

CHAPTER I

INTRODUCTION

This chapter describes the trends of global and Thailand alcohol problems. The chapter provides the information on magnitude and impact of the problems, justification of the study, research questions, objectives, and definition of the terms, as well as the expected benefits of this study

1. Rationale and Background

Alcohol is not an ordinary commodity but a toxic substance in terms of its direct and indirect effects on a wide range of body organs and systems (Babor T et al, 2004). It is one of the most harmful risks to health. At least 61 different types of injury, illness, or death, which are potentially caused by the consumption of alcohol, have been identified. For 38 of these conditions sufficient evidence for a direct causal association has been shown in a benchmark study with hazardous or harmful use of alcohol (English DR et al, 2006). Adverse effects of alcohol have been demonstrated for many disorders, including liver cirrhosis, mental illness, several types of cancer, pancreatitis, and damage to the fetus among pregnant women. Alcohol-related harm not only affect the individual drinker, they have a significant effect on others, including family members, victims of violence and accident associated with alcohol use, and the community as a whole. Drinking to intoxication, for example, also typically affects non-drinkers. Furthermore, alcohol consumption is also strongly related to social consequences such as drink-driving injuries and fatalities, aggressive behavior, family disruptions and reduced industrial productivity (WHO, 2000). Harmful use of alcohol is one of the most significant risks to health globally. According to the World Health Report 2002, the harmful use of alcohol worldwide is responsible for 4% of disease burden and 3.2 % of all premature deaths. This translates into 58.3 million disability-adjusted life years lost and 1.8 million deaths. Approximately 2 billion people worldwide consume alcohol, around 76 million or more than 1% of whom have been estimated to be suffering from alcohol consumption disorders (WHO, 2005). From a public health perspective, the burden

related to alcohol consumption, in terms of both morbidity and mortality, is considerable in most parts. Apart from 62 physical and mental disorders as identified in International Classification of Disease (ICD-10), harmful use of alcohol could lead to violence, intentional and unintentional injury, road traffics injuries, family impact, and unemployment. Alcohol consumption imposes economic and social costs on society as a whole. According to economic studies, the cost of health and social consequences of alcohol use up to 6% of GDP significantly outweighs the benefit from alcohol consumption in term of revenue generation in most countries (WHO, 2005).

In Thailand, alcohol use is embedded in Thai Societies. In 2004, about 20.8 million Thai people used alcoholic beverages. Alcohol has become one of the most important risks to health. For burden of alcohol in Thailand, the most recent burden of disease study in 2542 Disability-Adjusted Life Year(DALY):death from alcohol 4% (17,000 deaths),death and disability 5.8%(540,000 year) . Alcohol is the second most risk factors that cause death and ability in Thai population. Estimated economic lost by alcohol in 2546 is 13,007-33,652 million baht and 0.22-0.56 of gross domestic product (GDP) in Thailand (Gun Chernrunroj.2005). For this warning sign shown that 1) Alcohol production and consumption are on the rise and very rapid in most recent years 2) Disease and Injuries related to alcohol consumption have been rising and 3) Both number of drinkers and amount of alcohol are also increase.

On a population level, alcohol-related harm is not confined to the relatively small number of heavy drinkers or people diagnosed with alcohol use disorders. Even non-drinkers can become victims of alcohol-related aggression, for example, light and moderate drinkers, i.e. the majority of the population in many areas, who occasionally drink at high risk levels, while being individually responsible for a fewer harm than heavy drinkers, are collectively responsible, die to their greater numbers, for the largest share of alcohol burden on society. To alleviate burden of alcohol consumption, many countries have, across time, employed a great diversity of strategies. Alcohol policy, i.e. measures by government to control supply and demand, minimize alcohol-related harm, and promote public health, is among the most important strategies. At the same time there are other factors influencing consumption

and harm, such as level of production, political liberalization, marketing, and demographics, which are mostly outside of government control. In short, alcohol control measures affect alcohol consumption levels and drinking habits, which in turn have an effect on alcohol-related social and health problems. Research evidence shows that it is possible to develop and implement comprehensive and effective alcohol policies. In the past few years, considerable progress has been made in the scientific understanding of the relationship between alcohol policies, alcohol consumption, and alcohol-related harm. Ideally, this cumulative research evidence should provide a scientific base for public debate and governmental policy making in search of policies that protect health, prevent disability, and address the social problems associated with alcohol consumption.

Thailand has experienced a long-term problem related to alcohol use. The manifestation of the problem has varied considerably over time. The population and the administration occasionally become aware of the gravity of the problem. At each awakening, most people perceive the situation as a new problem. Too often, agencies plan strategies and commit resources without having up-to-date information about the nature and extent of alcohol-related problems. These efforts can be wasteful and counterproductive. The effectiveness of the proposed strategy depends largely on active outreach to collect data from as many sources as possible. It is important to emphasize that improving in epidemiological surveillance. Especially active surveillance from well-designed epidemiological surveillance on alcohol consumption and related-harm are critically important for well define and determine the magnitude to alcohol-related harm. The strengthening the evidence base is necessary to encourage facilitates appropriate policy response. At the local level, where the direct impact of alcohol use is felt, information needs are more concrete and immediately related to the local situation. A local active surveillance system will help define and determine the magnitude of alcohol-related problems and provide an early warning for emerging problems. Hence, this proposed project is needed.

2. Research Question

How to develop and implement an alcohol surveillance system at local level?

3. Objective of the Study

To develop an alcohol surveillance system at local level.

4. Scope of the Study

The study was conducted in Sumsong district about 30 kilometers east of Khon Kaen city center. Public health statistics reported that its population was 22,570. It seems that the proposed area is relatively small but manageable for this model development.

5. Operational Definition

Alcohol Related Harm: A specific and defined social or health problem to which alcohol drinking increases the risk of this problem. For example, traffic crashes were a natural part of a modern system of driving but a driver who drinks had substantially increased risk of crash.i.e. a drink/drive crash.

Indicators of alcohol related harm

1) Drink/drive traffic crashes

Drink/drive traffic crashes were defined as those in which at least one driver involved in the crash had been drinking. They were classified into three categories: non-injury crashes, injury crashes and fatal crashes (in which at least one person is killed).

2) Alcohol related assaults

Assaults in this context were defined as an intentional violence event in which one or more persons harmed sufficiently seriously to require some type of medical attention. In addition, in which at least one person involved in the event had been drinking. Such assaults can be divided into public assaults (those which occur in public places such as bars or pubs or in the public streets) and domestic assaults, which occur within the home.

3) Alcohol related unintentional non-traffic injuries and fatalities

It is known that alcohol is a contributing factor in a significant proportion of unintentional non-traffic injuries; fatal and non-fatal. In this context, injuries are alcohol-related if the person had consumed alcohol prior to event.

Injuries can usually be divided according to type or location of injuries. Typical injuries include burns, falls (related to the alcohol impairment of the individual), drowning (in which the person who drowned had consumed alcohol or as the result of a boating accident in which at least one of the boat operators had been drinking). Non-fatal injuries are discussed separately from fatal injuries.

4) Youth possession of alcohol in public places

With many research suggesting that young people were particularly at risk of harm from alcohol consumption, an ideal indicator for local purpose would be the number of youth under the current legal age who have actually purchased alcohol. Since this event was an illegal act, it was defined as an alcohol related harm.

5) Alcohol related hospitalization

In addition to the acute medical consequences of heavy drinking and alcohol related trauma events, hospitalization often occurs because of long term and chronic drinking. This indicator relates to the treatment of medical conditions caused by or strongly related to long-term alcohol consumption; including dependent drinking or alcoholism (e.g. liver cirrhosis or gastritis).

The ideal indicator was one in which all alcohol related (e.g. ICD-10) there is selectivity by medical personnel to assign alcohol linked ICD codes on hospital admission records.

6) Alcohol related mortality

It was defined as death caused in part or in full by heavy, usually long-term, consumption of alcohol. This data would be based on ICD-10 codes for mortality related to chronic drinking and BAC blood testing to establish mortality related to acute drinking. However, at present ICD codes are selectively, recorded on death certificates.

7) Per capita alcohol consumption

This was the average consumption of absolute alcohol per person aged 15 and above. It has been shown that average per capita alcohol consumption is closely associated with the actual level of a number of alcohol related harms.

8) Percentage of youth drinkers

This was the percentage of the population under the legal drinking age who has consumed at least one alcoholic drink over a specific time frame; for example the last 30 days. This was a useful indicator of potential alcohol involved harm for the young.

9) Percentage of drinking drivers on the roads

The number of alcohol tested positive drivers on the road was highly related to the number of drink/drive crashes; with risk increasing as the distributing of BAC positive drivers changes to include more high BAC drivers (e.g. BAC>.05).

10) Number and density of alcohol retail outlets

Both the absolute number and the concentration (number of outlets per 100 persons and/or geographic area) of alcohol retail outlets was an indicator of potential risk at the local level. Both on-premises (such as bars and restaurants) and off-premise (alcohol to be taken away for consumption elsewhere) outlets need to be included.

6. Independent and Dependent Variables

Independent Variables: Also, called predictors shown as below:

1. Per capita consumption
2. Alcohol treatment admissions
3. Problem alcohol users known to other agencies(multi agency review)
4. Hospital admission/discharge diagnoses
5. Cirrhosis Disease
6. Alcohol-related cancers
7. Alcohol-related emergencies
8. Alcohol-related deaths
9. Arrest or convictions
 - (1) Drink-driving offences
 - (2) Drunkenness
 - (3) Other alcohol-related offences

10. Traffic incidents
 - (1) Accidents
 - (2) Breathalyzer tests
11. Non-traffic accidents and Injuries
12. Production
13. Alcohol distribution
 - (1) Number and density of retail outlets (license)
 - (2) Alcohol sales
14. Price of alcoholic beverage

Dependent Variables: Dependent variable was group of situation within communities that categorize in three group and label with color.

Group 1 (Green) : Acceptable situation in which no need for interventions.

Group 2 (Yellow) : Alert/risky situation in which need attention to monitoring situation.

Group 3 (Red) : Severe situation in which need for interventions.

7. Implication

7.1 Academic Implication

Both qualitative and quantitative data collection techniques were used concurrently in this study in order to provide a comprehensive picture of alcohol abuse situation which serving as an early warning system.

7.2 Practical Application

At the local level, valid and reliable information should be available to empower the community to:

- 1) Monitor the extent of the changes in alcohol related problems in their locality
- 2) Identify those problems that need attention for prevention
- 3) Evaluate any local prevention efforts to reduce problems
- 4) Plan for evidence-based interventions

8. Indicators of Alcohol Use in Surveillance System

Alcohol related problems covered board spectrum of physical, psychological, and social pathologies. Indicators of alcohol use and related harm applied in this surveillance system included:

1) Epidemiological Surveys

The most direct measure of alcohol use and related problems in community is to conduct epidemiological surveys to assess the magnitude of the problem of alcohol use and alcohol dependence. Such surveys are considered a scientifically accurate measure of individual alcohol use problems but require large and expensive research studies, which have not been possible in many parts of the world.

2) Adult Per Capita Consumption of Alcohol

Another direct indicator of alcohol use is estimation of adult per capita consumption of alcohol.

3) Use of Health, Police, and Other Official Statistics

Another method is to develop indicators of alcohol-related harm from health, police, and other official statistics.

4) Use of Death, Injury, and Illness Data

All member countries of the World Health Organization submit data on causes of death, injury, and illness based on ICD-9 or ICD-10. Select conditions such as diseases of liver, neuropsychiatric conditions, select cancers are indicative of long-term adverse effects of alcohol. Select other conditions such as road traffic accidents, suicides, homicides, accidental poisoning are indicative of short-term adverse effect of alcohol.

5) Social Parameters

Social factors such as welfare payments, disability pension (related to alcohol), work place injury, absenteeism at work, unemployment, offences related to drunkenness, could also serve as indicators of the magnitude of problems related to alcohol use in the community.