ABSTRACT

Objectives. This study represents a continuation of the work initiated by the “Social Transition in the North” (STN) project. This research extends the findings from earlier reports, specifically focusing on comparisons of drug-taking behavior among Alaska and Siberian Eskimos; it is one of the first studies that obtained substance abuse data from Russian Natives in eastern Russian.

Study Design. The data were taken from the STN study was collected in two regions of Alaska (Northwest Arctic and the Aleutian Islands) and in two regions of the Russian Far East (Kamchatka and Chukotka). The health questionnaire included questions about the drug taking behavior of the study populations.

Methods. The methodology employed was responses to a questionnaire, administered by the initial Social Transitions team. Imbedded in the interview protocols were questions (in a quantitative format) that inquired about drinking and other drug use. Seven-hundred interviews, conducted the first year, formed the database for the findings reported herein. Of these respondents, 45% are Alaska Native; 55% are Russian Natives. Ages ranged from 13 to 60, with a mean of 38 years. Among the Alaskan group, 35% were male, 65% female; of the Russians, 25% were female, 75% were male.

Results. The Russian cohort consumed significantly higher levels of alcohol, while the Alaskan group reported higher levels of marijuana, cocaine, inhalants and chewing tobacco.

Conclusions. The differences found were attributable to cultural practices, reflected by the traditional drinking practices in Russian and to the rising substance abuse problem in the U.S. (Int J Circumpolar Health 2007; 66(1):71-76)

Keywords: drug-taking behavior, Alaska Native, Russian Native
INTRODUCTION

The “Social Transition in the North” (STN) project, funded by the National Science Foundation (NSF), was a “comparative study of social and economic change in two regions of Alaska (Northwest Arctic and the Aleutians) and in two regions of the Russian Far East (Kamchatka and Chukotka), as reflected in health and family relationship characteristics, as well as by indicators of individual or collective well-being” (1). The study specifically sought to “better understand the causes and effects of demographic, epidemiological, and domestic transitions in Alaska and Far East Communities (2). This paper extends the findings from earlier reports (2), focusing on comparisons of drug-taking among Alaska and Siberian Eskimos. It should be noted that this is one of the first studies that obtained substance abuse data from Russian Natives in western Russian (the Siberian Coast).

MATERIAL AND METHODS

In 2004 Mason (1) and Means (3), in a prior summary of the STN research, provided a comprehensive overview of the methodology, which was common across the different reports in the first research endeavor (2). Briefly, Sixteen communities--four communities in each of two regions in each country--were selected for the study sample. “The primary methodology employed was a questionnaire (in long and short form), administered over three years using a modified Solomon Four Group approach. The nested panel research design was chosen to maximize validity while using a relatively small sample” (1). Imbedded in the interview protocols were questions (in a quantitative format) that inquired about drinking and other drug use.

Seven-hundred interviews, conducted the first year (1993), formed the database for the findings reported herein. Of these respondents, 45% are Alaska Native; 55% are Russian Natives. Ages ranged from 13 to 60, with a mean of 38±14 years. Among the Alaskan group, 35% were male, 65% female; of the Russians, 25% were female, 75% were male.

Statistical analyses

A sufficient sample size permitted univariate analysis of variance (ANOVA) to be undertaken to test for population differences (Alaska vs. Russian Native) across gender on two drug-related variables -- alcohol and marijuana. Descriptive analyses (Chi Square) were utilized to describe differences in drug-related experiences for smaller sample sized to illustrate differences in drug-taking behavior by region by gender for cocaine, chewing tobacco and inhalants.

RESULTS

Alcohol

Figure 1 shows a graphic representation of the univariate analysis testing for differences in the number of men and women using alcohol in Alaska and Russia. A significant difference was found between subjects (F=15.027, df=3, p<0.001), between national groups (F=34.806, df=1, p<0.001) and between genders across regions (F=11.491, df=1, p<0.001).
As is observable from Figure 1, both Alaska Native men and women reported lower rates for having consumed alcohol compared to their Russian Native counterparts. Both the Alaska Native and Russian Native women reported less drinking than males.

Marijuana

The findings pertaining to ever having used marijuana (see Fig. 2) show a marked contrast to alcohol use, with both Alaska Native men and women reporting much higher rates compared to their Russian counterparts. Statistically significant differences were found between subjects (F=119.686, df=3, p<0.000), between national groups (F=291.487, df=1, p<0.000) and

Figure 1. Estimated Marginal Means of Ever Drink Alcohol.

Figure 2. Estimated Marginal Means of Ever Use Marijuana.
between genders (F=11.135, df=1, p<0.001). It is readily apparent that marijuana use was more prevalent among Alaska Native men and women than among Russian Native men and women.

**Chewing Tobacco**

Table I provides a comparison of self-reports of having used chewing tobacco. The number of Alaska Native men was far higher than their Russian counterparts. However, 3.0% of Russian women reported use of chewing tobacco as compared to 2.7% of Alaska Native women.

**Cocaine**

The findings (see Table II) indicate that no Russian men and women tried cocaine, compared to 34 Alaska Native women (15%) and 28 men (29.5%).

**Inhalants**

Table III reports experiences with use of inhal-
The prevalence of inhalants is present in both regions, with more Alaska Native men and women (n=35, 11.8%) reporting such use compared to Russian Native men and women (n=9, 2.3%).

**DISCUSSION**

Drinking has been reported to be high among Alaska Natives (4-7), as well as among Native Russians (8). The current finding, however, shows that drinking among Russian Natives is much higher than among Alaska Natives for both men and women. Earlier research in the Chukotka region (8) reported a pattern of drinking among Chukotka Natives that could be characterized as episodic drinking (several times a month), with very big amounts of alcohol consumed per drinking occasion. This drinking style has been found in the drinking patterns of Northern Siberian Native groups (9,10). It can be assumed that this pattern of drinking continues to be perpetuated. This is a drinking style that has also been found to be present among Alaska Natives (7,11).

The drinking style of both the Siberian and Alaska Natives, it can be assumed, follow cultural practices (12). Due to the remoteness of most communities, and alcohol-restrictive measures, drinking may be limited, but when alcohol is available it allows for the traditional style of drinking until all the alcohol is consumed. Such drinking is episodic or binge drinking, which contributes to high intoxicating doses per drinking occasion that could likely be accompanied by blackouts and by hangovers the next morning.

Contrasting findings were found for use of marijuana, where Alaska Native men and women exceed their Russian counterparts. Drug use in the United States (U.S.) has become endemic, presenting a formidable challenge to governmental agencies, policy makers, health providers and law enforcement. Early research in Alaska (13), found prevalence rates for drug use in Alaska to be higher than in the “lower-48” states, and these rates have not abated. Marijuana use in Alaska may be higher due to the fact that possession of up to 4 ounces of marijuana for personal possession was decriminalized at the time of the study. It is interesting to note that although the rates for marijuana use are lower in Russia, such use has evidently made an inroad.

The use of chewing tobacco has been a pervasive problem among Alaska Natives and rates for such use continues to exceed those among non-natives (14). The problem is less extensive in Russia.

Self-reports of experiences with cocaine is non-existent among Russian Natives, while use of inhalants is quite low. The low number of Russian respondents may be attributable to the non-use of cocaine or the reluctance of respondents to disclose possible use. Cocaine and inhalants, however, are more prevalent among Alaska Natives, which is in keeping with greater use of psychoactive substances in the U.S.

**Conclusions**

The STN data provided a rare opportunity to compare data from similar people in different nations. What was revealed is that the Russian Natives drink at higher rates than Alaska Natives, but the Alaskan group exceed the Siberian group in other catego-
ries of drug use, except for the use of chewing tobacco among women. It would be of interest to seek replication of these data to determine if there are changes in prevalence rates over time.

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