The Conception of Depression in Chinese American College Students

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The conception of depression in Chinese American college students was examined with the Center for Epidemiologic Studies-Depression Scale (CES-D). It was hypothesized that, because of their significant engagement with mainstream American culture, these students' conception of depression would better approximate White Americans' differentiated view (L. Radloff, 1977) than the general Chinese American community's integrated view (Y. Ying, 1988). A total of 353 bicultural Chinese American college students participated in the study. Consistent with the hypothesis, principal-components factor analysis with varimax rotation revealed a factor structure and loading similar to that found in White American adults. Confirmatory factor analysis also showed Chinese American college students to better approximate Radloff's differentiated model based on her White American samples than Ying's integrated model based on her Chinese American community sample. Implications of the findings and directions for future research are discussed.

conception of depression • Chinese American • Center for Epidemiologic Studies-Depression Scale

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Scholars have argued that the conception of depression varies cross-culturally. Its meaning and interpretation are embedded in a cultural framework (Fabrega, 1982; White & Marsella, 1982). Cultural conceptions of depression are inextricably linked with cultural conceptions of the self (Fabrega, 1982; White & Marsella, 1982). This has been repeatedly demonstrated in monocultural individuals who are exposed to and therefore internalize only one culture (with regard to Chinese people, see Cheung, 1985; Kleinman, 1986). However, few studies have examined the conception of depression in individuals who have experienced extensive cross-cultural living. In the present investigation, we examined whether Chinese American college students, who are significantly engaged with mainstream American culture, hold a conception of depression that better approximates that of White Americans than that of the less Americanized general Chinese American community.

**Significance**

This investigation is important for two major reasons. Because of worldwide migration and increased cross-cultural contact, the number of individuals exposed to and engaged with more than one culture is on the rise. Today, 25.8 million Americans (or 9.7% of the total population) are immigrants (U.S. Bureau of the Census, 1997), and 78% of them originated from non-European countries, mostly Latin America and Asia (U.S. Bureau of the Census, 1992). Thus, a significant number of Americans have undergone the process of encountering and living in a culture significantly different from their native one. With sustained contact, they may engage with mainstream American culture, and their children are likely to do so to an even greater degree. Over time, their sense of self may be affected, resulting in a change in their conception of depression.

In the case of Chinese Americans, the focus of the present investigation, two thirds of this population are immigrants, and the majority of the remainder are children of immigrants (U.S. General Accounting Office, 1990). Thus, understanding how the conception of depression changes secondary to cross-cultural living is particularly salient for this group. It has been suggested that, owing to the recency of their migration and continued espousal of Chinese culture, Chinese Americans hold an integrated conception of depression, in which psychological, physical, and interpersonal components are mixed (Ying, 1988, 1990). However, Chinese Americans are a heterogeneous group. It is possible that those who embrace mainstream American culture more fully may hold a conception of depression that better approximates the differentiated White American view than the traditional integrated Chinese view. This has not been previously empirically assessed and is examined here.

Second, the conception of depression holds important implications for service utilization, clinical assessment, and treatment (Fabrega, 1982; Kleinman, 1986). Thus far, the literature has focused on the help-seeking behavior and treatment of Chinese Americans with an integrated conception of depression (Ying, 1990, 1997). The study of whether more acculturated Chinese Americans hold a differentiated conception of depression, similar to that of White Americans, holds clinical implications with regard to the establishment of a working alliance between the therapist and client and the implementation of effective interventions (Fabrega, 1982; Sue & Zane, 1987).

**The Conception of Depression in Chinese and American Cultures**

Cultural variation in the conception of depression reflects cultural variation in the general conception of human experiences (White & Marsella, 1982). Chinese and American cultures have been described as
significantly different from each other. Although it is beyond the scope of this article to provide a comprehensive discussion of these differences, we highlight those most germane to the conception of depression, such as differences related to the conception of the self (Fabrega, 1982). In particular, we review the literature on cultural views of the self as exemplified by the body–mind relationship and self–other association.

Separation Versus Integration of Body and Mind

In mainstream American culture, the body and mind are thought to be dualistic, clearly separable and distinguishable. Thus, in American medicine, physical and mental illness are clearly differentiated (Fabrega, 1982; Lutz, 1985). Jenkins (1994) noted that the Diagnostic and Statistical Manual of Mental Disorders' (American Psychiatric Association, 1994) classification of depression as a mood disorder accompanied by somatic symptoms reflects the fundamental body–mind dichotomy in Western psychiatry. In fact, when psychological and physical symptoms co-occur, this is explained in terms of somatization, or the transformation of psychological distress into physical illness. Somatization suggests that psychological experiences precede the physical experiences, rather than the two concurrently influencing each other (Cheung, 1995).

In contrast, in Chinese culture and medicine, the mind and body are integrated with each other, as well as with the social context (Kaptchuk, 1983; Wu, 1982). Psychological, physical, and social factors contribute to the Chinese sense of self, general weltanschauung, as well as the development of specific symptoms and illness (White & Marsella, 1982). Illness of the soma is intimately associated with illness of the psyche and vice versa. Neurasthenia or "nerve weakness" is the preferred diagnosis over the psychological diagnosis of major depression in Chinese societies because it recognizes the presence of a physical process (Kleinman, 1986). Whereas Western-trained professionals may interpret this as somatization, a Chinese emic view would posit a natural, simultaneous, and inseparable intertwining of physical and psychological etiologies and manifestations (Cheung, 1995).

Social Interdependence Versus Independence

The Chinese conception of the self is fundamentally a social one. Hsu (1985) suggested that, whereas in the West, persons are defined by their uniqueness and separateness from others, in the East, they are defined by their similarity and connection with others. The permeable boundary between the self and other (Shweder & Bourne, 1982) is highlighted by the use of body parts to describe intimate relationships in the Chinese language. Thus, siblings are referred to as "hand and foot" and a beloved child is referred as a "heart, liver treasure" (Tung, 1994). As such, Chinese society has been characterized as interpersonally oriented and collectivistic (Markus & Kitayama, 1991; Triandis, McCusker, & Hui, 1990). In this context, duty, obligation, conformity, reciprocity, and avoidance of conflict, disapproval, and shame are highly valued (Ho, 1986; Russell & Yik, 1996; Yang, 1995). The Buddhist principle of yuan, which explains the connection between particular individuals as a continuation from previous lifetimes, further underlines the significance of these associations (Chang & Holt, 1991; Yang, 1995).

In contrast, there is a clear, discrete demarcation between the self and other in American mainstream culture, which highly values independence (Markus & Kitayama, 1991; Shweder & Bourne, 1982). Individualism is the American identity (Bellah, Madsen, Sullivan, Swidler, & Tipton, 1985). Americans are strong proponents of individual freedom and the right to exercise control over his or her life without outside
interference (Bellah et al., 1985). Indeed, Hofstede (1980) found Americans scored significantly higher on individualism compared with Chinese people. For Americans, the wish for interpersonal connectedness is counterbalanced by a wish for autonomy and privacy (Lutz, 1985). As such, American society has been characterized as an individualistic one (Markus & Kitayama, 1991; Triandis et al., 1990). Because social relationships are based on individual will and common interest (Choi & Choi, 1990), they may also be terminated when they are no longer pleasurable or when conflicts arise. Thus, it has been suggested that Chinese and Americans vary in both the quantity and duration of their social relationships: Chinese people have a few, long-term relationships, whereas Americans have numerous, short-term relationships (Hsu, 1985).

The Conception of Depression as Manifested by CES-D Factors

In this investigation, the Center for Epidemiologic Studies-Depression Scale (CES-D) is used to assess the conception of depression. The CES-D was originally developed to assess the level of depression symptoms in the general adult population (Radloff, 1977). Using principal-components factor analysis with varimax rotation, Radloff examined the conception of depression in three large White American samples (sample size ranged from 1,060 to 2,514) and identified four factors. Only items loading above .40 in all three groups were retained: Factor 1, Depressed Affect (“have the blues,” “depressed,” “lonely,” “crying spells,” and “sad”); Factor 2, Positive Affect (“good as other people,” “hopeful,” “happy,” and “enjoy life”); Factor 3, Somatic and Retarded Activity (“bothered by things,” “poor appetite,” “everything is an effort,” “restless sleep,” and “can’t get going”); and Factor 4, Interpersonal Problems (“people are unfriendly” and “people dislike me”). Consistent with the above discussion, Radloff’s findings showed White Americans to hold a conception of depression that clearly differentiates psychological and physical symptoms (as they loaded separately on Factors 1 and 3). In addition, there is also a clear self–other distinction as interpersonal items loaded on Factor 3, separate from other CES-D symptoms.

The CES-D has also been used to assess the conception of depression in the general Chinese American population and has been shown to reflect greater body–mind and self–other integration (Kuo, 1984; Ying, 1988). For instance, Ying (1988) identified three factors with these loadings: Factor 1, Depressed Affect/Vegetative Signs (“poor appetite,” “have the blues,” “keep mind on things,” “failure,” “talk less,” “lonely,” and “can’t get going”); Factor 2, Positive Affect (“good as other people,” “hopeful,” “happy,” and “enjoy life”); and Factor 3, Interpersonal/Vegetative/Depressed (“restless sleep,” “people are unfriendly,” “crying,” and “people dislike me”). The psyche–soma integration was evidenced by Factor 1, in which psychological and vegetative items loaded together. In addition, self–other integration was evidenced by Factor 3, in which social items (“people are unfriendly” and “people dislike me”) loaded with a vegetative sign (sleep disturbance) and depression (crying).

The findings suggest that the general Chinese American community continues to hold a conception of depression that is integrated despite living in the United States. However, Ying’s (1988) community sample, which was recruited through a random selection of Chinese-surnamed households in San Francisco, was quite heterogeneous, as it included participants who ranged in age from 19 to 91 years, who had lived in the United States for less than 1 year to their whole lives, and who held an education from not completing elementary school to postbachelor’s degrees. It is quite plausible that there is a subgroup of Chinese Americans who have been exposed to and embrace mainstream American culture more strongly than the Chinese American general
community, and who thus hold a conception of depression that deviates from the traditional Chinese one and better approximates that of White Americans.

**The Conception of Depression in Chinese American College Students**

The present investigation focuses on Chinese American college students. Among Chinese Americans, those educated in the United States are likely to be among those most engaged with American culture, as the American classroom has the objective of imparting values and behaviors for effective functioning in mainstream society. Chinese American college students are likely to have learned these lessons well as they have been successful in gaining admissions to American universities. Indeed, Suinn, Richard-Figueroa, Lew, and Vigil (1987) found the majority of their Asian American college student sample (81%) embraced mainstream American culture and self-identified as either bicultural or assimilated.

We hypothesized that, as a result of their significant acculturation (which is greater than that of the general Chinese American community, as demonstrated in Sample Demographics in the Method section), Chinese American college students' conception of depression will better approximate the differentiated view of White Americans (Radoslff, 1977) than the integrated view of the less Americanized Chinese American general community (Ying, 1988).

**Method**

**Sample Demographics**

A total of 353 Chinese American students at a prestigious public university in the United States participated in the study. The sample was roughly evenly divided between men (49.3%) and women (50.7%), and the overwhelming majority (99.2%) was single. Their mean age was 20.23 years (SD = 1.77), and they have been at the university for a mean of 2.68 years (SD = 1.18). Of the sample, 34.56% were American-born and the rest were immigrants, with a mean age of migration of 11.71 years (SD = 5.60). With Hollingshead's (1957) method of calculating socioeconomic status (SES) from the father's education and occupation (in which the possible range of scores is from 11 to 77, with 11 being the highest socioeconomic level), they had a mean SES score of 28.56 (SD = 15.25). With regard to living arrangement, 67.7% lived with nonfamily members (likely to be fellow students), 19.3% lived alone, and 13.0% lived with family members.

The Chinese American college student sample may be compared with Ying's (1988) Chinese American community sample with regard to their demographic characteristics. The college student sample was more likely to be American-born than the community sample (34.56% vs. 23.61%, respectively), \( \chi^2(1, N=713) = 23.47, p = .0001 \). All of the college student sample have had some college education, compared with 57.72% of the community sample, \( \chi^2(1, N=713) = 255.12, p = .0001 \), and unlike our study sample, participants in the community sample did not necessarily obtain their college education in the United States. Although Ying did not directly assess the acculturation of her community sample, the above demographic comparisons do suggest a greater degree of acculturation to mainstream American culture in the college student sample. Additional information regarding the Chinese American college students' engagement with American culture is provided below (see Assessment of Cultural Orientation section below).

**Measures**

**Assessment of Demographics.** The demographics questionnaire assessed personal background information, such as gen-
Assessment of Depression. The 20-item CES-D assessed the presence of depression symptoms in the last week (Radloff, 1977). Four of the items (Items 4, 8, 12, and 16) were reverse coded. The possible sum scores ranged from 0 to 60, with a score of 0 indicative of no depression symptoms and a score of 60 indicative of a severe level of depression symptoms. Previous studies have demonstrated the validity and reliability of the scale in White Americans and Canadians (Devins & Orme, 1985; Devins et al., 1988; Radloff, 1977, 1991). In the present study, coefficient alpha was .88. One-month test-retest reliability of the CES-D in this sample was .77 (n = 55). These numbers are comparable with previous findings based on European Americans and Canadians (Devins et al., 1988; Radloff, 1977).

Assessment of Cultural Orientation. The college students’ degree of cultural orientation to both American and Chinese cultures was assessed using the General Ethnicity Questionnaire—American and Chinese Versions (GEQA and GEQC, respectively; Tsai, Ying, & Lee, in press). The two versions of the General Ethnicity Questionnaire consisted of identical items, except with regard to its cultural reference (e.g., “I am proud of American culture” and “I am proud of Chinese culture”). Factor analysis with varimax rotation derived the following six factors for the GEQA: affiliation with American people (e.g., “Now, my friends are American”), participation in American activities (e.g., “I perform American dance”), pride in American culture (e.g., “American culture has had a positive impact on my life”), preference for American food (e.g., “At home, I eat Chinese food”), and use of English language (e.g., “How fluently do you speak Chinese?”). The items and the subscales were scored on a 5-point scale, with a higher number reflecting greater endorsement. The sample’s responses demonstrated their strong engagement with both cultures, as, on average, they scored above the midpoints in all subscales except for three. With regard to American cultural orientation subscores: $M = 2.96$ ($SD = 0.74$) for affiliation with American people; $M = 3.83$ ($SD = 0.74$) for participation in American activities; $M = 3.25$ ($SD = 0.57$) for pride in American culture; $M = 3.03$ ($SD = 0.83$) for preference for American food; $M = 3.71$ ($SD = 0.65$) for use of English; and $M = 4.44$ ($SD = 0.81$) for preference for media in English. With regard to Chinese cultural orientation subscores: $M = 3.58$ ($SD = 0.69$) for affiliation with Chinese people; $M = 2.35$ ($SD = 0.99$) for participation with Chinese activities; $M = 3.94$ ($SD = 0.67$) for pride in Chinese culture; $M = 3.93$ ($SD = 0.66$) for exposure to Chinese culture; $M = 4.06$ ($SD = 0.62$) for preference for Chinese food; and $M = 2.88$ ($SD = 0.89$) for use of Chinese language. The sample scored just below the midpoint on “affiliation with American people,” reflective of the relative racial segregation on American campuses, and partially as a result of the large proportion of self-identified Chinese American undergraduates at the study site during the time of this investigation (18.3%; Office of Student Research, 1999). The students also scored below the midpoint on the Chinese cultural orientation subscales “participation in Chinese activities” and “use of Chinese language.” Secondary to Westernization, most of today’s college students worldwide probably prefer “American” activities, such as Western dance and music, than ethnic dance and music.
addition, ethnic language loss is very common in early immigrants and second-generation Americans.

Procedure

The participants were recruited through the psychology subject pool, announcements made at classes and Asian American student organization meetings, fliers posted throughout campus, and word-of-mouth. Participants signed a consent form and completed the paper-and-pencil demographics questionnaire, the CES-D, and the GEQA and GEQC either alone or in a group with other participants.

Results

Consistent with Radloff (1977), we used principal-components factor analysis with varimax rotation to assess the CES-D factor structure for our sample. Five factors with an eigenvalue greater than 1 were retained. Items that correlated with a factor at \( r = .40 \) or higher were retained and are highlighted in boldface in Table 1. The first factor, Depressed Affect, consisted of the items "bothered," "have the blues," "depressed," "fearful," "lonely," "crying," and "sad." The second factor, Positive Affect, consisted of the items "good as others," "hopeful," "happy," and "enjoy life." The third factor, Somatic/Retarded, consisted of the items "keep mind on things," "life is a failure," "restless sleep," and "can't get going." The fourth factor, Interpersonal, consisted of "people are unfriendly" and "people dislike me." The fifth factor, Somatic, consisted of "poor appetite," "restless sleep," and "talk less." All of the factors may be considered conceptually pure; that is, psychological items did not load with physical items on the same factor.

Table 2 compared the Chinese American college students' factor loading with Radloff’s (1977) findings based on White American adults on the one hand and Ying's

### Table 1 CES-D Factor Structure Loading

<table>
<thead>
<tr>
<th>CES-D item</th>
<th>Factor 1: Depressed Affect</th>
<th>Factor 2: Positive Affect</th>
<th>Factor 3: Somatic/Retarded</th>
<th>Factor 4: Interpersonal</th>
<th>Factor 5: Somatic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Bothered</td>
<td>.54</td>
<td>-.15</td>
<td>.12</td>
<td>.13</td>
<td>.03</td>
</tr>
<tr>
<td>2. Poor appetite</td>
<td>.03</td>
<td>-.04</td>
<td>.26</td>
<td>.04</td>
<td>.66</td>
</tr>
<tr>
<td>3. Have the blues</td>
<td>.66</td>
<td>-.33</td>
<td>.23</td>
<td>.02</td>
<td>.15</td>
</tr>
<tr>
<td>4. Good as others</td>
<td>-.12</td>
<td>.68</td>
<td>-.05</td>
<td>.23</td>
<td>.08</td>
</tr>
<tr>
<td>5. Keep mind on things</td>
<td>.16</td>
<td>-.01</td>
<td>.73</td>
<td>.10</td>
<td>.13</td>
</tr>
<tr>
<td>6. Depressed</td>
<td>.74</td>
<td>.38</td>
<td>.25</td>
<td>.03</td>
<td>.01</td>
</tr>
<tr>
<td>7. Everything is an effort</td>
<td>.38</td>
<td>.34</td>
<td>.29</td>
<td>.10</td>
<td>-.21</td>
</tr>
<tr>
<td>8. Hopeful</td>
<td>-.09</td>
<td>.76</td>
<td>-.14</td>
<td>-.02</td>
<td>-.03</td>
</tr>
<tr>
<td>9. Life is a failure</td>
<td>.39</td>
<td>-.32</td>
<td>.50</td>
<td>.37</td>
<td>-.11</td>
</tr>
<tr>
<td>10. Scared</td>
<td>.52</td>
<td>-.14</td>
<td>.37</td>
<td>.15</td>
<td>.05</td>
</tr>
<tr>
<td>11. Restless sleep</td>
<td>.01</td>
<td>-.12</td>
<td>.45</td>
<td>.11</td>
<td>.46</td>
</tr>
<tr>
<td>12. Happy</td>
<td>.31</td>
<td>.74</td>
<td>-.10</td>
<td>-.09</td>
<td>-.19</td>
</tr>
<tr>
<td>13. Talk less</td>
<td>.28</td>
<td>-.03</td>
<td>-.05</td>
<td>.15</td>
<td>.66</td>
</tr>
<tr>
<td>14. Lonely</td>
<td>.46</td>
<td>-.20</td>
<td>.11</td>
<td>.27</td>
<td>.34</td>
</tr>
<tr>
<td>15. Unfriendly</td>
<td>.09</td>
<td>-.08</td>
<td>.05</td>
<td>.83</td>
<td>.17</td>
</tr>
<tr>
<td>16. Enjoy life</td>
<td>-.32</td>
<td>.73</td>
<td>-.14</td>
<td>-.10</td>
<td>-.12</td>
</tr>
<tr>
<td>17. Crying</td>
<td>.67</td>
<td>.02</td>
<td>-.22</td>
<td>.05</td>
<td>.16</td>
</tr>
<tr>
<td>18. Sad</td>
<td>.65</td>
<td>-.32</td>
<td>.25</td>
<td>.22</td>
<td>.20</td>
</tr>
<tr>
<td>19. People dislike me</td>
<td>.20</td>
<td>-.17</td>
<td>.21</td>
<td>.78</td>
<td>.10</td>
</tr>
<tr>
<td>20. Can't get going</td>
<td>.16</td>
<td>-.31</td>
<td>.64</td>
<td>.06</td>
<td>.28</td>
</tr>
</tbody>
</table>

Note. Boldface values indicate items loading above .40. CES-D = Center for Epidemiologic Studies–Depression Scale.
TABLE 2 A Comparison of Factor Loading in Chinese American College Students (ST) With White American (WA; Radloff, 1977) and Chinese American Community Samples (CO; Ying, 1988)

<table>
<thead>
<tr>
<th>CES-D item</th>
<th>Depressed Affect (WA &amp; ST) or Depressed Affect/Vegetative Signs (CO)</th>
<th>Positive Affect (WA, ST, &amp; CO)</th>
<th>Somatic/Retarded (WA &amp; ST) or Interpersonal/Vegetative/Depressed (CO)</th>
<th>Somatic (ST)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Bothered</td>
<td>ST</td>
<td>WA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Poor appetite</td>
<td>CO</td>
<td>WA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Have the blues</td>
<td>WA ST CO</td>
<td>WA ST CO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Good as others</td>
<td>WA ST CO</td>
<td>ST</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Keep mind on things</td>
<td>CO</td>
<td>WA ST</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Depressed</td>
<td>WA ST</td>
<td>WA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Everything is an effort</td>
<td>WA ST CO</td>
<td>ST</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Hopeful</td>
<td>WA ST CO</td>
<td>ST</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Life is a failure</td>
<td>CO</td>
<td>ST</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Fearful</td>
<td>ST</td>
<td>ST</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Restless sleep</td>
<td>WA ST CO</td>
<td>WA ST CO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Happy</td>
<td>WA ST CO</td>
<td>WA ST CO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Talk less</td>
<td>CO</td>
<td>ST</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Lonely</td>
<td>WA ST CO</td>
<td>WA ST CO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. Unfriendly</td>
<td>WA ST CO</td>
<td>WA ST CO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. Enjoy life</td>
<td>WA ST CO</td>
<td>WA ST CO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17. Crying</td>
<td>WA ST</td>
<td>WA ST CO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18. Sad</td>
<td>WA ST</td>
<td>WA ST CO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19. People dislike me</td>
<td>CO</td>
<td>WA ST CO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20. Can't get going</td>
<td>CO</td>
<td>WA ST CO</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. CES-D = Center for Epidemiologic Studies-Depression Scale.

(1988) findings based on her Chinese American community sample on the other. Compared with Radloff's results, the item loadings were highly similar. For the Positive Affect and Interpersonal factors, they were identical. For the Depressed Affect factor, 5 out of the 7 items that loaded for Chinese American college students also loaded for White Americans (Items 3, 6, 14, 17, and 18). For the Somatic/Retarded factor, 2 out of the 4 items that loaded for Chinese American college students also loaded on the same factor for Radloff's White sample (Items 11 and 20). Two others (Items 2 and 11), which loaded on Radloff's Somatic/Retarded factor, loaded on a separate Somatic factor for Chinese American college students (i.e., Factor 5).

In contrast, our results varied significantly from those found in Ying's (1988) community-based study of Chinese Americans. Except for the Positive Affect factor (identical in both samples), all other factors varied conceptually and in item loading. The Somatic/Retarded and Somatic factors did not emerge in the community sample. Factor 1 was a pure factor of Depressed Affect in the college student sample but a mixed factor of Depressed Affect/Vegetative signs in the community sample. Only 2 of the 7 items that loaded the Depressed Affect factor in the college sample also appeared on the Depressed/Vegetative signs factor in the community sample. Factor 4 was a pure factor of Interpersonal Relationship in the college sample but a mixed Interpersonal/Vegetative/Depressed factor in the community sample. In addition to the Interpersonal factor items "people are unfriendly" and "people dislike me," which loaded for both
samples, the items “restless sleep” and “crying” also loaded on the community sample’s Interpersonal/Vegetative/Depressed factor. These results support our hypothesis that the Chinese American college students better approximate White Americans in their conception of depression than the Chinese American general population.

To further assess the goodness of fit of our findings with that of Radloff’s (1977) White American adults and Ying’s (1988) community sample, we conducted two confirmatory factor analyses. According to Hatcher’s (1994) criteria, a good fit is present when the $\chi^2/df$ ratio is less than 2, the Bentler and Bonett’s nonnormed fix index and Bentler’s comparative fit index are over .9, and factor loading of each item on the factor identified is statistically significant ($p < .05$). The confirmatory analysis with Radloff’s White American sample yielded these results: $\chi^2(98, N = 353) = 163.41, p < .0001$, so the $\chi^2/df$ ratio was 1.67. The nonnormed fit index was .95, and the comparative fit index was .96. All items loaded significantly on the appropriate Radloff factors ($p < .05$). The confirmatory analysis with Ying’s Chinese American community sample yielded these results: $\chi^2(87, N = 353) = 210.90, p < .0001$, so the $\chi^2/df$ ratio was 2.42. The nonnormed fit index was .89, and the comparative fit index was .91. All items also loaded significantly on the appropriate Ying factors ($p < .05$).

Discussion

Both the principal-components factor analysis results and the confirmatory factor analyses fit indicators suggest that, secondary to their significant engagement with mainstream American culture, Chinese American college students’ conception of depression fit Radloff’s (1977) differentiated White American model better than Ying’s (1988) integrated Chinese American community model. As the college student sample represents a subset of the general Chinese American population, some similarity between the factor loading in the community and college students samples is not surprising.

There are several limitations to the study that pave the way for future research. We examined the internal structure of the CES-D but did not examine its external validity. As such, it does not fully describe the “nomological net” of the construct of depression (Cronbach & Meehl, 1955). In addition, we chose the CES-D to assess the conception of depression because of its popularity and easy use. Future research using open-ended qualitative methods is needed to more fully understand the conception of depression in Chinese American college students, so as not to be confined by the existing items of this Western-conceptualized instrument. For instance, our data’s good fit with the White American model and partial fit with the Chinese American community model may suggest that Chinese American college students’ conception of depression lies somewhere between a differentiated and an integrated view.

We hypothesized that Chinese American college students would hold a more differentiated conception of depression because of their strong engagement with mainstream American culture. The GEQA and GEQC results support their involvement with both American and Chinese cultures. Given their biculturality, it is especially notable that Chinese Americans students’ conception of depression better approximates that of White Americans than the community sample of Chinese Americans. There are two plausible explanations. One possibility is that the Chinese American college students’ strong American cultural orientation is associated with a significant shift in their sense of self, which resulted in their more differentiated conception. Although we assessed their general cultural practices, we did not directly examine their sense of self. Okazaki (1997) demonstrated the contribution of self-construal to psychological functioning in Asian and White American college students. Future research should
directly assess the relationship of the conception of the self with the conception of depression and other psychopathology.

The second possibility is that the reported Chinese cultural orientation is an overestimate whereas the reported American cultural orientation is an underestimate of their actual orientations. Participants' responses on the GEQA and GEQC may be influenced by the American context in which, in spite of the population's rapid diversification, the prevalent view remains that to be fully American means being White. Thus, when participants rate their engagement with American and Chinese cultures, they may be implicitly comparing themselves with White Americans. As such, they may feel less American (or White) and more Chinese. In contrast, if they were completing the instruments in a Chinese context, their difference from other monocultural Chinese people would be both evident and salient, and they would have been likely to rate themselves as more American and less Chinese. Although we are not aware of empirical research that has examined this phenomenon, our personal experiences and other autobiographical accounts support American minorities' realization of their Americanness upon visiting the home country of their ancestors (Mura, 1991). This deserves further study.

It is notable that although 34.56% of our sample were American-borns and 63.44% were immigrants, as a group, their conception of depression already approximated that of White Americans more than that of the Chinese American general population. It is possible that within the group of Chinese American college students, American-borns hold a conception of depression that is even more differentiated. Unfortunately, given their small number in our sample \( n = 122 \), we could not further test within-group variation (Tinsley and Tinsley, 1987, recommend a 10-to-1 sample-size-to-item ratio for stable factor analysis results). This should be assessed in future studies.

Finally, the finding that Chinese American college students' conception of depression tends to be differentiated holds implications for help seeking, assessment, and treatment. Chinese Americans with an integrated conception of depression may complain of concurrent somatic/vegetative symptoms and interpersonal difficulties rather than focus on psychological distress, and they may prefer to initially seek the assistance of medical professionals (Ying, 1990). In contrast, those with a more differentiated conception may present with primarily psychological symptoms and may be more willing to seek help from mental health professionals. This is consistent with the previous finding that more acculturated Chinese Americans hold a more favorable attitude toward help seeking and are indeed more likely to have actually sought help for mental health problems (Ying & Miller, 1992).

Given variation in the conception of depression in the Chinese American population, careful assessment prior to embarking on treatment is recommended. Those with an integrated conception may prefer an intervention that concurrently addresses psychological, physical, and interpersonal distress. To work successfully with them, clinicians may need to reconsider the applicability of the prevalent view that when psychological and physical symptoms co-occur, the psychological is likely to be the cause and the physical is merely a manifestation. Ying (1997) documented a case in which a Chinese American immigrant woman refused to continue treatment with a White psychiatrist when he insisted her physical complaints were merely a somatization of her psychological distress, as Western medical doctors were unable to identify an organic basis for her complaints. A more appropriate response might be to encourage the client to pursue treatments consistent with her integrated problem conception. These may include the practice of chi-gong and tai-chi, consultation with practitioners of Traditional Chinese Medicine, as well as problem-solving-oriented and supportive psychotherapy (Ying, 1997). It is clear that the clinician's knowledge of and respect for
these practices are crucial in conveying such a recommendation with sincerity and conviction. In contrast, Chinese Americans with a more differentiated conception of depression may be better suited for traditional Western psychotherapy that focuses more specifically on the individual’s psychological distress. However, as our data also partially fit Ying’s (1988) integrated model, some modification of Western treatment methods may be necessary even for these Chinese Americans. For instance, Tung (1991) wrote on the utility of insight-oriented therapy with Chinese Americans while at the same time identifying potential variation in its use. More research is needed to identify means of increasing therapy effectiveness with acculturated Chinese Americans.

Conclusion

The present investigation showed that the conception of depression in Chinese American college students better approximated the differentiated view of White Americans than the integrated view found in the Chinese American general community. The finding points to the heterogeneity in the Chinese American population and the shifting in the conception of depression secondary to increasing cross-cultural contact.

References


