

## Predictors of Acculturation for Chinese Adolescents in Canada: Age of Arrival, Length of Stay, Social Class, and English Reading Ability

Ben C. H. Kuo and Gargi Roysircar

In a sample of 506 Chinese adolescents living in Canada from 3 cohort groups, age at the time of arrival in Canada, length of stay in Canada, socioeconomic status, and English reading ability predicted acculturation. English reading ability and socioeconomic status predicted acculturative stress. There were within-group cohort differences in acculturation characteristics. Implications for counseling are addressed.

En una muestra de 506 adolescentes Chinos que viven en el Canadá de 3 cohortes, la edad de llegada a Canadá, el tiempo que vivieron en Canada, la posición socioeconómica, y la habilidad de leer Inglés predice la asimilación. La habilidad de leer Inglés y la posición socioeconómica que pronostico el estrés de asimilación. Estaban entre grupos de cohorte diferentes en características de asimilación. Las implicaciones para terapia se dirigen.

Immigrant children and adolescents represent the fastest growing and most ethnically diverse segment of the child population in Canada and the United States since the 1980s (Zhou, 1997), yet they have remained one of the most understudied populations (Aronowitz, 1992). In particular, there is a paucity of research on the migration experiences and the psychological well-being of Chinese adolescent immigrants and teenage international students in North America (Chiu & Ring, 1998). Chinese in Canada are characterized by their relative youth, with more than a third (34%) of this population under the age of 24 in the year 2000. Against this backdrop, the present study examines the role of sociodemographic variables in predicting acculturation and acculturative stress in three cohorts of Chinese adolescents in Toronto, Ontario. Subsequently,

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implications and recommendations for the provision of counseling services and clinical interventions are discussed.

## acculturation and acculturative stress among chinese immigrant adolescents

Acculturation is one of the most researched topics in understanding cross-cultural changes and migration experiences (Berry, 1997). Acculturation is defined as a process that begins with a firsthand contact between two autonomous cultural groups through which changes arise in either or both of the contacting groups (Redfield, Linton, & Herskovits, 1936). Acculturation research on Asian adolescents has focused on comparative experiences across generation or immigration status. Cross-national studies have revealed that first-generation Chinese adolescents hold a stronger identification with Chinese behaviors and values (less acculturation) than do their second-generation counterparts (Lay & Verkuyten, 1999; Rosenthal & Feldman, 1992). Ying, Lee, and Tsai (2000) found that foreign-born Chinese American students in the San Francisco Bay area were more likely to perceive racial discrimination, to take the cultural separation position, to associate primarily with their co-ethnic group, and to be either monolingual Chinese speakers or bilinguals. American-born Chinese were less likely to perceive racial discrimination but were more likely to take the assimilated or bicultural position, to be monolingual English speakers, and to associate with American or mixed ethnic groups.

A major consequence of acculturation involves acculturative stress. Acculturative stress is "a reduction in health status (including psychological, somatic, and social aspects) of individuals who are undergoing acculturation" (Berry, Kim, Minde, & Mok, 1987, p. 491). Acculturating Chinese immigrant adolescents not only face problems experienced by other nonimmigrant (e.g., native-born) youths associated with their developmental status (e.g., seeking individual identity and independence apart from the family; Rosenthal & Feldman, 1990) but also additional problems related to cultural differences with the host country and emotional adjustment to being away from the country of origin (Yeh, 2003; Ying, 2001). Asian adolescents are often confronted with having to negotiate between various multicultural environments and dealing with discrimination and stereotypes, language barriers, cultural adaptation, intergroup conflicts, and in-group pressure (Chiu & Ring, 1998; Lay & Nguyen, 1998).

Acculturative stress is also experienced differently among immigrants of varying migrant status (Berry et al., 1987) and generations (Lay & Nguyen, 1998; Sodowsky & Lai, 1997). Zheng and Berry (1991) found that Chinese sojourners (student visa holders) in Canada reported more problems related to work, family and children, language and communication, homesickness, and loneliness than Canadian-born Chinese and non-Chinese samples. The above study

estimated that as many as 70% of the sojourners in the study were considered "nonadapted." In Chung's (1994) study, compared with their American-born counterparts, Chinese unaccompanied adolescent sojourners in the United States reported more anxiety in the areas of worry/oversensitivity and social concerns/concentration, somatization, and anxiety symptoms.

In the present study, we propose that English proficiency and socioeconomic status (SES) are two potentially important variables in predicting the acculturation of Chinese adolescents living in Canada. Chinese immigrants and international students have reported particular difficulties in communication skills (Yeh & Inose, 2002; Zheng & Berry, 1991). The extent of English proficiency differentiates Chinese immigrants of varying levels of acculturation (Ying, 2001) and acculturative stress (Yeh & Inose, 2003). Previous research has indicated that an Asian family's SES has a positive relationship with adolescents' acculturation (Rohner, Hahn, & Koehn, 1992). In a recent study of American-born Asian Indian adolescents and their first-generation parents, Farver, Bhadha, and Narang (2002) found that higher family SES was related to both adolescents' and their parents' integrated and assimilated acculturation styles. Additionally, Florsheim (1997) noted the diversity in SES backgrounds among Chinese immigrants depending on their countries of origin (e.g., Hong Kong vs. Taiwan vs. China). He contended that parental SES should be taken into consideration in assessing immigrant youths' psychosocial adjustment. Therefore, of particular interest to the present study were the relationships of English proficiency and SES to acculturation and its related stresses.

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## hypotheses

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Empirical evidence has corroborated that sociocultural, demographic, and personal variables are critical moderators of acculturation (Berry, 1997; Sodowsky, Lai, & Plake, 1991). However, little is currently known about these relationships in younger Asian adolescent immigrants and international students. Therefore, in the present study we tested the predictors of acculturation and acculturative stress for Chinese adolescents in Canada by asking "To what extent do gender, age of arrival in Canada, length of stay in Canada, cohort status, SES, and English reading ability predict the acculturation and acculturative stress of Chinese adolescents in Canada?" On the basis of the existing literature, we hypothesized that a longer length of stay in Canada, a higher SES, and a greater English reading ability would predict a higher level of acculturation and a lower level of acculturative stress. Age of arrival in Canada at an older age, however, would be expected to predict a lower level of acculturation and a higher level of acculturative stress. In terms of cohort effect, it was hypothesized that early immigrants would be the most acculturated group with the least acculturative stress, international students would be the least accul-

turated group with the most acculturative stress, and late immigrants would fall between these two groups. No directionality in gender difference on the criterion variables was specified.

## method

### PARTICIPANTS

Adolescents of Chinese descent between the ages of 12 and 19 were recruited through Chinese/Taiwanese educational, social, community, and religious organizations in Toronto, as well as through the snowball technique by contacting Chinese/Taiwanese parents and adolescents known to the first author. Participants completed and signed an individual consent form along with a parental/guardian consent form written in both Chinese and English. A return rate of 68% was attained with 770 questionnaires sent out and 520 completed. Eventually, 506 questionnaires were considered usable for the data analyses.

The sample consisted of three cohorts of Chinese adolescents. *Early immigrants* ( $n = 284$ ) included Canadian-born adolescents and foreign-born adolescents who came to Canada prior to the completion of elementary school. *Late immigrants* ( $n = 106$ ) represented foreign-born adolescents who arrived in Canada after the completion of elementary school. *Internationals* ( $n = 108$ ) referred to nonimmigrant students who held student visas in Canada. Eight participants did not report their cohort status and were not included in subsequent analyses. Fifty-four percent ( $n = 274$ ) of the participants were male, and 46% ( $n = 231$ ) were female. One participant did not report gender information.

The overall sample had a mean age of 16.52 years ( $SD = 1.9$ ). Early immigrants (mean age = 15.71 years,  $SD = 1.78$ ) were the youngest, followed by late immigrants (mean age = 17.02 years,  $SD = 1.56$ ) and by internationals (mean age = 18.01 years,  $SD = 1.24$ ), who were the oldest. Although all of the participants were of Chinese descent, those who identified themselves as foreign-born came from 15 different countries of origin. Many participants belonged to the middle (51%) and upper-middle (36%) class. Sixty-seven percent of the participants' fathers and 58% of the participants' mothers were reported to have university/college or professional education.

### MEASURES

*Demographics.* The demographic form asked questions about age, gender, place of birth, age of arrival in Canada, residence status in Canada, generation status, ethnic self-designation, parents' countries of origins, and accompanied versus unaccompanied status. However, some of these demographics were not included in the analyses. Length of stay in Canada was determined by subtracting respondents' age of arrival in Canada from their current age.

*SES index.* The SES index was formulated on the basis of the participant responses to five questions: the estimated family annual income (ranged from 6 = *very wealthy* to 1 = *poor*), father's and mother's highest educational levels (ranged from 5 = *doctoral/professional degree* to 1 = *elementary school education*), and father's and mother's occupations. The reported occupations were converted to average annual salaries/wages on the basis of the *Occupational Outlook Handbook* (U.S. Bureau of Labor Statistics, 2001). A final composite mean score of the five items was calculated, which served as the SES index.

*English reading ability.* To assess the participants' reading ability in English, we asked participants to indicate how well they understood the English questionnaire. At the end of the questionnaire, the participants responded to the question by choosing among the six incremental options, from *I understand about 50% or less* (scored 1), indicating the lowest level of reading ability, to *I understand completely* (scored 6), indicating the highest level of reading ability.

*Minority-Majority Relations Survey (MMRS).* The MMRS (Sodowsky et al., 1991) is a 43-item, multidimensional instrument designed to study the acculturation of American minorities. A three-factor structure of the MMRS was reported representing Perceived Prejudice, Social Customs, and Language Usage subscales (Sodowsky et al., 1991). Only the latter two subscales were used for the present study, resulting in a total of 18 items measuring acculturation. Lower scores (e.g., 1) represented a strong affiliation with one's cultural or ethnic group and rejection of the White society, and higher scores (e.g., 5 or 6) indicated a strong identification with or assimilation to the White dominant society. References to "American" and "the United States" were substituted with "Canadian" and "Canada" to reflect the context of the study. Cronbach's alpha for the MMRS in the present study was .89.

*Cultural Adjustment Difficulties Checklist (CADC).* The CADC (Sodowsky & Lai, 1997) is a 48-item instrument developed to identify the acculturative stress of immigrants in the United States. The instrument assesses the majority-minority conflicts in interpersonal problems, alienation toward one's cultural reference group, and issues of self-efficacy in a White-dominant social context. It has a 6-point Likert scale with lower scores (e.g., 1) indicating less and higher scores (e.g., 5 and 6) indicating more acculturative stress. Ten cultural stress items of the CADC judged by the investigators to be most relevant to the experiences of adolescents were used for this study. Again, minor wording modifications were made to reflect the Canadian context of the study. The internal consistency reliability of the 10 CADC items for the study was  $\alpha = .83$ .

## results

Pearson correlations among the sociodemographic variables, the MMRS, and the CADC were first examined. For the overall sample, migration to Canada

at a younger age was significantly related to being in Canada for a longer period of time, to greater English reading ability, to being acculturated in Canadian practices and social customs, and to having less acculturation-related stresses than for those who migrated at an older age (see Table 1). With respect to acculturation, a higher level of acculturation was related to migrating at a younger age, a longer duration of residence in Canada, a higher SES, and greater proficiency in English reading ability. A higher level of acculturative stress, on the other hand, significantly correlated with migrating at an older age, a shorter stay in Canada, lower

TABLE 1

Means, Standard Deviations, and Correlations of the Key Variables for Three Cohorts of Chinese Adolescents in Canada

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6
Full sample ( <i>N</i> = 506)								
1. Age	9.53	6.50	—	-.96**	-.09	-.42**	-.62**	.28**
2. Length	7.16	5.73		—	-.06	.42**	.57**	-.25**
3. SES	0.56	0.12			—	.10*	.16**	-.13**
4. Reading	5.06	1.17				—	.36**	-.30**
5. Acculturation <sup>a</sup>	3.51	1.70					—	-.17**
6. Stress <sup>b</sup>	3.95	1.14						—
Early immigrants ( <i>n</i> = 284)								
1. Age	5.33	5.00	—	-.94**	-.01	-.31**	-.52**	.13*
2. Length	10.37	5.04		—	-.02	.30**	.45**	-.10
3. SES	0.57	0.13			—	.08	.11	-.15*
4. Reading	5.40	0.97				—	.29**	-.20**
5. Acculturation <sup>a</sup>	4.24	1.60					—	-.06
6. Stress <sup>b</sup>	3.70	1.10						—
Late immigrants ( <i>n</i> = 106)			—	-.83**	-.09	-.19*	-.05	.01
1. Age	13.62	2.75		—	.07	.21*	-.03	-.05
2. Length	7.75	5.34			—	.18	.23*	-.16
3. SES	0.53	0.10				—	.15	-.35**
4. Reading	5.50	0.55					—	.08
5. Acculturation <sup>a</sup>	3.57	1.90						—
6. Stress <sup>b</sup>	4.06	0.64						—
Internationals ( <i>n</i> = 108)			—	-.84**	-.03	-.17	-.22**	.15
1. Age	16.84	2.28		—	-.15	.19	.09	-.09
2. Length	3.60	2.57			—	-.02	.18	.06
3. SES	0.56	0.11				—	.27**	-.15
4. Reading	4.77	1.26					—	-.01
5. Acculturation <sup>a</sup>	2.64	1.26						—
6. Stress <sup>b</sup>	4.24	1.09						—

Note. Age = age of arrival in Canada; Length = length of stay in Canada; SES = socioeconomic status; Reading = English reading ability; Stress = acculturative stress.

<sup>a</sup>Acculturation is measured by the Minority–Majority Relations Survey. <sup>b</sup>Acculturative stress is measured by the Cultural Adjustment Difficulties Checklist.

\**p* < .05. \*\**p* < .01.

SES, and less proficiency in English reading ability. As expected, acculturation was found to have a significant negative relationship with acculturative stress,  $r(468) = -.17, p < .01$ . Adolescents' English reading ability was strongly linked to more acculturation,  $r(466) = .36, p < .01$ , and lower acculturative stress,  $r(476) = -.30, p < .01$ , for the overall sample (see Table 1).

A *t* test showed that gender had an effect on acculturation but not on acculturative stress. Male participants were more acculturated than were female participants,  $t(478) = 1.15, p < .01$ . In terms of cohort effects on the two dependent variables, acculturation and acculturative stress, two analyses of variance revealed significant differences across the groups. A subsequent Tukey's post hoc test indicated that early immigrants were significantly more acculturated than either late immigrants or internationals,  $F(2, 471) = 79.05, p < .01$ . The difference between the latter two groups was not significant. A comparable cohort pattern was also observed for acculturative stress. Early immigrants reported a significantly lower level of stress than did either late immigrants or internationals,  $F(2, 476) = 20.09, p < .01$ .

Finally, two sets of hierarchical multiple regressions were run to predict acculturation and acculturative stress from six sociodemographic variables. In view of our hypotheses, there was a special interest in assessing the unique contributions of SES and English reading ability to the dependent variables. As a result, SES index and English reading ability were entered last in the regression analyses to evaluate their predictive power above and beyond other demographic variables. Thus, gender, age of arrival in Canada, length of stay in Canada, cohort status, SES index, and English reading ability were entered in the analysis in the order listed and were regressed on the MMRS scores as the acculturation variable. Table 2 shows the regression results for all the cohort groups combined and each group separately. The regression model for the overall sample was significant,  $F(7, 446) = 45.68, p < .001$ , and accounted for 42% of the total variance in acculturation. Age of arrival ( $p < .001$ ) and length of stay ( $p < .01$ ) were significant contributors of acculturation. The SES index ( $p < .01$ ) predicted acculturation after controlling for the effects of the four preceding variables. Also, English reading ability ( $p < .001$ ) emerged as a significant predictor of acculturation over and above the preceding demographics variables. Gender and cohort status failed to predict acculturation.

At the individual cohort level, the contributions of the predictors to acculturation varied across the groups (see Table 2). The six sociodemographic predictors explained the most variance in acculturation for early immigrants,  $F(5, 258) = 25, p < .001$ , with 33% of variance accounted for. Age of arrival ( $p < .001$ ), length of stay ( $p < .05$ ), and English reading ability ( $p < .01$ ) were significant predictors for this group (see Table 2). The regression equations were significant for both late immigrants,  $F(5, 95) = 2.72, p < .05$ , and internationals,  $F(5, 83) = 3.35, p < .01$ , but the amount of variance explained was only 13% and 17% for these two groups, respectively. Gender ( $p < .05$ ) was the only significant predictor for acculturation for late immigrants, whereas

TABLE 2

**Summary of Hierarchical Multiple Regression Analyses for the  
Sociodemographic Variables in Predicting Acculturation**

Variable	Acculturation							
	All Groups		Early Immigrants		Late Immigrants		Internationals	
	<i>b</i> Value	$\beta$	<i>b</i> Value	$\beta$	<i>b</i> Value	$\beta$	<i>b</i> Value	$\beta$
Gender	0.23	.07	0.04	.01	0.60*	.24	0.30	.11
Age	-0.23***	-.86	-0.26***	-.78	-0.10	-.18	-0.26*	-.45
Length	-0.09*	-.30	-0.10*	-.32	-0.11	-.18	-0.28	-.35
Cohort status								
Int. vs. others	0.30	.07						
Early vs. others	0.09	.03						
SES	1.39**	.10	1.14	.09	2.09	.19	1.33	.11
Reading	0.22***	.15	0.30**	.17	0.11	.10	0.28*	.25
<i>F</i>	45.68***		25.00***		2.72*		3.35**	
<i>R</i> <sup>2</sup>	0.42		0.33		0.13		0.17	
Adjusted <i>R</i> <sup>2</sup>	0.41		0.31		0.08		0.12	
<i>t</i>	5.06***		4.55***		1.37		1.92	

Note. Age = age of arrival in Canada; Length = length of stay in Canada; Int. = internationals; Early = early immigrants; SES = socioeconomic status; Reading = English reading ability. *b* values represent the unstandardized coefficients.  $\beta$  values represent the standardized coefficients. Dependent variable is acculturation as measured by the Minority-Majority Relations Survey.

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

both age of arrival ( $p < .05$ ) and English reading ability ( $p < .05$ ) were the significant predictors for internationals.

In the second regression, the same six sociodemographic variables were entered into another analysis to regress on the CADC scores as the acculturative stress variable. Table 3 shows that the regression model on acculturative stress for the entire sample was significant,  $F(7, 456) = 9.86$ ,  $p < .001$ , and accounted for 13% of its variance. The effects of gender, age of arrival, length of stay, and cohort status were not significant. After these variables were controlled for, the SES index ( $p < .05$ ) emerged as a significant predictor of acculturative stress. English reading ability ( $p < .001$ ) further predicted the criterion over and above the five preceding variables.

At the individual cohort level, again the extent to which the six variables predicted acculturative stress varied across the groups. The regression models were significant only for early immigrants,  $F(5, 265) = 3.70$ ,  $p < .01$ , and for late immigrants,  $F(5, 97) = 2.94$ ,  $p < .05$ , accounting for 7% and 13% of the variance, respectively. For late immigrants, English reading ability ( $p < .01$ ) was the sole significant predictor for acculturative stress. For early immigrants, both English reading ability ( $p < .05$ ) and the SES index ( $p < .05$ ) were signifi-



TABLE 3

**Summary of Hierarchical Multiple Regression Analyses for the Sociodemographic Variables in Predicting Acculturative Stress**

Variable	Acculturative Stress							
	All Groups		Early Immigrants		Late Immigrants		Internationals	
	<i>b</i> Value	$\beta$	<i>b</i> Value	$\beta$	<i>b</i> Value	$\beta$	<i>b</i> Value	$\beta$
Gender	0.11	.05	0.03	.01	0.13	.06	0.30	.13
Age	0.04	.23	0.06	.25	-0.05	-.14	0.15	.31
Length	0.03	.14	0.04	.19	-0.04	-.09	0.13	.19
Cohort status								
Int. vs. others	0.00 <sup>a</sup>	.00 <sup>b</sup>						
Early vs. others	-0.24	-.10						
SES	-0.86*	-.09	-1.14*	-.13	-1.02	-.11	0.48	.05
Reading	-0.21***	-.21	-0.19*	-.16	-0.29**	-.33	-0.13	-.14
<i>F</i>	9.86***		3.70**		2.94*		1.30	
<i>R</i> <sup>2</sup>	0.13		0.07		0.13		0.07	
Adjusted <i>R</i> <sup>2</sup>	0.12		0.05		0.09		0.02	
<i>t</i>	7.63***		6.10***		5.15***		0.79	

*Note.* Age = age of arrival in Canada; Length = length of stay in Canada; Int. = internationals; Early = early immigrants; SES = socioeconomic status; Reading = English reading ability. *b* values represent the unstandardized coefficients.  $\beta$  values represent the standardized coefficients. Dependent variable is acculturative stress as measured by the Cultural Adjustment Difficulties Checklist.

<sup>a</sup>Actual value = .003. <sup>b</sup>Actual value = .001.

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

cant predictors of acculturative stress. Sociodemographic variables were not significant for internationals.

## discussion

The original hypothesis on acculturation was supported because English reading ability, SES, age of arrival, and length of stay were significant in predicting the acculturation level of the current Chinese adolescent sample. On the other hand, the hypothesis for acculturative stress was partially supported in that only English reading ability and SES significantly predicted acculturative stress.

Consistent with previous research, English language reading skill of Chinese adolescents in Canada was a key determinant of acculturation (Ying, 2001) and in reducing acculturation-related stress (Yeh & Inose, 2003). A strong command of English increases the ability of an adolescent to (a) acquire cultural knowledge of the new environment, (b) have greater cross-cultural interactions with the members of the majority group, and (c) avoid potential intercultural conflicts and misunder-

standings. Also, it was found that participants with higher SES backgrounds had a higher acculturation level, which was supported by the finding of a previous study (Farver et al., 2002). In addition, it appears that higher SES scores may have served as a buffer for Chinese adolescents living in Canada against acculturative stress, particularly for those who were early immigrants. Immigrant parents' occupational/academic success and financial resources may help to buffer adolescents against the stresses of discrimination and prejudice (Ying et al., 2000) and enhance psychological health (Leung, 2001). There were also certain acculturation advantages associated with Chinese adolescents who migrated at a younger age (including those born in Canada; see also Ying, 2001) and those who had resided in Canada for a longer period of time (see also Rosenthal & Feldman, 1990, 1992).

In terms of cohort effect, as hypothesized, the early immigrants were the most acculturated group with the least acculturative stress. However, contrary to expectations, late immigrants and internationals did not differ significantly in their acculturation characteristics, despite having different immigration statuses. This is in line with the findings of two recent studies in which Chinese adolescent migrants and sojourners were shown to be similar in various psychological and social indexes (Leung, 2001) and cultural orientation to the majority culture (Ying, 2001). The similarity between late immigrants and internationals may be attributed to (a) their being developmentally similar in making their migration during the teen years (mean age = 13.62 years for late immigrants and mean age = 16.84 years for internationals) and (b) their being more likely to be proficient in their native language/mother tongue, Chinese.

## LIMITATIONS

The findings should be interpreted carefully in view of the following limitations. First, the study was most informative about Canadian-born Chinese adolescents and Chinese adolescents who immigrated to Canada at an early age. The sociodemographic variables examined were less predictive of acculturation and acculturative stress for Chinese adolescents who immigrated to Canada when they were older and for Chinese international students. Therefore, a different conceptual framework may be needed to better understand the latter two groups. One method for achieving this might be to incorporate additional interpersonal and contextual variables such as social support, academic satisfaction, parent-child relationship, and perceived discrimination when studying recent arrivals (see, e.g., Leung, 2001; Ying et al., 2000). Second, the study adopted a combination of a community-based approach and the snowball technique in its recruitment of prospective participants. Although these methods used for sampling were effective in recruiting an otherwise hard-to-reach ethnic youth population, they preclude random sampling and so make it difficult to make generalizations about these immigrant groups. Moreover, because the sample was predominantly from Toronto, a multicultural urban area, the group may not be very representative of Chinese adolescents elsewhere in Canada.

## IMPLICATIONS FOR COUNSELING INTERVENTIONS

The present study suggests that sociodemographic and developmental factors have a strong impact on the adaptation of Chinese adolescents to the Canadian social environment. As revealed, among Chinese adolescents in Canada, psychological well-being (i.e., acculturative stress) is contingent on their level of acculturation (Berry et al., 1987; Sodowsky & Lai, 1997). Clinicians who work with more traditional (less acculturated) adolescents should be alert to possible stressors related to being a minority individual, such as conflicts with the majority group, isolation from one's ethnic group, lack of self-efficacy with regard to functioning in the dominant society, and intergenerational conflicts (Chiu & Ring, 1998). These cultural stressors may underlie an adolescent's presenting concerns in therapy or may even exacerbate them. Counselors can help the adolescent client to identify, process, and deal with acculturative stresses as a common and natural part of the acculturating process.

Chinese adolescents with poor English reading ability and from a lower SES are potentially at greater risk of having adjustment difficulties. These adolescents may also be the least likely to seek the guidance of a counselor or teacher because of language difficulties, isolation, and cultural stigmatization for seeking professional help. Therefore, creative strategies, such as outreach programs, social activities, and Chinese-speaking or bilingual peer support, should be implemented to overcome these barriers.

The results of this study substantiate the heterogeneity of Asian immigrants. The existence of within-group differences for acculturation rates suggests that clinicians should be cognizant of these differences when counseling Chinese adolescent clients. Problem assessment, conceptualization, and treatment implementation with immigrant adolescents must be generated within the clients' acculturation and developmental context.

## references

- Aronowitz, M. (1992). Adjustment of immigrant children as a function of parental attitudes to change. *International Migration Review*, 26, 89-110.
- Berry, J. W. (1997). Immigration, acculturation, and adaptation. *Applied Psychology: An International Review*, 46, 5-34.
- Berry, J. W., Kim, U., Minde, T., & Mok, D. (1987). Comparative studies of acculturative stress. *International Migration Review*, 21, 491-511.
- Chiu, Y.-W., & Ring, J. M. (1998). Chinese and Vietnamese immigrant adolescents under pressure: Identifying stressors and interventions. *Professional Psychology: Research and Practice*, 29, 444-449.
- Chung, C. L. E. (1994). *An investigation of the psychological well-being of unaccompanied Taiwanese minors/parachute kids*. Unpublished doctoral dissertation, University of Southern California, Los Angeles.
- Farver, J. A. M., Bhadha, B. R., & Narang, S. K. (2002). Acculturation and psychological functioning in Asian Indian adolescents. *Social Development*, 11, 11-24.
- Florsheim, P. (1997). Chinese adolescent immigrants: Factors related to psychosocial adjustment. *Journal of Youth and Adolescence*, 26, 143-163.

- Lay, C., & Nguyen, T. (1998). The role of acculturation-related and acculturation non-specific daily hassles: Vietnamese-Canadian students and psychological distress. *Canadian Journal of Behavioral Science, 30*, 172-181.
- Lay, C., & Verkuyten, M. (1999). Ethnic identity and its relation to personal self-esteem: A comparison of Canadian-born and foreign-born Chinese adolescents. *Journal of Social Psychology, 139*, 288-299.
- Leung, C. (2001). The sociocultural and psychological adaptation of Chinese migrant adolescents in Australia and Canada. *International Journal of Psychology, 36*, 8-19.
- Redfield, R., Linton, R., & Herskovits, M. (1936). Memorandum for the study of acculturation. *American Anthropologist, 38*, 149-152.
- Rohner, R., Hahn, B. C., & Koehn, U. (1992). Occupational mobility, length of residence, and perceived maternal warmth among Korean immigrant families. *Journal of Cross-Cultural Psychology, 23*, 366-376.
- Rosenthal, D. A., & Feldman, S. S. (1990). The acculturation of Chinese immigrants: Perceived effects on family functioning of length of residence in two cultural contexts. *Journal of Genetic Psychology, 151*, 131-151.
- Rosenthal, D. A., & Feldman, S. S. (1992). The nature and stability of ethnic identity in Chinese youth: Effects of length of residence in two cultural contexts. *Journal of Cross-Cultural Psychology, 23*, 214-227.
- Sodowsky, G. R., & Lai, E. W. (1997). Asian immigrant variables and structural models of cross-cultural distress. In A. Booth (Ed.), *International migration and family change: The experience of U.S. immigrants* (pp. 221-234). Hillsdale, NJ: Erlbaum.
- Sodowsky, G. R., Lai, E. W., & Plake, B. S. (1991). Moderating effects of sociocultural variables on acculturation variables of Hispanics and Asian Americans. *Journal of Counseling & Development, 70*, 194-204.
- U.S. Bureau of Labor Statistics. (2001). *Occupational outlook handbook, 2000-2001 edition*. Retrieved May 22, 2001, from <http://stats.bls.gov/ocohome.htm>
- Yeh, C. J. (2003). Age, acculturation, cultural adjustment, and mental health symptoms of Chinese, Korean, and Japanese immigrant youths. *Cultural Diversity and Ethnic Minority Psychology, 9*, 34-48.
- Yeh, C. J., & Inose, M. (2002). Difficulties and coping strategies of Chinese, Japanese, and Korean immigrant students. *Adolescence, 37*, 69-82.
- Yeh, C. J., & Inose, M. (2003). International students' reported English fluency, social support satisfaction, and social connectedness as predictors of acculturative stress. *Counseling Psychology Quarterly, 16*, 15-28.
- Ying, Y. (2001). Migration and cultural orientation: An empirical test of the psychoanalytical theory in Chinese Americans. *Journal of Applied Psychoanalytical Studies, 3*, 409-430.
- Ying, Y., Lee, P. A., & Tsai, J. L. (2000). Cultural orientation and racial discrimination: Predictors of coherence in Chinese American young adults. *Journal of Community Psychology, 28*, 427-442.
- Zheng, X., & Berry, J. W. (1991). Psychological adaptation of Chinese sojourners in Canada. *International Journal of Psychology, 26*, 451-471.
- Zhou, M. (1997). Growing up American: The challenge confronting immigrant children and children of immigrants. *Annual Reviews Sociology, 23*, 63-95.