Depression is common in the elderly, and is also the major reason for suicidal behavior in this age group.\textsuperscript{1} Since worldwide migration has increased over the last few decades, the close relationship between immigrants and mental illness has attracted much attention. Health programs and strategies have been established to ensure that individuals in minority groups have access to appropriate health care services, and research into depression in immigrants has become very important.

Prevalence of Depression in Elderly Taiwanese Immigrants

In a study published in this issue of the journal, Lai\textsuperscript{2} conducted face-to-face interviews, using a Chinese version of the Geriatric Depression Scale (GDS), to assess depression status in older migrants (\(n = 98\); age \(\geq 55\) years) from Taiwan to Canada. This was part of a multi-site study of a random sample of 2,272 older Chinese migrants to Canada. The prevalence of at least mildly depressive symptoms in older Taiwanese immigrants was 21.5%. Factors associated with depression were a negative attitude towards aging, poor physical health, single marital status, access barriers to appropriate health care services, low income, and poor financial status.

Prevalence of Depression in Elderly Chinese Immigrants

Since the interactions between migration and depression are complex, several questions have been addressed:

1) Is there a difference in the rate of depression in Canada between elderly Chinese immigrants from mainland China and those from Taiwan? Lai\textsuperscript{2} used the abovementioned interview and rating scale in a random sample (\(n = 444\)) of 2,272 elderly Chinese individuals living in Canada. A similar prevalence of depression (23.2\%) was found to that among Taiwanese immigrants (21.5\%), with both rates being higher than that in the general elderly population in North America (10–15\%).\textsuperscript{4}

2) Do elderly Chinese immigrants to Canada feel more depressed than those who migrate to other countries? Using the GDS, Abbott et al found that 26\% of elderly Chinese migrants to Auckland, New Zealand, had depressive symptoms.\textsuperscript{5} Furthermore, a recent study reported an even higher rate of depression (40\%) among Asians (\(n = 404\)) living in New York.\textsuperscript{6}

3) Is there a difference in the rate of depression between immigrants and native-born Americans from the same race? Cuellar et al\textsuperscript{7} compared Mexican immigrants with native-born Mexican Americans living in Texas and found no differences in terms of depression, health status, life-satisfaction and self-esteem, although immigrants reported more stress than their native-born counterparts. Income, age, gender and acculturation were significant predictors of immigrant well-being, whereas immigration status and years of residency were not.

4) Is it true that, as stated by Lai,\textsuperscript{2} elderly Taiwanese immigrants to Canada have a lower rate of depression than the elderly population in Taiwan? Su et al,\textsuperscript{8} using the GDS-15, reported a depression rate of 8.9\% in a community-dwelling Chinese

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population ($n = 2,045$) in Taiwan; this prevalence is lower than that identified by Lai\(^2\) among elderly Taiwanese immigrants in Canada. While the different rates of depression identified by Su et al\(^8\) and 3 other Taiwanese studies might be attributed to differences in the communities selected, rural or urban areas, instruments of depression assessment, and access to medical facilities, a higher rate of depression in immigrants versus non-migrants was confirmed by Fenta et al.\(^7\) In the latter study, the rate of depression among Ethiopian immigrants to Toronto (9.8%) was 3 times greater than that estimated for the population in southern Ethiopia (3.2%).

The abovementioned studies were all cross-sectional and did not prospectively investigate the effects of length of residency and frequency of moving on immigrant mental status. Nevertheless, according to statistics from Canada’s population survey of immigrant health,\(^10\) there appeared to be a “healthy immigrant effect”, with reduced health-service use among recent non-European immigrants. This strongly suggests that important distinctions might exist among immigrant subgroups, particularly among newer immigrants. Although Lai\(^2\) states that any health advantages might decrease over time as immigrants begin to assimilate to mainstream beliefs, attitudes and lifestyles, additional longitudinal studies are needed to address this issue.

**Risk Factors for Depression in Immigrants**

Generally, risk factors for depression in Chinese immigrants included poor physical health, single marital status, access barriers to appropriate health care services, poor financial status, and the level of ethnic identification.\(^2,3,5\) However, these studies did not focus on recent migrants. Two issues should be considered in such migrants: adjustment factors such as fatalism (loss of control), negative life events, lack of social support, and social skills’ deficits; and culture shock (a sudden unpleasant feeling that may violate expectations of the new culture, and cause a negative image of one’s own native culture), including a sense of loss, feelings of deprivation, rejection by members of the new culture, anxiety, disgust, and indignation.\(^11\)

Importantly, not all migrants develop depression, and not all patients with depression have a history of migration. It is likely that a certain degree of biologic or psychologic vulnerability, combined with social vulnerability, may lead to depression. Changes in cultural identity may lead to culture shock, and cultural distance may contribute to alienation and isolation, thereby leading to depression. It is also possible that the cognitive schema of migrants may differ depending on social and cultural backgrounds. Culture shock, real or perceived loss of family, family history, geography, and social environment, may all contribute to the genesis of depression. Conversely, elderly immigrants with, rather than those without, strong beliefs in traditional Chinese health practices and concepts have reported depressive symptoms less frequently. Therefore, adhesion to traditions, and a more positive attitude towards aging, may have protective effects against the development of depression.

**Implications for Immigrants to Taiwan**

The increasing immigration to Taiwan of women from mainland China, Vietnam and other countries, to marry Taiwanese men, now creates a need to assess the biologic, psychologic and social aspects of immigrant-bride adaptation to a new language and environment. Appropriate programs to facilitate mental-health promotion are also urgently needed.

**References**