

**NAE**

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Narcotics Awareness and Education Project

**DRUG ABUSE APPLIED  
RESEARCH AND  
TECHNOLOGY TRANSFER  
IN DEVELOPING COUNTRIES**

*By  
Henry Kirsch*

The Narcotics Awareness and Education (NAE) Project is designed to strengthen the capabilities of Lesser Developed Country (LDC) institutions to design, implement and evaluate effective drug awareness and prevention programs. The project focuses on drug demand reduction through public awareness and education. Key to the overall project strategy are activities that: generate an understanding of the nature and extent of drug abuse in a given country; develop public awareness of the problem among government policy makers, opinion leaders and the general public and of the importance of implementing comprehensive prevention programs before the drug problem gets out of hand; and assist in obtaining the support of key national leaders and institutions to develop and effectively implement national prevention strategies. Among the technical support services involved in the project strategy are technical assistance, training, research, information dissemination, and policy dialogue.

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## PREVENTION PROGRAM STRATEGIES IN DEVELOPED COUNTRIES

After almost three decades of drug abuse prevention programming in developed countries, one of the most important conclusions to be reached is that no single strategy has demonstrated long-term impact. A close corollary that has gained increasing recognition in recent years is that it is a mistake to pursue any single strategy as a solution. On the contrary, a consensus has begun to emerge among prevention specialists favoring a much broader view of prevention than characterized past approaches, focusing on social, cultural, political and legislative aspects of prevention - the environmental issues that have always been an element of the drug abuse problem - as much as on the individual (Flay and Petaitis, 1991). Recent analyses of research on drug use and other problem behavior of children and youth, combined with the experimental programs developed to test new theoretical approaches have drawn attention to the key areas of the family, the peer group, the school and the community as appropriate settings for prevention efforts. The implication is that prevention programs must attempt to affect all these areas, and not just one or another (Hawkins et al. 1986, 1987). Research on the impact of prevention programs in developed countries and a growing appreciation for the complexity of the problem has provided support for this broader view of prevention strategies with its reluctance to rely on a single strategy or approach; focusing instead on an integrated, comprehensive approach affecting different aspects of the political, social, and cultural environment, in addition to the individual.

In practical terms, this more comprehensive approach to prevention seeks to address the individual and the social environment in which the individual makes decisions about lifestyle and health issues. It postulates that the individual needs to be provided with the best possible skills to negotiate a hazardous environment. Efforts must also be stressed to make the environment itself less hazardous. As the environment becomes less hazardous, the skills become more potent and mastery of the environment increases. This view of prevention calls upon the policy-maker and the prevention worker to plan with each other in mind. It calls upon them to focus on individuals but only as individuals exist in broader settings such as the school, family, peer group, and community (Bernard 1991).

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## **APPLIED RESEARCH AND TECHNOLOGY TRANSFER TO DEVELOPING COUNTRIES**

Within the international context, many past attempts to transfer technology for the design and implementation of prevention strategies from developed to developing countries have suffered from certain deficiencies. Among these has been a lack of sensitivity to the fact that the social reality of drug abuse varies not only from country to country, but among different population groups and social strata within a country. Almost inevitably efforts to simply "import" prevention programs from developed countries for adoption in the third world have failed. The characteristics and dimensions of the problem cannot be assumed to be similar among the upper strata of metropolitan areas and those living in urban situations of social marginality, nor between communities with differing historical and cultural traditions within a single country. Unfortunately, numerous instances do exist of attempts to transfer programs to developing countries, as well as of policy decisions made in these countries, which are not informed by an empirical data base but stem from considerations of political expediency and the availability of external funding. (Carlini, 1990; Gureje and Olley, 1992). The results are often seen in the development of materials and messages that are irrelevant, incredible or unacceptable to the target groups or worse, serve to whet their curiosity to experiment with drugs (Carlini and Rosemberg, 1991).

However, policy-making and program definition involve a process of strategic planning. Any process of strategic planning requires a clear definition of the objectives to be reached, the means to be used to achieve those objectives and the measurements that will be employed to determine if both the process of achieving the stated objective is going along in a satisfactory fashion and if in fact the objectives are being met. Both a policy maker and a prevention program manager's first concern, then is to define the problem that is to be addressed. The sort of policy to be adopted and the programs to be undertaken depend on a clear understanding of the nature of the problem within the specific social context in which it occurs (Jutkowitz, 1992; Gorman, 1993).

It is for these reasons that a necessary element of any international cooperation between developed and developing countries is a collaborative effort to undertake applied research in order to first gather an understanding of the nature and extent of the drug abuse problem with the developing country. Information is required on the types of drugs that are being abused, the principal groups at risk for drug abuse reflected in part through the current patterns of those using drugs and the other risk factors that appear associated with patterns of drug abuse in a specific social context. In order to design effective prevention efforts at the national, state and local levels this requires careful and scientifically valid research into such questions as drug prevalence of specific populations, patterns of their drug abuse, cultural norms and those environmental factors which are of significance in shaping drug abuse at the community level.

From the perspective of an integrated approach to prevention, it is essential that the diverse sets of specific conditioning factors that exert a significant influence on people's beliefs, attitudes, opinions, choices and behavior in terms of drug abuse are addressed through appropriate research from the outset.

One set of these factors has to do with economic and social deprivation as well as the vast social and economic disparities common to many developing countries. Indicative of these situations are abandonment of school by children at early ages, high rates of unemployment and underemployment, urban marginality, highly concentrated and inequitable patterns of income distribution, social fragmentation and segmentation.

Another set concerns social change. All societies are in constant transition. In developing countries, however, the shifts are often more pronounced and the contrasts more poignant. Social, economic, political, and technological changes over the last three decades have had a significant impact upon such basic social institutions in developing countries as the family and the community. In many countries both family and community have become much more fragmented for vulnerable social groups, resulting in breaks in the naturally occurring linkages among the social systems; linkages that provide support and nurturance to individuals and create opportunities for them to participate meaningfully in their society. Children and youth, who live in communities suffering deteriorating social conditions where there is little hope for a better future, are more at risk for alcohol and other drug abuse later on.

Exposure to drugs is increasing often as a result of these changes. In many developing countries, demographic pressures often combined with famine, drought, civil war and abject levels of poverty are forcing millions of people out of their isolation in rural areas and into large cities where they soon become aware of a range of drugs previously unknown to them. Word of a drug that has acquired popularity somewhere can spread quickly almost everywhere in an urban environment.

### **EXPERIENCE OF THE NARCOTICS AWARENESS AND EDUCATION PROJECT OF THE UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT**

In recognition of these conditions, the United States Agency for International Development in collaboration with local agencies and organizations under the Narcotics Awareness and Education Project (NAE) of AID's Office of Education - Research and Development Bureau and predecessor projects of AID has undertaken an applied research technology transfer program over the last six years to assist host country institutions in the development of drug awareness and education programs in countries throughout Latin America, the Caribbean, South and South East Asia.

NAE project strategies include:

- strengthening host country institutional capabilities at the national, state and local community levels;
- building partnerships between public sector agencies and organizations representing civil society for the development and implementation of prevention plans; and
- training of trainers and community outreach practitioners.

These strategies are based upon an applied research agenda designed to improve the knowledge base for program design, implementation and evaluation through a variety of research techniques tailored to local needs and budgetary resource availability (Kirsch, 1992). These include:

- drug prevalence and knowledge, attitude and behavior (KAB) surveys, opinion leader, key informant, ethnographic and epidemiological tracking methods for effective planning, program design and evaluation,
- rapid assessment techniques including small scale surveys and focus groups for educational materials development social marketing and community-based program design and monitoring, and
- operations research to assess the impact of program efforts and to draw lessons learned in order to further test and refine methodologies.

## **APPLICATION AND TRANSFER OF QUANTITATIVE AND QUALITATIVE RESEARCH METHODS**

Wherever possible, the initial key research component used at a national level has been the conduct of a probabilistic representative sample survey. This is really the only approach with sufficient scientific rigor to measure drug abuse prevalence in specific populations and to permit valid generalizations to the population sampled. Project staff have trained and worked with host country researchers in a number of developing countries to conduct drug prevalence surveys using instruments derived from a proven standardized design in terms of its major variables. In all cases, prior to field work the instrument was reviewed by local specialists and pre-tested with a view to assuring that the language used and the substances studied corresponded to the culture and to the current understanding of drug availability in the host country.

The purpose of this effort has been to define the nature and extent of the drug problem in order to identify the magnitude of the drug problem in each country, the psychoactive substances that are of greatest concern and the groups at risk for drug use.

Such information has been used to define the types of national prevention programs that are required and the appropriate target groups of those programs. To date the NAE project and its predecessor projects in Latin America have worked with local agencies and organizations to undertake such surveys in Bolivia, the Dominican Republic, Haiti, Guatemala, Panama, Paraguay, and Peru (Jutkowitz, 1993). In South and South East Asia, surveys have been undertaken with the assistance of another AID predecessor project in Nepal, the Philippines, Sri Lanka and Thailand (Bhandaria and Subba, 1992; Mendoza and Ponce, 1992; Sri Lanka Anti Narcotics Association, 1991; Tanskul, 1990)).

However, probabilistic survey research into drug abuse is not the only form of research appropriate to understanding the nature of the drug abuse problem. Indeed, the purpose of national household and school surveys has been to measure use in broad segments of the general population. This method has certain strengths and limitations in its appropriate range of use. Its limitations are quite apparent for those segments of the population who cannot be located in

households or schools such as the displaced homeless, school dropouts, street children, etc. Quite different approaches are required to reach these groups, sometimes referred to as "hidden populations" despite their obviously high visibility in the urban areas of both developed and developing countries.

In addition, cultural differences, even within a small country, result in different beliefs and practices regarding many behavioral issues as well as different reactions to social change. Moreover, specific ethnic and social groups change at different rates. The complexity of behavior needs to be addressed and a change in behavior may require the target population either to modify an existing pattern or to learn a new one. In either case program designers need to understand the full context in which a new practice or set of practices will occur. (Lambert, 1990; Dreher, 1982 and 1992).

Use of a set of qualitative research methods has proved effective to investigate the attitudes, practices and social contexts associated with drug use among "hidden population" groups. It has also provided valuable information about a specific culture's perceptions, beliefs, values and behaviors - and the meaning it attaches to them (Feldman, 1990).

In order to meet the needs of these population groups, the NAE project has provided training to counterpart organizations in various countries to undertake ethnographic research. Within the NAE Project to date use of ethnographic methods has proved effective in developing an understanding of patterns of drug abuse among addict populations in Nepal (Youth Vision, 1992) as well as among street children in Bolivia (Alcatraz, 1993).

### **RECENT APPLICATIONS OF TECHNOLOGY TRANSFER: RAPID ASSESSMENT PROCEDURES FOR THE DEVELOPMENT OF EDUCATIONAL AND SOCIAL COMMUNICATION PROGRAMS**

During the course of the last year, the NAE Project has developed specific rapid assessment procedures in training drug abuse prevention staff in the design, implementation and evaluation of drug abuse prevention communication and education programs. The decision to do this was made in recognition of resource constraints and the lack of adequate information with which to design programs and develop materials especially at the local level.

National prevalence and KAB surveys often not exist for many developing countries. In those cases where data do exist, they may not provide sufficient information at the city, state or provincial level for decision-makers to plan effective preventive education and communication programs. In many instances, budgetary resource constraints simply do not permit policy makers and program managers the option of conducting an extensive probabilistic survey.

This situation is by no means limited to the field of alcohol and other drug abuse. For reasons of planning, evaluation and cost, rapid collection procedures have gained popularity. In the last few years, interest for collecting program planning and evaluative information that is obtained quickly and is reliable has been growing in a number of developmental areas, especially in the health and education fields (Rifkin, 1992; Scrimshaw and Hurtado, 1987). Another important aspect, however, is the focus on the participation of the community in the information gathering process. In the health field, this interest stems from the promotion of primary health care in

which community participation is seen as the key. In the field of drug prevention, the interest is closely linked with the application of the community promotor model and the coalition building process as communities are mobilized to take ownership of the prevention program.

The NAE Project rapid assessment procedure was designed to fill the need, quickly and inexpensively, for programmatic information that is not otherwise available or likely to be obtained for a specific community because of resource or other constraints within a sufficient timeframe needed for key program decisions to be made.

This technology transfer involves the application of quantitative and qualitative research methods to generate information on population groups at risk and the subsequent application of the data to guide the design of comprehensive communication and educational programs and the development of prevention materials. The training workshops range from five to ten days depending on the scope of the participants program needs. The approach involves intensive training in the use of focus group discussions and KAB (knowledge, attitude and behavior) surveys at the community level to gather baseline data needed to develop prevention communication strategies, messages and materials. Computer training was included and involved the use of EPI INFO, an integrated software package for designing survey questionnaires, entering data, and conducting statistical analysis of survey results.

This training has been undertaken since July 1992, in Asunción, Paraguay; Fortaleza, Brazil; and Monterrey, Mexico. Taking part in the workshops were seventy-three participants representing both governmental and non-governmental organizations engaged in drug abuse prevention programs at the national, state and local levels in these countries. Participants have been program managers and drug abuse program staff coming from a wide variety of disciplines. Many are psychologists, psychiatrists, physicians, educators, social workers and communications specialists.

An experiential learning methodology through participant exercises was employed through these workshops. Work groups were set up in such a way that teams would use the exercises to work on their own projects with real baseline data sets rather than on simulated case studies.

Participants first conduct a KAB survey in schools and neighborhoods located in communities where the level of community environment risk factors has been previously identified to be high. These risk factors include concentrated poverty, socio-economic marginality, community disorganization, violence and availability of drugs. During the training workshops the sample used was non-probabilistic and its results cannot be generalized to the entire population of the city under study. However, by the nature, design and number of respondents among homogeneous social groups where a significant number of community risk factors had already been identified, the results are suggestive of the characteristics of the problem and the extent of vulnerability of the population being studied. It was also significant that responses in terms of knowledge, opinions and attitudes expressed by those interviewed in one municipality of Asunción in mid-1992 closely mirrored the results of the national prevalence and attitudinal survey conducted one year before in Paraguay (Proyecto Marandu, 1991). In addition, training included methods to develop a quota sample of houses selected at random by city blocks or classes at schools which is easy for the agencies and organizations to undertake for future work.

provides a reasonable chance of eliminating bias and covers wider geographic areas. An example of applying such a sampling technique to youth between the ages of 12-24 should provide a reasonable random sample of the age group selected.

The questionnaire probes media preferences, knowledge, attitudes, opinion and drug use behavior. The questionnaire employed was developed from questionnaires used in previous KAB surveys undertaken in other countries and pre-tested either prior to or during the workshops to assure that the language used and the substances studied corresponded to local culture and local drug availability. Participants undertook the field work, did the data entry and analyzed survey results using the EPI INFO software package.

Workshop participants were then trained in the conduct of focus groups among members of their target audiences to pre-test messages and materials which they then used in their own projects.

In summary, this rapid assessment technique employs two different methodologies: one qualitative, the other quantitative. The technique is a two-pronged approach to collect information and gain firsthand insight into the knowledge, attitudes, feelings, beliefs, values, language and behavior at the community level. One line of inquiry requires the conduct of focus groups in which the interaction of respondents generally stimulates richer responses, and allows new and valuable ideas to emerge and generates hypotheses with which to guide program design process.

The other approach is through the rapid conduct of a survey using a sample from the target population. Both approaches are combined and oriented toward the collection of data for program planning, implementation and evaluation. Although the methods are designed to be quick, they do not have to be "dirty" in the sense of providing unreliable information. Care is emphasized in the design and pre-testing of questionnaires for reliability and validity, as well as training of field interviewers, supervision, data cleaning, coding, and entering to ensure that the data although obtained quickly, are accurate.

To date use of this rapid assessment approach has taken place in four cities in three countries: Monterrey and Ciudad Juárez in Mexico, Fortaleza, Brazil; and Lambaré, a municipality in Asunción, Paraguay. Figure 1 shows the main characteristics of the surveys. The surveys were of two types: community and school-based. During the training workshops the numbers of persons interviewed varied from 100 to 155. Community-based surveys were face-to-face interviews which sampled persons 13 years and older; generally students aged 13-18 were sampled in the school-based surveys which were self-administered.

## **MAIN FINDINGS OF SMALL SCALE SURVEYS**

At this point, we will examine some of the key findings of the surveys in terms of knowledge, opinions, and attitudes expressed by adolescents from 13 to 18 years of age. The survey asked about the knowledge which those interviewed had about the dependence forming capability of a series of psychoactive substances. This was done to elicit information on perceived levels of risk which might indicate either misinformation or simply lack of information on the nature of a substance. Figure 2 shows that in general, young people in Fortaleza seem to have a greater

**Figure 1: Characteristics of Small Scale Surveys Used in Rapid Needs Assessment Training**

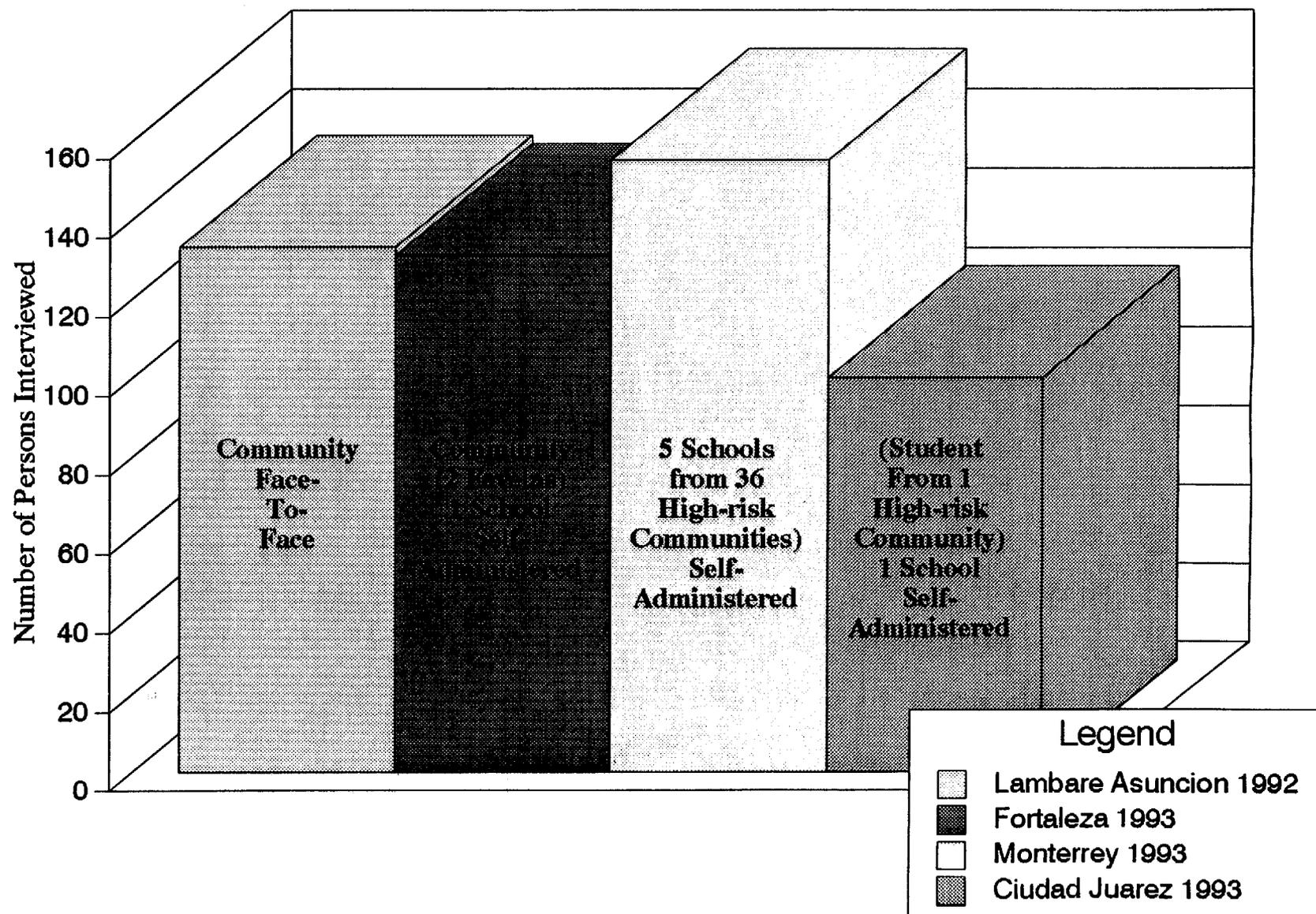
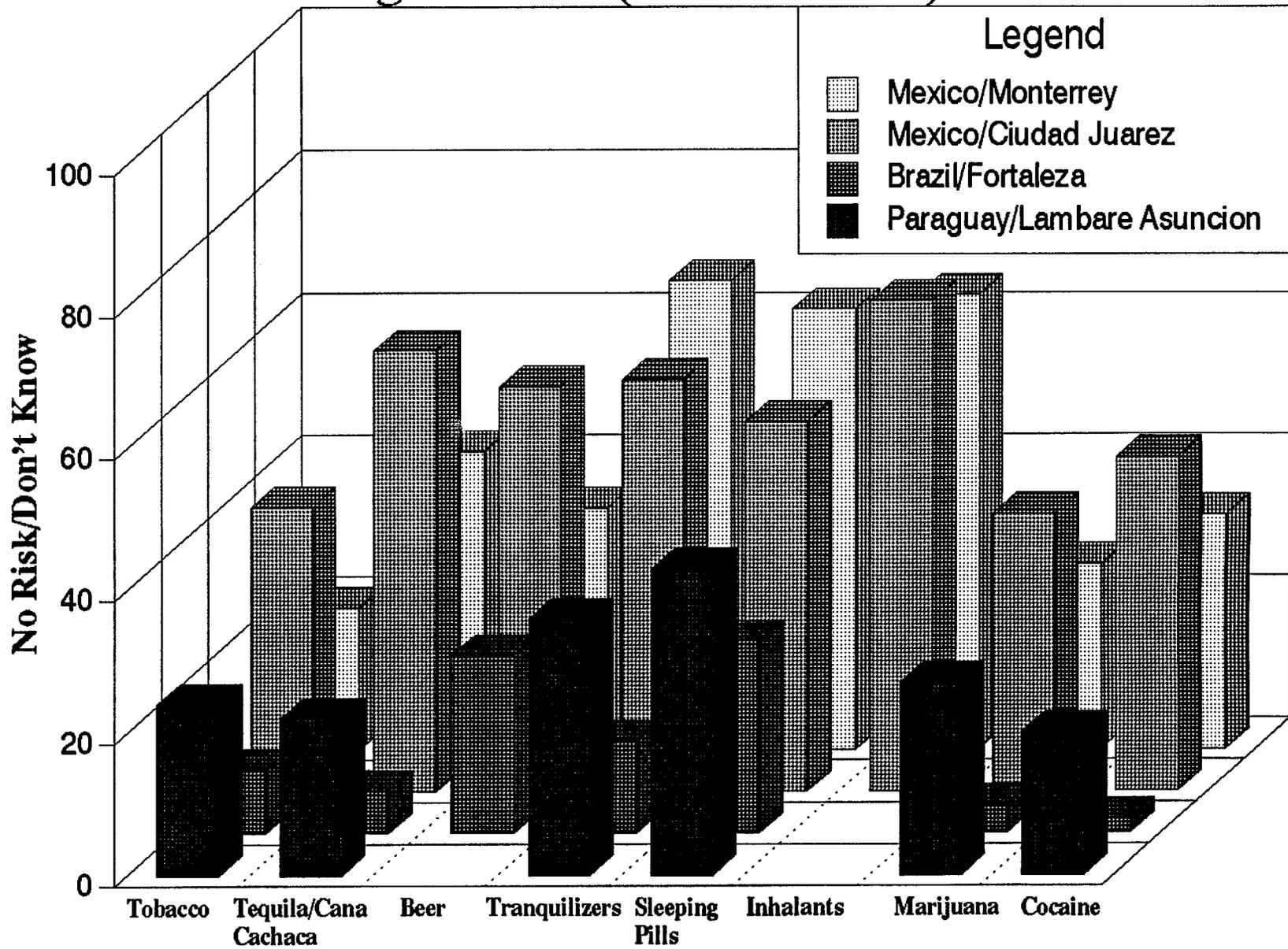


Figure 2: Perceived Risk of Becoming Dependent on A Substance through Abuse (Values in %)



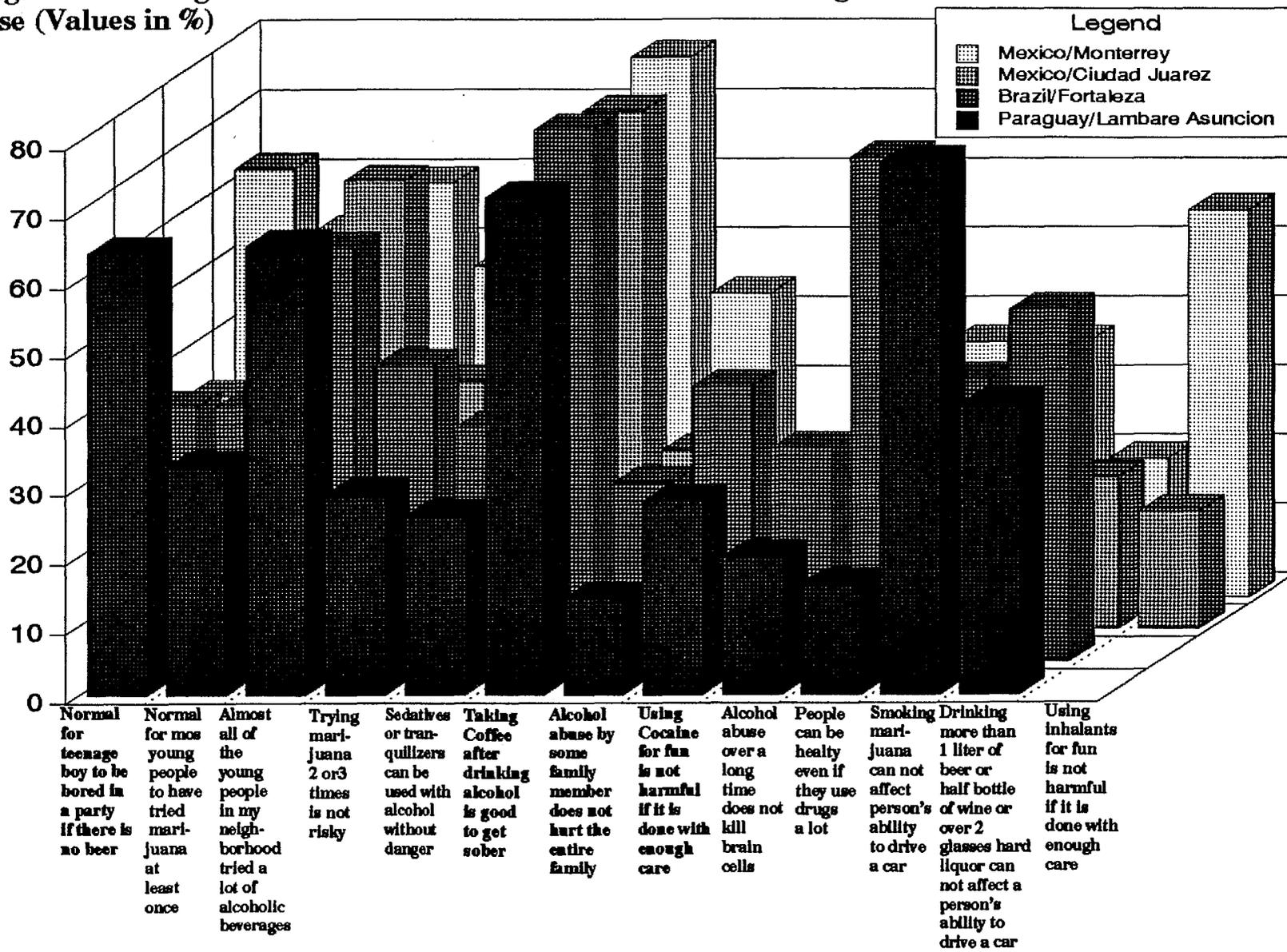
degree of knowledge of the risk of addiction than those in Asunción, Monterrey and Ciudad Juárez. However, the overall misinformation that the abuse of beer does not lead to addiction is common, ranging from one-quarter to over half of the respondents. The lack of knowledge of the addictive potential for tobacco in the Mexican cities and in Asunción is also striking as is that for hard liquor such as tequila and caña. The lack of perceived risk of addiction to marijuana and cocaine at first might be considered to be through lack of familiarity with these substances were it not for the fact that significant percentages of respondents both in the survey and in the focus groups reported knowing persons in their cities who used these substances (see Figure 8).

The survey studied beliefs and perceived behaviors linked to the use of psychoactive substances among young people between 13 and 18 years of age (Figure 3). For this purpose value statements were presented to this group for rating on a Likert-type scale ranging from: strongly agree, agree, indifferent, disagree, strongly disagree. If the global answers to most of the questions are considered regarding what is normal in the use of the so-called "gateway" drugs, combined use of sedatives and tranquilizers with alcohol, impaired ability to drive a car after using marijuana or drinking large quantities of alcoholic beverages, use of inhalants, marijuana and cocaine, it may be concluded that approximately one-third to more than one-half of the respondents in the four cities do not have a clear idea about the risks, ignore them, or otherwise underestimate these risks. Both males and females share these response rates.

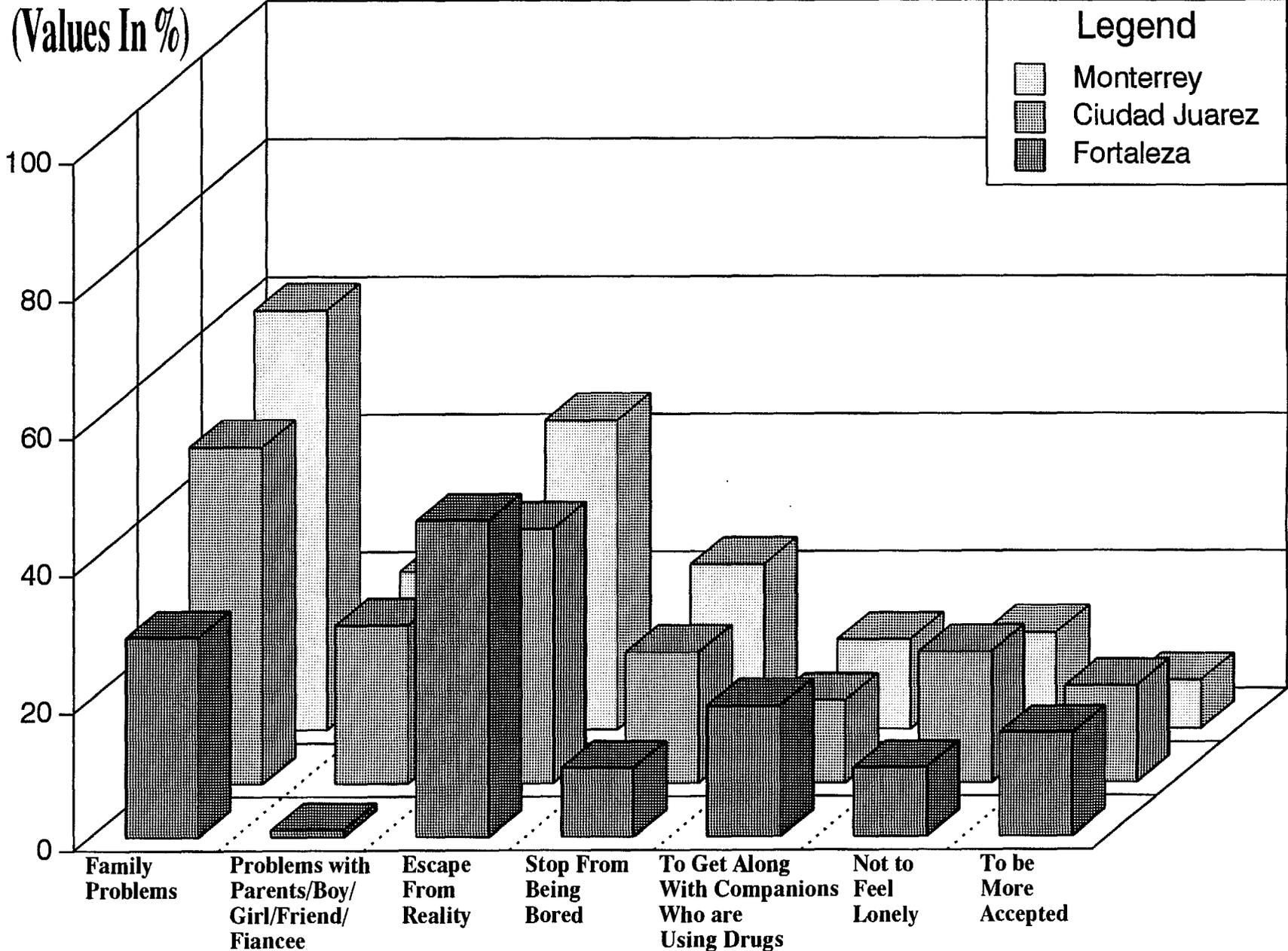
In an attempt to gain some insight into some of the major risk factors which existed in the surveyed communities, respondents were asked about the two most important reasons they believed people had for using drugs. Figure 4 shows that from 30% of the teenagers surveyed in Fortaleza to over 60% in Monterrey felt that family problems were at the root of the problem. This risk area increases when one includes specific problems with parents and problems with boy and girl friends and fiancée. To escape from reality is the second problem area mentioned by between 37 to 46% of respondents. But what reality is this? Focus group discussions buttressed by observations made by local prevention and treatment specialists targeted the social stresses placed upon young persons by conditions of family poverty, alcoholism and violence in the family circle, unemployment, community disorganization, and an absence of hope for the future. The program implications of these findings strongly suggest the need for integrated programs in schools, primary health care services, and community action groups targeting children from an early age but with an outreach program whose primary focus is the family.

In a further attempt to identify message areas for a preventive education and communications program, respondents were asked what were the two most important reasons they believed people had for not using drugs (Figure 5). By far the most important reason given was the perceived risk to physical and mental health. Closely related to this was the response relating to fear of the effects it may produce. In the small scale surveys, a number of respondents also believed that an important reason why persons did not use drugs was the belief that it lead to family problems. Other significant responses involved the fact that it was a crime, lead to problems with police, causes addiction and affects performance at work and at school. Taken together, this constellation of beliefs provides valuable insight for program designers as they identify target audiences, develop messages and materials and seek ways to mobilize community action.

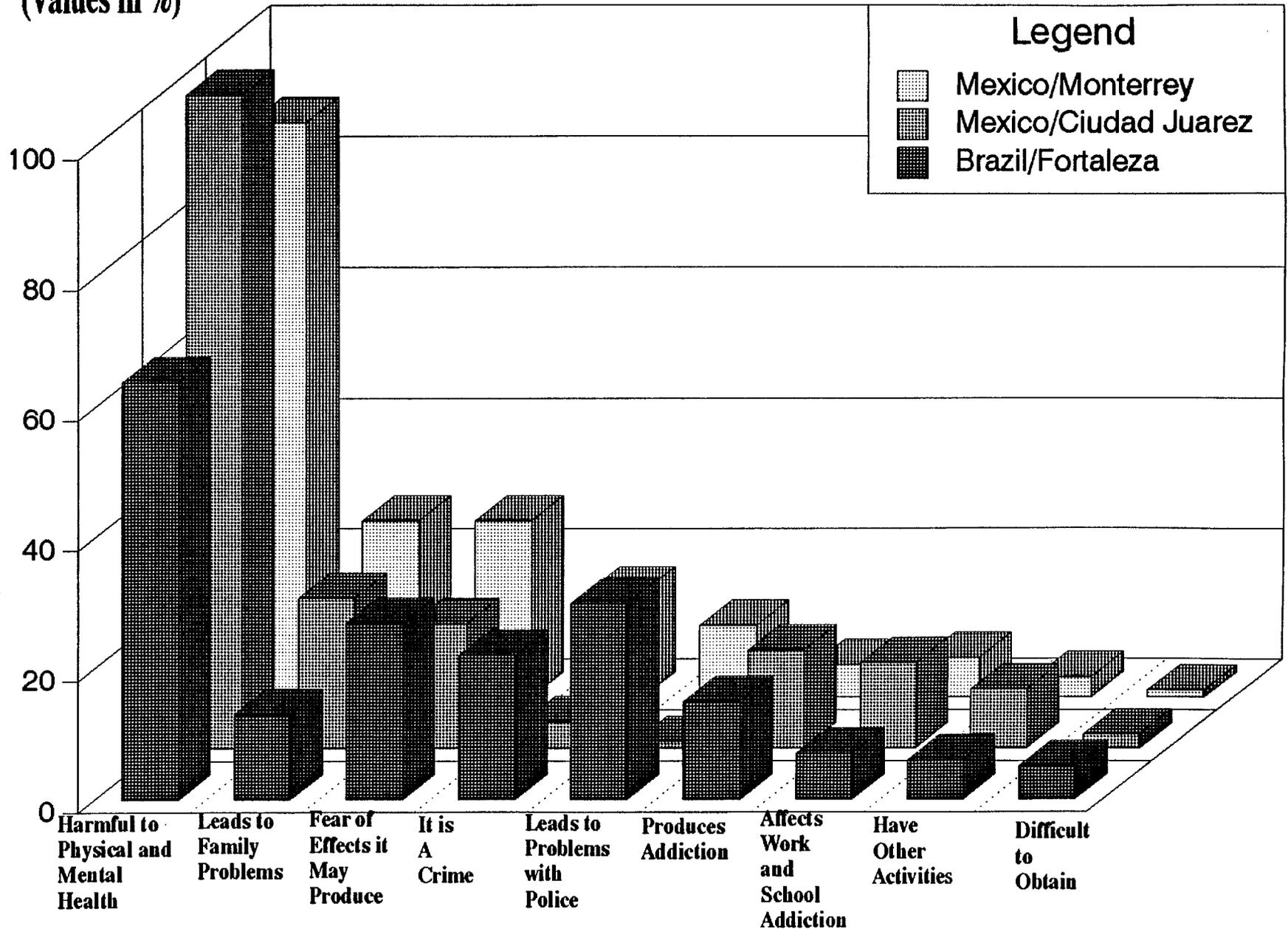
**Figure 3: Teenagers' Attitudes Towards Alcohol and Other Drug Use (Values in %)**



**Figure 4: Which Are The Two Most Important Reasons You Believe People Have for Using Drugs?**



**Figure 5: What Are The Two Most Important Reasons You Believe People Have for Not Using Drugs?  
(Values in %)**



The surveys also attempted to investigate exposure to certain drugs within the community (Figure 6). In all four cities in mid-1992 and in early-1993, inhalants, marijuana and cocaine were available and were being offered to teenagers (Figure 7). This information was also corroborated through spontaneous information provided by participants in the focus groups.

## **FROM APPLIED RESEARCH TECHNOLOGY TRANSFER TO ACTION**

The results of the quantitative and qualitative research were put to direct application. The training in Asunción resulted in the development of an integrated communications program employing mass media and interpersonal communications. Radio public service announcements in Spanish and Guaraní, TV spots, posters and pamphlets were designed, produced and distributed; and a community mobilization program was initiated. Plans call for use of focus groups to monitor reception and acceptance of the messages and a second wave of the survey instrument to assess the impact of the communications and mobilization campaign.

In Monterrey, educational materials were developed for use especially in Monterrey and Ciudad Juarez. Participants who came from three other cities in Northern Mexico applied these techniques upon their return.

In Fortaleza, the results of the training in these rapid assessment procedures served to mobilize both state secretariats and organizations representing civil society, to form a state commission which has already prepared the draft of a comprehensive, integrated drug control plan and has launched a state-wide key informant research effort as an initial step in its planning process.

In summary, the NAE Project rapid assessment procedure was designed to fill the need, quickly and inexpensively, for planning and decision-making information that is not otherwise available or likely to be obtained for a specific community because of resource or other constraints for key program decisions to be made in a timely fashion. Another key consideration is that the information gathering process be closely linked to a participatory process in which communities identify for themselves what their unique risk factors and needs are.

Properly combined, such an applied research effort initiates a process of seeking new alternatives for action through the creation of new partnerships and the strengthening of coalitions among broad groups of individuals and organizations which are mobilized to take ownership of the prevention program. As participation in prevention processes expands to include the multiple systems and strategies, referred to at the outset, the settings in which those activities occur also broaden. The prevention constellation encompasses as many settings for employing appropriate prevention strategies as the community has to offer. From this perspective one of the more important benefits which may be derived from this transfer of technology will be to assist not only in the prevention of drug abuse, but as a contribution to broader-based health and social improvement.

**Figure 6 (Values In %)**  
**How Many Persons Do You Know Who Use**

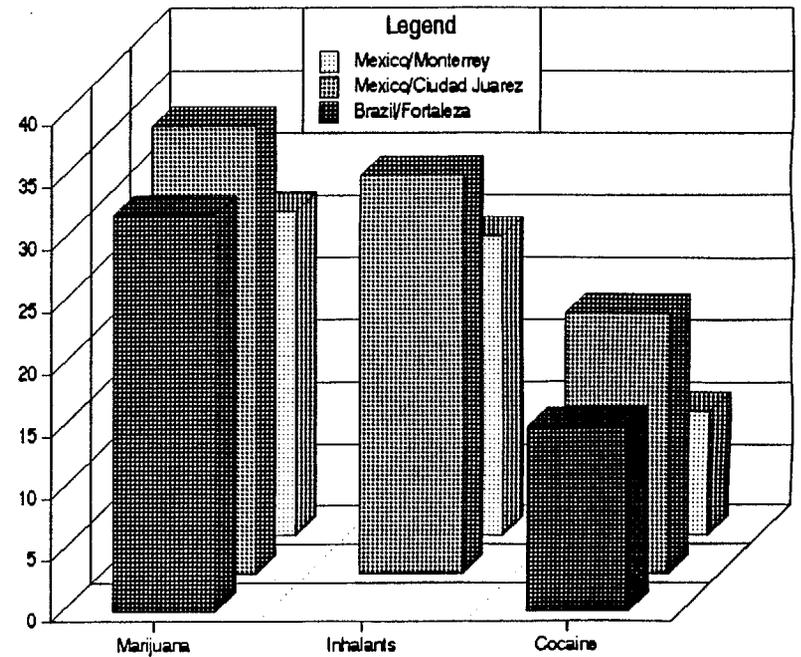
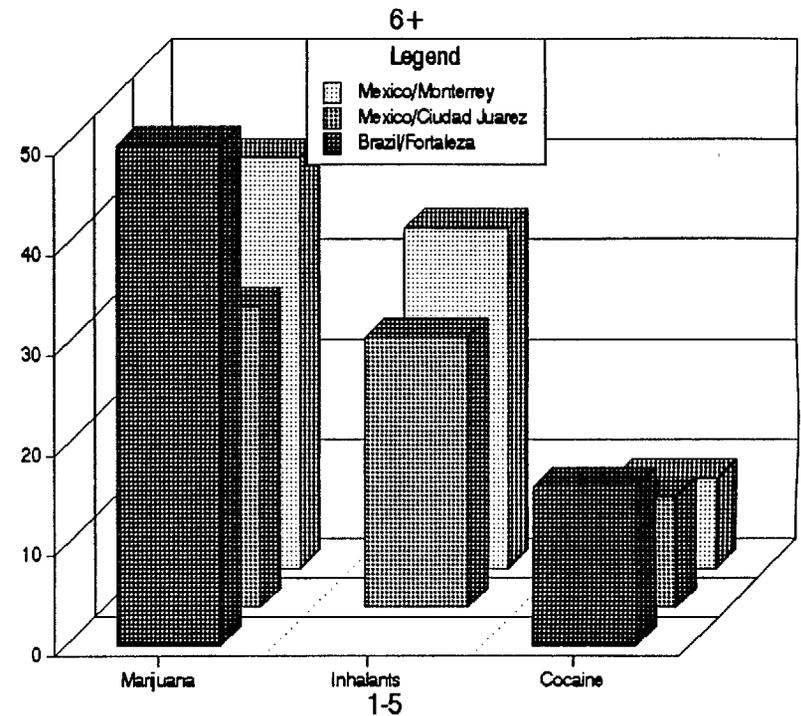
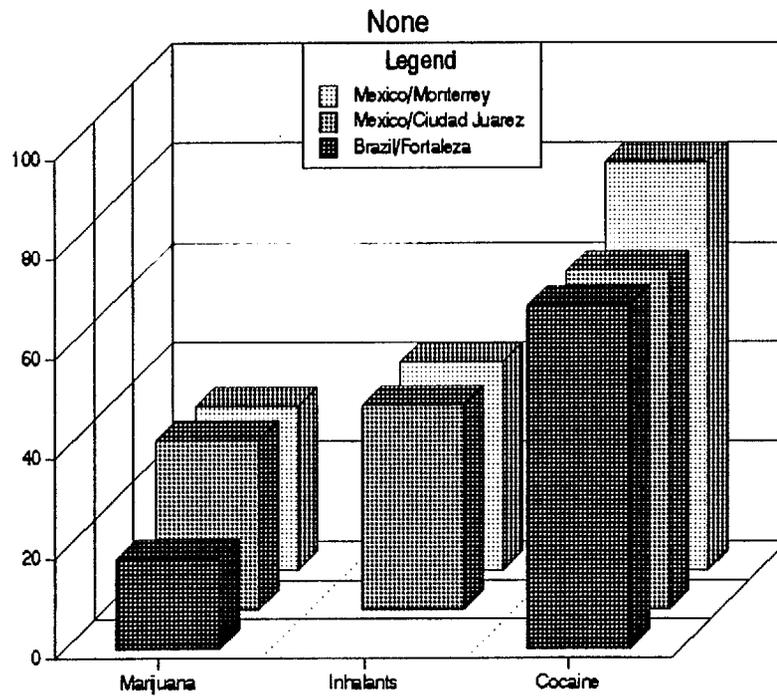
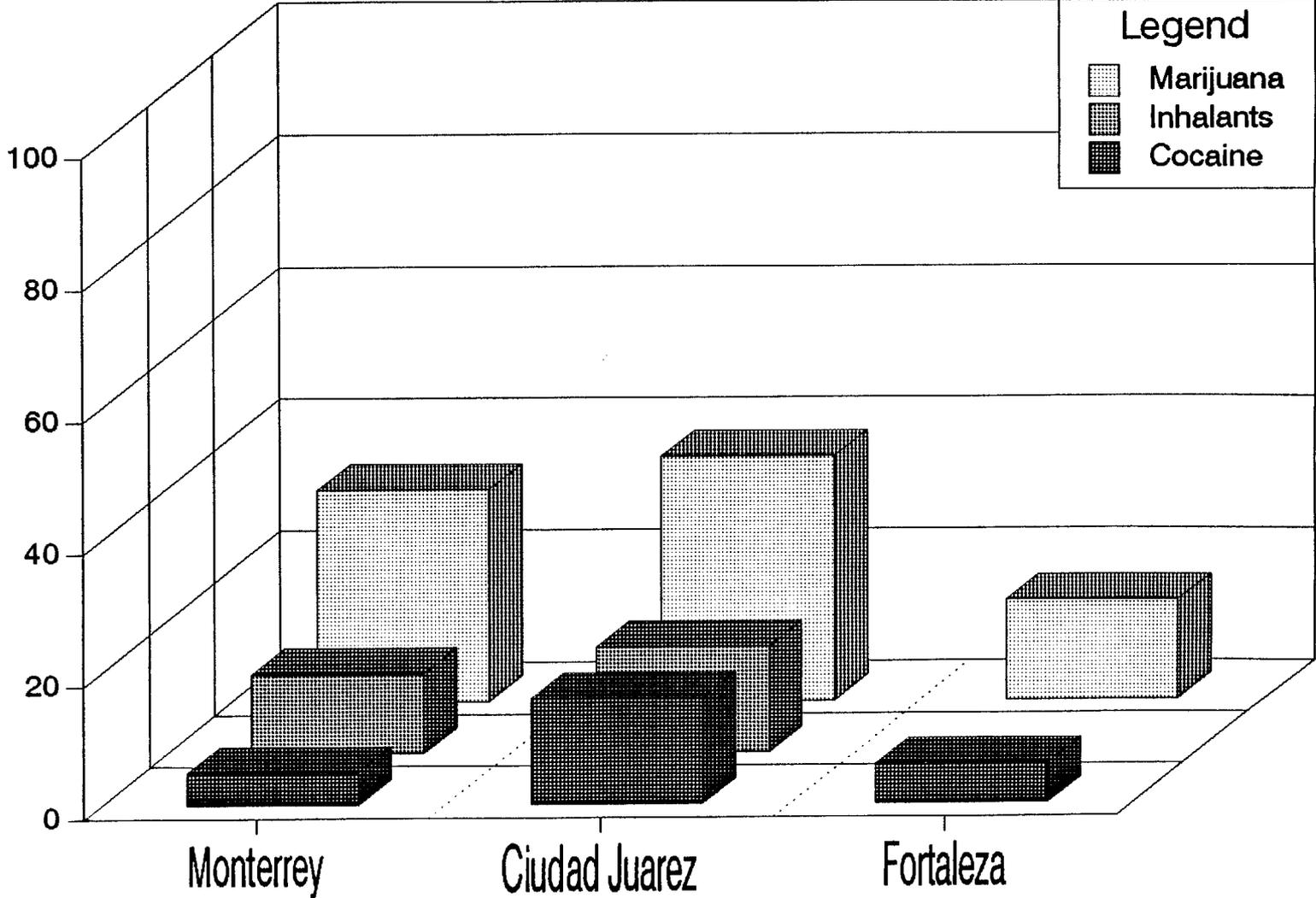


Figure 7: (Values in %) Has Anyone Ever Offered You:



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