The prevalence and correlates of alcohol use disorders in the United States and Korea—a cross-national comparative study

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Abstract

The purpose of this study was to compare the prevalence rates of Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition 12-month diagnoses of alcohol use disorders between the United States and South Korea using two large nationally representative surveys. Cross-tabulations were used to derive weighted prevalences of alcohol abuse and dependence, and odds ratio derived from linear logistic regression analyses were used to determine the relationships between alcohol abuse and dependence across sociodemographic characteristics of the general population samples. The prevalence of 12-month alcohol abuse was greater in the United States (5.3%) than Korea (2.0%), whereas the rate of alcohol dependence was greater in Korea (5.1%) compared with the United States (4.4%). The odds of abuse were significantly greater among men, and in the youngest age groups in both countries. There was increased odds of 12-month dependence among men, and those who were employed or never married in each country. Further, the rates of abuse and dependence in the United States and of abuse in Korea decreased as a function of age, a result that did not generalize to dependence among Koreans. The implications of the results of this study are discussed in terms of national differences between the United States and Korea as the result of gender roles and drinking patterns, and the need to understand the potential influence of the cultural applicability and specificity of psychiatric assessment interviews across countries.   Published by Elsevier Inc.

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Introduction

Alcohol use disorders (alcohol abuse and dependence) are characterized by maladaptive patterns of alcohol consumption manifested by symptoms leading to clinically significant impairment or distress (American Psychiatric Association, 1994). These disorders are not only among the most prevalent mental disorders worldwide but also contribute to the development of more than 60 disease conditions and account for 4% of the global burden of disease (Rehm et al., 2006; Rodgers et al., 2004; Room et al., 2005).

Current data indicate that alcohol use disorders are pervasive among Western countries (Hasin et al., 2007; Rehm et al., 2005), and maybe increasing in developing

countries (Anderson, 2006; Hall and Degenhardt, 2007). Further, studies indicate that there is substantial variation in prevalence rates of alcohol use and related harm both within countries and between countries of similar socioeconomic background (Maxwell, 2003; Teesson et al., 2006; Vega et al., 2002). Despite the importance of cross-national research in assessing impact on health care systems and in how variations in social, cultural, political, environmental, and genetic factors can influence the development of alcohol use disorders, relatively few cross-national epidemiologic surveys on the prevalence and correlates of alcohol use disorders have been conducted to date.

Among recent cross-national surveys that have included comparisons of alcohol use disorders using standardized assessment instruments and official diagnostic classifications (Demyttenaere et al., 2004; Merikangas et al., 1998), few have included Asian countries, especially South Korea. The dearth of cross-national comparative research

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on alcohol use disorders conducted in Korea and the United States (U.S.) is striking since per capita consumption of alcohol in liters (U.S. 8.5; Korea 7.7) and percentage of abstainers (U.S. 33.9%; Korea 27.1%) are similar between the United States and Korea (World Health Organization, 2004), but Korea has demonstrated greater rates of alcohol use disorders relative to the United States and other Western countries in the past (Helzer et al., 1990). However, prior comparisons have been limited by either reporting lifetime rates of alcohol use disorders or failing to assess alcohol abuse and dependence separately. Cross-national comparisons using current rates indentify the magnitude of alcohol use disorders and affected subgroups of the population currently existing between countries, information of greater public health relevance than lifetime rates. Alcohol abuse and dependence rates also vary considerately between countries and failing to disaggregate these two distinct conditions may obscure cross-national differences.

To fill the gap in our cross-national knowledge of alcohol use disorders, this study compares two contemporary national surveys conducted in 2001–2002 in Korea, the Korean Epidemiologic Catchment Area (KECA: Cho et al., 2007) survey, and in the United States, the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC: Grant et al., 2003b). The major purpose of this study was to investigate country-specific differences in the prevalences and sociodemographic correlates of current (12-month) Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV: American Psychiatric Association, 1994) alcohol abuse and dependence between the two countries.

Methods

Samples

The 2001–2002 NESARC is a nationally representative sample of the civilian, noninstitutionalized adult population (18 years and older) of the United States conducted by the National Institute on Alcohol Abuse and Alcoholism. The NESARC sample included face-to-face interviews of persons living in households, individuals living off military base, and residents of various group quarters: boarding or rooming houses, nontransient hotels and motels, shelters, facilities for housing personnel, and college dormitories and group homes. Details of this survey have been described elsewhere (Grant et al., 2003b).

To ensure adequate numbers of respondents for analytic purposes, oversampling of blacks and Hispanics in the NESARC was implemented at the design phase. Within each household, a respondent aged 18 years or older was randomly selected. Young adults (aged 18–24 years old) were oversampled at a rate of 2.25:1.00 at this stage of sample selection to secure a greater representation of this heavier drinking subgroup of the population. The final

sample ($n = 43,093$) was weighted to adjust for oversampling and nonresponse at the individual and household levels. The weighted data were then adjusted to be representative of the noninstitutionalized population of the United States for a variety of socioeconomic variables using the 2000 Decennial Census. The response rate was 80%.

The KECA study is a nationally representative sample of South Korea conducted in collaboration with the Korean Ministry of Health and Welfare and the Seoul National University College of Medicine. Data collection started on June 1, 2001 and ended on November 30, 2001. Sampling was carried out across 10 catchment areas, which consisted of four metropolitan districts (the western, eastern, southern, and northern district of Seoul), two districts of midsized cities (Jung-gu of Incheon and Daegu), and four rural counties (Ganghwa-gun, Cheongwon-gun, Naju, and Wonju). The target population included all eligible residents aged 18–64 years in South Korea who were listed in the updated 2000 population census of the Korea National Statistical Office (2000).

A stratified, multistage and cluster sampling design was adopted. The 2000 Population Census at the Korea National Statistical Office was the sampling frame. First, a random sample of 121 regions was selected, which consisted of 43 regions from the metropolitan districts, 25 regions from the midsized cities, and 53 regions from the rural counties. Second, a total of 7,867 households were selected by random sampling, with 65 households from each region. Third, excluding institutionalized individuals, a total of 7,867 persons were identified by selecting one person per household with a randomized method that chose the adult family member with the lowest day of birth without considering the month and year of his/her birthday. All interviews were conducted face to face, and the response rate was 79.8%. The final sample was weighted and adjusted to be representative of the noninstitutionalized population of South Korea for a variety of socioeconomic variables, using the 2000 Population Census.

Sociodemographic characteristics

Sociodemographic characteristics were entered into the logistic regression analyses as categorical variables. In addition, to ensure the comparability between the two surveys, categorical variables were created using identical cut points, that is, age: 18–24, 25–34, 35–44, 45–65 years; marital status: married/cohabiting, widow/divorced/separated, never married; educational attainment: <12, 12, 13–15, 16+ years; income: low, moderate, high. Quartiles were generated to determine the cutoffs for low, moderate, and high incomes for both countries. Low-income level was set at the first quartile; moderate-income level was set at the second and third quartiles; and high-income level was set at the fourth quartile. The actual cutoffs used for low, moderate, and high incomes