership at all levels to drive such a strategy, the failure to effectively engage grassroots structures into the process, and the apparent lack of commitment to putting adequate resources into policy implementation and evaluation will seriously undermine efforts to reduce alcohol misuse and to limit the harm associated with such misuse (Parry, 1997).

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Country Profile on Alcohol in Zimbabwe¹

by
David H Jernigan

1. INTRODUCTION

Zimbabwe, a land-locked country in Southern Africa, ranks as a low-income economy according to the World Bank (World Bank, 1996). Almost half its population of just over 11 million is under age 15. All but 2% of the population are of African descent. English is the official language, but most of the populace belongs to either the Shona or Sindebele language group. President Robert Mugabe and his ZANU-PF party, which holds nearly all of the seats in the country's parliament, have ruled the country since independence in 1980. Agriculture employs three-quarters of the workforce and provides 40% of exports. The country's leading export is tobacco. In 1993, nearly 80% of individuals over age 10 made less than Z\$150 a month (US\$21). Only 8.5% earned more than Z\$500 a month (US\$70) (Central Statistical Office, 1993).

Production of beer, wine and spirits is the country's fourth largest manufacturing industry in sales. Legal alcohol sales total 3.7% of the country's gross domestic product (calculated from Central Statistical Office, 1993; World Bank, 1993), and the national government receives close to 4% of its revenues from alcohol (estimated from Government of Zimbabwe, 1995; Delta Corporation, 1995). Households spend almost 7% of their annual income on alcoholic beverages - seven times the proportion spent by families in the U.S. (Central Statistical Office, 1994; US Bureau of Labour Statistics, 1994).

In the years immediately following independence, the national government experimented with state socialism. It erected high duty barriers to protect domestic production, nationalized a number of key industries including alcohol, and spent heavily on health and education. A decade of trade and government budget deficits combined with a stagnant economy to send Zimbabwe to the International Monetary Fund (IMF) and the World Bank for development assistance. The package of structural reforms recommended by the Bank included liberalization of trade, deregulation of markets, an end to price controls, and improvement in the efficiency of state-owned corporations. Coming at the same time as the country's worst drought in 100 years, the

¹ Adapted from Jernigan, D, *Thirsting for Markets: The Global Impact of Corporate Alcohol* (San Rafael, CA, Marin Institute for the Prevention of Alcohol and Other Drug Problems, 1997) for the Alcohol Policy in Developing Societies Project.

economic reforms were followed by inflation in excess of 40%. Government spending on health and child welfare dropped by 39% in real terms, and funding for education shrank 20%. Funds for social welfare, including alcohol and drug prevention work, fell by 32% (Chisvo & Munro, 1994).

Major droughts in recent years and an HIV epidemic infecting an estimated 17% of all adults have left the whole country desperate for cash (UNAIDS, 1996). So far in the 1990's, the country's currency has lost more than two-thirds of its value. Under pressure from the IMF and the World Bank to shrink, the government has removed price controls on alcohol, and talks of putting the municipally-run beerhalls in private hands.

Zimbabwe collects little data of any kind about its alcohol problems. Adoption of a national policy statement on drugs, including alcohol and tobacco, has been stalled at the cabinet level for more than a year. A civil servant in the Ministry of Health and Child Welfare summed up the country's battle against alcohol with these words: "You know, we call it a journey made in sand."

2. A BRIEF HISTORY OF ALCOHOL IN ZIMBABWE

Zimbabwean women by tradition brewed a cloudy or opaque beer made from sorghum or maize for ceremonies, spirit-medium celebrations, or the culmination of community efforts like planting and harvesting (Moses, 1989). Averaging 3% alcohol, compared to 4.5 to 8% for European malt beverages, the beer had some nutritional value especially when made from sorghum, although not as much as the unfermented sorghum alone. Brewing took more than a week. When the beer was ready, it had to be drunk promptly, or it would sour to the point of being undrinkable. During a "beer-drink", other tasks were set aside. Drinking to intoxication, but without complete loss of self-control, was a customary pleasure. The community suffered little harm from it, because it happened during a time regulated by tradition, insulated from work and other responsibilities.

Portuguese traders in the 17th and 18th centuries brought much stronger alcohol - European wines and spirits - to Southeastern Africa. In their hands, alcohol became an easy and profitable colonial currency (Pan, 1975). In West Africa, alcohol bought slaves. In Southern Africa, it bought labour. The practice of paying Africans in alcohol for agricultural work spread into the mining and manufacturing industries of the late 19th century. Alcohol became the linchpin of a colonial system tying African men to the new enterprises (Van Onselen, 1982).

When the colonists imposed "hut taxes", African women in the rural areas began brewing for cash to pay them. Women left behind when the men migrated to the urban areas started heading for the towns as well. Once there, many turned for subsistence to brewing traditional opaque beer for the African men. The white colonists wanted African workers, not families. To displace the women, colonial authorities in Durban, South Africa created beerhalls, municipal monopolies that supplied traditional beer to

African men. Beerhalls doubled as entertainment centres and tax collection points. Profits from the beer went to pay for barracks, more beer halls, security and other costs of "Native administration" (la Hausse, 1988).

Zimbabwe got its first brewery - the first industry of any kind in the capital city of Harare - in 1898, and its first beer halls in 1911 (Rhodesian Breweries, 1965; Parry, 1992). But the colonists were bad brewers, and beer in the beerhalls was often sour. Colonial authorities tried with little success to enforce their monopoly on the sale of opaque beer. Illicit brewing grew and spawned its own urban culture of shebeens and jazz bands. Wines and spirits in this period ranged from dull to deadly. Colonial merchants were notorious for lacing and watering them down. Prohibition of sale of European-style beer as well as wine and distilled spirits to black Africans lasted from the late 19th century until 1957. While ineffective, it promoted the growth of small-scale native distillers who sold directly or to shebeens. A variety of home-distilled products, often fortified with battery acid or other poisons, joined home-brewed beer in the illegal market.

Drinking for the native population took on multiple meanings. Beginning with its cultural roots as an expression of community and celebration, in the colonial setting it added the cachet of resistance. In the guerrilla war years of the 1960's and 1970's, the wives and widows of liberation fighters ran shebeens to support themselves and the war effort. Shebeens doubled as guerrilla hideouts, their facility in concealment serving a new cause (*Bulawayo Chronicle*, 1990). Meanwhile, the beer halls became stronger competitors to native brewers in the late 1950's when Heinrichs Syndicate (later bought out by South African Breweries) perfected commercial production of opaque beer, and motorized transport began to make widespread distribution of the product feasible.

3. TYPES OF ALCOHOLIC BEVERAGES AVAILABLE

So-called traditional African or opaque beer is the best-selling legal alcoholic beverage in the country by volume. Clear (European-style lager) beer is number two. Beerhalls, grocery stores and other retail outlets also sell distilled spirits, fortified wines and sherries in a variety of bottle sizes. The country consumes little table or fine wine. Global branded spirits are also too expensive for most of the population to drink on a regular basis. Most consumers of the stronger beverages drink what Maureen Paul, marketing manager for the country's largest wine and spirits company, called the "cheapies." According to her, inexpensive sherries and locally branded spirits products make up 95% to 97% of her company's volume (M. Paul, personal communication, 1995). In general, economics commands what people drink. In difficult times, according to Ben Tafa, marketing manager of the country's largest opaque brewing company, people do not drink less, they just drink less expensively (B. Tafa, personal communication, 1996). Similarly, the higher one's income, the more likely one will drink clear beer, fortified wine, spirits or imported spirits rather than the cheapest opaque beer.

Sociologists working at what is now the National University of Zimbabwe in Harare in the early 1970's estimated urban per capita consumption of opaque beer alone at roughly 11 litres, more than the French consume from all forms of alcohol combined (Reader & May, 1971). Taking into account that women in Zimbabwe drink very little, this would seem to imply that Zimbabwe's men were drinking very heavily.

4. THE ALCOHOL INDUSTRY

Chibuku Breweries makes approximately 90% of the country's legal African (opaque or traditional) beer (Q-mulative Research, 1996). National Breweries produces about 98% of the clear beer drunk in Zimbabwe (R. Wylie, personal communication, 1996). African Distillers sells 90% of Zimbabwe's wines and spirits (M. Paul, personal communication, 1995). The national government in partnership with South African Breweries and the other three giants in the South African alcohol industry own all these three companies, accounting for the major share of legal production of beverage alcohol in Zimbabwe. The national government owns the controlling share in Delta Corporation, a holding company that owns Chibuku Breweries and National Breweries, and 15% of African Distillers. South African Breweries (SAB), the world's fourth largest brewer, was the dominant player in Zimbabwe's legal alcohol industry until 1982, when the government forced it to relinquish control. However, it still has a 23% share of Delta.

Delta in turn owns 15% of African Distillers. However, the controlling interest in the company belongs to the three companies producing nearly all of South Africa's wines and spirits. Grand Metropolitan, the world's largest spirits company, owns 51% of one, Gilbey's. The second, Distillers, licenses brands from United Distillers (Guinness), but is controlled by a joint venture between tobacco giant Rembrandt-Rothman and the South African wine farmers' cooperative, as is the third, Stellenbosch Farmers' Winery, and the rest of Gilbey's. SAB owns 30% of Distillers and Stellenbosch as well. Zimbabwe's alcohol producers are descendants of this tight family of companies. Like their South African parents, Zimbabwe's alcohol producers exercise near-monopoly control over the market, dictating prices and collaborating on distribution. According to newspaper reports, they will resort to price discounting and give-aways in order to keep out competing producers (*The Herald*, 1993; *Sunday Mail*, 1995a, 1995b).

The drought and hyperinflation of the early 1990's notwithstanding, Zimbabwe's alcohol companies stayed in the black, and Chibuku and National Breweries (Natbrew) even expanded. African Distillers divested itself of non-alcoholic beverages, and recorded after-tax profits of more than Z\$14 million (US\$1.5 million) on sales of Z\$154 million (US\$13.7 million) in 1995 (African Distillers, 1995). Delta used the economic liberalization of the 1990's to upgrade and expand its brewing facilities. Natbrew opened a new modern brew house, doubling its capacity to 3 million hectolitres per year, and a new bottling line in Bulawayo. Its managing director estimated demand for clear beer had risen by 20% per year through the decade of the 1980's (*Financial Gazette*, 1991). Chibuku also opened at least one new brewery, giving it a total of 16 traditional beer breweries in the country. Both Natbrew and its

sister company Chibuku Breweries resolved container and label shortages. Chibuku solved a shortage in cardboard by switching to two-litre plastic containers. Dubbed "Scuds" because of their resemblance to the missiles used in the Persian Gulf war, the packages were returnable and reusable.

Delta reported increases in operating income well in excess of inflation over the first half of the 1990's. Because of the tendency of Zimbabwe's drinkers to drink whichever alcoholic beverage is likely to give them the most kick for the money, Delta makes up for declines in clear beer sales during economic hard times with increases in Chibuku sales. In 1995, for example, Natbrew's sales dropped, but Chibuku's grew by 20%. Delta's operating income from its beverages unit (which includes soft drinks) was Z\$244 million in 1995.

In addition to profiting from their investments in Zimbabwe's alcohol companies, the global "brand owners" - SAB in the case of the country's two leading beer brands, Grand Metropolitan and United Distillers for many of the distilled spirits brands - receive a royalty on every bottle sold under one of their brand names. For global distilled spirits, this is in the range of 2% of the retail price.

In 1995, the beer produced by the country's legal breweries totalled almost 4 litres of pure alcohol per capita (calculated from Delta Corporation, 1995; *Harare Herald*, 1995; Q-mulative Research, 1996). It is unlikely that legally-produced or imported spirits and wines add more than a litre to this amount. This points up how much illegally-produced alcohol probably exists in Zimbabwe. According to an alcohol industry-sponsored film, in 1991 60% of alcohol sales occurred in legal channels (Chibuku Breweries, 1991). Some of these are legally produced products sold in illegal outlets like shebeens. But particularly in the rural areas, people will also drink illegally-produced alcoholic beverages. No one knows exactly how much illegal alcohol is produced. In addition to home-brewed beer, alcohol industry and government officials agree that there is a strong enough market for *kachasu*, a name given to home-distilled products with 10% to 70% alcohol, to make it a major problem. Occasional newspaper reports of alcohol poisonings from *kachasu* point not only to the high alcohol content, but also the continued use of lethal additives to speed drinkers to their desired high.

No one is making large profits from illegal alcohol. On the contrary, newspaper and anecdotal reports stress the link between illegal distilling and poverty. Joseph Jabangwe, a civil servant funded by the International Labour Organization to work on alcohol and drug problems in Zimbabwe, described how illegal distillers respond to him:

“They ask us, what is your remedy? You say I must not brew *kachasu*, what do you want me to do all day? I want to raise fees for my children to go to school, I want fees for hospital for my children, clothing for my children, and food to eat in this rural area. What will you give me to keep me from brewing *kachasu*?” (J. Jabangwe, personal communication, 1995).

5. ALCOHOL AVAILABILITY, MARKETING AND PROMOTION

In the inflationary 1990's, Chibuku Breweries has kept the price of its beer behind the pace of inflation, with the help of lower excise tax increases than other alcohol products. To do this, it spends relatively little on advertising: about Z\$1 million (US\$101 000). Most of this goes to reminding patrons that, unlike industrially-produced traditional beer of even the recent past, the quality of Chibuku beer is good. Chibuku sells itself as the beer of the people; its tag line is “the beer that buddies share.” With a 108-hour shelf life, traditional beer requires careful handling. The Scud has helped Chibuku expand its market outside of the beerhalls; according to Chibuku Breweries' Tafa, now it can be sold “in really four walls or a shack” (B. Tafa, personal communication, 1996).

Clear beer is marketed to fill the aspirations of low-income drinkers. Clear beer marketing has all the hallmarks of beer advertising in the wealthy countries. National Breweries (“Nabrew”) spends approximately Z\$12 million (US\$1.2 million) per year on advertising. It segments its consumer base and targets its brands to different groups. For instance, a 1980's campaign for Carling Black Label targeted to young urban Zimbabweans, the “denim jeans brigade”. The tag line “it all happens quicker with Carling Black Label” as well as the brand's current slogan “switch to the lively beer” are subtle references to the fact that the beer has more alcohol and thus more “kick” than traditional beer.

Nabrew uses television, radio, magazines, billboards, cinema, and mobile cinema vehicles in the rural areas where no cinemas exist. Nabrew also sponsors the full range of Western sports, including soccer (men's and women's), horse racing, rugby, cricket, darts, golf and tennis. For low-income populations, sweepstakes are a potent lure. Nabrew sponsors a high-profile horse-race, the Nabrew Tankard. In conjunction with this, it runs a sweepstakes in which the prize is a Honda motorcar. Nabrew uses the event each year to promote its priority brand for that year.

Spirits in general do not sell well. Global brands such as Gilbey's gin and Bols brandy are the single best-sellers by value, but the volume of the market is in cheap local brandies, whiskies and fortified wines. The image of the global brands blends over into the local brands. Gilbey's gin carries local brand Gilbert's gin on its coattails. At this highest end of the market, identification with the West is the most evident, at times bordering on the absurd. Local brands bear colonial names like Viceroy, Bastion and Heritage. Heritage now uses *kinte* cloth in its advertising to give the brand a post-independence makeover. One of the oddest local spirits brands is Robert E. Lee

whisky, which uses the flag of the U.S. defenders of slavery and the name of their leading general to market whisky to a black audience.

African Distillers spends around Z\$3.5 million (US\$354 000) on advertising, and slightly more than that on promotions, including discounts. They sponsor in-store tastings in shops, supermarkets and bottle stores. The company markets its products on television as well as in the "inland circuit" for cinema, which shows films in beerhalls, mine clubs or on mobile vehicles in the rural areas. Most consumption of spirits is off-premise, in the small bottles - pints or half-pints - used by drinkers to add alcoholic strength to their beer or soft drinks. Holidays are important times for spirits marketers, with Easter and Christmas being two of the largest.

Both Natbrew and African Distillers are visible contributors to charities and education, including in Natbrew's case support of one of the only non-governmental organizations working on alcohol, the Zimbabwe Council on Alcohol and Drug Abuse (ZIMCADA). Zimbabwe's alcohol manufacturers collaborate in a manufacturers' association, run by a local marketing research firm, that doubles as their lobbying firm with the government and their public relations voice with the public at large. This group has an advertising code which forbids ads that "feature, foster or glamorize over consumption", "infer preference for drinks of a higher alcohol content", or imply that alcohol is "a contribution to personal or social success" (ZABMA, 1992). Tag-lines such as Bastion's "make friends with Bastion" and Bols' "all over the world friendships form around Bols," as well as Bastion's claim on posters that it is "fortified with brandy for extra strength, extra enjoyment" would seem to be in violation of this.

The message that drinking is the route to success in Western terms does seem to be reaching Zimbabwe's youth. A 1991 survey of 2700 secondary school students in two provinces found that students higher in status and more removed from traditional ways of living were more likely to drink alcohol (Eide & Acuda, 1995). A 1994 follow-up study of more than 3000 students in four provinces found that the more students geared their lives to Western culture, in terms of choice of music, radio stations, reading matter and films, the more likely they were to use alcohol (Eide & Acuda, 1996).

Alcohol is widely available through beerhalls, bars and restaurants, bottle stores, and grocery stores. Although licenses are required to sell alcohol in Zimbabwe, the point of the license seems to be tax registration more than outlet restriction. As of 1996 municipalities still owned the beer halls and received profits directly from them. Cities and towns also receive a levy from sales of alcohol at non-municipal outlets.

The single most powerful force in Zimbabwe's beer market is price. Since non-municipal outlets must pay a tax to the municipal authorities, beerhalls have the price advantage among the legal outlets. Beerhalls are most commonly found in urban "high-density" areas, the term left over from colonial days that refers to dense clusters of housing, usually on the edge of urban centres, built to house the African population during the days of colonially-imposed racial segregation. Some beerhalls offer food or entertainment or television, but their primary role is providing alcohol. Until recently,

beerhalls were among the first structures to be built in any new “high-density” housing development (T. Makombe, personal communication, 1995). In many of these areas, there is little or no recreational alternative to the beerhall.

In the early 1990's, the newspapers were filled with reports of unsanitary conditions in the beerhalls. Authorities forced one of Harare's largest beerhalls to close twice (at an estimated cost to the city of Z\$1 million in lost sales per week) because “toilets were not flushing, pipes which siphon beer from the tanks were leaking and dirty beer-mugs were not well-cleaned because of a shortage of water” (*Sunday Mail*, 1990). Patrons at another beerhall reported having to wash their own mugs “in a toilet the urinal of which is often flooded because of faulty plumbing” (*Daily Gazette*, 1994).

In Harare, one thousand alcohol outlets serve a population of just over a million. To improve management and profitability of the beerhalls, Harare spun its Liquor Undertaking off into a management arm called Rufaro Marketing (“rufaro” means happiness in Shona) which it then privatized in 1992, while keeping title to the beerhalls themselves. Rufaro operates 139 of the outlets in Harare, including beerhalls, lounges, cocktail bars and bottle stores. Sixty percent of sales of legally-produced traditional beer are through beerhalls. Marketing Harare's beerhalls, Rufaro also advertises, mostly in print media, emphasizing price levels and discounts.

Even cheaper than the beerhalls are the shebeens. Although illegal, they are not uncommon. The police record between two and four thousand shebeen offences per year in the 1990's (Central Statistical Office, 1995). Prior to 1994, the fine for being in a shebeen was Z\$20, for running one, Z\$100. In an attempt to increase their preventive effect, the government quintupled the fines in 1994, but this has done little to stem this form of free enterprise. The economic hardship resulting from structural adjustment in the early 1990's reportedly fed into the shebeen boom. Newspaper interviews with proprietresses, dubbed “shebeen queens”, described them as:

“...widows, divorcees, single mothers or women with unemployed husbands. In defending their business, the operators said running a shebeen was a better way of making money than robbery or prostitution”. (*Weekend Gazette*, 1992)

Shebeens may sell legally or illegally produced alcohol. Women of all classes turn to them for income. One newspaper story described certain shebeens as “parties where ‘invited’ guests are to pay anything from \$15 to \$10 per head” to attend “a garden ‘night club’ at some of these highly educated and respected people's homes” (*Financial Gazette*, 1990). A guest columnist in the *Bulawayo Chronicle* credited the survival of the shebeens to the fact that “the patrons of shebeens include leading members of the diverse society we live in”, including policemen who sometimes tip off the shebeen queen if a raid is planned (Mpofu, 1993).

Price, a constant determinant of drinking patterns in Zimbabwe, also keeps shebeens alive. At the same time that clear beer was selling legally at Z\$3.80 a litre and

traditional beer at Z\$2.00 a litre, illicit home brew was selling at Z\$1.00 a litre (*Sunday Mail*, 1995b, *Herald*, 1996).

6. PATTERNS OF ALCOHOL USE

There appears to be a sizeable group of drinkers in Zimbabwe, mostly men, who drink very heavily. Early estimates of alcohol consumption in Zimbabwe were extremely high: a 1971 survey of townships in five urban centres found a mean per capita annual consumption of 84.2 imperial gallons (Reader & May, 1971). This translates to an annual consumption of absolute alcohol of roughly 11.5 litres. If one were to narrow the field down only to the drinkers (mostly adult men), this figure would be even higher. A survey taken soon afterwards found that 29% of the urban men interviewed (n=116) drank twenty units or more per weekend, ten units or more per drinking session, and were intoxicated at least weekly (May, 1973). The author of this survey concluded:

“Acute addiction appears rare, but there is a pattern of weekend excessive drinking which though it may not appear pathological or deviant in the light of urban African values is none the less excessive by western standards, with ensuing social costs and considerable exposure of a large number of people to alcoholic risk, or at least to problem-drinking through addiction”. (May, 1973)

More recent studies of specific populations indicate that this heavy drinking style persists today. An unpublished survey of industrial workers by the Ministry of Health in 1989 found that of the 74% who drank, 66% drank every weekend, and 22% drank daily (Moses, unpublished data, 1989). In another survey of junior hospital workers at a large government hospital in Harare, 93% of male and 64% of female drinkers said they drank to intoxication every time they drank (Butau, 1992 cited in Acuda, 1995).

Looking at a broader cross-section of people, another recent study asked 483 consecutive patients (63% male, 37% female) attending primary health care clinics in Harare about their drinking (Chinyadza et al., 1993). Of 41% who said they were drinkers, 39% drank three or more times a week. When they drank, they drank in quantity: on an average day, two-thirds of the male drinkers had 10 or more drinks. On a heavy drinking day (usually around weekly or monthly paydays), 38.5% of the drinkers (16% of the total sample) had more than 21 drinks. Seventy-six percent of the drinkers drank this much at least once a month, and 13% did so three or more times a week.

Close to half of Zimbabwe's population is under age 15 (World Bank, 1996). While the legal drinking age is 18, a study of children in rural secondary schools found that 17% had drunk alcohol in the last seven days (Munodawafa, Marty & Gwede, 1992). A 1991 survey of 2700 students in both urban and rural schools in two provinces found that 32% of the boys and 28% of girls aged 12-14 had used alcohol. These numbers rose as students grew older. Students were much more likely to use alcohol than

tobacco, cannabis, inhalants or mandrax (Eide & Acuda, 1995). When students go on to university, they drink heavily by international standards. Compared with students in the United Kingdom, more than twice as many Zimbabwean university students - nearly one out of ten - get drunk between three and seven times a week (Chambwe, Slade & Dewey, 1983). Male drinkers in particular do not feel that they have had a good drink unless they get drunk (McMaster & Keshav, 1994).

7. ALCOHOL-RELATED PROBLEMS

Among patients at Harare's primary health clinics, drinkers were more likely than non-drinkers to have sexually transmitted diseases and work-related injuries, as well as common signs of heavy alcohol consumption such as hand tremors, sweaty palms and bloodshot eyes (Chinyadza et al., 1993). In the survey of junior hospital workers, 5% of the drinkers showed signs of alcohol dependence such as increased tolerance, morning drinking and loss of control. Seventy-two percent said they had suffered injuries, blackouts, guilt feelings, and expressions of concern from others as a result of their drinking (Butau, 1992). A retrospective study of close to 11 000 cancer cases occurring between 1963 and 1977 found that the leading cancers for men (liver - 18.2% of all cancers) and women (cervix -31.5% of all cancers) were both strongly related to alcohol use, particularly opaque beer drinking (Skinner et al., 1993).

The Minister of Health and Child Welfare, Dr. Timothy Stamps, estimates that alcohol is responsible for half the country's divorces, and large numbers of road traffic accidents (*Harare Herald*, 1994). Yet there are few data available to support these estimates. Hospital statistics regarding alcohol-related problems give a somewhat confusing picture. For instance, reports from the late 1970's through the early 1980's estimated that approximately a quarter of all psychiatric admissions to the main public hospital in Harare were alcohol-related (Buchan, 1992; Chawla, 1989). Figures supplied to the author by the Assistant Medical Records Officer at that hospital for the years 1985 to 1995, however, show the proportion of alcohol-related cases admitted to the psychiatric unit dwindling from 14 to 1.5% (L.B. Dhlakama, personal communication, 1996). The 1994 Annual Report of the Harare City Health Department stated that of the 707 819 new adult patients seen its thirty clinics that year, none had been diagnosed with an alcohol-related problem (Harare City Health Department, 1994). Yet a 1993 prospective study carried out in the psychiatric unit of Harare's public hospital used the AUDIT screening instrument to classify 13% of male and 2% of female patients as alcohol abusers or alcohol dependent (Acuda, 1995).

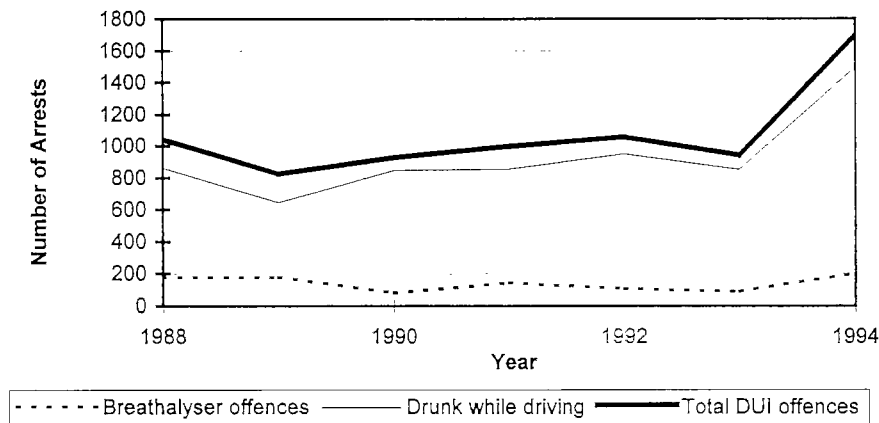
Government sources report a relatively low incidence of chronic liver disease including cirrhosis: 4.14 per 100 000 people in 1986 (United Nations, 1992). (In comparison, France had 15.6 cases per 100 000 in 1992 (Harkin, 1995). Official figures for drunk driving are low as well. The legal limit for driving under the influence of alcohol in Zimbabwe is .08. Although drunk driving offences increased from 862 in 1988 to 1493 in 1994, they account for less than 5% of reported traffic crashes (Department of Epidemiology and Disease Control, personal communication, 1995). California, in contrast, reports alcohol involvement in nearly 13% of its injury or fatal crashes

(Statewide Integrated Traffic Records System, 1995). The following graph shows Zimbabwe's drinking-driving arrest statistics for the years that they are available.

The upturn in offences recorded in 1994 could simply be the result of increased enforcement beginning in that year. Prior to January 1995, each of the country's eight provinces had one non-portable breathalyser. In 1995, the police began to work with portable breathalysers. Also, if the situation in Zimbabwe is comparable to that of neighbouring South Africa, then one would expect high numbers of pedestrian deaths and injuries, but these are not recorded in Zimbabwe.

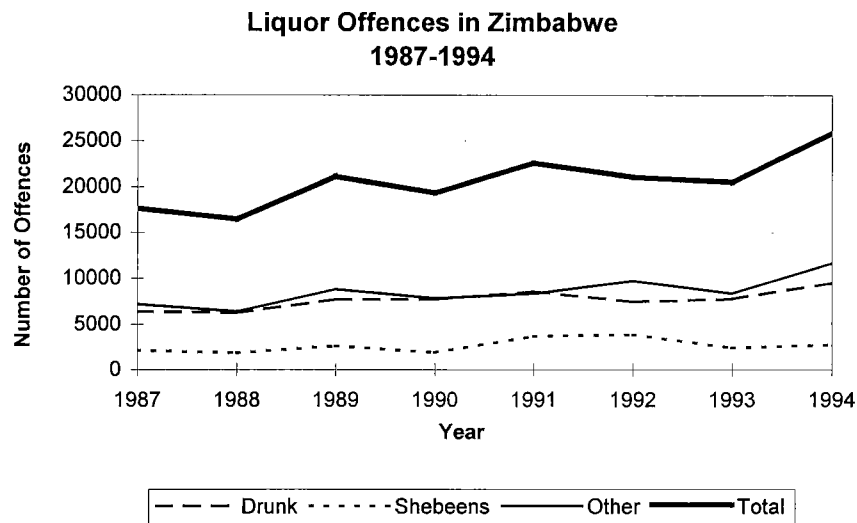
However, three other kinds of alcohol-related offences are recorded: public drunkenness, shebeens (running illegal alcohol outlets), and "other" (primarily drunk, violent and disorderly conduct in a public place, according to police sources). The graphs below show the trends in these offences for the years available. The difficulty with data, like the DUI data, is that they may reflect the level of enforcement more than the level of incidence of alcohol-related incidents. However, the general upward trend of the arrests for drunkenness suggests a problem that may be increasing.

DUI Offences 1988-1994



Why are Zimbabwe's official figures so low? One reason may be that heavy drinking is considered normal in Zimbabwe. When most drinkers regularly drink until they are drunk, alcohol problems may be considered normal as well, and go unnoticed and undocumented. When a problem is not defined as such, it is often not recognized or monitored. There are enough similarities between drinking patterns in Zimbabwe and in South Africa that some South African research can give a sense of how severe Zimbabwe's problems might be. Researchers in Cape Town found that on a typical workday, after 5 p.m. 7% of drivers and 12% of pedestrians were legally drunk (Van der Spuy, 1993a). The more serious the injury, the more likely both pedestrians and drivers had been drinking (Parry & Bennetts, 1998). Alcohol also played a role in 60%

of all violent deaths in the Cape Town metropolitan area in 1990 (Van der Spuy, 1993b).



8. CURRENT RESPONSES

8.1 Government Policies

In early 1995, a National Commission, including representatives from government ministries, non-governmental organizations and the alcohol industry, developed a "National Policy on Alcohol and Drug Abuse for Zimbabwe."

The policy recommended better measurement of the problems, more education, and suppression of the supply of illegal drugs. When it came to supply of the legal drugs, alcohol and tobacco, the policy stated that the government would "urgently review, update and enforce all legal measures aimed at preventing their excessive use and abuse and thus minimizing the harm they cause in the country". By mid-1996, the policy still had not made it to the floor of parliament. When asked about its status, the Health Minister reported it had been sent to the Zimbabwe Alcoholic Beverage Manufacturers Association because of "some sort of sticky things in there" (T. Stamps, personal communication, 1996).

Zimbabwe's governments, national and local, have mixed interests in alcohol. Alcohol excise taxes brought the national government close to Z\$580 million (US\$67.7 million) in 1994-1995 (estimated from Central Statistical Office, personal communication, 1996; Government of Zimbabwe, 1995). Income from Delta's beverage operations (including soft drinks) brought the state another Z\$19 million (US\$2.2 million) (Delta

Corporation, 1995). Together these made up almost 4% of the national government's revenue for 1994-1995. Figures at the local level are more difficult to obtain. For the city of Harare alone, the beerhalls brought in between Z\$3 and Z\$4 million per year in the 1980's (US\$800,000 to \$1 million). After privatization in 1992, this figure jumped to Z\$9 million (US\$2.25 million), 2% of the city's budget (City of Harare, undated). In addition, the city collects a tax on all alcohol sold legally outside the beerhalls. Receipts for this tax were unavailable. A 1991 film sponsored by Chibuku Breweries claimed that traditional beer sales provided more than Z\$23 million in revenues to local government in 1990 (nearly US\$7 million at 1991 exchange rates). It is impossible to verify this amount.

In 1990, the national government negotiated with the alcohol producers to introduce a warning label on alcohol containers. Written into the Food and Food Standards Regulations, the label must state "that alcohol may be hazardous to health if consumed to excess" and that "the operation of machinery or driving after the consumption of alcohol is not advisable" (Government of Zimbabwe, 1990). According to the U.S. Department of Health and Human Services, to be effective warning labels should be prominent on the label, printed in contrasting colours, and present a small amount of information (Assistant Secretary for Health, 1987). Zimbabwe's alcohol warning label meets none of these criteria (neither does the U.S. alcohol warning label). Zimbabwe's Health Minister, Dr. Timothy Stamps, admits that the warning will have little effect on current drinkers: "It's not a warning to those who are determined to consume". "But it's a lever you can tell young people" (T. Stamps, personal communications, 1996) In addition to the warning on the bottle, members of the Hotel and Restaurant Association have pledged to post a similar warning sign at the bar. A quest to find it in a popular local hotel led to a pantry, frequented only by the barmen, where the warning was duly posted.

No matter how the government views alcohol, the thriving illegal market limits the state's ability to control alcohol use with taxes. Taxes are lowest on the lowest alcohol product, traditional beer, and rise as alcohol content rises. That they for the most part do not automatically rise with prices (as, for instance, income or sales tax pegged to a percentage of receipts do) leaves the government constantly tinkering with the rates to keep up with inflation. The government learned the hard way how price-sensitive Zimbabwe's drinkers are when it raised the excise tax on clear and traditional beers too far in February of 1995. After a dramatic drop in revenues, caused by drinkers migrating either to traditional beer or to the illegal market, the government had to revise the tax back downward in July of that year.

There are no limits on where or when alcohol can be advertised. The companies are cautious of showing excessive consumption in their advertising. Large roadside billboards did not exist in Zimbabwe prior to the economic liberalization promoted by the World Bank and the IMF. Now they are another avenue for alcohol marketing.

Regulations governing how, when and where alcohol may be sold have become steadily more lenient in the 1990's. A 1994 amendment to the Liquor Act gave rural bottle

stores permission to sell alcohol for consumption on-premises, in recognition of what Health Minister Stamps called the need of people in the rural areas “for raising the resources they need to send their children to school, to pay for fees for clinics, bus fares and all that.” The regulation waived the sanitary requirements applied to urban on-sale outlets, such as flush toilets and tiled kitchens.

The next level of liberalization will likely be privatization of the municipal beerhalls. Under laws still in effect in 1996, cities and towns held title to beerhalls and other outlets. The newspapers were already reporting at that time plans to abolish these monopolies, in line with the World Bank and IMF-backed liberalization and structural adjustment of the economy. Health Minister Stamps anticipates that the move will eventually lead to lower consumption of alcohol: “If you have more liberal access to alcohol...then alcohol may not become so essential a commodity. It will be an adjunct to other amenities.” Stamps sees heavy alcohol consumption in Zimbabwe as an adolescent phase:

“a bit like a child that has been kept under reins, under control and totally restrained from exercising its freedoms. Eventually these freedoms are granted and they are overindulged. So to me I think this is also good that we are getting more and more people having access to alcohol...I think the point is that once it becomes clear that people can have a drink when they want to, they may not want to have it at all because they know it’s there”. (T. Stamps, personal communication, 1996)

8.2 Prevention and Treatment

In 1995, the government began devoting one day a year to alcohol education. Dubbed “DrinkWise Day”, it is intended as the culmination of a year-round public awareness campaign, including an essay competition for school children, panel discussions by the relevant government ministers, and placement of news stories in the national media. As of mid-1996, little progress had been made on the activities supposed to be occurring the rest of the year.

The Medical School at the National University of Zimbabwe runs occasional research studies on alcohol. Some of its work has been reported here. The national Department of Social Welfare runs a Resource Centre for Alcohol and Drug Problems with a professional staff comprised of a director, a social worker/community organizer, and a job placement officer. The International Labour Organization (ILO) funds another professional to work with the centre on workplace issues. With limited resources, the programme focuses on retraining and referring workers with alcohol problems, and on community mobilization for the generation of locally initiated prevention initiatives, primarily targeted at illegal drug problems.

Government treatment facilities are limited to the psychiatric wards in general hospitals, which accept patients for detoxification. The Zimbabwe Council on Alcohol and Drug Abuse (ZIMCADA) is a nongovernmental organization dedicated to alcohol,

tobacco and drug education. It is staffed solely by a retired civil servant, who gives educational presentations in public and private schools by invitation. Alcoholics Anonymous has at least eight meetings a week in Harare, and meetings in other major cities as well. There are no residential treatment facilities dedicated to alcohol dependent people; however, there is an independent Christian community in the suburbs of Harare with beds for as many as nine alcohol and/or drug-addicted people.

9. CONCLUSION

Zimbabwe faces many problems. HIV, food shortages and droughts, promoting economic growth, attracting investment - all of these must remain high in the country's priorities. All of these are potentially influenced by alcohol use. But in a country where both research and informed opinion indicates that a substantial portion of the population is composed of habitual very heavy drinkers, the local alcohol producing companies, all linked to large alcohol transnationals, promote their products freely. Government health authorities, with the backing of the World Bank and the International Monetary Fund, support even less control over how alcohol may be sold. Without reliable indicators of the size of Zimbabwe's alcohol problem, it will be difficult to assess the impact of the government's policies. Meanwhile, the marketing technology, dollars and sophistication of the alcohol companies far outweigh anything mounted on the prevention or treatment front by either non-governmental organizations or the increasingly cash-starved government.

The alcohol situation in Zimbabwe is complex, and will not yield to single or simple solutions. The policy questions faced by Zimbabwe are by no means unique. Controlling legal production without encouraging the illegal or informal market; welcoming investment that improves the quality and consistency of alcohol service and supply without surrendering the right to control the alcohol supply; dealing with patterns of drinking with strong historical and economic roots; and promoting alcohol education, prevention and treatment services that are consistent with the cultures and history of the country are issues faced by many countries at this time.

Zimbabwe provides a clear picture of the pressing need for monitoring, research and exchange of experience regarding alcohol policies in developing country contexts. Decisions being made in Zimbabwe about alcohol policy today will influence that country's experience not only with alcohol but also with economic development for years to come. There is a strong need for a body of scientific literature that can inform these policy debates. Without this, there is a strong chance that, as in Zimbabwe, alcohol will be left to the market to regulate. While eventually market forces will likely engage to curb a freely growing supply, many lives and opportunities are likely to be lost in the interim.

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