Acculturation: Measurements and Review of Findings

Richard M. Suinn

Abstract Acculturation is a process that occurs when two or more cultures interact together. This opening chapter discusses the evolution of the definition of acculturation and identifies scales used to measure acculturation through behavior, values, or a combination of both. The chapter then provides a detailed review of the research literature on the effect of acculturation on Asian Americans, specifically as it pertains to physical health, mental health, school performance, choice of careers, and attitudes toward counseling and therapy.

Keywords Acculturation · Scales · Asian-American mental health · Asian-American physical health · Asian-American school performance · Asian-American careers · Asian-American therapy attitude

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Definition

"Acculturation" has been defined in various ways. An early definition of acculturation was offered by Redfield et al. [1] as "those phenomena which results when groups of individuals sharing different cultures come into continuous first-hand contact, with subsequent changes in the original culture patterns of either or both groups..." (1, p. 149). Leininger [2] suggested that acculturation is the process by which an individual or group from culture A learns how to take on the values, behaviors, norms, and lifestyle of culture B. Berry [3] writes that acculturation is the "process by which individuals change, both by being influenced by contact with another culture and by being participants in the general acculturative changes under way in their own culture" (p. 235). Suinn [4] provides a more simple definition that acculturation is a process that can occur when two or more cultures interact together.

In all of these definitions, acculturation is viewed as a process of change leading to certain outcomes. Initially, acculturation was conceptualized mainly as a linear, unidimensional process, with the process occurring on a continuum. On this continuum, the original culture and the new culture are seen at opposite ends. Within this linear, unidimensional framework, the acculturation process is said to start with "low acculturation" and move toward "high acculturation." Put in other terms, "high acculturation" refers to adoption of the host culture's attitudes, values, or behaviors, whereas "low acculturation" refers to the retention of the culture of origin's characteristics. This model assumes that increments of involvement in the new culture necessarily involve corresponding decrements of involvement with the culture of origin.

A revised perspective expands the view of what the possible outcomes might entail. Instead of a single, linear continuum, a multilinear model focuses on a person's position on both the original culture's and the new culture's norms. Involvement in one society does not necessitate a decrease in involvement in another; therefore, a more comprehensive picture would describe individuals' positions relative to their original cultures' as well as to the new culture's identifying characteristics [5, 6]. This is best illustrated with a person whose culture of origin is Asian, immigrating to a Western country. One possible outcome of such exposure might be that this person retains the Asian cultural characteristics and adopts none of the Western characteristics—in effect showing high Asian and low Western identity. In Berry's terms, this outcome is called *separation*. Another potential outcome might involve loss of Asian attitudes, behaviors, values, and full adoption of Western characteristics—thus showing low Asian and high Western features. Berry would refer to this as *assimilation*. Still, yet a third outcome might include the retention of Asian besides the adoption of Western qualities—thereby showing high Asian as well as high Western characteristics, in other words, a person who is bicultural or at Berry's stage of *integration*. Finally, another outcome could be a rejection of one's prior culture as well as rejection of the Western culture—showing low Asian and low

Western characteristics; in other words, a person who is alienated from both cultures and is *marginalized* according to Berry.[1]

In this chapter, "acculturation" refers to the *process*; the terms "low acculturation" and "high acculturation" refer to the outcomes of the acculturation process; the former refers to the retention of the culture of origin's values, attitudes, and behaviors and the latter refers to the adoption of the host culture's values, attitudes, and behaviors. In addition, in this chapter, the term "Asian-identified" is equivalent to "low acculturation", whereas "Western-identified" is equivalent to "high acculturation" [4].

Assessment

Moyerman and Forman [7], in their definition of acculturation, identify the areas of change as attitudes, behaviors, or values. Similarly, Lee [8] describes acculturation as a process by which consumers learn values, attitudes, and behaviors different from their culture of origin. Also Berry et al. [6] defined the changes as involving cultural behaviors and values that individuals experience as a result of contact between two cultures. Over the years, measures of acculturation status for Asian or Asian-American populations have typically addressed one or both of the following: (a) assessment of acculturation through measuring behaviors or through measuring values or (b) development of a scale that is appropriate for diverse cultures rather than being specifically worded for one or a few cultures. There has also been attention to designing a scale or scoring systems that enable the assessment of individuals' status or commitment to both their country of origin and the host culture's behaviors, attitudes, or values—these are often referred to as orthogonal scales or orthogonal scoring. The following sections will briefly describe a sample of self-administered acculturation scales applicable to Asian or Asian-American populations. For the scales themselves, please refer to the Appendix.

Behavioral Acculturation Scales: Scales Based on Determining Acculturation by Behaviors

The Suinn–Lew Asian Self-Identity Acculturation Scale (SL-ASIA) is a 21-item instrument in which respondents rate the items on a scale from 1 to 5, with low scores representing high-Asian identification and high scores representing high-Western identification [9, 10]. These original 21 items covered behaviors

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[1] The term acculturation is sometimes used in writings to refer to the process, but also at times to the outcome of the process. Hence, "acculturation" might be used to refer to the outcome whereby an individual adopts the behaviors and values of the host culture as a result of exposure to that culture. On the other hand, "unacculturated" might be used to refer to an individual who retains the behaviors or values of the country of origin.

involving language, friendship choice, food preferences, media preferences, participation in cultural activity, ethnic identity, and geographical and generational history. Although viewed as a linear, unidimensional scale, an orthogonal scoring system is available [11, 12]. In addition, five new items have been developed that not only measure orthogonal information regarding the level of commitment to Asian as well as to Western norms but also cover the topics of values, perceived behavioral competency/comfort, and core self-identity [4]. Several authors have identified the SL-ASIA scale as the 'most widely used scale for measuring Asian-Americans' acculturation levels' [13–16].

The Marin Acculturation Scale, revised [17] is actually a scale originally developed by Marin et al. [18] for Hispanic populations. Gupta and Yick administered it to a group of foreign-born Chinese-Americans to determine its appropriateness and concluded that it could be a valid method. The scale is made up of 12 items regarding the following behaviors: language spoken at home, preference of the ethnicity of people at social gatherings, and language preferred in media. They reported suitable validity results from factor analysis and correlation with the length of residence in the United States.

Values Acculturation Scales: Scales Based on Determining Acculturation by Values

The Asian Values Scale (AVS) contains 36 statements that measure commitment to various Asian cultural values, including collectivism, conformity to norms, emotional self-control, filial piety, humility, and family recognition through achievement [19]. Respondents use a 7-point Likert scale, ranging from "strongly disagree" to "strongly agree." Scores from the AVS were correlated against scores from the SL-ASIA, with the result of $r = 0.15$. Because the AVS was designed as a measure of values, whereas the SL-ASIA assesses behaviors, this low correlation confirmed that the two scales measure different aspects of acculturation. The original AVS has been shortened to a 25-item version, named the Asian Values Scale-Revised [20]. This has been followed by a 42-item version—the Asian-American Values Scale-Multidimensional—that provides subscale scores on the values of collectivism, conformity, emotional self-control, humility, and family recognition [21].

The European American Values Scale for Asian Americans (EAVS-AA) was developed to independently measure Asian-American individuals' adherence to European American values [22]. The authors recognized that the AVS assesses the level of adherence to Asian values and wanted the EAVS-AA to correspondingly assess adherence to European American values to provide a more comprehensive picture. The initial values items were derived from a survey of 369 items, then reduced to 180 items, and finally reduced to a final pool of 18 items on which European Americans scored significantly higher than Asian Americans. Respondents rate each item on a 7-point scale, ranging from "strongly disagree" to

"strongly agree." A psychometrically improved 25-item version using a 4-point rating scale has replaced the initial EAVS-AA and is named the European American Values Scale for Asian Americans-Revised (EAVS-AA-R) [23].

Behavioral and Values Acculturation Scales: Scales Based on Assessment of Behaviors and Values

The Acculturation Scale, originally entitled The Acculturation Scale for Vietnamese Adolescents (ASVA), consists of 76 items representing behaviors and values associated with everyday lifestyle, group interactions, family orientation, and traditions [24]. A 5-point scale is used to indicate the respondents' level of agreement with each item. Behavioral items include items such as language, social group, and media preferences. Values items include values such as collectivism/individualism and culturally defined gender roles. Two subscale scores are derived: the IVN (Involvement in the Vietnamese culture) reflects the level of involvement in the Vietnamese culture and the IUS (Involvement in the American culture) score reflects the level of involvement in the US culture. A brief 50-item version is also available [24].

Pan-Ethnic Acculturation Scales: Scales Suitable for Diverse Ethnic Populations

The Asian American Multidimensional Acculturation Scale (AAMAS) is based on the SL-ASIA, but converted into a format appropriate for diverse ethnic populations [13]. The format revision asks respondents to rate each item according to three reference groups: (a) their culture of origin, (b) other Asian Americans, and (c) European Americans. Three subscales result from this approach: AAMAS Culture of Origin, AAMAS-Asian American, and AAMAS-European American. Each subscale is composed of 15 items assessing cultural behaviors, cultural knowledge, and cultural identity. Responses are rated through a 6-point scale from "not very much" to "very much."

The Stephenson Multigroup Acculturation Scale was designed to be appropriate for persons from diverse ethnic groups and has been tested among groups such as African Americans, Asian Americans (such as Cambodians, East Indians, and Filipinos), European Americans, and Hispanic Americans (such as Brazilians, Mexicans, and Peruvians) [25]. Two subscale scores are derived, representing immersion in the host society and immersion in one's ethnic society. There are a total of 32 items covering language, social interactions, cultural knowledge, food, and media preferences. Respondents use a 4-point scale ranging from "false" to "partly false," "partly true," and "true." The 32 items are in the form of statements, such as "I know how to read and write in my native language" and "I regularly read an American newspaper."

The Acculturation, Habits, and Interests Multicultural Scale for Adolescents (AHIMSA) is available for adolescents from diverse ethnic origins [26]. There are eight items covering food, media, social interactions, and identity. Each item is actually an incomplete statement, such as "I am most comfortable being with people from..." and "The way I do things and the way I think about things are from..." Four answer choices are offered: (a) the United States, (b) the country my family is from, (c) both, and (d) neither. From these answers, four scores are generated based on the four orientations: Assimilation (the total number of "United States" responses), Separation (the total number of "The country my family is from" responses), Integration (the total number of "Both" responses), and Marginalization (the total number of "Neither" responses).

The Multicultural Acculturation Scale (MAS) is made up of items covering behaviors, identity, and values [27]. The MAS includes 24 items involving daily, cultural, and work activities, social interactions, religion and language, and identity. Using a 5-point scale, respondents rate the extent to which their characteristics on these items are like those typical of their culture of origin. A second set of ratings uses the same items but with the referent being the Anglo (Western) culture. Three scores are reported: Ethnic Orientation Index (EOI), Anglo-American Orientation Index (AOI), and an Overall Acculturation Index (OAI). The OAI is calculated by subtracting the EOI from the AOI. A positive score is indicative of assimilation, a negative of separation. A near-zero OAI combined with high EOI and high AOI is interpreted as biculturalism. A near-zero OAI combined with low EOI and low AOI is interpreted as marginality.

The Orthogonal Cultural Identification Scale [16, 28, 29] consists of six basic questions assessing cultural behaviors, self-estimate of success in cultural involvement, and the level of adoption of an identified culture's "way of life." The scale asks participants to rate themselves on each of the six questions consisting of five referent points. For instance, one basic question is "Do you live by or follow the....way of life?" This question is repeated five times, with a different referent group, for example, "Do you live by or follow the White American way of life?" and "Do you live by or follow the Asian American way of life?" The five referent groups are African American, Asian American, American Indian, Mexican American or Spanish, and White American. Ratings are on a 4-point scale from "a lot" to "not at all." Within this model, participants can be assessed regarding their level of acculturation across any pairings of cultures.

Why Study Acculturation—Research Findings

Over the years, an impressive array of research has accumulated, which confirm either the direct or indirect relationship of acculturation outcomes to important variables. Thus, acculturation status has been found associated with physical health, mental health, school performance, and family/marital adjustment. Furthermore, acculturation status has been shown to affect career and personal

counseling/psychotherapy processes. The following sections will illustrate such findings from a sample of scholarly studies.

Acculturation Status and Physical Health

Coronary heart disease: Among the classic early findings bringing attention to the role of culture and health are the epidemiologic studies on coronary heart disease (CHD) and stroke among Japanese populations. Prevalence and incidence of CHD were compared among Japanese men residing in Japan, Hawaii, and California. The prevalence rates for definite and possible CHD showed a clear pattern of increasing prevalence from those in Japan to those in Hawaii to those in California, the prevalence rates being 25.4, 34.7, and 44.6, respectively. A similar gradient was also found for the prevalence of angina pectoris and elevated serum cholesterol [30]. Researchers conclude that there is a striking increase in CHD in Japanese who migrate to the United States, with this increase being more pronounced in California than in Hawaii. For instance, the incidence of myocardial infarction and death from CHD among Japanese men in California was nearly 50% greater than that of Japanese men in Hawaii [31].

The Canadian National Population Health survey examined 1,972 Asian immigrants to Canada with respect to the prevalence of hypertension [32]. Findings showed that rates of hypertension increased along with increased years of residence in Canada. This finding was found when other risk factors were controlled, such as smoking, health status and access, drinking, stress, and socioeconomic level. In all these studies, a major conclusion is that exposure to the Western culture—and presumably adoption of the Western lifestyle—is associated with major risk of CHD.

Eating disorders and obesity: Studies have reported on the possible relationship between adopting Western attitudes and values about physical appearance and eating disorders. Mau [33] studied acculturation levels and eating disorder symptoms among 396 Hong Kong schoolgirls. Instruments used were the SL-ASIA, the Eating Attitudes Test (EAT), and the Eating Disorder Inventory (EDI) [34, 35]. Results indicated that girls who were more Westernized scored higher on the EAT and on the bulimia symptoms subscale of the EDI. In a dissertation study, Doan [36] contacted 188 East Asian female undergraduates in the United States to determine the influence of acculturation on eating disorder symptoms. The group of women in the assimilation group showed the highest number of anorexic symptoms as compared with the women in the separation and marginalization groups. In addition, those students who internalized Western attitudes about physical appearances were most symptomatic compared with the rest of the sample. Finally, when all risk factors were controlled, acculturation status continued to contribute to anorexia symptomatology. Using an international sample of students from Hong Kong, Japan,

People's Republic of China, and Taiwan studying in the United States, Stark-Wroblewski et al. [37] also confirmed that the internalization of Western appearance norms was positively associated with eating disorder symptoms.

Unger et al. [38] studied behaviors leading to obesity. They examined the frequency of fast food consumption and of physical fitness activities among Asian American and Hispanic 6th and 7th grade adolescents. Acculturation status was assessed with the AHIMSA. Results showed that acculturation measured in the 6th grade was significantly associated with higher frequency of fast food consumption and a lower frequency of participation in physical fitness activity in the 7th grade. An interesting study by Yang [39] focused on the possible contribution of acculturation distress on emotional eating and hence body weight. Participants were Hmong and Hmong-Americans attending a US college. Results supported the hypothesis that acculturation stress levels were associated with emotional eating behaviors, although acculturation status was not. In addition, a small positive correlation was found between emotional eating and body weight ($r = 0.19$, $P < 0.05$), indicating that greater emotional eating was somewhat associated with higher body weight.

Smoking behaviors: In the same way that certain behaviors may be a risk factor for obesity and poor health, smoking is a well-known risk factor for poor physical health. A number of studies have examined the extent to which cultural norms influence smoking behaviors [40, 41]. Of interest are the variable findings of studies on acculturation status and smoking behaviors. One set of research supports the contention that low acculturation among Asians is associated with higher smoking. For instance Ma et al. [42] found low acculturation to be predictive of smoking among a sample of 1,374 Chinese, Cambodians, Koreans, and Vietnamese adult males living in the United States. Similarly, Hofstetter et al. [43] reported that less acculturated adult male Koreans in California reported higher current and predicted future rates of smoking. On a younger sample of 106 Asian-American high-school students, Weiss and Garbanati [44] found that lower acculturation was associated with smoking.

On the other hand, another series of studies report that higher acculturation rather than lower acculturation is associated with higher smoking prevalence rates [45, 46]. Chen et al.'s finding was based on a study of 1,810 Chinese-, Filipino-, Japanese-, and Korean-Americans in California. Unger et al.'s finding came from the Independent Evaluation of the California Tobacco Control, Prevention, and Education Program, which evaluated 15,938 youths. Of these, 4,352 were Hispanic and 3,021 were Asian American. The relevant finding focused on the association between the use of English and smoking behaviors. Results were that speaking only English at home doubled the risk of lifetime smoking compared with students who reported speaking only or mostly another language. As language usage has been accepted as one index of acculturation status, this study would confirm the suggestion that high acculturation is predictive of higher smoking.

There are several possible hypotheses regarding these apparently contradictory findings. One possible explanation is the difference in age groups. The

samples of Ma et al. [42] and Hofstetter et al. [43] were adult males, whereas the Chen/Unger series involved youth. Thus, Ma et al. [42] found that less-acculturated male adults but more-acculturated youth had higher smoking rates. Another hypothesis takes into account the context within which the individuals live and how these might interact with the level of acculturation. For instance, Unger and Chen [47] concluded that the surrounding social networks of adolescents have a major influence on smoking. Specifically, the age of initiation of smoking was earlier among adolescents whose friends, siblings, or parents were smokers. Another cross-cultural study by Unger et al. confirmed this finding [48]. Using survey data on 5,780 adolescents in California and 6,992 adolescents in Wuhan, China, the role of friends who smoke was studied. For both cultures, the association with friends who smoke was associated with smoking prevalence, and the strength of this relationship was similar between the two cultures. An additional study conducted by Weiss and Garbanati [44] discovered that what differentiated their Asian-American adolescents who smoked from nonsmokers was lower acculturation plus having a father who smoked.

Alcohol consumption: Alcohol consumption is another risk factor for health. Results have been similar to the prior findings regarding smoking behaviors. Hahm et al. [49] accessed a subsample of the National Longitudinal Adolescent Health data set looking at 714 Asian American adolescents. Asian American adolescents with the highest level of acculturation (English use at home, born in the United States) were identified as the highest risk group. However, a familial factor acted as a further influence. Thus, for adolescents with low parental attachment, the odds of alcohol use were 11 times greater in the higher acculturated group than in the lower acculturated group. Hendershot et al. [50] reported that acculturation and parents' use of alcohol significantly predicted drinking behavior. In addition, Hahm et al. [51] first found that high acculturation level was associated with high binge drinking. However, with further analyses, they concluded that the influence of friends who drink is the important pathway leading to binge drinking. Thus, acculturation status might be considered the first level of variables involved in alcohol consumption, but it is modified by the social or familial context.

Acculturation Status and Mental Health

Psychological distress: Berry has observed that the acculturation process can be stressful to a person struggling to adapt to the new cultural environment. Among the sources of stress facing the new arrival include acquiring a new language to communicate, developing work skills, understanding the new social and behavioral norms, and coping with social isolation and possible racism [52–57]. A number of studies provide concrete information regarding the nature of the relationship between acculturation and stress. Sodowsky and Lai [58] studied 200 immigrants who were Asian Indian, Chinese, Filipino, Japanese,

Korean, or Vietnamese. Acculturation status was significantly related to acculturation stress; the lower the level of acculturation, the higher the distress. Wang and Mallinkrodt [59] surveyed Chinese international students regarding acculturation, anxiety, and psychological symptoms or distress. The specific anxiety measured—"attachment anxiety"—involves worries about being alone and anxiety about being separated from significant figures. Results showed that low Western acculturation was in fact associated with high attachment anxiety. In addition, high levels of attachment anxiety were associated with high psychological symptoms/distress.

Wilton and Constantine [60] examined the cultural distress of 190 Asian and Latin American international college students. They found that the length of residence in the United States was negatively associated with acculturative distress, with higher stress reported by those more recently exposed to the United States. Of interest is the additional finding that students with concerns over their intercultural competency reported higher levels of distress. Lee et al. [61] also examined the relative roles of acculturation, acculturation stress, and mental health symptoms. In 319 Asian immigrant students in junior and senior high schools, acculturation stress was found to be associated with higher mental health symptoms. Furthermore, Asian youths who were more Asian-identified tended to report more mental health symptoms than youths who were more American-identified. Similarly, Ryder et al. [62] found that among Chinese undergraduate students, higher levels of assimilation predicted lower levels of distress, depression, reported symptoms, and social maladjustment.

In addition, several studies are expanding to ask the question of whether acculturation stress can be moderated. For instance, Lee et al. [61] first confirmed that acculturative stress was associated with mental health symptoms among 74 Korean international students in Pennsylvania. However, the availability of social support significantly reduced reports of mental health symptoms even with increased levels of stress. This buffering effect was especially prominent where there was a high level of acculturation skills, such as language. Earlier, Chung et al. [63] compared the levels of psychological distress of immigrant groups arriving in different years. The groups experiencing lower distress were more acculturated and felt they received helpful social support.

Depression and suicide: Although acculturation status has some relationship to depression, this relationship is complex. Shen and Takeuchi [64] examined the role of acculturation on depression with 983 Chinese-American employees, most of whom were immigrants. They discovered that higher levels of acculturation were associated with elevated depressive symptoms, but this was because higher acculturation status involved higher stress levels. However, this relationship between high acculturation and depression was dramatically altered in the presence of other variables. For employees with higher socioeconomic status, better social support, and lower stress, higher acculturation status was associated instead with lower depressive symptoms. Another interesting study is that of Kim et al. [65]. They utilized Berry's proposal that there are four possible outcomes of the acculturation process: assimilation,

integration, separation, and marginalization (as defined earlier) [6]. Participants were 60 Chinese-, Japanese-, or Korean-American adolescents, along with 60 mothers and 54 fathers living in California. Most parents immigrated as adults, whereas most adolescents were US born. The results confirmed that parents and adolescents who experience marginalization reported experiencing more intense depressive symptoms. Crane et al. [66] adopted a different point of analysis by examining the interaction between adolescents' acculturation status difference from their parents and depression. Their sample involved 41 adolescents and their parents living in the United States and Canada. They found that when adolescent depression was present, the crucial contributing factor was the existence of discrepancies between the adolescents and their parents in levels of acculturation. Lau et al. [67] conducted a similar analysis to determine whether family variables interacted with acculturation level. They researched suicidal behaviors documented in mental health outpatient clinic records of 285 Asian American youths in California. Less acculturated youths were found to be at greater risk of suicidal behaviors. Under further analysis, an important mediating variable was found to be family conflict. Less-acculturated Asian youths were at greater risk of suicidality under conditions of high parent–child conflict.

Family adjustment: With the high value afforded family matters in the Asian culture, research regarding acculturation and family adjustment assumes importance. Fu [68] contacted 150 Chinese Americans to determine the relationship between acculturation levels and family conflicts. Participants described their acculturation levels and then did the same on behalf of their parents. Results showed that the disparity between acculturation levels was related to family conflict. In a similar approach, Nguyen [69] obtained data from 91 Vietnamese-Americans in California. As with Fu's procedure, participants assessed their own acculturation status on a questionnaire and then completed the same items as they perceived their parents would answer the questions. Results indicated that the greater the difference in acculturation levels between the participants and their ratings of their parents, the higher the likelihood and seriousness of family conflicts. Pyke [70] expanded her study's focus to study siblings' acculturation level differences. Through interviews, she concluded that first-born children tended to be more traditional, whereas younger were more assimilated. These differences, she concluded, tended to be the sources of familial conflict. Sharir [71] also studied the influence of intergenerational discrepancies regarding acculturation with an emphasis on acculturation strategies. For instance, differences were examined where a family member endorsed integration, whereas another endorsed separation. Results confirmed that greater family conflict existed where adolescents adopted a different acculturation strategy compared with their parents. Ying and Han [72] conducted a longitudinal study of 490 Southeast Asian adolescents and confirmed that intergenerational discrepancy predicted intergenerational family conflict 3 years later. In addition, intergenerational conflict was predictive of depressive symptoms.

Acculturation Status and School Performance

There is a perception that Asian students tend to do well academically [73, 74]. In fact, a number of studies lend credence to this perception. In a longitudinal design, Huntsinger et al. [75] compared 40 European American and 40 second-generation Chinese-American preschool and kindergarten children over three testing periods: 1993, 1995, and 1997. The Chinese-American children outscored the European American children in mathematics all three times. Initially, the European American children scored higher than the Chinese children on receptive English vocabulary, but the Chinese children caught up by the third testing and surpassed the European American children in reading by that date. Fuligni et al. [76] conducted their study on high school students of European American, Mexican, or Chinese heritage. They found that commitment to one's ethnic culture was a factor associated with academic achievement. The authors not only concluded that high identification with one's cultural background was associated with high academic achievement among the Mexican and Chinese students, but cultural identification also signified higher academic motivation as well. Such students were more positive about education in general, found school interesting, and believed schooling to be useful for their future.

As with other findings demonstrating the important influence of acculturation status, how acculturation impacts school performance is being discovered. Here, the role of parents seems prominent. Huntsinger et al. [75] concluded that parental involvement, such as requiring more homework, was a significant influence on their children's high mathematics performance. Dandy and Nettelbeck [77] surveyed 239 Australian parents from Chinese, Vietnamese, and European Celtic heritage to identify parental expectations for their children. Results indicated that the Asian parents revealed higher aspirations and higher academic standards for their children's education than the European Celtic parents. Such high expectations were confirmed by a number of researchers using data from the US National Educational Longitudinal Study. The National Longitudinal Study [78] was a survey that included 3,009 African Americans, 1,527 Asian Americans, 16,317 European Americans, 3,171 Mexican Americans, and 299 Native Americans. From this data set, Shin [79] (see also Goyette and Xie, 80; Peng and Wright, 81) concluded that Asian American parents had higher educational expectations for their children than Mexican Americans or European American parents, and that this difference led to the Asian children's superior school performance.

Further research has taken the logical extension of asking how the students themselves viewed academic work, as this might moderate the influence of their parents' high expectations. For instance, if these students believed that success was a function of innate ability, then such a belief would reduce the impact of parental expectations and pressure. What has been found, however, is that Asian American students attribute academic success to factors within their control. For example, Mizokawa and Ryckman [82] asked 4th–11th grade

Asian American students (Chinese, Filipino, Japanese, Korean, and Vietnamese) to what they attribute success or failure in academic work. This sample of over 2,500 students rated effort more than ability as the explanation for academic performance. Similarly, Hau and Salili [83] confirmed that Chinese high school students rated effort, interest in studying, study skill, and the ability in studying to be the most important sources for academic success. Extending the study sample to undergraduate and graduate students, Yan and Faier [84] obtained the responses of 358 European, Chinese, Japanese, Korean, and Southeast Asian American participants. When compared with Asian American students, the European American students attributed academic achievement more to ability than did their Asian American counterparts. On the other hand, Asian American students emphasized effort when identifying the cause for academic achievement or failure. In effect, Asian cultural beliefs and values significantly impact on school performance. Among the important Asian beliefs are the role of hard work and discipline, even at an early age. Also important is the belief that "ability" is accomplished through effort and work, and that achievement precedes ability. In contrast, the European American culture places a greater emphasis on ability in academic achievement and on the belief that ability precedes achievement [85–88]. The research summarized in this section not only documents the influence of Asian parents but also confirms the lasting influence on the beliefs held by the children themselves. A possible conclusion that many Asian families might reach is that when there is academic failure, there is a lack of effort on the child's part, or if more Westernized, a lack of ability. This may be important to consider in a biopsychosocial formulation when working with children and their parents.

Acculturation Status and Career Decisions

Although there are only a small number of studies on acculturation and career decisions, there are some trends in results. Those with high Asian identification appear to select careers that have been stereotyped vocations for Asians (science or numbers oriented). They may place personal interests secondary and follow directions influenced by parental wishes. Tang et al. [89] reported this exact finding on a sample of 187 Asian American college students, concluding that lower acculturation participants chose more Asian-stereotyped occupations and were influenced by their families rather than by their personal interests. Castelino replicated these findings in his study [90]. Whereas Tang et al. involved predominantly Chinese, Vietnamese, and Filipinos born or raised in the United States, Castelino's sample was South Asian participants from Bangladesh, India, Nepal, Pakistan, and Sri Lanka. Once more, the results confirmed that low acculturation participants selected more stereotyped occupations; on the other hand, high acculturation participants expressed interest and choices among more nontraditional, broader sets of occupations. Hsieh [91] studied a slightly different view of

the role of acculturation. She looked at the decision-making self-efficacy of 280 Asian American female undergraduates as it might be affected by acculturation level. The level of acculturation was found associated with gender role traditionality; in turn, gender role traditionality directly influenced career decision-making self-efficacy. Finally, low self-efficacy was significantly associated with greater indecision about careers.

As Asian cultural values emphasize commitment to family and respect for parents, it is not surprising that such values influence career decision-making. Tang [92] examined Chinese students in China as well as Asian American and European American college students in the United States. Topics were students' career choices and parental involvement, such as parental career choices for their children and parental involvement in career planning. Results showed that the Chinese and Asian American students were more likely than the European American students to comply with their parental career choices for them. Corey [93] examined the career aspiration of second-generation Asian American college students and concluded that their tendency toward science/numerical career paths was substantially influenced by their perception of their parents' aspirations for them. Therefore, differences between the students' personal career choices and their parental aspirations are frequently a source of conflict.

Acculturation Status and Attitudes Toward Counseling and Therapy

Whether an Asian American seeks counseling for vocational issues or therapy for mental health issues, it is important to understand how such a person's background influences his/her attitude. Atikinson and Gim [94] inquired about how Asians view seeking professional help. Surveying 557 Chinese-, Japanese-, and Korean-American students, they found that the more highly acculturated students were more likely to recognize a personal need for professional psychological services. In addition, they were more open to discussing problems with a psychologist and were more tolerant of the stigma associated with psychological help. Given the stress confronting international students, Zhang [95] was also interested in their attitudes toward help-seeking, and thus studied 170 international students attending school within the United States. Zhang's results confirmed the relationship between acculturation level and attitudes; students with higher levels of acculturation showed more positive attitudes toward seeking psychological help.

Even when open to seeking professional help, it would be valuable to know whether Asian Americans have special preferences for the type of counselor or therapist they see. Atikson et al. [96] determined that Asian American undergraduates preferred counselors with attitudes and values similar to themselves. Lowe [97] uncovered even more specific information regarding preferential matching. From 103 Asian American undergraduates, she reported that a

counselor with collectivistic characteristics was perceived as more cross-culturally competent than a counselor using an individualistic approach. Because this group had also scored higher on collectivism values than individualistic values, the results support the premise that matching is a relevant factor. Of great interest is the work of Kim and Atkinson [98], which involved Asian American and European American counselors who conducted a brief career counseling session with Asian Americans. These were undergraduates volunteering for a study on career counseling methods in which Asian American volunteer clients participated in one 50-min career counseling session led by a trained European American female counselor. Results indicated that participants with high Asian values evaluated Asian American counselors as more empathic and credible than participants with low adherence to Asian values. Those with low Asian values (or high Western acculturation) evaluated the European American counselors as more empathic than did the participants with high adherence to Asian values (low Western acculturation).

Whereas the prior research focused on matching, another series has studied the counselor's behavioral styles as an influence on preference. Directive versus nondirective approaches to counseling have been specifically examined in a series of research (see, for example, Exum and Lau, 99). Atkinson et al. [100] conducted studies in which Asian American students evaluated audiotapes of a simulated counseling session with an Asian American student client. There were four conditions. In one tape, the counselor is identified as Asian American using a directive counseling style; in a second tape, the counselor is identified as Asian American but is using a nondirective approach; in a third tape, the counselor is identified as European American and is using a directive counseling style; and in the fourth tape, the counselor is identified as European American and is using a nondirective counseling approach. In all tapes, the client is portrayed as an Asian American student conflicted about selecting a career that would not be acceptable to the client's parents. Results showed that Asian American participants evaluated the Asian American counselor as more credible and approachable than the European American counselor. Furthermore, the directive counseling approach was viewed more positively than the nondirective approach. More recently, Li and Kim [101] obtained Asian American college student evaluations of a counselor using either a directive or a nondirective style. The brief session was focused on career counseling. These Asian American participants rated the counselor using directive counseling strategy as more cross-culturally competent and empathic. The level of acculturation did not affect the evaluations.

Although these prior studies focus on the counselor characteristics, two reports examined how Asian participants viewed their roles in counseling interactions. Fowler and Parliament [102] and Yuen and Tinsley [103] reported that Asians expect to assume less responsibility or motivation during counseling, which dovetails with their expectation that the counselor be more direct and act as an expert. European Americans or European Canadians, on the other hand, expect to have a more active role during counseling and do not expect the

counselor to provide all the solutions. In both studies, the Asian participants were lower in acculturation level, that is, were highly Asian culture identified. These studies would suggest that the determination of match between patient and clinician may be recommended to precede an initial evaluation to evaluate patient expectation and compatibility with the potential therapist's role.

Summary

Acculturation is defined in this chapter as a process that can occur when two or more cultures interact together. A variety of measurement approaches have been developed to assess this process including measures of behaviors, measures of values, or measures combining both behaviors and values. Numerous research studies have examined the relationship between acculturation and certain outcomes. Acculturation status has been found significantly associated with physical health and health-related behaviors, with mental health symptoms and distress, with family adjustment, with school performance, with career decision-making, and with the counseling/psychotherapy process. The relationship of acculturation to these outcomes provides substantial support for discussing, measuring, and understanding the acculturation process among Asian Americans as well as for the continuation of research about acculturation.

References

1. Redfield R, Linton R, and Herskovitz M. Memorandum on the study of acculturation. Am Anthropol 1936;38:149–152.
2. Leininger M. *Nursing and Anthropology: Two Worlds to Blend*, New York: John Wiley and Sons, 1970.
3. Berry J. Psychology of acculturation: under-standing individuals moving between cultures. In: Brislin R, ed. *Applied Cross-Cultural Psychology*. Newbury Park, CA: Sage, 1990: 232–253.
4. Suinn R. SL-ASIA: Suinn-Lew Asian Self-Identity Acculturation Scale. www.awong. com/~randy/dad/slasia.html 1994.
5. Berry J. Acculturation as varieties of adaptation. In: Padilla A, ed. *Acculturation: Theory, Models and New Findings*. Boulder, CO: Westview Press, 1980:9–25.
6. Berry J, Trimble J, and Olmedo E. Assessment of acculturation. In Lonner W, and Berry J. eds. *Field Methods in Cross-Cultural Research*. Beverly Hills, CA: Sage. 1986: 291–324.
7. Moyerman D and Forman B. Acculturation and adjustment: a meta-analytic study. Hisp J Behav Sci 1991;14:163–200.
8. Lee W. Becoming an American consumer: a Cross-cultural study of consumer acculturation among Taiwanese, Taiwanese in the Unites States and Americans. Communications. Urbana-Champaign: University of Illinois, 1988.
9. Suinn R, Rickard-Figueroa K, Lew S, and Vigil P. The Suinn-Lew Asian Self-Identity Acculturation Scale: An Initial Report. Educ Psychol Meas 1987;47:402–407.
10. Suinn R, Ahuna C., and Khoo G. The Suinn-Lew Asian Self-Identity Acculturation Scale: concurrent and factorial validation. Educ Psychol Meas 1992;52:1041–1046.

11. Abe-Kim J, Okazaki S, and Goto S. Unidimensional versus multidimensional approaches to the assessment of acculturation for Asian American populations. *Cultur Divers Ethnic Minor Psychol* 2001;7:232–246.
12. Mallinckrodt B, Shigeoka S, and Suzuki L. Asian and Pacific Island American students' acculturation and etiology beliefs about typical counseling presenting problems. Cultur Divers Ethnic Minor Psychol 2005;11:227–238.
13. Chung R, Kim B, and Abreu, J. Asian American Multidimensional Acculturation Scale: development, factor analysis, reliability and validity. Cultur Divers Ethnic Minor Psychol 2004;10:66–80.
14. Kim B. Acculturation and enculturation. In: Leong F, Inman A. Ebreo A, Yang L, Kinoshita L, and Fu M. eds. *Handbook of Asian-American Psychology*, 2nd edn. Thousand Oaks, CA: Sage, 2006:141–158.
15. Leong F. The role of acculturation in the career adjustment of Asian American workers: a test of Leong and Chou's (1994) formulations. *Cult Diver Ethnic Minor Psychol* 2001;7:262–273.
16. Johnson M, Wall T, Guanipa C, Terry-Guyer L, and Velasquez R. The psychometric properties of the Orthogonal Cultural Identification Scale in Asian Americans. *J Multicult Couns Dev* 2002;30:181–190.
17. Gupta R and Yick A. Preliminary validation of the acculturation scale on Chinese Americans. *J Soc Work Res Eval* 2001;l 2:43–56.
18. Marin G, Sabogal F, Marin B, Otero-Sabogal R, and Perez-Stable E. Development of a short acculturation scale for Hispanics. *Hisp J Behav Sci* 1987;9:183–205
19. Kim B, Atkinson D, and Yang P. The Asian values scale: development, factor analysis, validation, and reliability. *J Couns Psychol* 1999;46:342–352.
20. Kim B and Hong S. A psychometric revision of the Asian values scale using the Rasch model. *Meas Eval Counsel Dev* 2004; 37:15–27.
21. Kim B, Li L, and Ng F. The Asian American values scale-multidimensional: development, reliability, and validity. *Cultur Divers Ethnic Minor Psychol* 2005;11: 187–201
22. Wolfe M, Yang P, Wong E, and Atkinson D. Design and development of the European American values scale for Asian Americans. *Cultur Divers Ethnic Minor Psychol* 2001;7: 274–283.
23. Hong S, Kim B, and Wolf, M. A psychometric revision of the European American values scale for Asian Americans using the Rasch model. *Meas Eval Counsel Dev* 2005;37: 194–207.
24. Nguyen H and von Eye A. The acculturation scale for Vietnamese adolescents (ASVA): a bidimensional perspective. *Int J Behav Dev* 2002;26: 202–213.
25. Stephenson M. Development and validation of the Stephenson Multigroup Acculturation Scale (SMAS). *Psychol Assess* 2000;12:77–88.
26. Unger J, Gallaher P, Shakib S, Ritt-Olson A, Palmer P, and Johnson C. AHIMSA acculturation scale: a new measure of acculturation for adolescents in a multicultural society. *J Early Adolesc* 2002;22:225–251.
27. Wong-Rieger D and Quintana D. Comparative acculturation of Southeast Asian and Hispanic immigrants and sojourners. *J Cross Cult Psychol* 1987;18:345–362.
28. Oetting E and Beauvais F. Orthogonal cultural identification theory: the cultural identification of minority adolescents. *Int J Addict* 1990–1991;25:655–685.
29. Venner K, Wall T, Lau P, and Ehlers C. (2006). Testing of an orthogonal measure of cultural identification with adult mission Indians. *Cultur Divers Ethnic Minor Psychol* 2006;4:632–643.
30. Marmot M, Syme S, Kagan A, Kato H, Cohen J, and Belsky J. Epidemiologic studies of coronary heart disease and stroke in Japanese men living in Japan, Hawaii and California: prevalence of coronary and hypertensive heart disease and associated risk factors. *Am J Epidemiol* 1975;102:514–25.
31. Robertson T, Kato H, Rhoads G, Kagan A, Marmot M, Syme S, Gordon T, Worth R, Belsky J, Dock D, Miyanishi M, and Kawamoto S. Epidemiologic studies of coronary

heart disease and stroke in Japanese men living in Japan, Hawaii and California. Incidence of myocardial infarction and death from coronary heart disease. *Am J Cardiol* 1977;39:239–43.

32. Kaplan M, Chang C, Newsom J, and McFarland B. Acculturation status and hypertension among Asian immigrants in Canada. *J Epidemol Community Health* 2002;56:455–456.

33. Mau S. The relationship of eating attitudes, body image preferences, and *acculturation* on adolescent girls in Hong Kong. *Diss Abstr: Sect B: Sci Eng* 2000;60(8-B), Mar. :4235.

34. Garner D, Olmsted M, Bohr Y, and Garfinkel P. The eating attitudes test: psychometric features and clinical correlates. *Psychol Med* 1982;12:871–878.

35. Garner D, Olmstead M, and Polivy J. Development and validation of a multidimensional Eating Disorder Inventory for anorexia nervosa and bulimia. *Int J Eat Disord* 1983;2: 15–34.

36. Doan L. Eating disorder symptomatology, East *Asian* culture, and modes of acculturation. *Diss Abstr Sect B:Sci Eng* 2001; 62(1-B), July: 544.

37. Stark-Wroblewski K, Yanico B, and Lupe S. Acculturation, internalization of western appearance norms, and eating pathology among Japanese and Chinese international student women. *Psychol Women Q* 2005;29:38–46.

38. Unger J, Reynolds K, Shakip S, Spruijt-Metz D, Sun P, and Johnson C. Acculturation, physical activity, and fast-food consumption among Asian-American and Hispanic adolescents. *J Community Health* 2004;29:467–481.

39. Yang J. The relationship between contextual factors of psychological distress with emotional eating and body weight in Hmong and Hmong American college populations. Doctoral dissertation, Alliant University: Fresno, CA, 2006.

40. Ma G, Tan Y, Toubehh J, and Su X. Differences in stages of change of smoking behavior among current smokers of four Asian American subgroups. *Addict Behav* 2003;28: 1431–1439.

41. Unger J, Trinidad D, Weiss J, and Rohrbach L. Acculturation as a risk factor for smoking among Asian American adolescents: is the Association Confounded by Nationality? *J Ethn Subst Abuse* 2004;3:65–79.

42. Ma G, Tan Y, Toubbeh J, Su X, Shive S, and Lan Y. Acculturation and smoking behavior in Asian-American populations. *Health Educ Res* 2004;19: 615–625.

43. Hofstetter C, Hovell M, Lee J, Zakarian J, Park H, Paik H, and Irvin V. Tobacco use and acculturation among Californians of Korean descent: a behavioral epidemiological analysis. *Nicotine Tob Res* 2004;6:481–489.

44. Weiss J and Garbanati J. Relationship of acculturation and family functioning to smoking attitudes and behaviors among Asian-American adolescents. *J Child Fam Stud* 2004;13:193–204.

45. Chen X, Unger J, Cruz T, and Johnson C. Smoking patterns of Asian-American youth in California and their relationship with acculturation. *J Adolesc Health* 1999;24:321–328.

46. Unger J, Cruz T, Rohrbach L, Ribisi K, Baezconde-Garbanati L, Chen X, Trinidad, D, and Johnson C. English language use as a risk actor for smoking initiation among Hispanic and Asian American adolescents: evidence for mediation by tobacco-related believes and social norms. *Health Psychol* 2000; 19:403–410.

47. Unger J and Chen X. The role of social networks and media receptivity in predicting age of smoking initiation: a proportional hazards model of risk and protective factors. *Addict Behav* 1999;24:371–381.

48. Unger J, Yan, L, Shaki, S, Rohrbach L, Chen X, Qian G, Chou C, Jianguo S, Azen S, Zheng H, and Johnson C. Peer influences and access to cigarettes as correlates of adolescent smoking: a cross-cultural comparison of Wuhan, China and California. *Prev Med*; 2002;34:476–484.

49. Hahm H, Lahiff M, and Guterman N. Acculturation and parental attachment in Asian-American adolescents' alcohol use. *J Adolesc Health* 2003;33:119–129.

50. Hendershot C, MacPherson, L, Myers M, Carr L, and Wall T. Psychosocial, cultural and genetic influences on alcohol use in Asian American Youth. *J Stud Alcohol* 2005;66: 185–195.
51. Hahm H, Lahiff M, and Guterman N. Asian American adolescents' acculturation, binge drinking, and alcohol- and tobacco-using peers. *J Community Psychol* 2004;32:295–308.
52. Berry, J. Marginality, stress and ethnic identification in an acculturated aboriginal community. *J Cross-Cult Psychol* 1970;1:239–252.
53. Berry J, Kim U, Minde T, and Mok D. Comparative studies of acculturative stress. *Int Migr Rev* 1987;21:491–511.
54. Liang C, Li L, and Kim B. The Asian American racism-related stress inventory: development, factor analysis, reliability, and validity. *J Counsel Psychol* 2004;51:103–114.
55. Mays V, Cochran S, and Barnes N. Race, race-based discrimination, and health outcomes among African Americans. *Annu Rev Psychol* 2007;58:201–225.
56. Mio J, Nagata D, Tsai A, and Tweari N. Racism against Asian/Pacific Americans. In: Leong F, Inman A, Ebreo A, Yan L. Kinoshita L, and Fu M. eds. *Handbook of Asian-American Psychology*, 2nd edn. Sage Publications, Thousand Oaks, CA 2006:341–461.
57. Sue D, Bucceri J, Lin A, Nadal K, and Torino G. Racial microaggressions and the Asian American experience. *Cultur Divers Ethnic Minor Psychol* 2007;13:72–81.
58. Sodowsky G and Lai E. Asian immigrant variables and structural models of cross-cultural distdress. In: Booth A. ed. *International Migration and Family Change: The Experience of U.S. Immigrants* . Mahwah, N.J. Erblaum, 1997: 211–237.
59. Wang C and Mallinckrodt B. Acculturation, attachment, and psychosocial adjustment of Chinese/Taiwanese International students. *Cultur Divers Ethnic Minor Psychol* 2006;53:422–433.
60. Wilton L and Constantine M. Length of residence, cultural adjustment difficulties, and psychological distress symptoms in Asian and Latin American international college students. *J Coll Counsel* 2003:6:177–187.
61. Lee J, Koeske G, and Sales E. Social support buffering of acculturative stress: a study of mental health symptoms among Korean international students. *Int J Intercult Rel* 2004:28:399–414.
62. Ryder A, Alden L, and Paulhus D Is acculturation unidimensional or bidimensional? *J Pers Soc Psychol* 2000;79:49–65.
63. Chung R, Bemak F, and Wong S. Social support and acculturation: implications for mental health counseling. *J Ment Health Couns* 2000;22:150–161.
64. Shen B and Takeuchi D. A structural model of acculturation and mental health status among Chinese Americans. *Am J Community Psychol* 2001;29:387–418.
65. Kim S, Gonzales N, Stroh, and Wang J. Parent-child cultural marginalization and depressive symptoms in Asian American family members. *J Community Psychol* 2006;34:167–182
66. Crane D, Ngal S, Larson J, and Hafen M. The influence of family functioning and parent–adolescent acculturation on North American Chinese adolescent outcomes. *Fam Relat* 2005;54:400–410.
67. Lau A, Jernewall N, Zane N, and Myers H. Correlates of suicidal behaviors among Asian American outpatient youths. *Cultur Divers Ethnic Minor Psychol* 2002;8:199–213.
68. Fu M. Acculturation, ethnic identity, and *family conflict* among first- and second-generation Chinese Americans. *Diss Abstr: Sect B: Sci Eng* 2002;63(2-B), Aug.:1024.
69. Nguyen, G. The relationship between differential acculturation levels, family conflct , and self-esteem among Vietnamese-Americans. *Diss Abstr: Sect B: Sci Eng* 2003;64 (4-B):1943.
70. Pyke K. "Generational Deserters" and "Black Sheep": acculturative differences among siblings in Asian immigrant families. *J Fam Issues* 2005;26:491–517.
71. Sharir I. Chinese immigrant youth in Vancouver, Canada: an examination of acculturation, adjustment, and intergenerational conflict. *Diss Abstr: Sect B: Sci Eng*. 2002;63 (4-B), Oct.:2075.

72. Ying Y and Han M. The longitudinal effect of intergenerational gap in acculturation on conflict and mental health in Southeast Asian American adolescents. *Am J Orthopsychiatry* 2007;77: 61–66.
73. Kim U and Chun M. Educational 'success' of Asian Americans: an indigenous perspective. *J Appl Dev Psychol* 1994;15:329–339.
74. Sue S and Okazaki S. Asian-American educational achievements: a phenomenon in search of an explanation. *Am Psychol* 1990;45:913–920.
75. Huntsinger C, Jose P, Larson S, Krieg D, and Shaligram C. Mathematics, vocabulary, and reading development in Chinese American and European American Children Over the Primary School Years. *J Educ Psychol* 2000;92:745–760.
76. Fuligini A, Witkow M., and Garcia C. Ethnic identity and the academic adjustment of adolescents from Mexican, Chinese, and European Backgrounds. *Dev Psychol* 2005;41: 799–811.
77. Dandy J and Nettelbeck T. A cross-cultural study of parents' *academic* standards and educational aspirations for their children. *Educ Psychol* 2002;22:621–627.
78. Pringle C and Rasinski K. The National Education Longitudinal Study of 1988: Data Collection Results and Analysis Potential. Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco, California, March 27, 1989. Also available as NELS:88 report ED 295 985, ED308215, TM013551, RIEN0V89.
79. Shin H. Parental involvement and its influence on children's school performance: a comparative study between Asian (Chinese and Koreans) Americans and Mexican-Americans. Unpublished Doctoral dissertation. Columbia University, 2004.
80. Goyette K and Xie Y. Educational expectations of Asian American youths: determinants and *ethnic differences*. *Sociol Educ* 1999;72:22–36.
81. Peng S and Wright D. Explanation of *academic achievement* of Asian American *students*. *J Educ Res* 1994;87:346–352
82. Mizokawa D and Ryckman D. Attributions of *academic* success and failure: a comparison of six Asian-American ethnic groups. *J Cross Cult Psychol* 1990;21:434–451.
83. Hau K and Salili F. Structure and semantic differential placement of specific causes: *Academic* causal attributions by Chinese *students* in Hong Kong. *Int J Psychol* 1991;26: 175–193.
84. Yan W and Gaien E. Causal *attributions* for college *success* and failure: an American - Asian comparison. *J Cross Cult Psychol* 1994;25:146–158.
85. Chao R. Beyond parental control and authoritarian parenting style: understanding Chinese parenting through the cultural notion of training. *Child Dev* 1994;65: 111–1119.
86. Chalip L and Stigler J. The development of achievement and ability among Chinese children: a new contribution to an old controversy. *J Educ Res* 1986;79:302–307.
87. Stevenson H, Lee S, and Stigler J. Mathematics achievement of Chinese, Japanese and American children. Science 1986;231:693–699.
88. Wu D. Chinese childhood socialization. In Bond M. ed. The Handbook of Chinese Psychology. Hong Kong: Oxford University Press 1996:143–154.
89. Tang M, Fouad N, and Smith P. Asian Americans career choices: a path model to examine the factors influencing choices. *J Vocat Behav* 1999;54:142–157.
90. Castelino P. Factors influencing career choices of South Asian Americans: a path analysis. *Diss Abstr* 2005. *Sect A: Humanit Soc Sci* 65 (8-A):2906.
91. Hsieh M. Sociocultural factors influencing career indecision of Asian/Asian-American female college students: a cross-cultural comparison. *Diss Abstr. Sect A: Humanit Soc Sci*, 1996; 56(11-A):4325.
92. Tang M. A comparison of Asian American, Caucasian American, and Chinese college students: an initial report. *J Multicult Couns Dev* 2002;30:124–134.
93. Corey A. Correlates of Asian American college students' career aspirations: generational status, self-reports, and parental-reports on *acculturation* and perceived prejudice. *Diss Abstr.Sect B: Sci Eng*, 2001;61(7-B), Feb:3837.

94. Atkinson D and Gim R. Asian-American cultural identity and attitudes toward mental health services. *J Couns Psychol* 1989;36:209–212.
95. Zhang N. Acculturation and counseling expectancies: Asian international students' attitudes toward seeking professional psychological help. (Asian students). *Diss Abstr Sect A: Humanit Soc Sci*, 2000;60(7-A), Jan.:2392.
96. Atkinson D, Wampold B, Lowe S, Matthews L, and Ahn H. Asian American preferences for counselor characteristics: application of the Bradley–Terry–Luce model to paired comparison data. *Couns Psychol* 1998;26:101–123.
97. Lowe S. Impact of individualist and collectivist approaches to career counseling with Asian-Americans on perceptions of counselor cross-cultural competence and credibility. *Diss Abstr Sect A: Humanit Soc Sci*, 1999;60(2-A:0348.
98. Kim B and Atkinson D. Effects of Asian American client adherence to Asian cultural values, counselor expression of cultural values, and counselor ethnicity on career counseling process. *J Couns Psychol* 2002;49:3–13.
99. Exum H and Lau E. Counseling style preference of Chinese college students. *J Multicult Couns Dev* 1988;16:84–92.
100. Atkinson D, Maruyama M, and Matsui, S. Effects of counselor race and counseling approach on Asian Americans' perceptions of counselor credibility and utility. *J Couns Psychol* 1978;25:76–283.
101. Li L and Kim B. Effects of counseling style and client adherence to Asian cultural values on counseling process with Asian American college students. *J Couns Psychol* 2004;51:158–167.
102. Fowler D and Parliament V. The influence of culture on therapeutic expectations. Unpublished undergraduate thesis. Halifax, Nova Scotia: St. Mary's University 2005.
103. Yuen R and Tinsley H. International and American students' expectations about counseling. *J Couns Psychol* 1981;28:66–69.