Psychological distress and race/ethnic group differences among the elderly: The role of behavioral risk factors and health history

Introduction

The ratio of the elderly (persons aged 65 and older) to working-age persons has exploded during the last half-century in the United States and other developed countries. Similarly, 1965 immigration legislation in the U.S. favored family reunification, refugees, and labor force migrants and abolished the national origins system causing a diverse influx of immigrants with origins from non-European countries that continues today. Along with their offspring, these immigrants have contributed to an increasing ethnic diversity in all parts of the U.S. population, including the elderly. These changes demand attention, raising new socio-economic challenges in areas such as healthcare and government spending on the elderly. Because of their size, diversity and continuing growth, understanding health trends and needs of the elderly, and the differences between various racial/ethnic groups are crucial for governments.

In light of these facts, we consider: To what extent do psychological distress levels vary between racial/ethnic groups? How are these groups, many which contain large proportions of international migrants, affected by immigrant status and assimilation? What roles do behavioral risk factors and health history play in psychological distress levels among racial/ethnic groups?

METHODS

Data

Data for this study comes from the 2007 California Health Interview Study (CHIS), a computer assisted telephone survey that uses random-digit-dialing (RDD), plus supplementary cell-phone-only and Vietnamese and Korean sub-samples, to achieve a representative sample of

the non-institutionalized population of California living in households. The survey was collected from June 2007 to March 2008 and achieved a response rate of 18.7%, ranging from 15.9% in the cell phone sample and 22.1% for the Los Angeles county sample. The RDD sample contains 48,791 individuals taken from 44 geographic sampling strata. Sample weights adjust for household without telephones, and a cell-phone only sample of 825 individuals accounts for those households which are excluded from the RDD. In addition, a sample area probability of Los Angeles County including 981 individuals gauges non-response bias. CHIS oversamples Vietnamese and Korean communities, targeted from the RDD sample by focusing on group-specific surnames. Chinese, Filipino and Mexican samples were sufficiently large, making it unnecessary to oversample these groups. Adults ages 18 and older are chosen randomly from the household and interviews are conducted in five languages: English, Spanish, Chinese (Mandarin and Cantonese), Vietnamese and Korean. 8% of the CHIS interviews conducted were in a language other than English. The original sample includes 51,048 adults age 18 and older; this study is limited to 14,653 survey respondents aged 65 and over.

Statistical Analyses

We analyzed the data using the statistical package STATA version 10.0 (College Station, TX). We assessed the race/ethnic group status on psychological distress of minority respondents compared to white, non-Latino persons using multivariate models accounting for demographics, socio-economics, family status, acculturation and health. We applied survey weights and the jackknife technique to adjust standard errors according to design effects.

Variable selection

Independent Variable: Psychological Distress. Embedded within CHIS is the K6 Scale of non-specific psychological distress, designed to measure symptoms of psychological distress. Six

questions ask respondents how frequently they felt the following symptoms during the 30 days prior to the interview: nervous, hopeless, restless or fidgety, that nothing could cheer them up, that everything was an effort, and worthless. Responses ranged from none of the time (0) to most of the time (4). The responses of these six questions were combined to create a continuous, composite score ranging from 0 to 24.

Demographic Controls: Gender, Age, Race/Ethnicity: Chinese, Japanese, Filipino, Korean, Southeast Asian, other Asian; African-American, Other race or multi-race and White; all of these groups exclude persons of Latino origin. Latino-origin groups included Mexican, Salvadoran, Guatemalan, and other Latin American.

Assimilation Controls. I examine English language ability and citizenship status to measure acculturation or assimilation. Citizenship statuses include: citizen (native-born or naturalized) versus non-citizen, referring to legal permanent residents, unauthorized and temporary migrants.

Socio-Economic Controls. Education, poverty level, employment status.

General Health. Self-rated general health: Excellent, very good, good, fair or poor – 'Would you say that in general your health is excellent, very good, good, fair or poor?'

Household/Geography Controls. Rural versus urban area; household size 1 to 10 or more persons; home ownership.

Behavioral Risk Factor Controls. Smokes all the time or sometimes versus never. Number of alcoholic beverages consumed at a time from 0 to 20.

Health History Controls. Ever experienced heart failure; has condition limiting physical activity.

Results

After applying weights and controlling for all factors save behavioral risk factors and health history, an ordinary least squares regression shows that African-Americans, Japanese-

Americans, Chinese-Americans, some U.S.-born Latinos with origins in South America, and other or multi-racial non-Latinos have lower psychological distress than non-Latino native-born whites. However, other U.S. born Asian groups including Filipinos and Southeast Asians as well as some U.S. born Latinos such as Salvadorans, Mexicans and Guatemalans do not exhibit different levels of psychological distress than native-born whites. Women, those with less than high school degrees, the unemployed, persons out of the labor force, and those living under 100% of the poverty level have higher levels of psychological distress than males, high school graduates, the employed, and persons living at 200-299% of the poverty level. Greater household size is affiliated with lower levels of psychological distress. Citizenship and home ownership have no significant effect on psychological distress.

The second model adds behavioral risk factors including smoking and alcohol consumption, as well as health history indicators such ever experiencing heart failure and having a condition that limits physical activity. This model shows that African-Americans and multi-ethnic non-Latinos no longer have lower levels of distress than native-born whites, and those out of the labor force no longer display higher distress. Ethnic variation exists in the psychological distress levels of the elderly, mitigated in certain groups by behavioral factors and health history, suggesting the need for further exploration.

In addition, we plan to generate and compare predicted scores of psychological distress levels among the ethnic groups to gain further insight on the levels among white and various minority elderly in California. A limitation of this study and direction for future study includes assessing the effect of social support on psychological distress on minority and white elderly.