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Brief report

Lower rates of depression in westernised Chinese in the US☆

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Abstract

Background: Low reported rates of depression in Chinese populations could reflect real or artefactual factors, and might be clarified by studying acculturated Chinese in western regions.

We therefore sought to determine whether reported rates of depressive disorders differ in resident Chinese and matched non-Chinese controls in a large US community survey.

Method: We accessed data from the US National Epidemiological Survey of Alcoholism and Related Conditions, involving 306 Chinese subjects and 306 matched non-Chinese subjects.

Results: The Chinese reported significantly lower lifetime and 12-month major depression rates, and a lower lifetime rate of dysthymia. Similar rates were quantified for Chinese born in the US and Chinese born overseas. The Chinese did not differ from controls in terms of recurrence rates of major depression.

Limitation: Due to our matching analytic strategy, the reported statistics (e.g. prevalences) apply to our matched samples and should not be taken as estimates for the population.

Conclusions: Findings indicate that westernisation does not eliminate differences in depression rates long described in Chinese regions, and favour a model whereby the Chinese have a lower vulnerability to depression onset.

Keywords: Depression; Dysthymia; Epidemiology

1. Introduction

We previously reviewed (Parker et al., 2001) literature identifying Chinese individuals as having low reporting rates of depression. While low rates in metropolitan China continue to be reported (Shen et al., 2006), higher rates have been reported in other Chinese regions. For example, in Taiwan – where depression rates were also once quantified as significantly low, quite high rates have been reported in recent years – both in older subjects (Chong et al., 2001) and in adolescents (Gau et al., 2005). Chen (2001) has suggested that differences in case-finding methods may largely account for such differences in rates. Thus, differences may reflect artefactual (e.g. denial,

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methodological) or cultural factors (e.g. stoicism, acceptance of destiny, family support).

As cultural impact is difficult to examine directly, acculturation studies in western regions can be informative. In a study of Chinese Americans living in Los Angeles (Takeuchi et al., 1998), lifetime and 12-month rates of major depression were 6.9% and 3.4% respectively, distinctly lower than U.S. National Comorbidity Study rates (Kessler et al., 1994). In an Australian study (Parker et al., 2005) of Chinese and non-Chinese control subjects, acculturation impacted on reporting of episodes, lifetime depression and help-seeking rates.

Any test of the acculturation hypothesis would benefit from a rigorous epidemiological community-based controlled study, with a recent US community study providing such an opportunity.

2. Methods

2.1. Dataset

The US National Institute on Alcohol Abuse and Alcoholism (NIAAA) undertook the National Epidemiologic Survey of Alcoholism and Related Conditions (NESARC) across 2001–02. The NESARC dataset (NIAAA, 2005) is publicly available (http://niaaa.census.gov). We accessed the dataset and associated files on 10-November-2005.

2.2. Sample

Face-to-face diagnostic interviews generating DSM-IV diagnoses were administered by lay interviewers to 43,093 respondents (81% response rate), with Hasin et al. (2005) observing that the NESARC was able to estimate the prevalence of major depression disorder in minority groups as a result of the large sample size. For our analyses, we selected all 306 subjects who reported their 'origin of descent' as Chinese, and matched them (by age, sex, marital status, highest education completed, employment status and total family income) to non-Black, non-Hispanic control subjects. If multiple control matches were available, one subject from the pool was randomly selected using the SPSS 13.0 statistical program (SPSS 13.0 for Windows, 2004).

2.3. Matching

Chinese subjects and matched controls did not differ on any socio-demographic variable. Specifically, the mean age of both was 42.3 years (SD16.5) and 47.1% in each group were male. Educationally, 10.8% and 10.1% respectively had not reached high school, 14.7% and 15.4% completed high school or equivalent, and 74.5% and 74.5% had been educated beyond high school ($\chi^2=0.11$, *df* 2, $p=0.95$). Full-time employment rates were 57.2% and 59.2% respectively ($\chi^2=0.24$, *df* 1, $p=0.62$). In relation to marital status, 26.1% and 25.8% had never married, 59.2% and 61.1% were married or in a de facto relationship, and 14.7% and 13.1% were divorced, separated or widowed ($\chi^2=0.40$, *df* 2, $p=0.32$). Total family income distribution (across four bands ranging from less than $25,000 to $80,000 or more) was similar ($\chi^2=2.7$, *df* 3, $p=0.44$).

2.4. Depression measures

We report prevalence data for DSM-IV-defined major depression and dysthymia. In relation to help-seeking strategies (assessed as helping "improve your mood or make you feel better"), we selected subjects who met criteria for 'Lifetime Major Depression' and examined rates of affirming four separate 'Yes/No' questions: (1) Did you ever consult any kind of counselor/therapist/doctor/psychologist?; (2) Were you a patient in a hospital for at least one night?; (3) Did you ever go to an emergency room?, and (4) Did a doctor ever prescribe any medicines or drugs to improve your mood?

2.5. Statistical analyses

For the matched Chinese and controls subjects, McNemar tests were used to compare diagnostic rates. However, as there were few matched pairs of those meeting lifetime major depression criteria, Chi-square tests were used to compare help-seeking rates in all subjects and controls meeting such criteria, while several dimensional variables (e.g. age of onset, number of episodes and age of the most recent episode) were analysed by *t*-tests. Data on duration of most recent and of longest episode were compared using Mann–Whitney *U* tests due to large differences in variances between the two groups on those variables.

3. Results

3.1. Prevalence rates

The Chinese were significantly less likely to report lifetime episodes of major depression as indicated by McNemar test (6.5% vs 20.3%, $p<0.001$; OR=0.28, 95% C.I. 0.16–0.48), or an episode in the preceding 12 months (3.3% vs 9.2%, $p<0.01$; OR=0.36, 95% C.I. 0.17–0.74) — before and after excluding those judged as