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An Estimate of the Number of Narcotics Addicts in Thailand

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This paper is a report on the techniques and data collection methods used in an estimate of Thai narcotics addicts carried out in 1993. The research was funded by the Narcotics Affairs Section of the U.S. Embassy and the Office of the Narcotics Control Board (ONCB). Narcotics addicts are defined as "heavy users of one or more of the following substances: glue and thinner, marijuana, amphetamines, heroin, and opium." In the past, difficulties arose in measuring the incidence of narcotics addiction in Thailand. While some data is available from hospitals and prisons, for example, it is not collected in a standardized format.

According to a 1993 survey, Thailand has a minimum of 1.28 million narcotics addicts (see Figure 1). This represents about 2.2 percent of the population. Such data collection is beneficial as it contributes greatly to the development of an appropriate narcotics control policy. In the past, a great deal of resources were used to combat heroin abuse because this drug was assumed to constitute the greatest narcotics problem in Thailand. Perhaps the most important finding of this study is that, in fact, glue and thinner sniffers are almost twice as prevalent. Glue and thinner use occurs in 7.04 Thais per 1,000, while heroin use occurs in 3.6 persons per 1,000. Further, glue and thinner may be more detrimental in the long run, as their habitual use causes mental damage and the most prevalent users are among a younger population.

In this paper, we first explain how we define narcotics use. Second, we describe data collection techniques and, third, we report our major findings by subgroup and region. Finally, in our conclusion, we advocate the adoption of consistent narcotics user data collection in Thailand.

METHOD OF ESTIMATION

The research method employed in this study was to estimate the number of drug addicts from 16 population subgroups known to have relatively high incidences of addiction, and which are almost mutually exclusive. Conceptually, at any given moment, members of these 16 subgroups belong to one of the following three groups: *addicts who have committed a crime and have been apprehended or convicted; addicts seeking treatment; or addicts who have neither been apprehended, convicted, nor treated* (see Diagram 1). The overlapping of population groups was remedied by estimating the number of addicts on one reference date, December 31, 1993. In other words, a stock measure, rather than a flow measure, was employed. A stock measure, quite different from a flow measure, captures the population composition of narcotics users at any one point in time. A flow measure is dynamic because the indicator alters over time, as some people overcome their addictions while others yield. A hospital, for example, might use a flow measure if administrators are interested in knowing how many people were treated for addiction over the course of the year 1993. It must be recognized that each individual can only be counted on the initial visit, then the number of new visitors each day over the year are added together to arrive at the number of cases treated in the year.

In this study, we use stock data. In the first stage of the estimates, narcotics fall into one of three categories: *1) addicts who have committed a crime and have been apprehended or convicted, 2) addicts seeking treatment,* and *3) addicts who have neither been apprehended, convicted, nor treated.* For the first category, data was collected from police stations and prisons. For the second, data was collected from hospitals and temples.

The third category included 16 groups with high probability of addiction. This was the most difficult category, as few data sources are available. Since narcotics addiction is a sensitive issue, and addicts are often unwilling to give information, key informants were asked to estimate the number of narcotics addicts in a specific group or location. Because of especially high prevalence rates, 11 occupations were targeted. Tuk tuk (motorized three-wheel vehicle) drivers, for instance, and bus and truck drivers all have higher rates of drug abuse than do other occupational groups. People working in the service and entertainment sectors, as well as night workers generally, also tend to have higher rates of abuse. Another notable group is fishermen who go to sea for extended periods, military recruits, and students. Some groups were chosen from areas where narcotics addiction is believed to be especially high. Thus rural villages or urban slums were targeted, again through the key informant strategy. Hill tribes were also included.

Two methods were used to estimate the number of drug addicts. The first was based on the incidence rate and population size. It was not possible, however, to estimate the rate of drug addiction for some subgroups as there are no reliable estimates of their numbers, i.e., the number of truckers and construction workers.

Where population size was unknown, we used a second method.[1] First, the average number of addicts per sample unit was calculated by category. For example, the average number of addicts per fishing boat included in the sample was calculated. This figure was then multiplied by the total number of units. The estimated results were broken down by region, type of drugs and population sub-group.

As a result of the research method, the study estimated the minimum number of narcotics addicts. The overall estimate for the Thai population was based on the summation of the 16 group estimates. As they fall outside of the 16 categories, some narcotics addicts may not have been included. We tried to mitigate this problem by choosing groups with the highest prevalence rates, based on information from secondary sources and experts.[2]

To make sure that the estimated results were reliable, the study also conducted a series of intensive interviews with a few population subgroups to estimate the prevalence rates for each. Moreover, the comparison of our results with previous studies also confirmed that the estimated prevalence rates were consistent. The accuracy of our results is estimated at 68 percent, quite low because of the high variation in the number of addicts from each sample subgroup (see Table 1).

DATA COLLECTION

The following sample frame was used to approximate the Thai population. First, provinces were listed as either Southern, Central, Northern or Northeastern. Within each regional category, provinces were ranked on three dimensions: the ratio of heroin addicts to the total patient population, the ratio of heroin addicts to the total prison population, and the ratio of addicted persons among the total of all apprehended persons.[3] All three rank orders coincided.

Next, three provinces were chosen from each region: the largest, the smallest, and the median. Seven provinces, however, were included from the Central region: the two largest, the two median, and the two smallest provinces, based on population size, plus Bangkok. In all, 16 provinces were included. We chose seven central provinces because we believe that the provinces closest to Bangkok are more likely to have the highest rates of narcotics abuse. Thus our rationale was similar to the logic used in choosing the 16 population subgroups.

To measure the number of addicts, we used both primary and secondary data collection methods. By using a structured questionnaire, we gathered secondary data from public and private hospitals, temples, police stations, correctional institutes, and government agencies.

For primary data collection, we used the key informant method. The key informant survey was also used among population subgroups with high incidences of drug addiction. The survey period was from January

to June, 1994. Key informants were necessary because of the sensitive nature of the issue. Depending on the quality of the data, we sometimes employed both primary and secondary data collection methods.

MAJOR FINDINGS

Our findings indicate that, in 1993, 2.2 percent of the Thai population were narcotics addicts. When measured purely in numbers of users or by prevalence rate, heroin is not the most serious narcotics problem. Of all Thai addicts, 17 percent were heroin users (Figure 2). This translated into approximately 214,000 persons on December 31, 1993 (Table 2).

Glue and thinner sniffers were the largest group of addicts, with a prevalence rate of 7.04 per 1,000 persons. Marijuana addicts followed, with a prevalence rate of 5.49 per 1,000 persons. Then came amphetamine users at 3.8 per 1,000, heroin users at 3.6 per 1,000, and opium users at 1.11 per 1,000 (Figure 3). The incidence of Thai drug addicts per 1,000 population, therefore, varied from 7 for glue inhalers to 3.7 for heroin addicts, and 1.1 for opium addicts.

As for occupational categories, truckers, tuk tuk drivers, fishermen (especially those aboard fishing boats with longer-term voyages), and bus drivers all had alarmingly high prevalence rates (Figure 4). We estimate that 56 percent of truckers are users, with amphetamines the drug of their choice. Tuk tuk drivers and fishermen are more likely to use heroin, with prevalence rates of 411.19 and 304.67, respectively. Bus drivers are also highly likely to abuse narcotics with a prevalence rate of 288.41 per 1,000.

When results are examined by region, several interesting facts emerge. First, both rich and poor regions appear to have similar prevalence rates (Figure 5). Prevalence is highest in the Central region, at 24 per 1,000, yet there are large numbers of addicts in the Northeast, 24.26 per 1,000, as well. Poorer regions are more likely to have glue addicts—12 addicts per 1,000 persons in the Northeast, while the richer regions, Central and Bangkok, suffer from amphetamine and heroin abuse. The North and the South have the highest incidences of marijuana use (see Figure 6).

Within the province of Bangkok, the highest rates of abuse are found in the following groups: construction laborers (especially amphetamines), slum dwellers (especially heroin), and prisoners (especially heroin). It must be noted, however, that prevalence rates can vary greatly between different slum areas. Amphetamine and heroin abuse have the highest prevalence rates in Bangkok province, 6.3 per 1,000 persons and 8.3 per 1,000, respectively.

One should not, however, put too much emphasis on regional comparisons and the overall drug problem because discrepancies are most likely a result of intervening variables. The high rate of heroin addicts in Bangkok is understandable as it is the country's most active heroin market. In Bangkok, addicts have easy access to cheap heroin. The problem of glue sniffers in the Northeast probably reflects the social problems caused by the large outflow of migrants seeking temporary jobs elsewhere, leaving their children at home. Besides the Central Plain, Bangkok also has very serious problems of amphetamine use. Both regions have large construction and transportation sectors where employment is usually based on piece-rate remuneration. This wage system seems to encourage drug abuse.

POLICY RECOMMENDATIONS

Our information on the number of drug addicts will be more useful for drawing up drug prevention and enforcement policies if backed up by time series data. One of the policy recommendations, therefore, is that ONCB should estimate drug addicts on a yearly basis by adopting and modifying the methods used in this study. As ONCB has already carried out regular surveys of drug addicts, it only needs to make some changes in its surveys and train its officers in the new estimate methods. In future, the following tasks should be carried out by ONCB:

First, the Board should gather information on the size of various population subgroups. In this way estimates of the total number of addicts can be derived from analyzing the incidence rates and the

population at risk, rather than from the average number of drug addicts per place (i.e., per fishing boat, per temple, etc.) and the number of places. Second, the reference date for future estimates should be either July 1 or April 1, both better than our reference date of December 31. December 31 coincides with a holiday period and thus typical behavior may be temporarily altered. Third, future studies should increase the sample sizes in some population subgroups known to have high variations in the number of addicts, particularly slum dwellers.

Fourth, ONCB should establish a database system so that a time-series estimate of drug addicts can be systematically carried out. The data should be gathered at the provincial level and should also be broken down by sex and age. This system requires technical training for ONCB personnel, redesigning the system and questionnaires for data collection, careful identification and evaluation of key informants for different population subgroups, and so on.

Finally, after a few years of carrying out such estimates, ONCB should design a model to determine the econometric relationship between the number of Thai drug addicts and national socio-demographic-economic factors. Such a model should allow our nation to obtain quick, more economical and reliable estimates of the number of Thai drug addicts.
