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Research report

Cross-national difference in the prevalence of depression caused by the diagnostic threshold

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Abstract

Background: According to published reports, the prevalence rates of major depressive disorder (MDD) in East-Asian countries are lower than in the West, but the reasons for this difference have not been fully investigated.
Methods: This study compared the Korean Epidemiologic Catchment Area study (KECAS) sample with the National Comorbidity Survey (NCS, USA) sample. In total, this study included 5349 participants in KECAS and 7423 in NCS aged 18–54 years. The Composite International Diagnostic Interview (CIDI) assessed for MDD. Analysis of the individual symptoms of MDD was completed.
Results: Diagnostic threshold of MDD was higher in KECAS participants than in NCS participants. Koreans diagnosed with MDD showed more work impairment than Americans with MDD. Koreans were more likely to express the symptoms like "low energy" and "concentration difficulty," but less to the symptoms like "depressed mood" and "thoughts of death" during an episode of MDD.
Limitations: The Diagnostic and Statistical Manual of Mental Disorders (DSM) framework was the basis for the majority of the comparisons made in this study. Various depressive symptoms not included in the DSM framework were unlikely to be detected.
Conclusions: Cross-cultural differences in rates of MDD are attributable to diagnostic thresholds. Symptom patterns and forms of depression in Korea, as defined by the DSM framework, are not identical to those in the U.S.

Keywords: Prevalence; Depression; Cross-cultural; Threshold; DSM

1. Introduction

Community-based epidemiologic studies on mental disorders gained interest at the end of World War II. Major depressive disorder (MDD) is one of the most

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common psychiatric disorders. The development of the Diagnostic Interview Schedule (DIS) (Robins et al., 1981) allowed researchers to make cross-national comparisons, and these comparisons revealed large cross-national variations in the prevalence of MDD. Summarizing the findings from community surveys in 10 countries, lifetime prevalence ranges from 1.5% in Taiwan to 19% in Beirut (Weissman et al., 1996). Using the Composite International Diagnostic Interview (CIDI) based on DSM-III-R or DSM-IV, the International Consortium of Psychiatric Epidemiology (ICPE) representing 10 countries reported lifetime prevalence rates of MDD from 3% in Japan to 16.9% in the U.S., and a 1-year prevalence rate of MDD from 1.2% in Japan to 10% in the U.S. (Andrade et al., 2003).

In Korea, there have been two large community-based psychiatric epidemiologic studies conducted using fully structured instruments. Initially, Lee et al. (1990) conducted a community-based psychiatric epidemiologic study using the Korean version of DIS (K-DIS) based on DSM-III, and reported a lifetime prevalence of MDD of 2.8% and a 1-year prevalence rate of 2.3%. Later, the Korean Epidemiologic Catchment Area study (KECAS) was conducted in 2001 using the Korean version of CIDI (K-CIDI) based on DSM-IV, and reported a lifetime prevalence of MDD of 4.3% and a 1-year prevalence rate of 1.7% (Cho et al., 2007). Both of these nationwide studies conducted in Korea indicated low prevalence of MDD than in the West.

Comparisons made between countries reveal that the lifetime rate of depression is less in all Asian countries than in the United States and The Netherlands (Lee et al., 1990; Chen et al., 1993; Demyttenaere et al., 2004; Chiu, 2004). However, although the prevalence of MDD in Asia has been reported to be lower than in the West, few studies have sought to explain these cross-national differences in prevalence rates of MDD. Among the few studies to explain cross-national differences in prevalence rate of MDD, Weissman et al. (1996) suggested that cultural differences or different risk factors might affect the expression of MDD.

The reported low prevalence of depression in Korea led us to review carefully the component section on depression of CIDI. We focused chiefly on criterion A for the MDD diagnosis, and hypothesized that degrees of positive responses to symptoms of MDD are at least partly responsible for the reported low prevalence of depression in Korea. No definitional differences exist between DSM-III-R and DSM-IV criteria for MDD, and both KECAS and NCS administered CIDI. Thus, joint analyses were possible between the KECAS and the NCS. By comparing two national representative samples, we undertook to examine four questions: (1) Is the MDD criteria defined in the U.S. valid in Korea?; (2) What are the differences in the pattern of depressive symptoms – symptom profile – between the two nations?; (3) Do Koreans diagnosed with MDD show the same level of work impairment as Americans with MDD?; (4) Are there any MDD symptoms more frequently and preferentially endorsed by Koreans with MDD than by Americans with MDD?

2. Methods

2.1. KECAS sample

The Korean Epidemiologic Catchment Area Study (KECAS), designed to estimate the prevalence and correlates of psychiatric disorders in a nationwide sample of Korean adults (Cho et al., 2007), and provided derivative data. The target population included all eligible residents ages 18–64 years in South Korea (a total of 1,450,827 persons) that were listed in the updated 2000 population census of community registry offices (Korea National Statistical Office, 2000). The Institutional Review Board of Seoul National University Hospital approved this study. Utilization of a stratified, multistage, cluster sampling design randomized the residents. In total, from 7867 selected Korean households, 6275 face-to-face interviews were completed by one person per household (response rate, 79.8%) chosen at random. To match age with that of the NCS sample, 5329 participants aged 18 to 54 years were included in our analysis.

2.2. NCS sample

We used the baseline National Comorbidity Survey (NCS) data to allow comparison with the general U.S. population. The Substance Abuse and Mental Health Data Archive Web site (SAMHDA; Kessler, 2007) made the NCS data available. Conducted on a stratified, multistage area probability sample, the NCS included 8098 U.S. residents age 15–54 years in 1990–1992, as described in detail elsewhere (Kessler et al., 1994). To match age with that of the KECAS sample, 7423 participants aged 18 to 54 years were included in our analysis.

2.3. Diagnostic instruments

Both the KECAS and the NCS administered CIDI to each participant. CIDI is a fully structured diagnostic interview designed to allow psychiatric diagnoses based