

University of Windsor

Scholarship at UWindor

Electronic Theses and Dissertations

Theses, Dissertations, and Major Papers

2002

Chinese immigrant youth in Vancouver, Canada: An examination of acculturation, adjustment, and intergenerational conflict (British Columbia).

Iris. Sharir
University of Windsor

Follow this and additional works at: <https://scholar.uwindsor.ca/etd>

Recommended Citation

Sharir, Iris., "Chinese immigrant youth in Vancouver, Canada: An examination of acculturation, adjustment, and intergenerational conflict (British Columbia)." (2002). *Electronic Theses and Dissertations*. 1432.
<https://scholar.uwindsor.ca/etd/1432>

This online database contains the full-text of PhD dissertations and Masters' theses of University of Windsor students from 1954 forward. These documents are made available for personal study and research purposes only, in accordance with the Canadian Copyright Act and the Creative Commons license—CC BY-NC-ND (Attribution, Non-Commercial, No Derivative Works). Under this license, works must always be attributed to the copyright holder (original author), cannot be used for any commercial purposes, and may not be altered. Any other use would require the permission of the copyright holder. Students may inquire about withdrawing their dissertation and/or thesis from this database. For additional inquiries, please contact the repository administrator via email (scholarship@uwindsor.ca) or by telephone at 519-253-3000ext. 3208.

INFORMATION TO USERS

This manuscript has been reproduced from the microfilm master. UMI films the text directly from the original or copy submitted. Thus, some thesis and dissertation copies are in typewriter face, while others may be from any type of computer printer.

The quality of this reproduction is dependent upon the quality of the copy submitted. Broken or indistinct print, colored or poor quality illustrations and photographs, print bleedthrough, substandard margins, and improper alignment can adversely affect reproduction.

In the unlikely event that the author did not send UMI a complete manuscript and there are missing pages, these will be noted. Also, if unauthorized copyright material had to be removed, a note will indicate the deletion.

Oversize materials (e.g., maps, drawings, charts) are reproduced by sectioning the original, beginning at the upper left-hand corner and continuing from left to right in equal sections with small overlaps.

Photographs included in the original manuscript have been reproduced xerographically in this copy. Higher quality 6" x 9" black and white photographic prints are available for any photographs or illustrations appearing in this copy for an additional charge. Contact UMI directly to order.

**ProQuest Information and Learning
300 North Zeeb Road, Ann Arbor, MI 48106-1346 USA
800-521-0600**

UMI[®]

**CHINESE IMMIGRANT YOUTH IN VANCOUVER, CANADA:
AN EXAMINATION OF ACCULTURATION, ADJUSTMENT,
AND INTERGENERATIONAL CONFLICT**

by

Iris Sharir

A Dissertation

**Submitted to the Faculty of Graduate Studies and Research
through the Department of Psychology
in Partial Fulfillment of the Requirements for
the Degree of Doctor of Philosophy at the
University of Windsor**

Windsor, Ontario, Canada

2002

© 2002 Iris Sharir



**National Library
of Canada**

**Acquisitions and
Bibliographic Services**

**385 Wellington Street
Ottawa ON K1A 0N4
Canada**

**Bibliothèque nationale
du Canada**

**Acquisitions et
services bibliographiques**

**385, rue Wellington
Ottawa ON K1A 0N4
Canada**

Your file Votre référence

Our file Notre référence

The author has granted a non-exclusive licence allowing the National Library of Canada to reproduce, loan, distribute or sell copies of this thesis in microform, paper or electronic formats.

The author retains ownership of the copyright in this thesis. Neither the thesis nor substantial extracts from it may be printed or otherwise reproduced without the author's permission.

L'auteur a accordé une licence non exclusive permettant à la Bibliothèque nationale du Canada de reproduire, prêter, distribuer ou vendre des copies de cette thèse sous la forme de microfiche/film, de reproduction sur papier ou sur format électronique.

L'auteur conserve la propriété du droit d'auteur qui protège cette thèse. Ni la thèse ni des extraits substantiels de celle-ci ne doivent être imprimés ou autrement reproduits sans son autorisation.

0-612-67679-X

Canada

ABSTRACT

Research with adolescent migrants suggests that they may be at greater risk of experiencing mental health difficulties and intergenerational conflict than their non-immigrant peers. However, few studies have focused on factors that are associated with the mental health status and family relationships of migrant youth. Using the acculturation framework proposed by Berry (1999), the present study examined the impact of acculturation strategy, demographic factors, and migration-related variables on the psychological adjustment and family relationships of 152 first generation Chinese immigrant youth. Twenty-eight second generation Chinese immigrant youth and 36 third and later generation Canadian youth served as comparisons.

Participants completed a demographic questionnaire, psychological adjustment measures, and family relationship measures. The Chinese immigrant youth also completed two acculturation measures. The reliability and validity of the adjustment and family relationship measures for the Chinese youth were assessed. Only measures with adequate psychometric properties were employed in the analyses.

The first generation group overwhelmingly endorsed integration and rejected the other acculturation strategies. There was stronger support for the acculturation attitude of separation than assimilation in the first generation group. Differences in the level of support for assimilation were found based on gender and on the ethnic composition of the neighborhood the participants resided in. Results revealed generational differences in psychological adjustment, with better adjustment reported by the third or later generation group than by the first generation group. Factors found to be associated with greater mental health difficulties among the first generation group included: 1) adoption of an

acculturation strategy other than integration; 2) less self-confidence in English; and 3) feeling more negative about the move to Canada. Greater family conflict was reported by those first generation adolescents who had adopted a different acculturation strategy than their parents as compared to those adolescents who had adopted the same acculturation strategy as their parents. Explanations for these findings and the implications of the present study are discussed. Limitation and suggestions for future research are provided.

ACKNOWLEDGMENTS

This research would not have been completed without the assistance of many people. I am profoundly grateful to the study participants for their willingness to be a part of this project. I hope that the knowledge I have gained from their experiences will serve to benefit others. I also acknowledge the assistance of the teachers and youth workers at the participating schools and community centres during the data collection. I thank Dr. Berry of Queen's University and Dr. Paulhaus and his colleagues at the University of British Columbia for providing me with questionnaires. Partial funding for this study was provided by the Mennonite Central Committee of Canada.

There are a number of individuals who have made important contributions to my dissertation. I am indebted to my supervisor, Dr. Jim Porter, who has been an important influence on both my research and clinical training. He provided timely and invaluable feedback and has always been positive and encouraging about my work. Moreover, it is because of his support that I have been able to achieve both my professional and my personal goals. I would also like to thank my committee members, Dr. Michael Kral, Dr. Shelagh Towson, and Dr. Lynne Phillips, for their support and contributions to this project and for allowing me to benefit from their expertise.

I feel fortunate to have many family and friends who have helped in numerous ways along the way. In particular I would like to thank my parents, whose faith in me has always been unshakable and who never set limits on what they thought I could achieve. I am also grateful to Joel. His love, humour, encouragement, and intellect are my source of inspiration.

TABLE OF CONTENTS

ABSTRACT	iii
ACKNOWLEDGEMENTS	v
LIST OF TABLES	viii
LIST OF FIGURES	ix
CHAPTER	
I. INTRODUCTION	
Introduction	1
History of Chinese Immigration in British Columbia	2
Recent Chinese Immigration Patterns	4
Acculturation	6
Models of Acculturation	7
Acculturation and Ethnic Density	9
Early Studies on the Adjustment of Immigrants	11
Recent Studies on the Adjustment of Adult Immigrants	13
Gender	14
Socioeconomic Status	15
Age of Migration	15
Ethnic Density	16
Acculturation	17
Other Factors	20
Adjustment among Immigrant Children	24
Adjustment among Adolescent Immigrants	26
Studies with Adolescent Immigrants	26
Factors Associated with Adjustment among Immigrant Youth	30
Intergenerational Conflict	34
Explanations for Intergenerational Conflict in Immigrant Families	38
Impact of Family Conflict	41
Mental Illness and Chinese Culture	42
The Present Study	45
II. METHOD	
Participants	49
Measures	55
Demographic Questionnaire	55
Chinese Acculturation Questionnaire (CAQ)	56
Vancouver Index of Acculturation (VIA)	57

Beck Depression Inventory (BDI)	58
State-Trait Anxiety Inventory (STAI)	61
General Health Questionnaire – 30 (GHQ-30)	63
Somatic Complaints Scale (SCS)	66
Family Environment Scale (FES)	67
Conflict Rating Scale (CRS) and Ratings of Relationship with Parents (REL)	68
Procedure	69
III. RESULTS	
Preliminary Analyses	72
Adjustment Measures	72
Family Conflict Measures	74
Conflict Rating Scale (CRS) and Relationship with Parents (REL)	74
Vancouver Index of Acculturation (VIA)	76
Chinese Acculturation Questionnaire (CAQ)	77
Primary Hypotheses	84
Secondary Hypotheses	95
Open-Ended Questions	97
IV. DISCUSSION	102
Limitations	115
Future Research	119
Concluding Remarks	121
REFERENCES	123
APPENDIX A: Demographic Questionnaire	150
APPENDIX B: Chinese Acculturation Questionnaire (CAQ)	154
APPENDIX C: Vancouver Index of Acculturation (VIA)	160
APPENDIX D: Somatic Complaints Scale (SCS)	162
APPENDIX E: Family Environment Scale (FES)	163
Conflict Rating Scale (CRS)	166
Relationship with Parents (REL)	167
APPENDIX F: Confirmatory Factor Analysis	168
VITA AUCTORIS	171

LIST OF TABLES

Table

1	Sample Characteristics by Generational Status	51
2	Living Arrangements for First Generation Group Before and After Migration	53
3	Time Spent in Canada among Parents of First Generation Group	54
4	Description of Acculturation, Adjustment, and Family Conflict Measures	70
5	Psychometric Properties for the Adjustment Measures for Youth of Chinese Descent	73
6	Intercorrelations Among the Adjustment Measures for Youth of Chinese descent	75
7	Two-factor solution for the VIA-Self and VIA-Parent	78
8	Psychometric Characteristics of the CAQ Subscales	79
9	Correlations between CAQ and VIA-Self Subscales	82
10	Means and Standard Deviations for the CAQ Subscales based on Ethnic Self-Identity for Youth of Chinese Descent	83
11	Means and Standard Deviations for Family Conflict and Adjustment Measures for the Three Groups by Acculturation Strategy	85
12	Correlations Between Acculturation Attitude and Adjustment (DI) in the First and Second Generation Groups	90
13	Difference in Adjustment and Family Conflict in the First, Second, and Third Generation Groups	93
14	Result of Confirmatory Factor Analysis	169

LIST OF FIGURES

Figures

1	CAQ subscale intercorrelations for the first and second generation groups	81
---	---	----

Chapter I

Introduction

Over the past century, the migration of individuals and families between countries has become increasingly common. During the first half of the 20th century over 100 million people migrated from one country to another (Aronwitz, 1984). This number has continued to rise over the past 50 years due to social, political, economic, environmental and technological factors (Roth & Ekblad, 1993). Recent estimates suggest that there are more people who live outside their country of origin now than at any other time in history (Aronwitz, 1984; Rogler, 1994) and immigration has been described as an important concern for many countries (Hertz, 1988; Siem, 1997). This concern stems, in part, from the major psychological impact that migration can have on individuals.

Most research with immigrants has focused on the adjustment of adults (Evans & Lee, 1998). Many factors associated with better outcomes for adult immigrants have been identified, including the acculturation strategy adopted. Less research has been conducted with immigrant youth, despite the fact that available studies suggest that adolescents may experience considerable difficulties following migration. In addition, although some of the factors known to be associated with psychological difficulties among adult immigrants have been assessed with youth, little research has focused on the significance of the preferred acculturation strategy or on factors such as the ethnic density of the host community. Moreover, although intergenerational conflict has been described as a common experience among immigrant families, little attention has been given to determining when it is likely to occur. The present study was designed to address these

issues by employing the two-dimensional model of acculturation proposed by Berry and his colleagues (1987, 1999) to assess the psychological adjustment associated with the various acculturation strategies among immigrant youth. As well, the level of family conflict associated with these strategies was investigated to determine whether certain acculturation strategies are associated with increased risk of intergenerational conflict. Also examined were several demographic variables thought to mediate adjustment and family conflict, including, in particular, ethnic density. The present study focused on Chinese youth in the Greater Vancouver Area. There were three reasons for investigating this population in particular: (a) despite their large numbers, information on the adjustment of young Chinese immigrants to Canada is relatively limited (McLoyd, 1998; Noh & Avison, 1992; Sue, Nakamura, Chung, & Yee-Bradbury, 1994; S. K. Wong, 1997); (b) because there are considerable differences between Chinese and Canadian cultures, these youth may be at particular risk of experiencing significant difficulties following immigration; and (c) the high concentration of Chinese immigrants in some Vancouver neighbourhoods permits the examination of the impact of migrating to a community with a large number of individuals from the same ethnic group.

History of Chinese Immigration in British Columbia

Canada is a country largely settled by immigrants, with early immigration flowing primarily from northern Europe. Outside of Quebec, White, English-speaking immigrants have dominated Canada's social and political spheres since the formation of the country in 1867. As migration from other countries increased, this power was used to establish barriers to the migration of other ethnic groups. One group targeted for

exclusion was migrants from China.

The history of Chinese immigration to North America began more than 100 years ago (Tong & Spicer, 1994). Several conditions during the 19th century made emigration to North America attractive. Among the “push” factors were: the Nanking and Wanghsia treaties signed by the Manchu government with Britain and the United States that created an environment of poverty and oppression within China; natural disasters that produced widespread famine and a disintegration of the traditional village economy; and a climate of political instability and political persecution (Con, Con, Johnson, Wickberg, & Willmott, 1982). The foreign contacts that many Chinese residents made through their involvement in coastal trading made emigration a viable solution to these problems (Ma, 1978). “Pull” factors to North America were the need for labourers following the discovery of gold in the mid-1800s and later the desire for family reunification.

The first Chinese immigrants to Canada arrived in British Columbia in 1858 during the period of the Gold Rush. Chinese labourers were also later recruited to help build the CPR railroad. By the end of the 19th century, more than 25,000 Chinese people had migrated to Canada, with the vast majority residing in British Columbia. Although the early relations between the Chinese and White communities were generally harmonious, the completion of the railroad and the decline in the Gold Rush resulted in a need for fewer labourers and an increase in tensions and discriminatory attitudes towards the Chinese community. In 1885, Canada passed the Chinese Immigration Act, an exclusionary law designed to restrict the number of Chinese allowed to gain entry into the country by imposing a “head tax” on all new Chinese immigrants (Tan, 1989). Other restrictive immigration laws passed between 1900 and 1966 further decreased emigration

from China to Canada. Thus, census data indicate that Vancouver had 3,559 Chinese residents in 1911 and 3,011 in 1931 (Ma, 1978).

Recent Chinese Immigration Patterns

By 1967, Canadian policies towards visible minorities had begun to change as reflected in the introduction of the Immigration Act of 1967 that prohibited discriminatory immigration practices and the official policy of multiculturalism adopted in 1971 (Esses & Gardner, 1996; Johnson & Lary, 1994). These policies resulted in shifts in Canadian immigration patterns with fewer migrants originating from Europe and greater numbers from Asia and the Middle East (Lai & Yue, 1990). Before 1961, 90% of immigrants to Canada were born in Europe, but between 1991 and 1996, they made up only 19% of new immigrants (Statistics Canada, 1997). In contrast, statistics for Asian and Middle Eastern immigrants show an increase from 3% to 57% over these same time periods.

By the second half of the 1980s, individuals of Chinese ethnic origin had become a major source of immigrants to Canada (Johnson, 1994). Migration from Hong Kong increased in advance of the return of Hong Kong to the People's Republic of China in 1997 and from Taiwan due to the strengthening of the Taiwanese pro-independence movement that led to fears about security and restrictions on movement (Johnson, 1992; Le Corre, 1994). Canada became the most favoured country for migration in part due to the political and economic stability and the good educational opportunities for children (Smart, 1994). In particular, the Greater Vancouver Area became a popular site for relocation because of its proximity to Asia relative to other major Canadian cities, the

relatively warm weather, and the receptivity of the provincial government to Chinese migrants as demonstrated through actions such as appointing a Chinese Lieutenant-Governor and selling a large downtown Vancouver property to a Hong Kong developer (Johnson, 1994; Le Corre; Mitchell, 1999). The Chinese migrants who arrived after the mid-1980s differed from earlier waves of Chinese migrants due to their higher socio-economic status and education levels as well as their desire to move in order to achieve greater political security rather than fleeing for reasons of poverty or persecution (Mitchell). The most recent reports available indicate that between 1994 and 1999 approximately 50% of immigrants to the Greater Vancouver Area have been from Hong Kong, China, or Taiwan, and more have entered under the "Economic Class" than under family reunification programs (Citizenship and Immigration Canada, 1997, 2000; L. L. Wong, 1997). According to the 1996 census, individuals of Chinese ethnic origin were the largest visible minority group in the Greater Vancouver Area, comprising 27% of the population of the City of Vancouver and 33% of the population of the City of Richmond (Statistics Canada, 1997). This represents a more significant change for Richmond compared with the City of Vancouver, as traditionally most individuals of Chinese ethnic origin resided in the City of Vancouver, with few residing in Richmond before the 1980s (Ray, Halseth, & Johnson, 1997).

Despite the positive economic impact of the Chinese migration over the past two decades for British Columbia (Le Corre, 1994; L. L. Wong, 1997), some authors documented an increase in anti-Chinese sentiment beginning in the 1980s (Johnson, 1992; Li, 1998). For example, in their review of a local Vancouver newspaper from 1986 to 1990, Creese and Peterson (1996) found dozens of articles discussing problems

associated with increased Chinese migration, including rising housing costs, the changing character of neighbourhoods (e.g. the building of 'monster homes'), the cost of providing more English-as-a-Second-Language classes, and the activity of Asian gangs (see also Brunet, 1994; Majury, 1994). However, they noted that the newspaper appeared to be more culturally sensitive by the mid 1990s and other researchers have found that respondents in Canada described having higher comfort levels with those of Chinese ethnic origin than any other visible minority group (Berry & Kalin, 1995). Nonetheless, anti-Chinese attitudes continue to be a concern in the Greater Vancouver Area.

Acculturation

A classic definition of acculturation is that “acculturation comprehends those phenomena which result when groups of individuals having different cultures come into continuous first-hand contact with subsequent changes in the original culture of either or both groups” (Redfield, Linton, & Herskovits, 1936, p. 149). Historically, acculturation research was conducted by cultural anthropologists who conceptualized acculturation as occurring at the group level (Olmedo, 1979). Among acculturating groups, various types of changes have been identified including: physical changes, such as type of housing or population density; biological changes, such as differences in nutritional status or the occurrence of new diseases; political changes, usually involving loss of autonomy for non-dominant groups; economic changes in terms of ways people earn a living; cultural changes that involve modifications of linguistic, religious, and educational institutions; and adjustments in social relationships, with new in-group and out-group members (Berry, 1994). Following the work of Hallowell with Ojibwe people, psychologists

began to investigate acculturation at the level of the individual (Berry, 1999). This process, termed psychological acculturation, has been defined as the changes that occur in an individual whose cultural group is undergoing acculturation (Berry, 1994). Changes that occur at the level of the individual include behavioural, attitudinal, and value shifts. The acculturation process may also lead to social and psychological problems (Berry et al., 1987; Berry, 1994).

Models of acculturation.

Two major models of acculturation have been proposed (Donà & Berry, 1994). The unidimensional or assimilationist approach suggests that groups that come into contact with each other become more similar over time, although it is generally assumed that the non-dominant group changes to more closely resemble the dominant group. The acculturation process is conceptualized as linear; as migrating groups adopt the behaviours and values of the host society they abandon those of the culture of origin. One of the major proponents of this approach was Gordon (1964) whose seven-stage model proposed that for assimilation at each stage to occur there must be a relinquishment of the traditional culture. The assimilationist model guided early psychological research, perhaps because it was consistent with the American “melting pot” ideal for immigrants. However, this model has been criticized as being biased towards the dominant culture by presenting assimilation of non-dominant groups as the desired outcome of acculturation and for implying that the acculturation process is unidirectional (Richman, Gaviria, Flaherty, Birz, & Wintrob, 1987).

Alternatively, bidimensional models of acculturation have been proposed. These models reject the notion that the culture of origin must be abandoned in order to adopt the

host culture. Instead, identification with each culture is assessed separately and change is measured on each dimension (Sayegh & Lasry, 1993). One model based on this approach was proposed by Zak (1973) who suggested that ethnic identity was best conceptualized as comprised of two independent factors, the minority dimension and the majority dimension, rather than on a minority to majority continuum. His research demonstrated that there was no correlation between these two dimensions, lending support to a bidimensional model.

More recently, Berry proposed a model of acculturation based on the bidimensional approach. This model has gained influence and has been characterized as the most prominent acculturation model in the literature (Dion & Dion, 1996). Berry and his colleagues have argued that acculturating individuals are faced with two decisions (Berry, Kim, Power, Young, & Bujaki, 1989). The first is concerned with cultural maintenance and involves deciding whether or not one's cultural identity and customs are of value and should be maintained. The second issue concerns the desirability of contact with, and participation in, the dominant culture whereby the individual decides whether positive relations with the rest of society are of value and should be sought. Although Berry believes that these decisions are made on a continuous scale, he treats them as dichotomous decisions for conceptual purposes. Based on the resolution of these two issues, individuals demonstrate one of the four options or acculturative strategies. Rejection of the original culture and adoption of the values and culture of the host society represents the *assimilation* strategy. When the opposite occurs and the individual strives to maintain his or her culture and does not value contact or participation in the host culture, the *separation* strategy is endorsed. The *integration* strategy is characterized by

maintenance of the original culture and adoption of the values of mainstream culture. This strategy seeks to “make the best of both worlds” (Berry et al., 1992, p. 279). In order for integration to be a viable option, the society of settlement must be accepting of cultural diversity (Berry, 1999). When *marginalization* occurs, the individual either has no interest in or is unable to maintain the culture of origin (often because the dominant society prohibits cultural maintenance) and is not interested or is unable to participate in the mainstream culture (often because of forced exclusion).

Although there is evidence that people may hold somewhat different attitudes or behave somewhat differently depending on whether they are in more private spheres (such as at home or within the ethnic community) or public spheres (such as at work), individuals generally adopt one strategy (Berry, 1997). Studies with diverse cultural groups and in various countries including Canada (Aycan & Kanungo, 1996; Berry et al., 1989; Pawliuk et al., 1996; Sayegh & Lasry, 1993), the United States (Krishnan & Berry, 1992; Phinney, Chavira, & Williamson, 1992), Israel (Horenczyk, 1996), and England (Ghuman, 1997) have generally indicated that integration is the preferred acculturation strategy among immigrants and members of ethnic minority groups, while marginalization is the least favoured alternative. Results regarding the frequency with which assimilation and separation have been adopted as acculturation styles are less consistent. It appears that, after integration, adult respondents may be more likely to favour separation, while adolescents and young adults may prefer assimilation (Aycan & Kanungo).

Acculturation and ethnic density.

Research on acculturation has examined the impact of various factors on the

acculturation process including the voluntariness of contact between the groups and the policies and conditions of the society of settlement (Berry, 1999). Another factor that has received some attention is the ethnic density in the community of resettlement, defined as the relative size of an ethnic group in an area that contains more than one ethnic group (Rabkin, 1979). Most studies examining the impact of ethnic density on acculturation have found that settling in a community with a larger co-ethnic density increases the likelihood of maintaining the values and traditions of the culture of origin (Yancey, Eriksen, & Juliani, 1976). Berry (1999) suggested that residing in areas of high ethnic density increases the possibility, and perhaps the preference for, maintaining the traditional culture, leading to the adoption of integration or even separation strategies. One study assessed both ethnic self-identification and ethnic attitudes and behaviours among two groups of Aboriginal adolescents in Norway who lived either in areas of high or low co-ethnic density (Kvermmo & Heyerdahl, 1996). Those youth who lived in an area of high co-ethnic density were more likely to self-identify as a member of their ethnic group, wear traditional clothes and speak the traditional language than adolescents residing in an area of low co-ethnic density. A study in Canada assessed rates of Jewish intermarriage as a measure of group cohesion and found that the lowest rates of intermarriage were in provinces with the largest Jewish communities (Brym, Gillespie, & Gillis, 1985). These results suggest that individuals living in communities with greater numbers of co-ethnics are more likely to retain traditional cultural values than those living in communities with lower co-ethnic densities. Similar results were reported in a study with Hispanic high school students in the United States where respondents who lived in a region with a higher concentration of co-ethnics were more likely to retain the

traditional value of residing in the family home until marriage than their counterparts in less ethnically dense communities (Goldscheider & Goldscheider, 1988). A study that examined data collected with 11 different ethnic groups in the United States and Canada found a significant association between settlement within urban ethnic neighbourhoods and language retention by second and third generation immigrants (Schrauf, 1999). This association was thought to stem, at least in part, from the increased opportunity to use the mother tongue in areas of high co-ethnic density.

Early studies on the adjustment of immigrants

For almost 150 years, mental health practitioners have been investigating immigrant adjustment and the consequences of resettlement. Interest in this area stemmed from research that found higher rates of psychiatric illness among immigrant groups compared to the native-born population (Berk & Hirata, 1973; Carpenter & Brockington, 1980; Cochrane, 1977; Pollock, 1913; Rwegellera, 1977; Sauna, 1969). Ødegaard's (1932) classic study was typical of the early research in that it found excess psychiatric hospitalization admissions among Norwegian-born individuals residing in Minnesota compared to the native born.

Two hypotheses were proposed to account for the higher rates of psychiatric illness among immigrants. The self-selection theory suggested that those who were predisposed to mental illness were more likely to emigrate because of their inability to succeed in or form attachments to their culture of origin (Murphy, 1977; Sauna, 1969). This hypothesis was popularised by Ødegaard who found that very few immigrants became ill during the first year following immigration, assumed to be the period of

greatest stress (Sam, 1994). Thus, the higher rates of psychiatric illness among immigrants were attributed to internal factors rather than external ones (Pernice & Brook, 1996). Later research demonstrated that children of immigrants had lower rates of mental illness than their immigrant parents and comparable morbidity rates to the native population. This contradicted the self-selection theory because biological factors would presumably be passed on to the next generation who would then also have higher rates of mental illness than the non-immigrant population and led to the proposal of the stress of migration hypothesis (Malzberg, 1969; Sauna). This hypothesis proposed that external factors, such as the change in environment and the stressors associated with migration and cultural adaptation, were responsible for the higher rates of psychiatric illness found among immigrants (Rack, 1988; Sauna). This hypothesis has guided more recent research on immigrant mental health.

Despite the initial appeal of these hypotheses, the early studies have been criticized on various grounds. For example, because of their reliance on admission rates to psychiatric hospitals they focused exclusively on a limited number of serious psychiatric illnesses and introduced bias stemming from differential rates of admission, cultural differences in the conceptualization of mental illness, overdiagnosis of serious pathology among ethnic minority groups and misdiagnosis as a result of cultural misunderstandings (Berk & Hirata, 1973; Loring & Powell, 1988; Rogler, 1993). In addition, the accuracy of official records is suspect, particularly those from the beginning of the century (Berk & Hirata). Early studies also failed to control for factors such as the age and gender distribution of the population and the differential social class and occupations of immigrants (Sauna, 1969). When data from the early studies were

reanalysed controlling for these factors, the differences in admission rates between immigrants and the native population were reduced or were of only limited statistical significance (Malzberg, 1969; Morrison, 1973). Furthermore, prior to 1980, no reliable criteria were available for making diagnoses. Therefore, group comparisons on rates of mental illness from previous decades have only limited usefulness and validity (Sprock & Blashfield, 1983). As well, the criteria used to make diagnoses in these studies were not described. Therefore, it is unclear whether diagnoses were based on objective criteria or subjective impressions. The design of early studies, in which immigrants were conceptualized as a unitary group to be compared to the host population, has also been criticized for ignoring important differences among immigrant groups. Such differences include variability in the culture of origin and the country of resettlement and the circumstances of migration (Murphy, 1977; Rack, 1988). The relevance of other methodological problems, such as the lack of control groups and the validity of self-report questionnaires, has been raised (Roth & Ekblad, 1993). Finally, some studies failed to show higher rates of mental illness among immigrants (e.g. Halldin, 1985) and other studies concluded that rates of psychiatric illness and admission rates to psychiatric hospitals among immigrants varied depending on the country of origin (Cochrane, 1977; Rack, 1988).

Recent studies on the adjustment of adult immigrants

More recent studies on the adjustment of migrants have continued to focus primarily on the psychological difficulties of adult immigrants (Aronwitz, 1984). Following the proposal of the stress migration hypothesis and the need to account for the

inconsistent findings on immigrant mental health, research on the adjustment of adult immigrants shifted from studies of group differences in rates of psychiatric illness (e.g., native-born versus foreign-born) to investigations into the factors that impact the adjustment process. Although early views assumed that migration inevitably led to stress and psychological difficulties, more recent models have suggested that migration does not necessarily lead to poorer mental health (Maingot, 1985; Murphy, 1977). Rather, the link between migration and psychological adjustment is thought to be mediated by a number of factors (Pernice & Brook, 1996; Williams & Berry, 1991).

Gender.

Gender is one of the factors that has consistently been found to mediate the adjustment of immigrants. Most studies have reported greater psychological difficulties among immigrant women than among immigrant men, including a higher incidence of depression, lower self-esteem, more psychiatric symptomatology and more somatic complaints (e.g., Beiser et al., 1988; Krishnan & Berry, 1992; Scott & Scott, 1989; Ying & Liese, 1990). Higher levels of psychological distress among women than men are commonly reported in studies with non-immigrants (Shek, 1989a). Among immigrants, however, the gender difference may reflect both general factors and factors specific to migration. General factors include the findings that women have more limited access to social support than men because they are less likely to work outside the home (Lasry & Segal, 1980), that family conflicts affect women to a greater degree (Naidoo, 1992) and that women are more willing to admit to experiencing psychiatric problems (Scott & Scott). Factors specific to migration include the observation that women experience greater stress from the changes in traditional family roles (Beiser et al.; Salgado de

Snyder, Cervantes, & Padilla, 1990).

Not all studies have reported gender differences in adjustment difficulties following migration. For example, a study of Ethiopian Jewish immigrants in Israel found no difference between men and women in levels of reported anxiety, depression, or sleep disturbance (Arieli & Aydech, 1992). Similarly, Pernice and Brook (1996) found no gender differences in self-reported emotional distress in their study of Southeast Asian refugees, Pacific Island immigrants and British immigrants in New Zealand. As well, no gender differences in level of depression were reported in a study with Vietnamese immigrant university students (Lay & Nguyen, 1998).

Socioeconomic Status.

Socioeconomic status (SES) has also been identified as an important factor. It appears that although pre-migratory SES has some impact on mental health, it is post-migratory SES that is most important for subjective ratings of distress (Scott & Scott, 1989). For example, Ying (1988) found that when the differences in SES between foreign-born and American-born Chinese respondents were controlled for, the level of psychological adaptation between the two groups was equivalent. Other studies have documented the relevance of a relative change in SES following migration, with a loss of status associated with poorer adjustment (Beiser et al., 1988; Williams & Berry, 1991).

Age of migration.

Age at time of migration is also crucial, as the experience of migration differs across the life cycle (Felsman, Leong, Johnson, & Felsman, 1990; Juthani, 1992). Generally, those who immigrate as adolescents or seniors have been identified as being at particularly high risk for experiencing adjustment difficulties (Beiser et al., 1988; Hertz,

1988; Mena, Padilla, & Maldonado, 1987; Scott & Scott, 1989).

Ethnic density.

Another variable that has received attention is the ethnic density in the society of settlement. Research in this area stemmed from a more general hypothesis that the mental health of the individual is affected by their “fit” with the characteristics of the larger community in which they reside (Wechsler & Pugh, 1967). Many studies examining the impact of ethnic density on the psychological functioning of ethnic minority group members have utilized hospitalization rates as the outcome measure. Results of these studies support the notion that having a minority status within one’s community increases the risk of hospitalization for psychiatric difficulties (Kraus, 1969; Mintz & Schwartz, 1964; Muhlin, 1979; Rabkin, 1979; Sydiaha, Lafare, & Rootman, 1969). Research has also found that living in a community with higher numbers of co-ethnics is associated with fewer depressive symptoms (Beiser, Turner, & Ganesan, 1989; Tweed et al., 1990), lower suicide rates (Neelman & Wessely, 1999) and increased feelings of psychological well-being (Tran, 1987). To explain these results researchers have pointed to beneficial aspects of living in communities with high co-ethnic densities, such as increased social support, greater availability of role models, more economic support and diminished feelings of marginality (Kirmayer, 1998; Kuo, 1976; Murphy, 1963; Smart & Smart, 1993; Tran). However, Ying and Akutsu (1997) found that although for most Southeast Asian refugee groups increased ethnic density was associated with greater happiness and less demoralization, contradictory results were found for Cambodians. In addition, other studies have suggested that those who live in areas with large numbers of immigrants from the same ethnic group actually experience

higher levels of psychopathology (Aneli & Aycheh, 1992; Cochrane & Bal, 1988; Phillips & Inui, 1986; Scott & Scott, 1989).

One possible explanation for these contradictory findings is that although resettlement among co-ethnics is beneficial in the short-term, it may become less important in the long-term or even hamper long-term adjustment. This may occur because of the family problems that arise from the differential impact that the cultural community has on family members (Beiser et al., 1988; Beiser et al., 1989). Living in an ethnically homogeneous community in the longer-term may also impede the development of adaptive skills, such as knowledge of the majority culture language (Beiser, Dion, Gotowiec, Hyman, & Vu, 1995). In addition, many of these studies can be criticized for their almost exclusive focus on hospitalization rates. Moreover, comparisons of study results are difficult because of the wide variability in the definition of community, ranging from particular neighbourhoods within a city to entire countries.

Acculturation.

Another factor that has been the focus of attention is acculturation. Berry (1997) has suggested that although acculturation may be a relatively easy process for some individuals, other migrants experience more difficulties. He coined the term acculturative stress to describe the experience of those individuals who encounter serious difficulties as a direct result of stressors that arise during the acculturation process. Although research has confirmed that there is an association between acculturation and mental health, it is unclear as to whether this relationship is best characterized as direct, indirect, or curvilinear, where a bicultural identity based on identification with both the original and host cultures is associated with optimal adjustment (Rogler, 1994; Rogler, Cortes, &

Malgady, 1991). Several reasons have been proposed to account for these inconsistent findings. Rogler suggested that acculturation is one of the three transitions that occur following migration and indicated that the ability to reconstruct one's social network and reintegrate into the socio-economic system also influence adjustment. Therefore, studies that only assess acculturation are not addressing other important adjustment-related variables. The inconsistent findings may also be a result of problems with measures of acculturation that assess only behavioural changes rather than changes in beliefs and values. Moreover, most acculturation measures are bipolar in nature so that respondents are forced to choose between more of one culture and less of the other culture. In addition, there has been a lack of uniformity in the literature regarding the most appropriate ways to conceptualize and assess acculturation and mental health (Mehta, 1998; Rogler et al.).

Some researchers have utilized linear scales when assessing the association between acculturation and mental health. Several studies have reported that respondents who were more assimilated were less anxious and depressed (Ghaffarian, 1987), experienced fewer psychosocial stressors (Gim, Atkinson, & Whiteley, 1990) and were better adjusted (Kuo, 1976; Mehta, 1998; Padilla, Wagatsuma, & Lindholm, 1985; Ryder, Alden, & Paulhus, 2000) than those who adhered more strongly to the culture of origin. However, other studies have found assimilation to be associated with increased substance dependence (Rogler, Cortes, & Malgady, 1991) and lower self-concept scores (Heras & Revilla, 1994). A meta-analysis on the association between acculturation and mental health found no consistent effect of acculturation on adjustment (Moyerman & Forman, 1992).

Other studies have utilized bidimensional acculturation models when measuring the association between acculturation and mental health. Across ethnic group, age of respondents, country of investigation and outcome measures, integration has consistently been associated with the best adjustment and marginalization has been associated with the poorest adjustment (Aycan & Kanungo, 1996; Berry, 1999; Fernandez-Barillas & Morrison, 1984; Krishnan & Berry, 1992; Phinney, et al., 1992; Schmitz, 1992, 1994; Wong-Reiger & Quintana, 1987; Ying, 1995). Inconsistent results have been reported for assimilation and separation, with some studies reporting no association between these strategies and psychological outcome (Phinney et al., 1992) and others finding assimilation and separation to be associated with greater distress (Krishnan & Berry; Schmitz, 1992). There is also some indication that although they lead to a better outcome in the long-term, integration and assimilation may be stressful in the short-term because they require major changes to the individual's belief and value system (Schmitz, 1992).

The overall pattern from these studies reveals that integration is associated with the least amount of acculturative stress and the best psychological outcome while marginalization is associated with the most distress (Berry, 1999). There have been inconsistent findings with respect to assimilation and separation, with some studies reporting intermediate levels of stress associated with these strategies and others finding no association. There is also some evidence that the congruence between the strategy adopted by the individual and that generally preferred by his or her ethnic group can affect psychological outcome. For example, individuals who choose a strategy of separation while the other group members adopt an assimilationist approach will have poorer mental health than individuals who favour an assimilation approach (Berry &

Kim, 1988).

Other factors.

The evidence on the impact of religiosity on the development of mental health problems after migration is inconsistent. Some researchers have suggested that it may improve adjustment by providing peace of mind and integrating individuals into a social group (Bankston & Zhou, 1995; Scott & Scott, 1989), while others have regarded religious observance as a source of stress for immigrants because dietary, dressing, and grooming restrictions serve to distance them from mainstream society (Juthani, 1992). There has also been no consistent pattern identified regarding marital status, perhaps because level of marital conflict has generally not been assessed (Aroian, Norris, Patsdaughter, & Tran, 1998). Some studies have suggested that married people who emigrate without their spouses and family members who are separated during the migration process may be at particularly high risk of experiencing psychological difficulties (Abbott, Wong, Williams, Au, & Young, 1999; Beiser et al., 1988; Scott & Scott).

The importance of education has been well documented (Ariel & Aycheh, 1992; Juthani, 1992; Lasry & Sigal, 1980; Naidoo, 1992; Vega, Kolody, & Valle, 1987). Researchers have suggested that immigrants who are better educated may possess skills that allow them to find employment more easily in the country of settlement (Baptiste, 1993) or they may have more access to a greater range of resources and may view migration as a challenge rather than a stressor (Berry, Kim, Minde, & Mok, 1987).

Another focus of research has been on personality characteristics. Some studies conducted with immigrants to Western countries have concluded that certain traits, such

as extroversion, hardiness, and internal locus of control, decrease the risk of developing mental health problems (Dion & Dion, 1996; Kuo & Tsai, 1986; Lu, 1990; Searle & Ward, 1990). Other researchers have advocated for a "culture fit" model, in which different personality characteristics are adaptive depending on the values and beliefs held within that culture (Church, 1982; Kealey, 1989). This model was introduced to address the inconsistent findings in the literature regarding the association between personality factors and adjustment and the contradictory results obtained from studies conducted with migrants in non-Western cultures (Armes & Ward, 1989; Berry, 1997).

Other factors have also been investigated with respect to their impact on adjustment. Knowledge of the host language prior to migration has consistently been associated with better adjustment and self-reported life satisfaction among both adults and children (Abbott et al., 1999; Ariel & Aycheh, 1992; Beiser et al., 1988; Hinton, Tiet, Tran, & Chesney, 1997; Naidoo, 1992). There is some evidence to suggest that confidence with the host language is also an important factor (Ying & Liese, 1990). A positive association has been found between level of confidence with the host language and adjustment, perhaps because a lower linguistic competence in the host language interferes with an individual's ability to negotiate their needs in the new culture and leads to feelings of isolation (Noels, Pon, & Clément, 1996).

The relevance of degree of cultural distance between the original and host cultures has also been demonstrated (Baptiste, 1993; Juthani, 1992). For example, one study found that British immigrants in New Zealand experienced lower levels of depression and anxiety compared with Indochinese refugees and Pacific Island immigrants (Pernice & Brook, 1994). This difference was thought to reflect the historical and cultural

similarities between England and New Zealand as well as the higher status of British immigrants in New Zealand society. Research has also concluded that having prior experience with diverse cultures, and particularly being knowledgeable about the host culture prior to migration, is associated with better adjustment (Naidoo, 1992; Scott & Scott, 1989).

Another important factor is the impetus for the relocation. Research has consistently found that involuntary migrants experience more psychiatric symptoms and higher rates of mental illness than voluntary migrants and should be considered a high risk group (Mezey, 1960; Rumbaut, 1989). For example, studies have suggested that refugees experience higher rates of anxiety, depression, and posttraumatic stress symptoms compared with the general population (Cohon, 1981; Hinton et al., 1997; Westermeyer, Vang, & Neider, 1983; Williams & Berry, 1991). Refugees also seem at higher risk for maladjustment compared with voluntary immigrants (Pernice & Brook, 1994). It is possible that having the option of returning to the country of origin decreases the intensity of pressure to adapt, thereby improving adjustment (Misra & Kilroy, 1992). Moreover, refugees are more likely to experience prearrival trauma than voluntary migrant groups, which places them at higher risk of various mental health problems (Arieli & Aydech, 1992; Hinton et al.).

Inadequate social support has been implicated in the development of adjustment difficulties following migration (Patel, 1992; Vega et al., 1987). For instance, Kuo and Tsai (1986) reported that among a diverse group of immigrants in the United States, the availability of social support was negatively associated with self-reported levels of depression. The ethnic composition of the social support network was unimportant.

Also important are the attitudes and behaviours of the host society towards immigrants and immigration. For example, studies have found that experiences of discrimination in the society of settlement are associated with psychological difficulties among immigrants (Beiser et al., 1988; Pernice & Brook, 1994, 1996).

Another factor found to be important in the research is the phase of adaptation. There have been two models of adaptation proposed; a u-shaped adjustment curve, in which initial and later phases are associated with better adjustment than the intermediate time period, and a linear adjustment model in which adjustment improves over time. Most research has supported the linear model of adjustment, in which mental health problems decrease with length of time spent in the country (Lay & Nguyen, 1998; Malzberg, 1969; Scott & Scott, 1989; Vega et al., 1987). However, other researchers have found evidence for a u-shaped adjustment process (Rumbaut, 1989; Vignes & Hall, 1979; Williams & Berry, 1991). A u-shaped adjustment, in which an initial period of positive adjustment is followed by a period of increased difficulties that resolve over time, may be more likely to occur when there are significant improvements in the political, economic, and social conditions of the migrant in the country of settlement (Ying & Liese, 1990). This is because the improvements in living conditions lead to a period of euphoria immediately after migration. However, as the migrant begins to encounter difficulties in the society of settlement (e.g., discrimination experiences, difficulties finding employment), greater psychological distress is experienced. The level of distress decreases over time as these difficulties are resolved.

Although various pre-migratory and post-migratory factors have been identified as affecting the adjustment of immigrants, most studies have only assessed the impact of

these factors with adult migrants. Few have assessed their importance for the adjustment of immigrant children and youth.

Adjustment among immigrant children

Compared with the wide body of knowledge on the adjustment of adult immigrants, there is a paucity of research on the psychological impact of migration for children. In the literature, there are disagreements about their risk of maladjustment. Some authors have suggested that migration has little impact on the adjustment of children, particularly when they immigrate at an early age (Berry, 1997; Fuligni, 1998; Haour-Knipe, 1989). For example, one study assessed level of adjustment among an ethnically mixed group of 6-16 year old immigrant and non-immigrant children in Ontario (Munroe-Blum, Boyle, Offord, & Kates, 1989). Those children born outside of Canada were found to have similar rates of psychiatric illness in the preceding 6 months compared with children born in Canada as assessed by self-report (for children age 12-16), parent report, and teacher report. There were no differences between the two groups in school performance. Based on teachers' ratings on a behavioural problem checklist, Touliatos and Lindholm (1980) found that first and second generation visible minority immigrant children in the United States (in Kindergarten through Grade 8) either did not differ or exhibited fewer symptoms than children of native-born parents. Of particular interest is research that has been conducted with Chinese participants. One study assessed symptoms of attention-deficit hyperactivity disorder based on teacher ratings among 250 Chinese immigrant children in grades one through six living in New York City. Approximately nine percent of boys and two percent of girls scored above the cut-

off, a percentage much lower than found for samples in most other countries (Yao, Solanto, & Wender, 1988). Similarly, a study with Chinese immigrant children in British Columbia found no difference between maternal reports of behavioural symptoms associated with internalizing and externalizing syndromes for the immigrant children compared with non-immigrant children in other samples (Short & Johnston, 1997).

Other studies have suggested that immigrant children may be at risk of experiencing emotional and behavioural difficulties (Aronwitz, 1992; Taft, 1979). A study with Ugandan Asian children 12 to 18 months after their arrival in Canada found that approximately one-quarter to one-third reported having academic difficulties and being lonely and more than one-quarter could be diagnosed as having a moderate to severe psychiatric disturbance (Minde & Minde, 1976). A Swiss study found that a group of immigrant parents from various countries rated their children as having greater attention and social problems compared with the ratings of non-immigrant parents (Steinhausen, Winkler Metzke, Meier, Kannenberg, 1997). Greater parent-reported mental health difficulties among immigrant children were found in a study that compared immigrant Turkish children (ages 4-18) in the Netherlands with their non-immigrant peers (Bengi-Arslan, Verhulst, van der Ende, & Erol, 1997). In particular, immigrant parents rated their children as having higher levels of anxiety/depression. Results from a study with Chinese immigrant children in New York City indicated that parents viewed their sons as exhibiting higher levels of symptoms in areas such as anxiety/depression and aggression than parents of boys in China (Chang, Morrissey, & Koplewicz, 1995).

One possible explanation for the seemingly contradictory findings on the adjustment of immigrant children is that many of these studies did not differentiate

between visible minority and non-visible minority immigrant children, who may have different migration experiences because of differences in their status in the country of settlement. Moreover, no consistent definition of adjustment was used in the literature. Another possible explanation is that the focus of research, comparing prevalence rates of various psychiatric disorders among immigrant and non-immigrant children, is inappropriate (Aronwitz, 1984). Rather, similar to the shift that occurred in research with adults, studies should examine variables important in mediating the adjustment of migrant children. For example, Aronwitz (1992) assessed the impact of parental characteristics and found that openness to new experiences among Soviet immigrant parents was a significant predictor of the adjustment of their children. Similarly, another study of Soviet immigrant parents and children found greater adjustment difficulties among children whose parents reported higher levels of depression or somatic symptoms (Barankin, Konstantareas, & de Bosset, 1989).

Adjustment among adolescent immigrants

As with immigrant children, there has also been little research on the adjustment of adolescent immigrants. The paucity of studies in this area is particularly surprising given that migrating during adolescence has been identified as placing individuals at high risk of experiencing adjustment difficulties (e.g., Beiser et al., 1988; Berry, 1997; Hertz, 1988).

Studies with adolescent immigrants.

Sam and Berry (1995) assessed the incidence of emotional disorders among first and second generation adolescents who migrated from various countries to Norway.

They found that 10-14% were classified as having high to extreme levels of emotional disorders, compared to rates of 6% found among Norwegian children in the general population (Sam, 1994). A study that compared a diverse group of second-generation immigrants in Sweden with a reference group of native-born peers found higher rates of delinquent behaviours, including property crimes, violent offences, and drug abuse, among the immigrant sample (Mägiste, 1992). Gil, Vega, and Dimas (1994) found that foreign-born Hispanic adolescent boys experienced greater acculturative stress than their American-born Hispanic peers. Similarly, a study with adolescent immigrants of mainly Southeast Asian and African origin in England found that the immigrant youth reported greater difficulties in areas such as relationships with teachers and family, irritability, and social confidence than the non-immigrant control group (Olowu, 1983). Results from a study examining the adjustment of first and second generation Chinese and Vietnamese immigrants in the United States indicated that the immigrant youth reported more internalizing difficulties in areas such as anxiety and depression, had lower self-concept scores, and were less satisfied with their social support network than were their non-immigrant Caucasian classmates (Lorenzo, Pakiz, Reinherz, & Frost, 1995). Based on their experiences at a counselling centre, Mirsky and Kaushinsky (1989) commented that older adolescents and young adult migrants often experienced feelings of depression, isolation, loneliness, and a loss of interest in activities. Bashir (1993) noted that many immigrant youth experience problems with identity formation, which can result in feelings of depression and anxiety.

Several studies have been conducted with adolescent refugees. One study found high rates of anxiety and depression among Vietnamese adolescent refugees, with older

adolescents being more symptomatic than younger adolescents (Felsman et al., 1990). Similarly, DuongTran (1996) found that over 40% of his sample of Vietnamese adolescents scored in the depressed range on a self-report measure. A study with adolescent refugees from Cambodia also reported relatively high levels of posttraumatic stress symptomatology and depression among these youth. However, these symptoms did not affect their ability to function adequately within their school, work, or family environments (Sack et al., 1995).

Various explanations have been offered to account for the high-risk status of immigrant youth. One explanation, based on the stress hypothesis, suggests that because they generally do not “select” themselves to migrate, children and adolescents are better characterized as involuntary rather than voluntary migrants, regardless of the actual impetus for migration (Georgas & Papastylianou, 1994; Sam, 1994). As noted earlier, involuntary migrants, perhaps because of their inability to return to the country of origin or their lack of choice regarding the decision to move, have greater adjustment difficulties than voluntary migrants.

According to the intra-psycho view, the adjustment difficulties of immigrant youth originate from the experience of multiple losses that occur after migration, resulting in grief and mourning in the child (Sam, 1994). This grief and mourning may be expressed through emotional dysfunction.

A third explanation is based on the major developmental task of adolescence. Erikson (1968) suggested that adolescence is the period during which individuals develop a coherent and stable sense of identity that includes having a sense of who they are and what their values and goals are. Some researchers have suggested that adults, who have

well developed identities, are better able to cope with exposure to the norms and values of two cultures simultaneously than adolescents, who have not yet achieved a strong sense of ethnic identity (LaFromboise, Coleman, & Gerton, 1993; Sam, 1995). Identity development among ethnic minority youth has been the focus of considerable research (see Phinney, 1990 for a review).

Another explanation, stemming from the psychosocial perspective, suggests that conflicts between the values and demands of parents and school or peers lead to adjustment difficulties among children (Berry, 1997). Thus, while the primary socialising agents of non-immigrant children all promote similar values, the values taught in the homes of immigrant children often contradict those advanced by mainstream society (Sung, 1985). Furthermore, immigrant youth may find it difficult to gain acceptance in either sphere as parents may view their children as having adopted too much of the mainstream culture while mainstream society may view them as too traditional (Ying, 1999). The differential expectations can have a number of sequelae including role conflict, personal maladjustment, and family conflict (Cohon, 1981; Sam 1994).

Not all studies have found differences in adjustment among immigrants and non-immigrants (Davies & McKelvey, 1998; Guarnaccia & Lopez, 1998; Klimidis, Stuart, Minas, & Ata, 1994). Dyal and Chan (1985) compared symptoms of distress among Chinese university students in Hong Kong, Chinese students in Canada, and Euro-Canadian university students in Canada. Their results revealed that both groups of Chinese females reported more symptoms than the Euro-Canadian females while no group differences were found among the males. One limitation of this study was that

most of the students were sojourners who did not intend to emigrate permanently.

Therefore, they may have been insulated from any long-term adjustment difficulties. A study comparing first and second generation Chinese immigrant youth in the United States and Australia with respondents born in the United States and Hong Kong also found no significant differences between the immigrant and non-immigrant groups on measures of psychological and physical symptomatology (Chui, Feldman, & Rosenthal, 1992). However, the immigrant respondents in this study were limited to those from intact families. Therefore, these results may not be generalizable to other immigrant groups. A study conducted with a diverse group of immigrant youth in Norway revealed that the immigrant youth had more positive self-perceptions than their Norwegian-born peers (Stiles, Gibbons, Lie, Sand, & Krull, 1998). Finally, contrary to the notion that immigrant youth are at high risk for experiencing difficulties, Liebkind (1993) found higher levels of depression and other psychiatric symptoms among Vietnamese migrant parents and caregivers than among their adolescent children.

Factors associated with adjustment among immigrant youth.

Consistent with the early research on adult immigrants, contradictory results are reported among studies that compare the adjustment of immigrant and non-immigrant youth. These findings reinforce the need for research on factors that mediate the effect of immigration on mental health. Some studies have examined such factors. For example, several of the demographic variables identified as significant for adult adjustment have also been found to be important for immigrant youth. Studies have found that immigrant adolescent girls report higher levels of psychiatric difficulties than boys, including greater anxiety (Klimidis et al., 1994), more depressive symptomatology and lower self-esteem

(Liebkind, 1993; Rumbaut, 1994; Sam, 1994), and greater emotional distress and psychosomatic symptoms (Chiu et al., 1992). Furthermore, although research with non-immigrant youth has also found higher levels of psychological distress among adolescent girls compared to boys, particularly in the areas of depression, eating disorders, and self-esteem (e.g., Nolen-Hoeksema & Girgus, 1994; Offer & Schonert-Reichl, 1992; Shek, 1989a), the etiology of the gender differences may differ. Among immigrant youth, the reported gender differences in adjustment may also be affected by the greater freedoms granted to boys and the more limited opportunities afforded to girls for adopting the values of the host culture (Edwards & Beiser, 1994; Jokhani, 1998). Studies have confirmed that there is greater pressure on immigrant girls than boys to retain the traditional culture, which may increase adaptation difficulties (Danziger, 1974; Sharma, 1984).

Age of migration has been identified as an important variable. For example, a study with older adolescents demonstrated greater acculturation stress among those who had emigrated after age 12 compared with those whose migration occurred in preadolescence (Mena et al., 1987). Similarly, a study with young adults in university found that those who emigrated after age 14 reported higher levels of stress and lower self-esteem than respondents who had emigrated prior to age 14 (Padilla, Alvarez, & Lindholm, 1986). A study with immigrants in Australia reported greater academic difficulties and more frequent school drop-out among youth who had migrated after age 10 (Krupinski, 1984). Contradictory results were reported in a study of Chinese immigrant youth in the United States and Australia, where there were no differences in levels of emotional distress or psychosomatic complaints among those who migrated

before or after age 10 (Chiu et al., 1992).

A decrease in SES following migration has also been associated with greater adjustment difficulties among immigrant children (Minde & Minde, 1976), while greater religiosity has been associated with better adaptation among immigrant youth (Bankston & Zhou, 1995). In addition, more adjustment difficulties have been reported for children and youth who immigrate from rural rather than urban areas (Ashworth, 1982; Florsheim, 1997).

Research has also demonstrated the importance of knowledge of and self-confidence with the dominant language in the country of settlement among immigrant children, adolescents, and young adults for overall adjustment, self-esteem, mood, academic progress, and life satisfaction (Gorman, 1998; Pak, Dion, & Dion, 1985; Rumbaut, 1994; Thomas, 1995). However, one study found that Chinese adolescent immigrants in the United States who chose to complete the package of questionnaires in English rather than Chinese, and therefore were assumed to have better English-language skills, reported having more difficulties with peer relationships (Florsheim, 1997). This was interpreted as reflecting the alienation that Chinese English-speakers feel from both Chinese and American-born peers. Changes in family composition following migration have also been associated with higher levels of psychiatric symptoms. For example, a study with Chinese immigrant adolescents and young adults (ages 15-25) in New Zealand found that those individuals who lived with only one or neither parent had elevated scores on a screening instrument of non-psychotic disorders compared to youth living with both parents (Abbott et al., 1999). In addition, research has demonstrated that youth with more supportive parents experience fewer academic difficulties and better emotional

functioning, as assessed by self-image, depressive symptoms, and psychosomatic complaints, following migration (Ashworth, 1982; Sam & Berry, 1995).

The impact of ethnic density on the adjustment of youth has also been assessed. One study found a higher level of distress among Chinese immigrant youth living in a community with a large Chinese concentration compared with adolescents whose ethnic group comprised only a small minority of the population (Chiu et al., 1992). These authors cautioned against accepting the notion that the availability of a large ethnic community is associated with fewer mental health concerns. However, other researchers have suggested that adolescents who have few individuals from the same ethnic group in their communities and schools are more vulnerable to experiencing difficulties (Chud, 1982). Olowu (1983) found that adolescent immigrants attending schools with a high immigrant population (greater than 40 per cent) reported fewer difficulties than their counterparts in schools with low immigrant populations. Similarly, a study with a culturally diverse group of first and second generation immigrants in Norway found that living in an ethnically homogeneous neighbourhood was associated with greater life satisfaction (Sam, 1998).

Several studies have assessed the association between acculturation and adjustment. In his research with adolescents, Sam (1994) found that within a culturally diverse group of immigrant youth in Norway, integration was associated with lower rates of psychological symptoms and greater happiness than marginalization. Separation was also associated with psychological maladjustment, although not as strongly as marginalization. There was no relationship between assimilation and adjustment for these youth. A study with a culturally diverse group of first and second generation

immigrant children (ages 6-17) in Canada found few differences on self-report adjustment measures between children who had adopted different acculturation strategies, although assimilated children had higher self-esteem scores than marginalized children (Pawliuk et al., 1996). In this study, however, there were only 48 participants, there were no children who had adopted a separation style, and the marginalized group consisted of only three children. Other researchers have suggested that having a bicultural orientation may create stress due to the need to negotiate between two conflicting value systems but may increase flexibility and allow the individual to be effective in both cultures (Phinney & Rotheram, 1987). Moreover, some researchers have argued that youth who assimilate into the mainstream culture and sacrifice the skills needed to interact within their own culture are at a particularly high risk of maladjustment (Phinney, Lochner, & Murphy, 1990). For example, among Chinese youth in Canada, there was a link between lower adherence to the culture of origin and higher rates of delinquency (Wong, 1998).

Finally, the importance of personality variables was highlighted in a study that found that introversion was associated with higher levels of psychopathology (Naditch & Morrissey, 1976).

Although some variables associated with the adjustment of adolescent immigrants have been identified, the contradictory findings and the paucity of research in this area suggest that more studies are needed in order to clarify and better understand the relevance of these factors.

Intergenerational Conflict

Intergenerational conflict has been identified as an area of concern for immigrant

families. Within Western families, the perception that severe conflicts between parents and adolescents are normative has not been supported by research conducted over the past two decades. Although studies have documented that some conflict between parents and adolescents in the West is not unusual, overall levels of parent-child conflict are generally low, most adolescents have positive feelings towards and feel connected to their parents, and most families do not encounter severe difficulties (Hall, 1987; Hamid & Wyllie, 1980; Offer & Schonert-Reichl, 1992; Paikoff & Brooks-Gunn, 1991; Youniss & Smollar, 1985). For example, a British study with 200 adolescents found that two-thirds of the participants reported few disagreements with their parents and less than 10 percent described rejecting their mother or father (Rutter, Graham, Chadwick, & Yule, 1976).

Results of empirical studies assessing levels of intergenerational conflict among immigrant families in the West have consistently identified parent-child disagreements as a major concern for these families, although overall levels of conflict reported are generally low to moderate. Several studies have compared levels of intergenerational conflict between immigrant families and non-immigrant families. For example, a comparison of the level of conflict among second-generation Greek adolescents and their parents with Anglo-Canadian dyads revealed greater disharmony within the Greek families (Kartakis, 1998). Another study compared family relationships among a group of Chinese and Korean first and second generation immigrants with a group of European American youth (Greenberger & Chen, 1996). Although few differences were found among younger adolescents, older adolescent Asian Americans consistently reported greater conflict than their European American peers. Rosenthal (1984) examined levels of family conflict among first and second generation Italian and Greek families and

Anglo-Australian families. Her results revealed that Greek and Italian adolescents and their parents perceived more family conflict than their Australian counterparts, although the overall level of conflict within the immigrant families was moderate. Greater conflict was found among families where the children rated themselves as feeling more Australian than Greek or Italian. Zivkovic (1995) examined family conflict among immigrant parents and their adolescent children living in three communities that varied on level of ethnic density and participation in mainstream society. Higher levels of parent-child conflict were reported in the closed, isolated community than in the more open communities, perhaps because of the greater discrepancy between the values held in the home compared with those encountered at school and expressed by peers.

The source of intergenerational conflict in immigrant and non-immigrant families seems to be somewhat different. For example, one study reported that family conflicts among Caucasian adolescents in England focus on relationships between family members, misbehaviour, or personal loss (Roberts & Cawtharpe, 1995). For the adolescents whose families had migrated from Pakistan, conflict was centred on style of dress, religious beliefs and behaviours, and relationships with non-family members. Similarly, a study comparing adolescents who had attempted suicide found that for both Caucasian and first or second generation Asian adolescents the majority of suicide attempts were precipitated by conflicts within the family (Handy, Chithiramohan, Ballard, & Silveira, 1991). For the majority of the Caucasian youth the conflicts were due to generational differences in the attitudes of the peer group and the parental views while for the Asian youth these conflicts were focused on cultural issues, including style of dress, religious issues, and choice of friends.

Research has suggested that gender may be an important variable mediating the intensity of intergenerational conflict. In general, greater disharmony within immigrant families has been reported by females than males (Rosenthal, 1984; Rumbaut, 1997; Salgado de Snyder et al., 1990). For example, a study of first and second generation Chinese immigrant youth in the United States found that the female respondents reported lower levels of family cohesion than their male counterparts (Chiu et al., 1992). One explanation for the gender differences in family conflict is that there are greater value differences in parent-daughter dyads than parent-son dyads. This arises because parents expect greater adherence to traditional values among their daughters, perhaps because of the greater disparity in the roles of females in the traditional and mainstream cultures compared to the roles of males (Rosenthal, Ranieri, & Klimidis, 1996). Some studies have reported that girls actually endorse traditional values less strongly than boys (e.g., Danziger, 1974; Nguyen & Williams, 1989; Sharma, 1984), which would result in greater family disharmony between parents and their daughters compared to parents and their sons and may lead to more difficulties for girls in their attempt to negotiate the simultaneous expectations of two cultures (Szapocznik & Kurtines, 1993). Other researchers have argued, however, that girls will retain the traditional culture to a greater degree than boys, perhaps to minimize intergenerational conflict (Bashir, 1993; Sam, 1995).

In summary, studies with diverse groups of immigrant families have found conflict between adolescents and their parents to be a major concern. There is some evidence to suggest that greater disharmony may occur within parent-daughter dyads than between parents and their sons. In addition, research has suggested that immigrant youth

who adopt the values of the host country rather than retaining traditional values are more likely to experience disagreements with their parents.

Explanations for intergenerational conflict in immigrant families.

Various explanations have been offered to account for elevated levels of conflict within immigrant families. Some researchers have suggested that immigrant families contend with intercultural as well as intergenerational conflicts as a result of the more rapid acculturation of children compared to their parents (Baptiste, 1993; Szapocznik & Kurtines, 1993; Ying, 1999). Empirical studies with various cultural groups in Australia, Finland, and the United States have confirmed that the values, ethnic identities, and behaviours of adolescents do change to resemble those of the host culture more quickly than those of their parents or other adults (Liebkind, 1993; Nguyen & Williams, 1989; Rosenthal et al., 1996; Szapocznik, Scopetta, Kurtines, & Aranalde, 1978). It appears that the values and identities of adolescents are less entrenched and therefore it is easier for adolescents to adopt the new values (Cashmore & Goodnow, 1986; Matsuoka, 1990). In addition, the younger generation has greater exposure to the values of the host country through peer relationships and school attendance (Rosenthal, 1984; Rosenthal et al., 1996).

Empirical studies have also demonstrated that greater conflict occurs in families where parents and children adhere to different sets of values (Heras & Revilla, 1994; Szapocznik & Kurtines, 1993; Taft & Johnston, 1967). This may occur because parents in these families have less influence and authority over their children. In order to regain control, these parents may become increasingly strict which can cause an escalation in conflict intensity (Baptiste, 1987; Bowman & Edwards, 1984). For example, Chinese

adolescent immigrants in Australia and the United States described their parents as more structured and controlling than either their Western cohorts or their non-immigrant Chinese peers in Hong Kong (Rosenthal & Feldman, 1990). These results suggest that following migration, parents may attempt to exert more control and have greater structure in their families.

For Chinese families living in the West, those parents and children who adhere to different value sets may be particularly at risk of experiencing intergenerational conflict because of the divergent, and often opposing, ideas they hold. Chinese culture is based on a collectivist orientation. In collectivist societies, the goals of the group rather than the individual are paramount (Triandis et al., 1993). According to Triandis and his colleagues, this is reflected in the emphasis placed on obedience, co-operation, making personal sacrifices for the good of the group, and accepting the authority of group leaders (e.g. parents). The self is conceptualized as interdependent, group-oriented, and in relation to others, and one's behaviours reflect not only on one's own reputation but that of the entire family (Gao, 1998). Thus, researchers have described Chinese culture as stressing interdependence, placing the needs of the family before one's own, having a sense of loyalty and duty towards the family, maintaining harmony among family members, and practising filial piety (Chan & Leong, 1994; Ho, 1996; Hwang, 1990; Matsuoka, 1990; Sung, 1985). In addition, it is deemed desirable to have a well-defined hierarchy within which children are taught to be obedient, respectful towards their elders, and self-controlled (Leung, 1996; Wu, 1996). These values are inconsistent with the individualistic position of Western value systems that emphasize independence of children from their parents, achieving separation from the family, equality among family

members, and personal success (Chan & Leong; Rosenthal & Feldman, 1992).

Clearly, important discrepancies between Chinese and Western values are found in many areas including family relationships. Sandhu (1997) found increased levels of conflict among Asian families in which the children did not adhere to the traditional family values. The increased conflict was associated with greater alienation from parents and higher identification with peers.

A second explanation for the elevated levels of family conflict within immigrant families is the reliance of parents on the language skills of their children. Children often learn the language of the host country more quickly because of their greater ease in learning a new language, enrolment in school, and greater contact with majority culture peers (Bashir, 1993; Beiser et al., 1988; Birman & Trickett, 1999; Bowman & Edwards, 1984). For example, Chao (1999) found that among a group of 188 Chinese immigrant high school students, 75% reported that they had translated for their parents over the past month. Parents who indicated that they had received language assistance indicated that they relied more heavily on their children than on other family members or friends. This can lead to a reversal of family roles where children gain unusual power in the family due to the reliance of parents on their children to assist them with daily tasks and negotiate cultural difficulties (DeSantis & Ugarriza, 1995). In addition, through their roles as interpreters, children may gain access to knowledge and information about their parents that they would otherwise not have (Lai & Yue, 1990; Rosenthal et al., 1996).

Differential rates of language acquisition may also lead to more generalized communication problems for immigrant families and disrupt relationships between parents and children (Coll & Magnuson, 1997; Vega, Khoury, Zimmerman, Gil, &

Warheit, 1995).

Impact of family conflict.

The level of conflict among family members is an important issue to consider because of the major impact that it has on the functioning of children. The centrality of the parent-child relationship in the psychological development of children in both Western and Eastern cultures has been well documented. The quality of the parent-child relationship for both North American adolescents and Chinese youth living in China or Hong Kong has been associated with various outcome variables including self-esteem (Cheung & Lau, 1985; Demo, Small, & Savin-Williams, 1987; Gecas & Schwalbe, 1986; Leung, Salili, & Baber, 1986), life satisfaction (Leung & Leung, 1992; Greenberg, Siegel & Leitch, 1983; Shek, 1997a), school performance (Rosenthal & Feldman, 1991; Shek, 1997b), behaviour problems (Ekblond, 1988; Leung & Lau, 1989; Wang, Shen, Gu, He, & Ho, 1991), substance use (Farrell & White, 1998; Shek, 1997b), feelings about one's ethnicity (Rosenthal & Feldman, 1992), and overall well-being (Acock & Demo, 1994). In addition, longitudinal studies of Chinese families in Hong Kong showed that the level of intergenerational conflict was predictive of adolescent well-being, coping resources, and smoking behaviour one year later (Shek, 1998a, 1998b).

The importance of family harmony for children's functioning has also been documented among immigrant families (Liebkind, 1993; Minde & Minde, 1976). For example, Scott and Scott (1989) found that the absence of parent-child conflict within immigrant families was associated with a lower number of reported adaptive problems, a higher level of school satisfaction among the children, and higher self-esteem and emotional well-being among all family members. Family conflict has also been found to

be a strong predictor of depression, low self esteem, and psychological problems among immigrant youth from various cultural groups in the United States including Chinese adolescents (Florsheim, 1997; Rumbaut, 1994).

Because of the emphasis placed on family harmony and filial piety in Chinese culture, higher levels of family conflict following migration may be particularly stressful for Chinese youth and may have a greater impact on their functioning than the functioning of youth from less collectivistic cultures (Shek, Chan, & Lee, 1997; Tsai, 1999). For example, a study with adolescents living in mainland China and the United States found that high levels of conflict with parents had a more negative impact on the mood of the Chinese adolescents compared with their American counterparts (Greenberger, Chen, Tally, & Dong, 2000).

Mental Illness and Chinese Culture

Chinese conceptualizations of mental illness evolved from both classical Chinese medicine and traditional folk theories about health and illness. Traditional folk theories suggested that illness can occur if proper rituals are not practised or if one engages in immoral behaviours (Lee, 1986). For example, mental illness was attributed to the improper worship of ancestors or the improper placement of an ancestral tomb (Kuo & Kavanagh, 1994). In classical Chinese medicine, health was conceptualized in a holistic manner that integrated physical and psychological functioning and maintaining balance was deemed necessary to avoid illness (Gaw, 1993; Kuo & Kavanagh). Within this framework, key concepts included *yin-yang*, negative and positive forces in the body, and *ch'i*, energy that flows through the body. Physical and mental illness was thought to

occur when there was an imbalance in *yin-yang* or when *ch'i* became too weak or its flow was obstructed (Leung, 1996). Leung described a close connection in Chinese medicine between emotions and health, with the display of strong emotions linked to an obstruction in the flow of *ch'i* (e.g., sorrow makes it weak, joy makes it slow) or an imbalance of *yin-yang* (e.g., excess *yin* from too much joy or excess *yang* from too much anger).

Furthermore, Chinese medicine associated particular internal organs with specific emotions (e.g., liver with anger, lungs with sorrow) and suggested that experiencing an excess of that emotion could damage that organ (Gaw, Leung).

Thus, ideas about mental health differ significantly in Chinese cultures compared with Western societies. Perhaps as a consequence, differences have been noted in the symptomatology and prevalence rates of psychiatric illnesses between individuals of European and Chinese ethnic origins. One of the most widely cited differences is the greater inclination among those of Chinese ethnic origin to focus on somatic symptoms rather than psychological symptoms. Some researchers have suggested that this tendency towards somatization is due to the direct link between internal body organs and emotional states and the interrelationship between mind and body in Chinese culture (Kuo & Kavanagh, 1994). Kleinman and his colleagues (e.g. Kleinman, 1982; Kleinman & Kleinman, 1985; Kleinman & Kleinman, 1999) described the use of somatic complaints as an "idiom of distress" that provides an acceptable way of discussing psychological or social problems. Somatic symptoms are deemed more acceptable than psychological symptoms because the stigmatization of mental illness in Chinese culture results in a tendency to avoid disclosing personal problems to others (Kuo, 1984; Sue & Sue, 1987). Thus, although somatic symptoms are recognized as potentially having an emotional

component, it is the physical rather than the psychological symptoms that generate support and care from others and become the focus of treatment (Kleinman & Kleinman, 1999; Russell & Yik, 1996).

Cross-cultural comparisons of prevalence rates of psychiatric disorders are difficult to make because of the impact of culture on the perception, labelling, and reporting of symptoms (Angel & Thoits, 1987; Kirmayer, 1989). Nonetheless, researchers have compared prevalence rates of mental illness in Chinese and Western cultures. Researchers have suggested that overall, studies have found lower prevalence rates of mental illness in Chinese societies compared to Western ones, although there has been an increase in the rates of mental illness in Chinese societies over the past few decades (Escobar, 1993; Kleinman & Kleinman, 1999; Leung, 1996). With regard to specific disorders, Draguns (1996) reported lower rates of depression in Chinese countries than in the West and indicated that suicide rates in China are below the median according to World Health Organization statistics, although suicide appears to be more common in China than in North America (Kleinman & Kleinman). For schizophrenia, lower prevalence rates have been reported in Taiwan compared to the United States and the course and outcome of the illness tends to be more favourable for those in developing countries, including Chinese societies, than in developed countries (Escobar). For other disorders, researchers have indicated that rates of anxiety disorders, alcoholism, and eating disorders are considerably lower in Chinese cultures than in the West and that personality disorders are diagnosed less frequently (Draguns; Kleinman & Kleinman; Lee; Gaw). However, the diagnosis of neurasthenia is much more common in Chinese societies than in the West (Kleinman, 1982). Moreover, several culture-bound

syndromes, including *Koro* and *Amok*, are found in Chinese societies but not in Western societies (Gaw).

Given the significant differences in the conceptualization and manifestation of mental illness as well as other factors, including differences in response styles and languages spoken in Chinese and Western societies, care must be taken when conducting research with individuals from these two societies. Researchers have described many challenges associated with cross-cultural research. One major challenge is the use of instruments developed for Western European samples with other cultural groups. This may result in problems such as item nonequivalence, where individual items have different meanings for different cultural groups, or construct nonequivalence, where particular scores obtained on measures by members of different cultural groups do not correspond (Draguns, 1995; Knight & Hill, 1998). Statistical methods for evaluating these forms of bias have been proposed (e.g., Sireci, Bastari & Allalouf, 1998; Steinberg & Fletcher, 1998). However, other concerns can remain including "category fallacies," where psychiatric constructs (e.g., depression) are measured in cultures in which they lack coherence (Kleinman, 1987) or when important psychiatric constructs for one culture are not assessed (Rogler, 1989).

The Present Study

The purpose of the current study is to expand the body of literature on immigrant mental health. The focus of the study is on the acculturation and adjustment of adolescents, one migrant group that has received little attention. The adjustment of immigrant youth was assessed within the acculturation framework proposed by Berry and

advances this framework in several ways. First, despite the fact that this model is well researched and widely accepted, there have been few studies assessing the acculturation strategies adopted by adolescents and no studies that have utilized this framework with immigrant youth in Canada. Second, although the model has been adopted for use with immigrant groups in Canada as well as other countries, all immigrants have been from communities in which they have constituted only a small minority of the local population. The current study examined the acculturation process of Chinese adolescents residing in the Greater Vancouver area where, in some areas, individuals of Chinese ethnic origin comprise the majority of the population. Immigrants residing in more ethnically homogeneous communities may adopt different acculturation strategies than those who reside in areas where they comprise only a minority of the population, and this possibility has not been assessed in previous studies that have utilized Berry's model. Third, previous studies have not examined the association between acculturation strategy and family conflict. Although research has been conducted on the relationship between acculturation strategy and psychological outcome for adults and there is also a large body of knowledge on the association between family conflict and psychological adjustment, the relationship between acculturation strategy, family conflict, and psychological adjustment has not been previously assessed among adolescents. This study is designed primarily to assess the nature of the association between these variables rather than to investigate the specific reasons for these associations.

The primary hypotheses for the study are:

1. The most common acculturation strategy among the immigrant youth will be integration, followed by assimilation and separation, with marginalization being the least

common acculturation strategy.

2. Girls will be more likely than boys to adopt a separation strategy and boys will be more likely than girls to endorse an assimilation strategy.
3. Adolescent immigrants who demonstrate a marginalization strategy will report greater psychological distress (i.e., poorer psychological adjustment) than all other adolescents. Adolescent immigrants who adopt an integration strategy will report less distress than other immigrant youth. Adolescent immigrants who adopt separation and assimilation strategies will report intermediate levels of distress.
4. Positive associations will be found between level of distress and level of family conflict for all respondents.
5. Greater psychological distress and family conflict will be reported by:
 - i) girls compared to boys.
 - ii) immigrant adolescents whose acculturation strategy differs from that of their parents compared to those who have the same acculturation strategy as their parents.
6. Greater psychological distress will be reported by adolescents who immigrated to Canada as adolescents compared to those who immigrated as pre-adolescents.

Secondary hypotheses are also proposed:

7. Other variables will be associated with greater psychological distress among the immigrant youth including: lower English self-confidence, lower religiosity, lack of choice about moving, being less positive about the immigration process, change in family composition, and a decrease in family SES following migration.
8. Immigrant adolescents who describe their parents as having poorer English language skills will report higher levels of family conflict.

9. Level of ethnic density will affect the acculturation strategy adopted among the immigrant youth: for all youth, integration will be the most common acculturation strategy and marginalization the least common strategy. Youth living in ethnically dense communities will be more likely to adopt a separation than an assimilation strategy. Youth living in ethnically diverse communities will be more likely to adopt an assimilation strategy than a separation strategy.

Chapter II

Method

Participants

The participants in this study were 216 youth (106 males and 110 females) in grades 8 to 12 who resided in Vancouver or Richmond, British Columbia. These areas were chosen because of their ethnic compositions as well as the availability of participants based on the ability to obtain school board approval. All high schools and community centres in these two areas were contacted and invited to participate in the study. A total of eight community centres (six in Vancouver and two in Richmond) and four high schools (three in Vancouver and one in Richmond) agreed to participate. Among the four high schools, participation ranged from two to nine classrooms.

A total of 308 youth completed the questionnaires. To be included as a participant in the study, a youth had to (1) be born in Canada, Mainland China, Hong Kong, Taiwan, or Macau, (2) have parents born in the above listed countries or Western Europe, and (3) be between the ages of 14 and 19. Ninety-two (29.9%) of the 308 respondents had to be excluded from the study -- 88 (28.6%) for failing to meet study criteria (49 [15.9%] due to birthplace, 37 [12.0%] due to parent birthplace, and two [0.6%] due to age), three (1.0%) for giving obviously incorrect responses or for a failure to complete a majority of the questionnaires, and one (0.3%) for failing to obtain valid guardian consent. The remaining 216 served as participants. It should be noted that the sample size varies somewhat according to the measure being considered, because some participants failed to complete one or more questionnaires.

Of the 216 participants, 168 (77.8%) were recruited from schools and 48 (22.2%) from community centres. Two hundred and five (94.9%) of the participants resided in Vancouver and 11(5.1%) in Richmond. The manner in which participants were recruited makes it difficult to estimate the response rate. However, there was clearly variability in participation rates ranging from most eligible youth participating in some classrooms or community centres to a small minority participating in others.

The 216 participants were divided into three groups. The first generation Chinese Canadian immigrant group (first generation group) consisted of 152 youth who listed their own and their parents' ethnic origin as Chinese and who immigrated to Canada from Hong Kong ($n = 75$), Taiwan ($n = 45$), Mainland China ($n = 28$), or Macau ($n = 3$) as well as one youth whose place of birth was missing but who described himself and his parents as Chinese and whose grandparents were all born in China. Of these, 149 resided in Vancouver and 3 in Richmond. The second generation Chinese Canadian group (second generation group) consisted of 28 self-identified Chinese youth who were born in Canada and had both parents born in one of the places listed above ($n = 24$), one parent born in China or Hong Kong and one in Canada or Europe ($n = 3$), or both parents born in Malaysia ($n = 1$). All second generation participants resided in Vancouver. The third or later generation Canadian comparison group (third or later generation group) consisted of 36 Canadian-born youth who had both parents born in Canada ($n = 28$) or one parent born in Canada and the other parent born in Western Europe, Australia, or New Zealand ($n = 9$). In the third or later generation group, 28 resided in Vancouver and 8 resided in Richmond. Table 1 summarizes the demographic characteristics of the sample. Socioeconomic status (SES) was assessed by the Hollingshead-Redlich Two-Factor

Table 1

Sample Characteristics by Generational Status

Variable	Generation			Total (N = 216)
	First (n = 152)	Second (n = 28)	Third or later (n = 36)	
Gender				
Male	66	21	19	106
Female	86	7	17	110
Mean Age	16.47 (1.12)	16.46 (0.74)	15.50 (1.08)	16.31 (1.12)
Mean SES	2.83 (0.95)	2.83 (1.05)	2.47 (0.77)	2.76 (0.94)
Grade				
8 – 9	12	2	13	27
10	23	0	9	32
11	58	15	8	81
12	59	11	6	76
Religion				
None	49	7	4	60
Christian	35	11	18	64
Buddhist	25	4	1	30
Other	4	1	5	10
Missing	39	5	8	52
Religious Attendance				
Never	50	12	7	69
Few Times a Year	47	7	9	63
Once a Month	5	1	6	12
Once a Week or More	24	6	12	42
Missing	26	2	2	30

Index of Social Position (Hollingshead & Redlich, 1958). As shown in Table 1, the sample was fairly evenly divided by gender (male = 49.1%; female = 50.9%) except within the second generation group, where there were significantly more males than females $\chi^2 (1, N = 28) = 7.00, p < .05$. The three groups differed significantly in age, $F (2, 213) = 12.39, p < .001$, father's education level, $F (2, 209) = 5.78, p < .01$, mother's education level, $F (2, 208) = 14.95, p < .001$, and religious attendance, $F (2, 183) = 3.76, p < .03$. Follow-up analyses based on the Scheffé test indicated that the third or later generation group was younger than the other two groups ($p < .05$) and had the least educated parents ($p < .05$). The third or later generation group was also more religious than the first generation group ($p < .05$).

Among first generation respondents, the average age of arrival in Canada was 11.9 ($SD = 3.3$; range = 3 to 17) and the average length of time in Canada was 4.8 years ($SD = 3.1$; range = 0.5 to 14). As indicated in Table 2, although most of the first generation group had lived with both parents prior to arriving in Canada, only about half currently resided with both parents. Also of note is the fact that only 31% of the youth indicated that both parents lived in Canada all of the time while 60% reported that at least one parent lived outside of Canada some of the time (44% father; 1% mother; 15% both) and 8 % reported that at least one parent lived outside of Canada all of the time (4% father; 2% mother; 2% both; see Table 3).

An examination of the first generation group based on place of birth (Hong Kong, Taiwan, or China) revealed no difference in age, $F (2, 145) = 0.91, ns$ or religious attendance, $F (2, 121) = 0.24, ns$. However, there were differences in SES, $F (2, 115) = 3.37, p < .05$, age of arrival in Canada $F (2, 145) = 7.50, p < .01$, and parents' education

Table 2

Living Arrangements for First Generation Group Before and After Migration

Youth Lives With	Prior to Migration	After Migration
Mother and Father	86.8 %	57.2 %
Mother	8.6 %	28.9 %
Father	1.3 %	3.3 %
Other	3.3 %	10.5 %

Note. Most youth who marked “other” indicated that they lived with a sibling or another family member.

Table 3

Time Spent in Canada among Parents of First Generation Group

Time Spent in Canada	Mother	Father
All of the Time	78.9 %	34.9 %
Some of the Time	15.8 %	58.6 %
None of the Time	3.9 %	5.9 %
Missing	1.3%	0.5%

level, $F(2, 145) = .91, p < .01$ for father, $F(2, 145) = .91, p < .01$ for mother. Scheffé tests indicated that first generation participants from Hong Kong had arrived in Canada at a younger age (as would be expected based on immigration trends) and had less educated parents than those from Taiwan or China ($ps < .05$). A marginally significant difference was found for SES, with those from Hong Kong reporting a higher SES than those from China ($p < .07$).

Measures

In cross-cultural research, it is important to use instruments that are valid for all respondents. To the extent possible, measures were selected for their similar psychometric properties among both Western and Chinese adolescents.

Demographic questionnaire. Participants completed a demographic questionnaire designed to elicit information pertinent to the present study, including age, parents' occupation and education level, and religious attendance (see Appendix A). In addition, the first generation group responded to questions about their age at migration, voluntariness of migration, changes in family composition following migration, and changes in SES following migration. The first generation group also completed 5-point Likert scales (ranging from not at all to very well) of self-rated competence in English and their other language and of parental competence in English. These scales, adapted from earlier research, required participants to rate their own and their parents' ability to read, write, speak, and comprehend the language (Noels et al., 1996; Pak et al., 1985; Ying & Liese, 1994). The language scales possessed high internal consistency (α s: youth English = .89, youth other language = .89, mother = .96, father = .98). The first

generation group also responded to two open-ended questions. These questions concerned the parents' attitude about the youth maintaining their traditional culture and adopting Canadian culture and how these issues are impacted by the youth's gender.

Chinese Acculturation Questionnaire (CAQ; see Appendix B). The CAQ is a self-report instrument designed for this study. Its format is based on the acculturation framework proposed by Berry and his colleagues, who have emphasized the need to develop culturally specific items to measure the four acculturation attitudes of assimilation, integration, separation, and marginalization. Acculturation measures based on Berry's model have been used successfully with a number of different ethnic groups including Canadians of French, Portuguese, Korean, Hungarian, and South Asian descent (Aycan & Kanungo, 1996; Berry et al., 1989). The scales had high internal consistencies (range α s = .68-.90 for the assimilation, integration, separation and marginalization subscales) and had good validity when assessed with criteria such as language preference and ethnic identification. Acculturation measures based on this model have also been utilized successfully in other countries including the United States (Krishnan & Berry, 1992; Phinney et al., 1992) and Germany (Schmitz, 1992), highlighting the applicability of the model and the scales developed from it in diverse contexts.

For this study, an initial list of 80 items assessing 20 domains was generated based on Berry's acculturation questionnaire for South Asian respondents, other acculturation questionnaires including the Suinn-Lew Asian Self-Identity Acculturation scale (Suinn, Rickard-Figueroa, Lew, & Vigil, 1987), information from a graduate student in Asian studies, and a review of the literature on Chinese culture (e.g., Gorman, 1998; Lai & Yue, 1990; Sung, 1985; Tsai, 1999; Wu, 1996). A wide range of topics that

would be particularly relevant for adolescents were addressed. Discussion with two other Chinese immigrant consultants, a community leader and a graduate student in psychology, helped refine both the domains assessed and the wording of items. Finally, two Chinese immigrant adolescents completed the acculturation questionnaire and identified items that seemed inappropriate or difficult to understand.

The final CAQ scale is comprised of 76 items assessing 19 domains thought to be relevant to acculturation among Chinese youth including language usage, choices about friends and marriage partners, choices about television programs and movies watched, and participation in organizations and sports. Items are presented in a randomized order.

Vancouver Index of Acculturation (VIA; Ryder et al., 2000; see Appendix C).

The VIA is a 12-item bidimensional self-report questionnaire designed to measure Chinese and North American acculturation. Items were derived based on recommendations from other acculturation researchers and are presented in pairs that address six content areas, with one item in each pair assessing Chinese culture and the other item assessing North American culture. Items are rated on a 5-point Likert scale ranging from not at all to very much so. The measure was utilized in a study with 150 first and second generation Chinese undergraduate students in Vancouver (Ryder et al., 2000). The measure had adequate reliability (Cronbach's $\alpha = .79$ and mean inter-item $r = .40$ for the Chinese subscale and Cronbach's $\alpha = .75$; mean inter-item $r = .34$ for the North American subscale). In addition, correlational analyses revealed a nonsignificant correlation between the two subscales, indicating that they were orthogonal ($r = .09$, ns).

Concurrent validity was assessed by comparing the subscales with several factors. Percentage of time lived in and educated in the West were associated with the North

American subscale ($r_s = .47$ and $.41$, respectively, $p_s < .001$). Both subscales were significantly associated with a widely used unidimensional acculturation measure, the SL-ASIA ($r = -.30$, $p < .001$ for the Chinese subscale and $r = .54$, $p < .001$ for the North American subscale). The two subscales were also associated with an ethnic self-identification item ($r = -.34$, $p < .001$ for the Chinese subscale and $r = .44$, $p < .001$ for the North American subscale).

This measure was adapted for this study to allow participants to rate both themselves (VIA-Self) and their parents (VIA-Parent) on acculturation to Chinese and Canadian society, resulting in four subscales labelled VIA Self-Chinese, Self-Canadian, Parent-Chinese, and Parent-Canadian.

Beck Depression Inventory - Revised (BDI; Beck, Rush, Shaw, & Emery, 1979).

The BDI is a self-report questionnaire designed to measure behavioural symptoms associated with depression (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961). There are 21 categories of symptoms and attitudes. Each category has four statements rated from 0 to 3 (neutral to maximal severity) according to symptom severity. A total score is derived by summing the responses given to each item (range = 0 to 63) with higher scores indicating greater depression. Cut-off scores for categories of depression are: None or minimal -- 0-10; mild to moderate -- 11-18; moderate to severe -- 19-29; and severe depression -- 30 and above (Beck, Steer, & Garbin, 1988).

Items for the original 1961 version of the BDI were derived primarily from clinical observations. A modified self-report version of the BDI, introduced in 1978, reduced linguistic difficulties and standardized the number of response options in each

category. Research has found similar internal consistencies and high correlations between the two versions (Beck & Steer, 1984; Lightfoot & Oliver, 1985).

The BDI has been widely used both clinically and in research with psychiatric and non-psychiatric populations and has been characterized as one of the better self-report measures of depression (Beck & Clemmesen, 1983; Campbell, Burgess, & Finch, 1984; Kerner & Jacobs, 1983). The original scale was validated by Beck et al. (1961) through point biserial comparisons of BDI total score and psychiatrist ratings of depression severity for psychiatric inpatients ($N = 193$) and outpatients ($N = 269$) living in a major American city ($r = 0.65$ to 0.67 , $p < 0.01$). It was found to be a reliable instrument based on split-half item analysis ($r = 0.93$) and BDI scores were found to be sensitive to changes in depression over time. In their review and meta-analysis of studies that have utilized the BDI, Beck et al. (1988) reported that the scale had a high internal consistency (mean coefficient alphas were .86 for psychiatric populations and .81 for nonpsychiatric samples) and good reliability, with test-retest correlations ranging from .48 to .86 for psychiatric populations and .60 to .83 for nonpsychiatric respondents (time intervals ranged from hours to weeks). Concurrent validity has been established based on the association of the BDI with other measures of depression such as the Zung Self-Rating Depression Scale and the Hamilton Depression Scale and it has been found to reliably differentiate depressed from nondepressed individuals, different types of depression (e.g. dysthymia and major depression), and psychiatric and non-psychiatric samples (Beck et al.; Kerner & Jacobs).

The BDI has also been used in research with adolescents. Studies have reported high internal reliabilities among clinical and nonclinical adolescent samples (range $\alpha =$

.86 - .90) and high item-scale correlations, ranging from .27 to .62 with a mean of .49 (Barrera & Garrison-Jones, 1988; Teri, 1982). Factor analytic studies have revealed a four-factor solution similar to that obtained with adults (Bennett, Ambrosini, Bianchi, Barnett, Metz, & Rabinovich, 1997; Teri). The validity of the BDI has been established based on its significant correlation with depression items on a semi-structured interview for both hospitalized and nonhospitalized adolescents ($r = .49$, $p < .001$ and $r = .73$, $p < .001$, respectively) as well as a measure of general self-worth ($r = -.40$, $p < .001$ and $r = -.64$, $p < .001$ for hospitalized and nonhospitalized youth, respectively; Barrera & Garrison-Jones, 1988). Other researchers have reported that BDI scores differentiate psychiatric and non-psychiatric adolescents (Naughton & Wiklund, 1993).

Several studies have utilized the BDI with Chinese adolescents. These studies have found a high internal consistency (Cronbach's $\alpha = .81$) and a two-week test-retest reliability of .72 ($p < .05$) (Chan & Tsoi, 1984; Lee & Lee, 1996). Another study utilized the Chinese version of the BDI with 2,150 secondary school students aged 13 to 20 in Hong Kong (Shek, 1990, 1991). The questionnaire was found to be reliable (Cronbach's $\alpha = .86$) and all but two items had item-total correlations greater than $r = .3$. In addition, the BDI had moderate correlations with other measures of psychopathology, although it was most highly correlated with other measures of depression. Principal components analysis indicated that a two-factor solution was most appropriate with the affective, cognitive, and motivational components of depression loading on one factor and somatic complaints loading on the second factor. Although this factor structure differs from those found in some Western studies, the BDI was comprised of more than one factor which provides support for Beck's multidimensional view of depression.

State-Trait Anxiety Inventory (STAI, Form Y; Spielberger, 1983). The STAI (Form Y) is one of the most widely used self-report screening measures for anxiety. The STAI was designed to detect the two components of anxiety, state and trait, as conceptualized by Cattell and Spielberger (Spielberger, 1983). Trait anxiety is a relatively stable personality trait characterized by the tendency to have increased feelings of anxiety when encountering stressful situations and state anxiety is a fluctuating emotional experience of fear, worry, and apprehension that occurs as a reaction to situations that are perceived as threatening. The STAI is comprised of two 20-item scales that measure each component. Respondents rate items on a four-point scale to assess either the intensity of their feelings (for state anxiety) or frequency of their feelings (for trait anxiety). Weights of one to four are assigned to each response with reverse scoring for approximately half of the items. A total score for each scale is calculated based on the sum of all items (range of 20 to 80).

Items for the original STAI were developed from a pool of 177 items derived from other anxiety questionnaires. Items were retained based on rational, internal, and external validation procedures. Originally, one scale with twenty items that could measure both state and trait anxiety was produced, although this method was abandoned in favour of the two separate twenty item scales format. The revised version of the STAI addressed the scale's vulnerability to acquiescent response tendencies, improved the psychometric properties of several items for non-college respondents, and eliminated items associated with depression rather than anxiety. Despite these changes, very high correlations have been found between the two versions ($r = .95$ for high school students).

The norms for high school students are based on a sample of 202 male and 222 female Grade 10 students (Spielberger et al., 1983). Alpha coefficients for State Anxiety were .86 for males and .94 for females and .90 for both males and females on Trait Anxiety. Studies with college students, medical patients, and community respondents have reported Cronbach's alphas of .92 to .95 for State Anxiety and .84 to .95 for Trait Anxiety (Knight, Waal-Manning, & Spears, 1983; Novy, Nelson, Goodwin, & Rowzee, 1993; Ray, 1984; Tanaka-Matsumi & Kameoka, 1986). In the original validation study, test-retest coefficients for male and female samples of high school and college students over periods of one hour to three months ranged from .65 to .86 for Trait Anxiety and .16 to .62 for State Anxiety (Spielberger et al.).

Evidence has also been found for its validity. In the original validation study, the STAI showed moderate to high correlations with other measures of anxiety such as the Taylor Manifest Anxiety Scale ($r = .80$), the IPAT Anxiety Scale ($r = .75$), and the Multiple Affect Adjective Checklist ($r = .52$). As well, the Trait Anxiety scale discriminated between non-psychiatric and psychiatric adult groups for whom anxiety is a symptom.

The STAI has also been used with youth. A study with 205 adolescent respondents at a medical centre found those diagnosed as having a psychiatric disorder were more likely to score above the 90th percentile compared to those diagnosed with a medical condition (Smith, Mitchell, McCauley, & Calderon, 1990). Several researchers have utilized the STAI with Chinese samples. One study found that pregnant women who had been told that their unborn child had a congenital problem scored higher in trait anxiety than control groups of mothers with healthy unborn children and mothers who

had already given birth to a healthy child (Tsoi, Ho, & Mak, 1986 as cited in Shek, 1988). The STAI was also used in a study assessing postoperative anxiety among patients in Hong Kong, although no psychometric data were reported (Callaghan, Yuk-Lung, Ida, & Siu-Ling, 1998). In his study of 2,150 high school students, Shek (1988) found that the measure had good reliability based on Cronbach's alpha (α s = .90 and .81 for State and Trait scales, respectively) and spilt-half analyses (.89 for State and .83 for Trait).

General Health Questionnaire - 30 (GHQ-30; Goldberg, 1972). The GHQ-30 is one of the short forms of the original 60 item General Health Questionnaire. This self-report measure was developed to detect nonpsychotic disturbances in community and general practice settings (Goldberg, 1972; Goldberg & Blackwell, 1970). It focuses on changes in the usual level of functioning and is less useful for identifying more chronic difficulties (Naughton & Wiklund, 1993). The GHQ is a widely used questionnaire in North America and Europe, with the 30 item version used most often in community samples (Banks, 1983; Chan & Chan, 1983). Respondents rate themselves on a four-point scale to indicate the extent to which they have recently been experiencing each symptom. Items are scored either 0 for the lowest two severity ratings (not at all or no more than usual) or 1 for the highest two severity ratings (rather more than usual or much more than usual). The total score is derived from the sum of all items. Scores on the GHQ can be used to indicate the severity of psychological disturbance on a continuum or to identify "cases" by applying a clinical cut-off score of 5 (Naughton & Wiklund, 1993). Likert scoring methods have also been utilized by some researchers (Naughton & Wiklund).

Items for the GHQ-60 were derived from a set of 140 questions covering four major areas of adjustment including depression, anxiety, social impairment, and somatic symptoms (Vieweg & Hedlund, 1983). These 140 items were administered to 100 “severely ill” and 100 “mildly ill” psychiatric patients and to 100 demographically matched controls. Items that discriminated between these groups were retained. These remaining items were subjected to a principal components factor analysis which revealed five clinically meaningful factors. The 60-item GHQ was constructed by retaining items that loaded most highly on these factors. Items selected for the 30-item version best differentiated between psychiatric and nonpsychiatric groups, balanced positive and negative responses, and excluded items related exclusively to physical illness.

A review of the research on the GHQ found that this measure had good psychometric properties (Vieweg & Hedlund, 1983). Internal consistency ranged from .78 to .95 and test-retest correlations ranged from .51 to .90. Studies comparing the GHQ total score with clinical assessment ratings have reported validity coefficients ranging from .70 to .83, and concurrent validity has been demonstrated based on its association with other measures of distress such as the Beck Depression Inventory and the Middlesex Hospital Questionnaire. There is also some evidence for its predictive validity. For example, high GHQ scores were predictive of post-operative distress among breast cancer patients (Hughes, 1982).

A number of studies have utilized the GHQ with adolescents (e.g., Borrine, Handal, Brown, & Searight, 1991; Enos & Handal, 1986). One study that utilized the GHQ-30 with Australian youth found alpha coefficients of .92 (Winefield, Goldney, Winefield, & Tiggemann, 1989). One and two year test-retest coefficients ranged from

.25 to .45 ($p < .001$). GHQ total scores in this study were significantly correlated with other measures of adjustment including self-esteem ($r = -.46$, $p < .001$) and depressive affect ($r = .57$, $p < .001$). In a sample of adolescents, Banks (1983) reported a sensitivity of 86%, a specificity of 76% and an overall misclassification rate of 24% compared with classifications made on the basis of the Present State Examination (PSE) for a cut-off score of 5. The GHQ-30 total score had a correlation of .59 with the PSE total score.

The GHQ has also been used cross-culturally, including with Chinese participants. Chan and Chan (1983) administered the GHQ-30 to English-speaking Chinese university students in Hong Kong. The measure had high internal reliability (alpha coefficient = .85) and all but five items showed item-total correlations above .20. Similarly, in a study with Chinese women the GHQ-30 had a Cronbach's alpha coefficient of .88 as well as high item-total correlations for all but two items (Shek & Tsang, 1995). Chan (1985) assessed the reliability and validity of English and Chinese versions of the GHQ-30 among university students in Hong Kong. He found similar alpha coefficients (English version, .84; Chinese version, .87) and similar patterns of item-total correlations.

The validity of the GHQ with Chinese respondents has also been established. For example, it was significantly correlated with another brief self-report scale of psychiatric symptoms, the Self-Reporting Questionnaire ($r = .49$, $p < .001$) and with the MMPI ($r = .52$, $p < .001$) among university students (Chan & Chan, 1983). The Chinese GHQ was found to be associated with a measure of post-partum depression among women who had recently given birth (Lee et al., 1998). When the Chinese version of the GHQ-30 was utilized with 146 Taiwanese community respondents and 150 respondents attending a

mental health centre, it showed good discriminant validity, with a sensitivity of 74%, a specificity of 94%, a positive predictive value of 80%, and an overall misclassification rate of 11% compared to a standardized interview (T. Cheng, 1985).

Several studies have examined the use of the GHQ with Chinese adolescent samples. Shek (1987, 1989b) reported on its psychometric properties among a sample of 2,150 students aged 11 to 20. He found it to have good reliability (Cronbach's $\alpha = .88$) and good internal consistency (Guttman split-half reliability = .78). All but two items had acceptable item-total correlations. Evidence was also established for the validity of the GHQ-30 based on its correlations with other measures of adjustment including translated versions of the Beck Depression Inventory ($r = .58$) and the State-Trait Anxiety Inventory ($r = .63$ for State; $r = .58$ for Trait). Further evidence for its validity was found in a study with 1082 adolescents in Hong Kong that showed significant correlations between the Chinese versions of the GHQ-60 and the Self Esteem Inventory ($r = -.47$; Chan & Lee, 1993).

Somatic Complaints Scale (SCS; adapted from Crystal et al., 1994). The SCS is a nine-item self-report scale that measures physical symptoms often associated with emotional or psychological distress (see Appendix D). Respondents rate the frequency of symptoms over the past month from 1 (never) to 5 (almost every day). Scores are calculated based on the mean rating for each item. The scale consists of the eight items used in a cross-cultural study that included 1,633 Chinese and 1,386 American high school respondents (Crystal et al., 1994). Items were developed by bilingual research group members and were chosen based on their meaningfulness within the different cultures. The scale showed acceptable reliability (Cronbach's $\alpha_s = .71$ for American

adolescents and .73 for the Chinese adolescents) and validity based on a significant correlation between the SCS and a single-item measure of depression ($r = .42$ for American respondents and $r = .40$ for Chinese respondents). For the current study, a ninth item (dizziness) was added to more accurately reflect the most frequent physical complaints found by Kleinman (1982) in his research on depression in China.

Family Environment Scale (FES; Moos & Moos, 1986). The FES is a 90-item true and false questionnaire with 10 scales designed to measure respondents' perceptions about their family environment (see Appendix E). Items were generated from structured interviews with families and from other questionnaires and were chosen to reflect three dimensions of family environment: the Relationship dimension (Cohesion, Expressiveness, and Conflict scales); the Personal Growth dimension (Independence, Achievement Orientation, Intellectual-Cultural Orientation, and Moral-Religious Emphasis scales); and the System Maintenance dimension (Organization and Control scales). Although the entire scale was administered in the current study, consistent with previous research, the level of conflict was assessed based on scores on the Conflict scale (Borrine et al., 1991; C. Cheng, 1998). The Conflict scale consists of nine items that gather information about the expression of anger and amount of conflict within families. Scores are calculated based on the total number of items endorsed and are then converted to standard scores.

The FES was originally validated with an ethnically diverse sample of nonclinical ($N = 1,125$) and distressed ($N = 500$) families in the United States. Few differences were found between the perceptions of sons and daughters although children tended to characterize their families somewhat more negatively than their parents. Psychometric

testing indicated that the FES has good reliability. Coefficient alphas for the 10 subscales ranged from .61 to .78, two-month test retest subscale reliabilities ($N = 47$) ranged from .68 to .86, and 12-month reliabilities ($N = 241$) ranged from .52 to .89. There is also evidence for its construct validity. For example, the number of areas of disagreement reported by respondents (e.g. relatives, money, politics) was positively associated with scores on the Conflict scale (average $r = .49$).

The FES has been translated into numerous languages, including Chinese (Cheung & Lau, 1985). A Chinese version of the FES has been utilized in a number of studies with Chinese children and adolescents. The Conflict scale has been found to have good psychometric properties and to be a valid measure of family conflict (T. Cheng, 1998; Leung et al., 1986; Rosenthal & Feldman, 1990). Studies with Chinese adolescents have reported an internal reliability of .68, Cronbach's alphas ranging from .72 to .89 and a one week test-retest reliability of .84 ($p < .001$) for the Conflict scale (Cheng; Lee & Lee, 1996; Ma & Leung, 1990). The validity of the Chinese version of the Conflict scale was assessed by examining its relationship to measures of distress (Cheng). It was found to be significantly associated with self-reported depression ($r = .35$, $p < .001$) and all individual items were significantly related to psychological distress (r s ranging from .20 to .35, p s $< .001$) and trait anxiety (r s ranging from .15 to .28, p s $< .001$) among the 581 adolescents sampled.

Conflict Rating Scale (CRS) and Ratings of Relationship with Parents (REL).

The CRS is a measure designed for the current study that assesses levels of parent-child conflict in six specific areas chosen based on a review of the literature (see Appendix E). Respondents rate the level of conflict with their parents in six areas using a scale from 1

(very little) to 5 (very much). The mean rating across the six items is used to compute the overall CRS score. Respondents are also presented with an open-ended question regarding the areas of greatest conflict with their parents. The REL scale is a measure designed for the current study that assesses the overall relationship with parents.

Participants indicate how well they get along with each parent on a scale of 1 (not well at all) to 5 (very well) and rate their relationship with each parent on scales of 1 (not good at all) to 5 (very good). The REL score is computed based on the average rating for the four items. In addition, a relationship score for each parent is calculated based on the average rating for the two items about that parent.

Table 4 provides a summary of all acculturation, adjustment, and family conflict measures used in this study.

Procedure

Within the schools, teachers who agreed to participate were provided with written information about the study and the appropriate procedure for distributing consent forms. Within the community centres, either the youth worker or the researcher distributed the consent forms to the youth. Active consent from the youth and their parents/guardians was required.

Participants met with the researcher either during regular classroom periods or at a mutually convenient time. Respondents completed the questionnaires alone or in groups of up to 30. The purpose of the study was explained to respondents and

Table 4

Description of Acculturation, Adjustment, and Family Conflict Measures.

Scale	Abbreviation	Description
Chinese Acculturation Questionnaire	CAQ	76-item acculturation measure based on model developed by Berry and his colleagues. Integration, assimilation, separation, marginalization subscales.
Vancouver Index of Acculturation - Self	VIA-Self	12-item scale of own acculturation to Chinese and Canadian society.
Vancouver Index of Acculturation - Parent	VIA-Parent	12-item measure in which respondents rate parent acculturation to Chinese and Canadian society.
Beck Depression Inventory - Revised	BDI	21-item self-report measure of symptoms associated with depression.
State-Trait Anxiety Inventory – State Subscale	STAI-S	20-item self-report questionnaire assessing current level of anxiety.
State-Trait Anxiety Inventory – Trait Subscale	STAI-T	20-item self-report measure assessing general level of experienced anxiety.
General Health Questionnaire – 30	GHQ-30	30-item questionnaire of general psychological functioning.
Somatic Complaints Scale	SCS	9-item self-report scale measuring physical symptoms often associated with psychological distress.
Family Environment Scale	FES	9-item self-report scale assessing level of family conflict.
Conflict Rating Scale	CRS	6-item self-report scale of parent-child conflict in six specific areas.
Relationship with Parent	REL	4-item self-report measure assessing relationship with parents.

confidentiality was assured. The demographic questionnaire was completed first, followed by the family relationship and adjustment questionnaires which were presented in a counterbalanced order. To minimize confusion among the non-Chinese participants not completing the acculturation questionnaires, the three acculturation measures were placed at the end of the questionnaire booklet and were presented in a counterbalanced order. Respondents required between twenty to ninety minutes to complete the questionnaires. Interpreters were present when required, although overall few language difficulties were encountered. Upon completion, participants received a written description of the study, information about mental health services in their community, and a S3 gift certificate or the equivalent (if other compensation was deemed more appropriate by the youth worker). Participants and/or parents/guardians could ask to receive a summary of the results. A summary of the results was sent to all participating school boards, schools, and community centres and to those participants and parents/guardians who had requested it.

Chapter III

Results

Preliminary Analyses

Many of the instruments used to assess psychological adjustment and family relationships in the current study were originally developed for use with North Americans of Western European descent or Western European populations. Although efforts were made to ensure that these measures had been previously utilized in studies with participants of Chinese descent, there were limited data available for some of the measures about their psychometric properties with youth of Chinese descent. In addition, a new acculturation measure was created for the current study. Therefore, the reliability and validity of all measures were examined for the youth of Chinese descent.

Adjustment Measures. Reliability analyses were performed on the BDI, STAI-State, STAI-Trait, GHQ-30 and SCS for the youth of Chinese descent.¹ As illustrated in Table 5, all scales had acceptable mean inter-item correlations and mean item-scale correlations as well as good internal reliability.

Confirmatory factor analyses were computed for each of the measures (except for the SCS which was created for this study) for the combined first and second generation groups. Results of the confirmatory factor analyses are found in Appendix F.

The validity of the adjustment measures was assessed through an examination of the intercorrelations between these scales, a common method of determining whether

¹ In these and all further analyses, the reader may note that the number of respondents differs for different analyses. This reflects the fact that several participants failed to complete one or more of the questionnaires or had one measure omitted from the analysis because it appeared to be invalid (e.g., responded "false" to all items on a measure that includes items that are reverse-scored).

Table 5

Psychometric Properties for the Adjustment Measures for Youth of Chinese Descent

Scales	Cronbach's Alpha	Mean Inter-item Correlation	Mean Item-Scale Correlation
BDI	.88	.26	.48
STAI-S	.91	.33	.54
STAI-T	.88	.28	.48
GHQ-30	.93	.32	.55
SCS	.80	.31	.49

Note. $n = 165-177$. BDI = Beck Depression Inventory; STAI-S = State-Trait Anxiety Inventory–State Subscale; STAI-T = State-Trait Anxiety Inventory–State Subscale; GHQ-30 = General Health Questionnaire-30; SCS = Somatic Complaints Scale.

instruments are measuring the same general construct (Anastasi, 1988). As indicated in Table 6, all intercorrelations were in the moderate range, supporting the validity of the measures for youth of Chinese descent.

Because the five indicators of mental health were correlated, they were combined to form a composite index of psychological distress in order to improve reliability (Ghiselli, Campbell, & Zedeck, 1981; Mehta, 1998). The five adjustment scores were converted to standard scores and added together to form the Distress Index (DI). For ease of comprehension, the Distress Index (DI) was then transformed to have a mean of 100 and a standard deviation of 10.

Family Conflict Measures. Cronbach's alpha values were computed for the FES Conflict Scale among the participants of Chinese descent. Internal reliability was somewhat low ($\alpha = .53$). In addition, item-scale correlations were generally low (range $r = .003 - .35$). Eliminating the item with the lowest item-scale correlation did not significantly increase the internal reliability. In order to preserve the integrity of the scale, it was deemed inappropriate to eliminate more than one item. Thus, the internal reliability for the FES Conflict Scale among the participants of Chinese descent was insufficient to allow for its use in analyses.

Conflict Rating Scale (CRS) and Relationship with Parents (REL). As a result of the low internal reliability of the FES for the Chinese youth, the psychometric properties of the Conflict Rating Scale (CRS) were examined. The CRS was created based on the mean participant ratings for the six areas of conflict between the youth and their parents. Internal reliability was found to be adequate for the participants of Chinese descent ($\alpha = .73$) and marginally adequate for the third or later generation group ($\alpha = .64$). The mean

Table 6

Intercorrelations Among the Adjustment Measures for Youth of Chinese descent

Scale	1	2	3	4	5
(n = 178-180)					
1. BDI	--	.41**	.69**	.55**	.59**
2. SCS		--	.46**	.39**	.44**
3. GHQ			--	.62**	.64**
4. STAI-S				--	.78**
5. STAI-T					--

Note. BDI = Beck Depression Inventory; SCS = Somatic Complaints Scale; GHQ-30 = General Health Questionnaire-30; STAI-S = State-Trait Anxiety Inventory–State Subscale; STAI-T = State-Trait Anxiety Inventory–Trait Subscale.

****** $p < .01$

item-scale correlations of .47 for the Chinese participants and .38 for the third or later generation group were adequate.

The REL was based on four questions that assessed how the youth gets along with each parent and how the relationship with each parent is rated. Adequate internal reliability was found for the participants of Chinese descent and the third and later generation group ($\alpha = .84$ and $.74$, respectively).

Examination of the correlation between the CRS and REL for the Chinese participants revealed that, as expected, there was a significant negative association between these measures ($r = -.26$, $p < .01$). A marginally significant negative correlation between the CRS and REL was found for the third and later generation group ($r = -.31$, $p = .07$).

Vancouver Index of Acculturation (VIA). Reliability analyses were performed on the VIA Self-Chinese, Self-Canadian, Parent-Chinese and Parent-Canadian acculturation subscales for the Chinese participants. High internal consistency values were found for all four subscales ($\alpha = .85$ Self-Canadian subscale, $\alpha = .80$ Self-Chinese subscale, $\alpha = .82$ Parent-Canadian subscale, $\alpha = .81$ Parent-Chinese subscale). Mean inter-item correlations were $r = .49$ for the Self-Canadian subscale, $r = .43$ for the Self-Chinese subscale, $r = .43$ for the Parent-Canadian subscale, and $r = .45$ for the Parent-Chinese subscale. In addition, consistent with the model, the Chinese and Canadian subscales were orthogonal for both the Self ($r = .004$, ns) and Parent ($r = -.004$, ns) measures.

A principal components analysis was performed on item responses of the VIA-Self and VIA-Parent for the Chinese descent groups. For each scale, this analysis yielded three factors with eigenvalues that exceeded unity, accounting for 68% of the variance for

the VIA-Self and 63% of the variance for the VIA-Parent. However, based on the scree test, simplicity of structure, and the hypothesized model, two factors were rotated using a Varimax rotation procedure for interpretation. For the VIA-Self (see Table 7), the first factor, accounting for 30% of the variance, is comprised of items assessing attitudes towards Canadian culture. The second factor, accounting for 27% of the variance, contains items assessing attitudes towards Chinese culture. The VIA-Parent scale (see Table 7) had a similar factor structure except that the Chinese culture factor emerged as the first factor, accounting for 28% of the variance, and the Canadian culture factor was the second factor, accounting for 26% of the variance.

Chinese Acculturation Questionnaire (CAQ). Various analyses were computed to assess the reliability of the four CAQ subscales: integration, assimilation, separation and marginalization. Initially, correlations between each item and the total score on the subscale that it was designed to assess were examined. Following the suggestion of Berry et al. (1989) as well as other researchers (e.g., Aycan & Kanungo, 1996), those items that had a correlation below $r = .2$ with the subscale were eliminated (integration = 2, assimilation = 2, separation = 1). All other item-scale correlations were in an acceptable range ($r = .24$ to $.65$). In addition, correlations between each item and the other three subscales were examined. Based on this analysis, one additional item from the assimilation subscale was eliminated because it correlated more strongly with another subscale than its own subscale. The 70 remaining items comprised the final CAQ. As illustrated in Table 8, internal consistencies of the subscales were high. Table 8 also provides other psychometric characteristics of the CAQ subscales.

Table 7

Two-factor solution for the VIA-Self and VIA-Parent

Item	Factor loadings					
	VIA-Self		Communalities	VIA-Parent		Communalities
	F1	F2		F1	F2	
1a	-.03	.51	.26	.68	-.03	.46
1b	.67	.03	.45	.12	.62	.40
2a	-.08	.69	.48	.62	.03	.38
2b	.58	-.19	.37	-.13	.61	.39
3a	.02	.80	.64	.76	-.05	.58
3b	.85	.03	.73	-.11	.80	.65
4a	.03	.82	.66	.74	.06	.55
4b	.88	-.03	.77	-.07	.81	.65
5a	.07	.72	.52	.80	.02	.64
5b	.76	.16	.60	.13	.74	.57
6a	.04	.82	.67	.82	-.06	.68
6b	.82	.05	.68	-.01	.75	.56

Note. Highest loading obtained by a variable amongst the factors is in bold.

Table 8

Psychometric Characteristics of the CAO Subscales

Subscale	Number of Items	<u>M</u> (Scale)	<u>SD</u> (Scale)	Range	Cronbach's Alpha
Integration	17	3.9	.49	2.35 – 4.94	.86
Assimilation	16	2.4	.46	1.13 - 4.06	.81
Separation	18	2.9	.50	1.67 – 4.44	.84
Marginalization	19	2.6	.49	1.32 – 3.89	.82

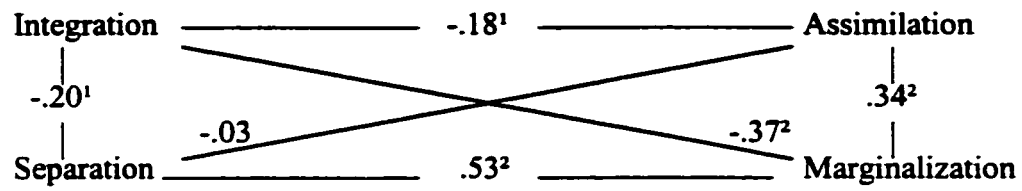
Note. N = 171.

Support for the validity of the CAQ was obtained in a number of ways. First, the pattern of relationships among the four subscales was assessed and compared to the proposed model and actual findings from previous studies (Berry et al., 1989).

According to the model, there should be negative associations between integration and marginalization and between assimilation and separation. Figure 1 illustrates the associations that were found in this study among the four subscales. As expected, there was a negative correlation between integration and marginalization but no significant correlation was found between assimilation and separation.

Support for the validity of the CAQ subscales was also assessed by examining their associations with the VIA Self-Chinese and Self-Canadian subscales. As seen in Table 9, predicted results were confirmed with all subscales showing significant correlations in the expected directions. Integration had a positive association with both the Self-Canadian and Self-Chinese subscales. Assimilation was positively correlated with the Self-Canadian subscale and negatively correlated with the Self-Chinese subscales. Separation had a positive association with the Self-Chinese subscale and a negative association with the Self-Canadian subscale. Marginalization had a negative association with both the Self-Canadian and Self-Chinese subscales.

The validity of the CAQ was further assessed based on responses to a question about ethnic identity. Table 10 shows that mean scores on the four acculturation subscales for each ethnic self-identity were in the expected directions. Because of the small number of respondents who self-identified as “Canadian” ($n = 3$) and “Other” ($n = 7$), only the “Chinese-Canadian” and “Chinese” groups were included in statistical analyses. These results indicate that as expected, respondents who selected the “Chinese”



¹ $p < .01$

² $p < .001$

Figure 1. CAQ subscale intercorrelations for the first and second generation groups.

Table 9

Correlations between CAO and VIA-Self Subscales

Subscale	Integration	Assimilation	Separation	Marginalization
VIA Self-Canadian	.30 **	.28 **	-.51 **	-.30 **
VIA Self-Chinese	.13 *	-.39 **	.18 *	-.18 **

* $p < .05$, one-tailed. ** $p < .01$, one-tailed.

Table 10

Means and Standard Deviations for the CAQ Subscales based on Ethnic Self-Identity for Youth of Chinese Descent.

CAQ Subscale	Ethnic Self-Identity			
	Canadian (n = 3)	Chinese (n = 65)	Chinese-Canadian (n = 94)	Other (n = 7)
Integration	3.69 (.45)	3.78 (.52) ^a	3.99 (.46) ^b	3.84 (.38)
Assimilation	2.58 (.38)	2.36 (.50)	2.49 (.44)	2.38 (.37)
Separation	2.80 (.71)	3.12 (.44) ^a	2.68 (.46) ^b	2.78 (.51)
Marginalization	2.41 (.41)	2.71 (.45) ^a	2.45 (.49) ^b	2.39 (.57)

Note. Standard deviations are in parentheses. Different superscripts on the same line indicate that means differ significantly, $p < .05$ (only "Chinese" and "Chinese-Canadian" groups were included in the analyses).

identity option had a significantly higher mean on separation, $t(157) = 6.1, p < .001$, and lower mean on integration, $t(157) = 2.7, p < .01$, than those with a “Chinese-Canadian” identity. In addition, those who selected the “Chinese” option had a significantly higher mean on marginalization than those with a “Chinese-Canadian” identity, $t(157) = 3.4, p < .01$. Results for assimilation were in the expected direction with a higher mean for respondents with a “Chinese-Canadian” identity than those with a “Chinese” identity, but were only marginally significant, $t(157) = 1.7, p < .10$.

Descriptive statistics for the Distress Index (DI) and the individual outcome variables for the first and second generation groups by acculturation strategy and the third or later generation group are found in Table 11. Interestingly, within the first generation group, no differences were found on adjustment (DI) or intergeneration conflict (CRS) based on country of origin (Hong Kong, China, or Taiwan), $F(2,144) = .91, ns$ for DI. $F(2,143) = 1.74, ns$ for CRS.

Primary Hypotheses

Acculturation research has suggested that integration is the preferred acculturation style among adolescents, followed by assimilation, separation, and marginalization (see Hypothesis 1). In the current study, participants were classified as having adopted a particular acculturation strategy based on the highest subscale score on the CAQ (i.e., a respondent whose highest score was on the integration subscale was classified as having adopted an integration strategy). For first generation respondents, 123 were classified as having adopted integration, 2 assimilation, 9 separation, and 9 marginalization. Obviously in this sample integration was strongly preferred. However, there were too

Table 11

Means and Standard Deviations for Family Conflict and Adjustment Measures for the Three Groups by Acculturation Strategy

Generation				
First				
	Integration (n = 122-123)	Assimilation (n = 2)	Separation (n = 9)	Marginalization (n = 8-9)
DI	102.18 (41.0)	152.87 (31.3)	123.02 (39.1)	114.75 (26.4)
BDI	10.1 (8.2)	24.5 (6.4)	11.9 (6.4)	12.8 (10.1)
STAI-S	44.0 (10.5)	47.0 (7.1)	49.3 (10.6)	43.8 (6.4)
STAI-T	46.2 (9.6)	56.0 (8.5)	50.1 (9.0)	45.9 (5.8)
GHQ-30	30.6 (14.1)	60.0 (21.2)	36.9 (16.9)	36.3 (13.1)
SCS	2.2 (.67)	2.1 (.79)	2.5 (.64)	2.6 (.86)
CRS	2.4 (.83)	3.7 (.70)	2.8 (.62)	2.7 (.71)
Second				
	Integration (n = 27)	Assimilation (n = 1)		
DI	93.145 (39.8)	91.24		
BDI	9.3 (7.6)	6.0		
STAI-S	38.6 (10.6)	46.0		
STAI-T	44.1 (8.5)	45.0		
GHQ-30	29.6 (12.6)	14.0		
SCS	2.2 (.82)	2.6		
CRS	2.4 (.79)	2.5		

	Third or later (n = 36)
DI	82.30 (28.7)
BDI	5.7 (5.0)
STAI-S	39.5 (10.1)
STAI-T	41.2 (8.7)
GHQ-30	18.8 (10.1)
SCS	2.4 (.70)
CRS	2.3 (.72)

Note. DI = Distress Index; BDI = Beck Depression Inventory; STAI-State = State-Trait Anxiety Inventory–State Subscale; STAI-T = State-Trait Anxiety Inventory–Trait Subscale; GHQ-30 = General Health Questionnaire-30; SCS = Somatic Complaints Scale; CRS = Conflict Rating Scale. Standard deviations in parentheses.

few respondents who adopted any of the other three acculturation strategies to run the planned analyses.

To examine acculturation attitudes, paired-sample t -tests were used to compare mean scores on the four acculturation scales. For the first generation group, the mean score on integration was significantly higher than the other three subscales, $t(141) = 23.5$, $p < .001$ for assimilation, $t(141) = 15.0$, $p < .001$ for separation, $t(141) = 18.8$, $p < .001$ for marginalization. The mean score on the separation subscale was significantly higher than both the assimilation and marginalization subscales, $t(141) = 9.1$, $p < .001$ for assimilation, $t(141) = 7.8$, $p < .001$ for marginalization. Unexpectedly, the mean score for marginalization was significantly higher than for assimilation, $t(141) = 4.4$, $p < .001$ indicating that in this sample there was stronger support for marginalization than assimilation. In general, these results provide support for the first part of Hypothesis 1, although the balance of the hypothesis could not be tested.

Differences in acculturation attitudes were also examined within the first generation group based on country of origin. Analyses comparing those born in Hong Kong, China, and Taiwan found no significant differences in mean scores for any of the four acculturation subscales, $F(2, 137) = 1.21$, ns , $F(2, 137) = 0.09$, ns , $F(2, 137) = 1.85$, ns , $F(2, 137) = 0.55$, ns .

Results for the second generation group were also examined. In this group, 27 respondents were classified as having adopted integration and 1 assimilation, again revealing a strong preference for integration. A comparison of mean scores on the acculturation subscales revealed many similarities to the pattern found for acculturation attitudes in the first generation group. Thus, the highest mean score was on the

integration subscale, $t(27) = 11.3, p < .001$ for assimilation; $t(27) = 12.3, p < .001$ for separation; $t(27) = 13.6, p < .001$ for marginalization. In addition, the mean scores on the assimilation and separation subscales were significantly higher than those for marginalization, $t(27) = 2.8, p < .01$ and $t(27) = 3.5, p < .001$, respectively. In the second generation group, there was no significant difference in the mean scores on the assimilation and separation subscales $t(27) = 0.08, ns$.

There is also some evidence in the literature that gender has an impact on preference in acculturation strategy (Hypothesis 2). In the current sample, frequency of acculturation strategy by gender was: 75 males and 75 females adopted integration; three males and no females adopted assimilation; three males and six females adopted separation; and two males and seven females had marginalization as their highest subscale. Consequently, there were insufficient numbers of participants of either gender who had adopted an acculturation strategy other than integration to allow for this hypothesis to be tested. However, consistent with this research, Chinese males had a higher mean score on assimilation compared to females, $t(169) = 2.3, p < .05$ ($M = 2.51, SD = 0.51$ for males and $M = 2.35, SD = 0.41$ for females). For separation, males did not differ from females, $t(169) = 0.25, ns$ (M s = 2.9 and 2.8, respectively). Thus, there was partial support for this hypothesis in that males endorsed assimilation more strongly but there was no gender difference for separation.

Other research on acculturation has examined the relationship between acculturation strategy and psychological adjustment (see Hypothesis 3). Generally, integration has been associated with the best adjustment, marginalization with the poorest adjustment, and separation and assimilation with intermediate levels of adjustment. In

this study, the small number of respondents in the assimilation, separation, and marginalization groups precluded separate analyses for each group. Therefore, these three groups were collapsed to form a non-integration group. Analyses comparing the first generation integration and non-integration groups revealed that, as predicted, youths who adopted an integration strategy showed less psychological distress (DI) than youths who adopted any of the other three strategies, $t(141) = 2.1, p < .05$. Thus, support for the hypothesis was found, with integration having the expected mental health benefits compared to the other acculturation strategies.

A comparison between the first generation integration group and the third or later generation group revealed higher levels of psychological distress (DI) in the first generation integration group, $t(157) = 2.7, p < .01$. The psychological adjustment (DI) of the second generation group did not differ from either the first generation integration group, $t(149) = 1.1, ns$, or the third or later generation group, $t(62) = 1.3, ns$.

To further examine the relationship between acculturation and mental health, correlational analyses between the acculturation attitudes and psychological adjustment (DI) were computed (see Table 12). As expected, in the first generation group, integration was associated with better adjustment while separation and marginalization were associated with greater distress. However, there was no significant association between assimilation and adjustment. These results provide further support for the mental health benefits of integration.

It is also interesting to examine the association between acculturation and adjustment in the second generation group. As indicated in Table 12, the expected negative associations between adjustment (DI) and the separation and marginalization

Table 12

Correlations Between Acculturation Attitude and Adjustment (DI) in the First and Second Generation Groups

Generation	n	Acculturation Attitude			
		Integration	Assimilation	Separation	Marginalization
First	143	-.20**	.01	.18*	.43**
Second	28	-.08	.26	.35*	.46**

*p < .05, one-tailed. **p < .01, one-tailed.

subscales were found, and there was a trend towards assimilation being associated with greater distress. However, the correlation between adjustment (DI) and integration was not significant.

There has been a great deal of interest in the relationship between the family environment in which a child is reared and the psychological functioning of that child (see Hypothesis 4). Previous research has found a positive association between level of distress among adolescents and the level of family conflict. In the current study, this was confirmed for the first generation group, with a significant positive correlation between level of family conflict (CRS) and level of distress (DI), $r = .21$, $p < .01$. Similar results were found for the second and third or later generation groups, although the results were only marginally significant, $r = .27$, $p = .08$ and $r = .23$, $p = .09$, respectively. Self-reported adjustment difficulties (DI) were also correlated with ratings of parent-child relationships (REL), with significant results for the first and second generation groups. ($r = -.42$, $p < .001$ and $r = -.37$, $p < .05$, respectively). Results for the third or later generation group were not significant, $r = .01$, *ns*. In general then, the expected associations between higher levels of family conflict and greater psychological distress were found for the first and second generation groups with less consistent results for the third or later generation group.

Other studies have examined specific factors that impact on family relationships and mental health among adolescent immigrants. For example, gender differences in level of adjustment and family conflict have been reported (see Hypothesis 5i). In the current study, *t*-test analyses revealed few differences in level of family conflict or adjustment between males and females within each group, although the means on the

Distress Index (DI) were in the expected direction with greater self-reported distress in females (see Table 13). The lack of support for this hypothesis is surprising given the relatively consistent reports in the literature of higher levels of psychological difficulties among females compared to males beginning in adolescence.

Some researchers have proposed that similarity in the acculturation strategy adopted by the youth and the parents may result in better adjustment and more harmonious family relationships (see Hypothesis 5ii). To test this hypothesis, youth were classified as having adopted a particular acculturation strategy as above. For parents, the participants' responses on the VIA-parent scales were used to classify parents as having demonstrated one of the four acculturation strategies. Parents who scored above the midpoint on both the Canadian and Chinese subscales comprised the integration group, the assimilation group was comprised of those who scored above the midpoint on the Canadian subscale and at or below the midpoint on the Chinese subscale, the separation group was comprised of those who scored above the midpoint on the Chinese subscale and at or below the midpoint on the Canadian subscale, and parents who scored at or below the midpoint on both the Canadian and Chinese subscales comprised the marginalization group. First generation participants rated separation as the most frequent acculturation strategy adopted by their parents ($n = 85$) with integration the next most frequent strategy ($n = 56$). Participants felt that there was little support for marginalization among parents ($n = 3$) and no parents were seen as having adopted an assimilation strategy.

There were a total of 58 participants in the first generation group who had adopted the same strategy as their parents and 80 who adopted a different acculturation strategy

Table 13

Gender Differences in Adjustment and Family Conflict in the First, Second, and Third Generation Groups

Scale		n	Mean	SD	t	df	p
First Generation							
DI							
	Male	66	101.87	39.1	.91	148	.36
	Female	85	107.91	41.1			
CRS							
	Male	66	2.6	.89	1.6	148	.10
	Female	84	2.4	.74			
Second Generation							
DI							
	Male	21	89.29	39.3	.88	26	.39
	Female	7	104.4	39.2			
CRS							
	Male	21	2.5	.78	1.0	26	.33
	Female	7	2.1	.73			
Third or later Generation							
DI							
	Male	19	82.1	30.3	.05	34	.96
	Female	17	82.6	27.8			
CRS							
	Male	19	2.4	.68	1.2	34	.25
	Female	17	2.1	.75			

Note. DI = Distress Index; CRS = Conflict Rating Scale.

than their parents. Analyses comparing level of family conflict found that as expected, those youths with a different acculturation strategy than their parents felt less positively about their relationship with parents (REL) than youths with a similar acculturation strategy, $t(136) = 2.6, p < .01$. There was also a trend towards youths with different acculturation strategies than their parents having higher levels of distress (DI) than those with the same acculturation strategy, $t(136) = 1.60, p = .11$.

Based on previous research, it was expected that there would be a difference in the level of psychological distress reported by respondents who migrated at different ages (see Hypothesis 6). Respondents in the first generation group were divided into two groups, with those who immigrated at age 12 or younger comprising the pre-adolescent group and those who immigrated after age 12 comprising the adolescent group. There were no significant differences between the two groups on the level of psychological distress (DI), $t(148) = 0.16, ns$. However, further analyses were conducted based on the length of time since immigration. Respondents were divided into three groups: recent immigrants, i.e., those who had moved to Canada within the past three years ($n = 55$), intermediate immigrants, i.e., between four and seven years ago ($n = 69$), and longer-term immigrants, i.e., more than seven years ago ($n = 26$). Results showed a marginally significant difference between the groups on the Distress Index (DI), $F(2,147) = 2.6, p = .08$ ($M = 99.9, SD = 38.3$ for recent immigrants, $M = 113.2, SD = 43.9$ for intermediate immigrants, $M = 95.7, SD = 29.7$ for longer-term immigrants). Bonferroni contrasts revealed a trend towards higher distress in the intermediate immigrant group than the recent and longer-term immigrants ($p = .20$ and $p = .17$, respectively). These results tend to support a u-shaped adjustment model as opposed to a linear model of adjustment.

Secondary Hypotheses

Previous studies have identified various factors that are thought to have an impact on the adjustment of immigrants in addition to those examined above (see Hypothesis 7). Similar to results reported in the literature, first generation immigrant youth in the current study who were in favour of the move to Canada reported less distress (DI) than those who described themselves as opposed to the move, $t(145) = 2.25, p < .05$. As well, those who planned to live in Canada in the future had less distress (DI) than those who planned to return to their country of origin, $F(2, 147) = 4.35, p < .05$, (Bonferroni contrast, $p < .05$; no difference for those staying and those unsure or those not staying and those unsure). In addition, although youth who did not feel consulted about the move did not report more psychological distress (DI) than those who did feel consulted, $t(145) = 1.36, ns$, the means were in the expected directions (110.1 and 101.1, respectively). Another factor that was examined was self-reported confidence in English. Among the first generation group there was a marginally significant correlation between self-reported English skills and adjustment (DI), $r(125) = -.12, p < .07$, suggesting a tendency for those more proficient in English to report less psychological distress. Contrary to the proposed hypotheses, there was no association between level of distress (DI) and level of religiosity, $r(125) = -.10, ns$. Even when the psychological adjustment of those who attended religious services was compared with those who never attended, there was no difference between the groups, $t(123) = .241, ns$. There was also no association between changes in family composition following migration and distress (DI), $t(148) = .65, ns$. Indeed, study respondents described equally good relationships with their parents, regardless of whether they lived with them all of the time, some of the time, or none of

the time, $F(2,148) = .17$, *ns* for father and $F(2,146) = .81$, *ns* for mother. The hypothesis that a change in SES following migration would impact adjustment could not be tested because of the small number of respondents who indicated that the family SES had changed ($n = 16$).

Research with immigrant families has suggested that intergenerational conflict can develop when parents rely on the language skills of their children (see Hypothesis 8). In this study, however, there was no association between English language skills of parents as rated by the youth and either level of family conflict (CRS; $r = .04$, *ns* for mother and $r = .04$, *ns* for father) or ratings of parent-child relationships (REL; $r = .02$, *ns* for mother and $r = .05$, *ns* for father). Thus, the data do not support this hypothesis.

Another area examined in this study was the impact of ethnic density on acculturation (see Hypothesis 9). Participants were divided into two groups based on their response to a question about the ethnic composition of their neighborhood. In the first generation group, 81 participants reported that they lived in a primarily Chinese/Chinese Canadian neighborhood, and 60 described their neighborhood as primarily composed of individuals from other ethnic groups. Although too few participants were classified as having adopted each of the acculturation strategies to directly test the hypothesis, mean acculturation subscale scores were compared for respondents living in ethnically dense and diverse neighborhoods. Consistent with the hypothesis, respondents who perceived that they lived in ethnically diverse neighborhoods more strongly supported assimilation $t(139) = 2.6$, $p < .05$ than their counterparts who perceived that they lived in ethnically dense neighborhoods. No differences were found on endorsement of integration, $t(139) = .97$, *ns*, or

marginalization $t(139) = .24, ns$. Contrary to the hypothesis, there was no difference in support for separation based on perceived ethnic composition of the neighborhood, $t(139) = .76, ns$.

Open-Ended Questions

First generation participants were asked to respond to two open-ended questions. A total of 131 participants responded to at least one of the questions.

The first question concerned parents' attitude about the youth maintaining his or her traditional culture and how this attitude is affected by the respondent's gender. Of those who responded to the first part of this question about parents' attitude towards the youth maintaining the traditional culture ($n = 117$), 12 indicated that they didn't know or wrote "none" and 3 participants made other comments unrelated to the question (e.g., "want me to go to university"), leaving 99 usable responses. An examination of these responses revealed that they fit into several categories.

A small number of respondents indicated that their parents were not particularly concerned about them maintaining the traditional culture ($n = 16$), although some of the youth continued to practice some traditions. For example, one youth stated that they "don't care about me maintaining my culture - they occasionally celebrate festivals and I join them." There were also several youths who indicated that their parents allowed them to decide the extent to which they maintained the traditional culture ($n = 7$).

A larger number of respondents felt that it was at least somewhat important to their parents that they maintain aspects of the traditional culture. Some simply indicated that it was important to their parents ($n = 23$) and others noted that their parents wanted

them to maintain the traditions but did not force them to do so ($n = 4$). A significant number of youths gave specific examples of ways they were expected to practice the traditional culture, such as language maintenance ($n = 13$), celebrating Chinese holidays ($n = 4$), specific traits (e.g., respect others) or customs (e.g., marry a Chinese person) that their parents wanted them to maintain ($n = 9$), or a combination of these ($n = 3$). For example, one participant wrote "Encourage me and my sister to learn Chinese and speak Chinese in the house. If we speak English they would think we are talking some secret (sic)."¹ A few respondents also stated that they are expected to keep traditions because they will likely move back to their country of origin ($n = 2$) and one wrote that his father did not care about cultural maintenance but his mother did.

There were a number of youth who spontaneously mentioned the importance to their parents of their maintaining both the traditional culture and adopting the new culture ($n = 16$). This was often related to language issues (e.g., knowing both Chinese and English). Interestingly, there was also one respondent who wrote that "they want me to become more Canadian but I don't want to - want me to become more Canadian because it's important to learn English. I think it's important to keep my own culture."

The second part of the question asked respondents about how their gender affects their parents' attitudes about cultural maintenance. Of the 67 usable responses (one person indicated that he didn't know and two commented that their parents prefer boys to girls), most indicated that they did not think their parents' attitude would be different if they were the other gender ($n = 50$). For those who gave other responses, among females, one wrote that she would have to maintain more cultural traditions if she were male, two felt that their parents would be less strict if they were male, and one felt that

her parents would be more strict. Among males, four commented that their parents would have stricter rules if they were girls, one wrote that he would not have to study as hard, and one stated that there would be less pressure on him to be responsible. Two males felt that there would be more pressure for them to return to their country of origin if they were girls.

The second question concerned parents' attitude about the youth adopting Canadian culture and how this attitude is affected by the respondent's gender. A total of 119 youths responded to the first part of this question. There were 13 who wrote that they didn't know or that their parents had no feelings about this issue and 6 participants who commented about other issues or made other comments unrelated to the question (e.g., "want me to have the same opinions as they do") leaving 100 responses that were categorized into different themes.

The largest category of responses were that either their parents were happy ($n = 16$) or did not mind ($n = 26$) that they were becoming more Canadian. One youth wrote that her parents "feel good because I have more than one country to live in now." Some participants stated that their parents did not mind if they adopted Canadian culture as long as they maintained aspects of Chinese culture ($n = 22$) or did not adopt certain aspects of Canadian culture, such as style of dress ($n = 2$). Others focused specifically on language and commented that their parents encouraged them to learn more English ($n = 9$). For example, one respondent wrote that her parents would be "glad if I could fit in and become more Canadian while maintaining some Chinese traditions" and another commented that they "don't mind if I speak English - they encourage me". There was

also one respondent who indicated that her parents encouraged her to become more Canadian but that she found it difficult to do so.

Other respondents indicated that their parents were less pleased about them adopting Canadian culture ($n = 13$). For example one youth wrote "sometimes have conflict with my parents if I were too Canadian therefore my parents try to restrain me from doing so" while another commented that her "mom says I am more talkative and too sociable at some points. Don't want me to grow up but be the same 'myself' (*sic*) before I came to Canada." There were also some youths who felt that they were not becoming more Canadian ($n = 5$) such as one youth who wrote that "we live in the way that we are in Hong Kong, don't feel that we belong to any part of Canada." Others indicated only that their parents wanted them to retain their original language or culture ($n = 4$). Two respondents stated that one parent opposed their becoming more Canadian while the other parent did not.

The second part of this question had respondents comment on how their gender affected their parents' attitudes about them becoming more Canadian. Similar to the previous question, the overwhelming majority of responses from the 49 who answered stated that there would be little difference ($n = 44$). Of the remaining responses, four indicated that their parents were stricter with girls than boys (e.g., "if I were a girl, I wouldn't hang out with my friends as much as now"). The final respondent indicated that "if I am the opposite sex, my parents will not be as sceptical (*sic*) to me becoming Canadian as if I am male, because there is much to learn for a Chinese girl in Canada (*sic*)".

Based on the responses to these questions it appears that the majority of the first generation Chinese youth felt that their parents expected them to retain at least certain aspects of their traditional culture but were not opposed to them becoming more Canadian. From the perspective of the respondents, most parents appeared to be supporting an integration strategy for their children. A minority of respondents felt that their parents were opposed to them adopting Canadian culture, consistent with a separation strategy and some participants indicated that their parents were unconcerned about the youth maintaining the traditional culture, similar to an assimilation strategy. Interestingly for these youth, few regarded gender as a factor that influenced their parents' attitudes.

Chapter IV

Discussion

The purpose of this study was to explore several issues relevant to a group of Chinese immigrant youth residing in a large co-ethnic community in Canada. One area examined was the acculturation process of the Chinese participants utilizing the framework proposed by Berry and his colleagues. In addition, the study assessed factors associated with psychological adjustment and family relationships among Chinese immigrant youth. Second generation Chinese immigrants and third or later generation Canadians were used as comparison groups in the latter analyses.

The framework proposed by Berry suggests that two issues are considered during the acculturation process: the extent to which the traditional culture will be maintained and the extent to which the mainstream culture will be adopted (Berry, 1997). Assimilation occurs when the mainstream culture is adopted but the traditional culture is not maintained. Separation is the maintenance of the traditional cultural and rejection of the mainstream culture. Integration is characterized by both maintenance of the traditional culture and adoption of the mainstream culture. Marginalization occurs when there is neither the opportunity to maintain the traditional nor adopt the mainstream culture. As expected, integration was the preferred acculturation strategy among the first and second generation Chinese participants. That is, the vast majority of the Chinese youth obtained their highest score on the integration subscale. These results are supported by other research that has found integration to be the preferred acculturation strategy among immigrant youth (Ghuman, 1997; Pawliuk et al., 1996; Sam, 1994).

Clearly, study participants were reluctant to replace their traditional values and behaviours with more mainstream ones and instead preferred to add mainstream culture to their traditional culture (Sam, 1995). The overwhelming preference for integration suggests that Canada's multicultural policy, which encourages cultural pluralism while promoting the full participation of ethnic groups in all aspects of Canadian society, is consistent with the acculturation strategy adopted by study participants (Berry, 1997; Berry & Kalin, 1995; Esses & Gardner, 1996). This provides some evidence for the continued relevance of multiculturalism for immigrants in Canada.

In addition to examining the preferred acculturation strategy, acculturation attitudes, the mean scores on the four acculturation subscales, were also explored. Horenczyk (1996) has suggested that among migrants who have adopted an integration strategy, there may be variations in the degree to which they are interested in maintaining the culture of origin and adopting the mainstream culture. Examining acculturation attitudes provides information about the extent to which cultural maintenance and adoption of the mainstream culture are valued. The acculturation attitudes of the participants in the current study were more supportive of separation than of assimilation. This suggests that, although both cultural maintenance and adoption of mainstream culture were important to these adolescents, there may have been more value placed on maintaining the traditional culture. This is contrary to the position of some researchers who suggest that children and adolescents tend to adopt mainstream cultural values rather than emphasizing maintenance of the traditional culture (Liebkind, 1993; Nguyen & Williams, 1989; Rosenthal, et al., 1996). The results of the current study are also contrary to empirical studies in Canada and elsewhere that have reported stronger support

for assimilation than separation among immigrant children and youth (Aycan & Kanungo, 1996; Pawliuk et al., 1996; Phinney et al., 1992).

The emphasis on cultural maintenance among study participants was further illustrated when acculturation attitudes were assessed based on factors found to be relevant in previous research. For example, the association between acculturation and ethnic density was examined. These analyses revealed that although youth who perceived their neighborhoods to be ethnically diverse more strongly supported assimilation than those who perceived their neighborhoods to be more homogeneous, there was no difference in their attitudes about separation. As well, an examination of gender differences revealed that, as expected based on the literature, males more strongly endorsed assimilation than did females. However there were no gender differences in the support for separation.

There are various possible explanations for the stronger support for the acculturation attitude of separation compared to assimilation among the first generation Chinese participants. First, rejection of Chinese culture may have been deemed undesirable based on parental preferences. As suggested by Sam (1995) and confirmed by the results of the current study, adolescents who perceived themselves to have adopted a similar acculturation strategy to the one adopted by their parents were less likely to experience intergenerational conflict. In this study, participants clearly perceived their parents to be endorsing the maintenance of their traditional culture. It may be hypothesized that this would have discouraged youth from supporting assimilation. For the participants in the current study, the importance in Chinese culture of family harmony

and filial piety may have increased their sense of obligation to minimize conflict with parents by emphasizing cultural maintenance.

Another possible reason for the rejection of assimilation by the first generation study participants was raised by Berry (1999). He suggested that social ecology may impact the acculturation process in that having a large ethnic population that resides together in the same area increases the potential and possibly the preference for cultural maintenance. In the current study, participants lived in a community where the large Chinese population and strong community supports provided an environment in which cultural maintenance was a viable option. This may have played a role in the stronger support for separation over assimilation.

The issues raised by social identity theory may also be applied to explain the support for cultural maintenance over adoption of the mainstream culture among study participants. Proponents of this theory argue that people have a tendency to dissociate themselves from social groups that they perceive to have low status (Tajfel & Turner, 1986). This suggests that members of an ethnic minority group are more likely to adopt an assimilation approach if they feel that their group lacks prestige within the larger community. When applied to the results of the current study, the social identity approach implies that separation would be more strongly supported than assimilation if the Chinese immigrant youth felt positively about their ethnic group and considered it to be held in high esteem by others. Although opinions regarding the Chinese community were not directly elicited from study participants, research has found that Canadians described a relatively high degree of comfort with individuals of Chinese ethnic origin, especially compared to other visible minority groups (Berry & Kalin, 1995). Living in a community

with a large number of individuals from a particular ethnic group is also associated with more positive evaluations of that group (Berry, 1984). Finally, it may be hypothesized that the relatively high socioeconomic status of the Chinese community in the Greater Vancouver Area would increase their prestige within the mainstream community.

There may also be a more general explanation for the findings of the current study. It is possible that the immigrant youth in this study had resided in Canada for a relatively short period of time and that over the years they would come to support assimilation more strongly. Indeed, there is some evidence in the literature for a decline in cultural maintenance in later generations of immigrants (Phinney, 1990). Similarly, in the current study there was no difference in support for the acculturation attitudes of separation and assimilation in the second generation group indicating that cultural maintenance was not valued more than participation in mainstream culture. Although length of residence in Canada may account for this difference, it is also important to note that there has been a massive immigration of people of Chinese ethnic origin into Vancouver over the past decade. Therefore, the second generation group was reared in a different cultural climate where there were many fewer Chinese immigrants living in the community. Thus there may have been fewer opportunities and less community support for maintaining traditional values and customs.

It is difficult to determine which of these explanations best accounts for the rejection of assimilation and the stronger support for separation among the first generation Chinese immigrant group. Further research in this area is warranted.

The results of the study may have implications for the acculturation model proposed by Berry and his colleagues. First, the findings of previous studies with

university students and adult immigrants can now be extended to adolescent immigrants. There appears to be a consistent pattern in Canada as well as other countries in which integration is the preferred acculturation strategy among immigrants. However, there has been greater variability found regarding support for assimilation, separation, and marginalization, particularly among adolescent immigrants. Based on the results of the current study and as reported in several previous studies (e.g., Horenczyk, 1996; Sam, 1995) it appears that under certain circumstances immigrant adolescents may value cultural maintenance more highly than adoption of mainstream culture. There is a need for further research to better understand why some groups of immigrant adolescents will support separation more strongly than assimilation.

Second, as suggested by Berry and others, various group-level factors may have made separation more attractive than assimilation for these youth, including the ethnic density of the community. However, it may also be important to emphasize characteristics specific to a cultural group in the acculturation model, such as the values promoted by that culture. As indicated earlier, the emphasis in Chinese culture on filial piety and family harmony may have influenced the acculturation process among study participants such that cultural maintenance was more desirable than adoption of the mainstream culture.

The findings may also be relevant for the literature on acculturation of adolescent immigrants. Although some recent studies have found separation to be more strongly supported than assimilation among immigrant youth (Horenczyk, 1996; Sam, 1995), there appears to be a widespread belief that those who migrate as children and adolescents will tend to adopt an assimilation attitude (e.g., Baptiste, 1987; Birman &

Trickett, 1999; Rosenthal et al., 1996). Clearly this is not always the case. In particular, assimilation may be seen as an undesirable acculturation attitude by youth who are living in a community that has a large number of co-ethnics, in which there are structural supports for cultural maintenance, and when adolescents are from a culture in which considerable emphasis is placed on parental preferences.

Another objective of this study was to examine the mental health difficulties of study participants. Within the first generation group, the level of psychological distress among youth who had adopted an integration approach was compared to those who had adopted one of the other three acculturation strategies. Lower levels of distress were reported by the integration group compared with the non-integration group. These results are consistent with other acculturation research which has documented the benefits of integration over the other strategies (e.g., Berry et al, 1987; Schmitz, 1992).

Analyses also examined the relationships between the four acculturation attitudes and the index of distress. As expected, integration was positively associated with mental health and marginalization was negatively associated with mental health. These relationships are consistent with those reported in studies conducted in various countries and with various age groups (Aycan & Kanungo, 1996; Berry, 1999; Berry et al, 1987; Fernandez-Barillas & Morrison, 1984; Krishnan & Berry, 1992; Phinney, et al., 1992; Schmitz, 1992, 1994; Wong-Reiger & Quintana, 1987; Ying, 1995). Surprising, however, was the positive association found between separation and distress and the lack of association between assimilation and distress. Although other studies have found separation to be associated with higher levels of distress (e.g., Krishnan & Berry; Schmitz, 1992) and assimilation to have no association with mental health (e.g., Phinney

et al., 1992), specific characteristics of the current sample, such as their geographical location, appeared to make it more likely that assimilation would be associated with psychological distress and separation would be associated with positive psychological adjustment.

With respect to geographical location, many of the first generation youth resided in an area with a relatively high density of co-ethnics and many went to school with many other Chinese immigrants. This suggests that emphasizing cultural maintenance could allow for the development of a strong social support system and involvement in various after-school activities, factors associated with lower levels of psychological distress. The current results indicate, however, that supporting separation did not promote positive psychological adjustment. Perhaps this is because even youth living in a community with a large Chinese population must come into continuous contact with other members of Canadian society and mainstream culture, which could be a source of stress. Alternatively, the Chinese community might be a source of stress for the study participants. For example, a study with Chinese adolescent immigrants in Los Angeles found intragroup stressors, that is stressors emerging from within one's own ethnic group, to be a more significant source of stress for the youth than other stressors such as discrimination or pressure to achieve academically (Chiu & Ring, 1998).

Comparisons were also made between the level of distress reported among the three generational groups. Analyses revealed that both the integration and non-integration first generation groups reported higher levels of psychological distress than did the third or later generation Canadian group. These results are consistent with other cross-cultural studies that have reported greater distress among immigrant youth than

among their non-immigrant peers (e.g., Lorenzo et al., 1995; Olowu, 1983; Sam & Berry, 1995).

It was also of interest to assess factors that were associated with adjustment difficulties in the first generation immigrant group. In the current sample, higher levels of distress were reported among those who were opposed to the move than among those in favour of it and among those who planned to return to their country of origin in the future rather than remain in Canada. In addition, although the analysis about feeling consulted did not reach statistical significance, there was a trend towards participants who were not consulted prior to the move reporting higher levels of distress than those who were consulted. It is important to consider the possibility that adolescents experiencing greater adjustment difficulties would be less likely to want to remain in Canada. However, taken together the results of the current study highlight the significant relationship between the attitudes towards relocation and level of psychological adjustment. In this respect, it is interesting to consider these results in light of research that has found a higher level of distress among involuntary migrants compared to voluntary ones (Berry et al., 1987). Adolescents who were not in favour of the move and did not plan to remain in Canada can be considered involuntary migrants. As such, they would likely experience some of the same psychological difficulties as other involuntary migrants, including the knowledge that they must remain in the new country for an extended period of time and do not have the option of returning to their country of origin in the near future. It is also possible that adolescents who did not plan to remain in Canada would invest less effort in developing a social support system and as a result

would experience higher levels of psychological distress. Further research is necessary to better understand these issues.

Another factor that was examined was self-reported knowledge of English. Consistent with results from previous studies (Ying & Liese, 1990), there was a trend towards adolescents who reported having better English skills also describing better psychological adjustment. It may be hypothesized that these adolescents would have greater success at school which could positively impact on their adjustment and self-esteem. Furthermore, they would likely have less difficulty negotiating mainstream society and developing friendships with non-immigrant peers.

Several other factors assessed were not associated with level of adjustment. For example, males and females described similar levels of psychological distress. This was surprising given the fairly consistent reports of higher levels of psychological difficulties among females compared to males for both adult (Beiser et al., 1988; Krishnan & Berry, 1992; Scott & Scott, 1989; Ying & Liese, 1990) and adolescent immigrants (Chiu et al., 1992; Liebkind, 1993; Rumbaut, 1994; Sam, 1994). One possible explanation for this finding is that many of the factors that lead to greater adjustment difficulties among immigrant girls are not applicable for the current sample. For example, previous studies have suggested that girls may experience more adjustment difficulties because of the differential treatment by parents: girls are granted less freedom and fewer opportunities to adopt the values of the host culture (Edwards & Beiser, 1994; Jokhani, 1998). However, in the current study, participants' responses to open-ended questions suggest that few felt their parents' attitudes about their child maintaining his or her traditional culture and adopting Canadian culture were impacted by the child's gender. Moreover, some of the

respondents indicated that there would be more pressure on boys than girls to retain the traditional culture. In addition, researchers have suggested that, although traditional Chinese culture values males more highly, boys experience stricter discipline and more expectations than girls (Ho, 1989). Thus, for the first generation group in the current study, the similar opportunities granted to girls and boys for adopting mainstream culture could explain the lack of gender differences in mental health.

There was also no association between level of religiosity and level of reported psychological distress. However, the overall level of religious participation was relatively low among the immigrant youth. Indeed over one-quarter of those who responded to the question indicated that they had no religious preference while almost one-half stated that they never attend religious services. Even when the psychological adjustment of those who attend religious services was compared with those who never attend, there was no difference between the groups. It may be that religious attendance was not a protective factor for the first generation immigrant youth in this study because it did not play a major role in their lives.

In addition, adolescents who described changes in their family composition following migration did not report greater distress than those whose family composition remained unchanged. In the current sample, the majority of the youth who experienced a change in family composition went from living with both parents to living only with their mother and having their father in Canada some of the time. Although previous studies have reported that changes in family composition among immigrants can be a risk factor for greater adjustment difficulties (e.g., Abbott, et al., 1999; Beiser et al., 1988), these studies have tended to focus on married adults or on adolescent refugees who were

separated from their parents under traumatic circumstances and who were likely of a lower socioeconomic class than the current study participants. As well, those who lived with neither parent were at highest risk. It is unclear the extent to which participants in these studies continued to have contact with their absent family members. In the current sample, only a small minority of immigrant adolescents indicated that they were separated from both of their parents during the move, most did not enter Canada as refugees, and the majority continued to have at least some contact with both parents. Therefore, it is possible that the change in family composition was less extreme for the current sample compared with previous samples. Furthermore, study respondents described equally good relationships with their parents, regardless of whether they lived with them all of the time, some of the time, or none of the time. Thus, the relationship between the adolescent and the absent parent remained close despite the lack of direct ongoing contact, which could have minimized the impact of the change in family composition.

Age of migration was another factor examined in terms of its association with adjustment. In the current study, there was no difference in level of psychological distress between those who migrated as pre-adolescents compared to those who migrated as adolescents. However, analyses conducted based on length of residence in Canada showed a trend towards a u-shaped adjustment curve: those who had lived in Canada for an intermediate length of time (four to seven years) had higher levels of distress than those who had lived in Canada either less than four years or more than seven years. There has been some support in the literature for a u-shaped adjustment curve, especially when there are major economic and social differences between the country of origin and

the society of settlement (Ying & Liese, 1990). This may have been the experience of many of the immigrant youth.

Overall then it appears that factors related to the move were more strongly associated with psychological adjustment than were the demographic variables assessed.

Finally, variables associated with family conflict among the immigrant youth were assessed. Variables examined in the current study included gender, parental English language skills as reported by the youth, and, as discussed earlier, perceived correspondence between the acculturation strategy of the parent and the youth. Of these, only the perceived similarity in acculturation strategy was associated with less family conflict.

With regard to the lack of gender differences in level of family conflict, previous research suggested that conflicts between parents and daughters arise because greater adherence to traditional culture is expected among girls compared to boys (Danziger, 1974; Nguyen & Williams, 1989; Rosenthal, et al., 1996; Sharma, 1984). As indicated earlier, there is some evidence that, for parents in this study, gender did not affect their expectation regarding cultural maintenance. In addition, the lack of endorsement for abandoning the traditional culture among both males and females may have minimized the difference in level of conflict between parents and their sons and daughters. However, youth who perceived themselves to have adopted different acculturation strategies than their parents did describe more intergenerational conflict. This provides support for the importance of parental expectations with regard to cultural maintenance and adoption of mainstream culture for level of parent-child conflict.

Finally, when examining the impact of parental English language skills on intergenerational relationships, it can be hypothesized that the Chinese emphasis on filial piety would decrease the likelihood that family conflict would develop if children were required to assist their parents with English. In addition, it is possible that, because the current sample resided in a large Chinese community, there was less need to use English language skills and other services were available to assist with language difficulties. As a result, there may have been less need for parents to rely on their children for assistance.

Limitations

There are a number of limitations of this study to be addressed. First, it is important to examine how adjustment was defined. In cross-cultural studies, it is possible to use emic or etic approaches (Draguns, 1995). The former approach defines mental health difficulties from the perspective of the particular group being studied. This study used the latter approach in which previously defined categories are used to study mental health with different ethnic minority groups. Although such an approach allows for comparison between groups, ideas about what constitutes normal or problematic feelings and behaviours and the ways in which psychological distress is expressed varies among cultural groups (Angel & Thoits, 1987; Lee, 1996; Phinney & Rotheram, 1987). A number of steps were taken in order to minimize the problems often associated with etic research. Measures used were ones that have been found to have construct equivalence within Chinese and North American cultures. In addition, because researchers have found that psychological difficulties may be expressed more through physical symptoms in Chinese cultures, a somatic scale was also included in the test

package (Kleinman, 1982; Russell & Yik, 1996). Nonetheless, the problems associated with etic research designs remain.

There are also several methodological issues that present as potential limitations of this study. One issue is sample size. Although there were sufficient numbers in the first generation immigrant group, there was an underrepresentation of those adopting acculturation strategies other than integration. As a result, some of the proposed analyses could not be conducted. More importantly, it is difficult to determine whether this is an accurate reflection of the population or particular to this sample. In addition, there were fewer numbers of second and third or later generation participants, limiting the generalizability of the results to these groups and potentially affecting the comparisons made between the first generation immigrant group and the second and third or later generation groups.

Furthermore, the first and second generation Chinese immigrant groups were comprised of individuals who had migrated from primarily three different locations: China, Hong Kong, and Taiwan. Although there are many similarities between these groups there are also some important differences including amount of pre-migration exposure to Western culture and the English language and level of urbanization in the country of origin (Lai & Yue, 1990). Although no differences were found on the outcome measures based on country of origin, the number of people born in each country, particularly China, was relatively small and therefore important differences between youth born in different Chinese societies may not have been detected.

Another potential limitation is that the sample is not necessarily representative of the population of Chinese immigrants in the Greater Vancouver Area. As a result of

bureaucratic issues, it was only possible to sample youth from Vancouver and Richmond which limited the range of community ethnic density assessed. Although the density of the Chinese community is lower in Vancouver than in Richmond, one could not truly claim that there is a lack of support for the Chinese community as Vancouver has a well-established Chinatown area as well as a community centre and religious organizations. In the current study, even youth whose immediate community was not primarily Chinese lived in close proximity to a large Chinese community. Therefore, the study did not examine isolated Chinese youth living in areas where there would be few opportunities or support for maintaining the traditional culture. Furthermore, given the differences in the Chinese communities in Vancouver and Richmond, it would have been preferable to have a larger number of respondents from Richmond.

In addition, participation rates within classrooms and community centre groups varied widely as participation in this study was voluntary. The fact that youth self-selected to take part in the study raises the issue of whether the sample is truly representative of Chinese immigrant youth residing in the Greater Vancouver Area. It is difficult to determine the reasons that youth and/or their parents chose not to participate in the study. However, given the reluctance noted in the literature for individuals of Chinese ethnic origin to discuss emotional or family difficulties with others, it may be hypothesized that parents and children with higher levels of difficulties would be less likely to participate (Loo, Tong, & True, 1989). Consequently, the results of this study may be an underestimate of the actual levels of mental health difficulties and family conflict experienced by Chinese youth residing in the Greater Vancouver Area. In addition, it is possible that this tendency to not disclose personal information to others

would make traditional Chinese parents and children less likely to participate in the study. This may have had an impact on the results obtained, particularly with regard to the acculturation of the first and second generation groups.

A related limitation is the possibility that Chinese participants minimized adjustment difficulties and/or conflict within the family. The tendency to minimize mental health difficulties due to stigma and shame as well as to emphasize the maintenance of a public face in Chinese culture has been discussed in the literature (Schneider, 1998; Sue & Sue, 1987). This would have led the Chinese participants, especially those who have retained the traditional cultural values, to minimize areas of difficulty. This tendency is sometimes examined using scales of social desirability but was not assessed in this study.

Concerns may also be raised about the fact that parents were generally assessed as one unit in this study. That is, attitudes towards acculturation and level of family conflict were elicited for both parents together rather than separately. There is some evidence in the literature that the parenting styles of mothers and fathers in Chinese families may differ and that Chinese adolescents have different levels of conflict with one parent than the other (Berndt, Cheung, Lau, Hau, & Lew, 1993; Shek, 1999; Yau & Smetana, 1996). Furthermore, several respondents to the open-ended questions suggested that one parent had a different attitude about cultural maintenance and adoption of mainstream culture than the other. This suggests that there may have been a loss of important information and specificity if, for example, the participants had few conflicts with one parent and many conflicts with the other parent or felt that each parent had adopted a different acculturation strategy. However, some research has demonstrated a close correspondence

between the ratings children make in the level of conflict with their mothers and fathers (Rosenthal et al., 1996). Thus, it is difficult to determine the impact of assessing both parents together on the results obtained.

Finally, this study examined only some of the variables that may be important in the relationship between acculturation and mental health. Personality variables such as hardiness, level of social support, and acceptance or prestige of the Chinese community in the Greater Vancouver Area were not assessed although these factors have been noted to affect mental health (Berry & Kim, 1988). Furthermore, most of the variables examined were found to be relevant in studies conducted with adults and factors that may specifically impact adjustment among adolescents, including academic achievement and relationships with peers, were not examined. In addition, although the indices of adjustment used in this study (depression, anxiety, somatic symptoms, and overall adjustment) are often considered to be primary indices of mental health (Sam, 2000), this is a somewhat narrow definition of adjustment. Other areas relevant to adolescents, such as delinquent behaviour and substance use, were not assessed (Bailey, 1992; Li, Fang, Santon, Feigelman, & Dong, 1996; S. K. Wong, 1997).

Future Research

The results and identified limitations of the current study suggest several directions for future research. In terms of study design, it would be important to replicate this study with larger numbers of second, third and later generation participants in order to increase the power in the study and ensure the generalizability of the results. Moreover, it would be useful to have measures available in both Chinese and English in

order to minimize language difficulties and potentially allow for the inclusion of recent immigrants who do not know English. It could also be interesting to include a comparison sample of youth who live in China, Hong Kong, and Taiwan. This would allow more in-depth analyses about the impact of the migration process on psychological adjustment and family relationships.

In the current study, variables such as parental English proficiency and level of family conflict were determined based on ratings by the youth. In future projects, the perspective of the parents could be elicited to assess what effect this would have on the results. It is possible that if the views of parents were used in the analyses there would be support for some of the hypotheses not confirmed in the current study, such as gender differences in level of family conflict. Furthermore, as indicated earlier, it may be useful to examine factors such as level of intergenerational conflict and acculturation strategy separately for mothers and fathers. The potential importance of separate analyses was illustrated in several responses to the open-ended questions that suggested that views of parents differed in areas such as maintenance of the traditional culture. In addition, given the significant relationship between the similarity of acculturation strategy of the youth and parents and level of family conflict, there may indeed be important differences in the relationship of the adolescent with his or her mother and father. These issues may have particular relevance for Chinese immigrant youth who often reside primarily with one parent.

The use of a longitudinal research method would be helpful for identifying changes that may occur in an individual's acculturation style and level of adjustment over time. In particular, it would be interesting to further explore whether there is a

relationship between length of time since migration and adjustment. The current results suggest that there may be a u-shaped adjustment curve such that those who are more recent or longer-term immigrants have better adjustment than those who have been in Canada for an intermediate length of time. This relationship could be better examined if the level of adjustment among immigrant youth was assessed over time. Such information could assist in the development of more appropriate preventative programs for immigrant youth by targeting those who would be most at risk.

Finally, future research could focus on immigrant youth from other ethnic groups who do not comprise a significant minority of the population in the Greater Vancouver Area as well as Chinese adolescent immigrants in Canada who reside in communities other than Vancouver. This would allow for a test of the hypothesis that the results of this study are specific to immigrant youth who reside in an area with many co-ethnics. Furthermore, it would be interesting to replicate this study in a community such as San Francisco, which also has a large well established Chinese community but is located in a country that promotes assimilation rather than integration.

Concluding Remarks

The results of this study confirm and extend earlier research in the areas of acculturation, mental health, and family relationships among first generation immigrant youth. Specifically, first generation Chinese adolescent immigrants residing in a large co-ethnic community in Canada were found to strongly support integration and reject other acculturation strategies. Furthermore, stronger support was found for the acculturation attitude of separation compared to assimilation among the first generation

Chinese participants. This study also identified several factors that were associated with greater mental health difficulties among the immigrant youth including adoption of an acculturation strategy other than integration, not feeling confident about their English language skills, and feeling more negative about the move to Canada. Moreover, immigrant adolescents who had adopted a different acculturation strategy than their parents described more conflictual family relationships highlighting the relevance of the acculturation process for family functioning. This study makes an important contribution to cross-cultural research not only because it focuses on adolescent immigrants, who are underrepresented in the literature, but also because it examines the acculturation process and adjustment of youth residing in a unique community with a large number of co-ethnics. The study results also provide useful information that will allow those providing services to more accurately identify the immigrant youth and their families who are at risk for experiencing difficulties and tailor their treatment programs to meet the needs of these individuals.

References

- Abbott, M.W., Wong, S., Williams, M., Au, M., & Young, W. (1999). Chinese migrants' mental health and adjustment to life in New Zealand. Australian and New Zealand Journal of Psychiatry, 33, 13-21.
- Acock, A. C., & Demo, D. H. (1994). Family diversity and well-being. Thousand Oaks, CA: Sage.
- Anastasi, A. (1988). Psychological testing (6th ed.). New York: Macmillan.
- Angel, R., & Thoits, P. (1987). The impact of culture on the cognitive structure of illness. Culture, Medicine and Psychiatry, 11, 465-494.
- Arieli, A., & Aycheh, S. (1992). Psychopathology among Jewish Ethiopian immigrants to Israel. Journal of Nervous and Mental Disease, 180, 465-466.
- Armes, K., & Ward, C. (1989). Cross-cultural transitions and sojourner adjustment in Singapore. Journal of Social Psychology, 29, 273-275.
- Aroian, K. J., Norris, A. E., Patsdaughter, C.A., & Tran, T. V. (1998). Predicting psychological distress among former Soviet immigrants. International Journal of Social Psychiatry, 44, 284-294.
- Aronwitz, M. (1984). The social and emotional adjustment of immigrant children: A review of the literature. International Migration Review, 18, 237-257.
- Aronwitz, M. (1992). Adjustment of immigrant children as a function of parental attitudes to change. International Migration Review, 26, 89-110.
- Ashworth, M. (1982). The cultural adjustment of immigrant children in English Canada. In R. C. Nann (Ed.) Uprooting and surviving: Adaptation and resettlement of migrant families and children (pp. 77-83). Dordrecht, Holland: D. Reidel.
- Aycan, A., & Kanungo, R. N. (1996). Impact of acculturation on socialization beliefs and behavioral occurrences among Indo-Canadian immigrants. Journal of Comparative Family Studies, 29, 451-467.
- Bailey, G. W. (1992). Children, adolescents, and substance use. Journal of the American Academy of Child and Adolescent Psychiatry, 31, 1015 - 1018.
- Banks, M. H. (1983). Validation of the General Health Questionnaire in a young community sample. Psychological Medicine, 13, 349-353.

Bankston, C. L. III, & Zhou, M. (1995). Religious participation, ethnic identification, and adaptation of Vietnamese adolescents in an immigrant community. The Sociological Quarterly, 36, 523-534.

Baptiste, D. A., Jr. (1987). Family therapy with Spanish-heritage immigrant families in cultural transition. Contemporary Family Therapy, 9, 229-251.

Baptiste, D. A., Jr. (1993). Immigrant families, adolescents and acculturation: Insights for therapists. Marriage and Family Review, 19, 341-363.

Barankin, T., Konstantareas, M. M., & de Bosset, F. (1989). Adaptation of recent Soviet Jewish immigrants and their children to Toronto. Canadian Journal of Psychiatry, 34, 512-518.

Barrera, M. Jr., & Garrison-Jones, C. V. (1988). Properties of the Beck Depression Inventory as a screening instrument for adolescent depression. Journal of Abnormal Child Psychology, 16, 236-273.

Bashir, M. R. (1993). Issues of immigration for the health and adjustment of young people. Journal of Paediatric and Child Health, 29 (Suppl. 1), S42-S45.

Bech, P., & Clemmesen, L. (1983). The diagnosis of depression: 20 years later. Acta Psychiatrica Scandinavica, 68 (Suppl. 310), 9-30.

Beck, A. T., & Steer, R. A. (1984). Internal consistencies of the original and revised Beck Depression Inventory. Journal of Clinical Psychology, 40, 1365-1367.

Beck, A. T., Steer, R. A., & Garbin, M. G. (1988). Psychometric properties of the Beck Depression Inventory: Twenty-five years of evaluation. Clinical Psychology Review, 8, 77-100.

Beck, A. T., Ward, C. H., Mendelson, M., Mock, J., & Erbaugh, J. (1961). An inventory for measuring depression. Archives of General Psychiatry, 4, 561-571.

Beiser, M., Barwick, C., Berry, J. W., daCosta, G., Fantino, A., Ganeson, S., Lee, C., Milne, W., Naidoo, J., Prine, R., Tousignant, M., & Vela, E. (1988). Mental health issues affecting immigrants and refugees. Ottawa, Canada: Ministry of Supply and Services.

Beiser, M., Dion, R., Gotowiec, A., Hyman, I., & Vu, N. (1995). Immigrant and refugee children in Canada. Canadian Journal of Psychiatry, 40, 67-72.

Beiser, M., Turner, R. J., & Ganeson, S. (1989). Catastrophic stress and factors affecting its consequences among Southeast Asian refugees. Social Science and Medicine, 28, 183-195.

- Bengi-Arslan, L., Verhulst, F. C., van der Ende, J., & Erol, N. (1997). Understanding childhood (problem) behaviors from a cultural perspective: Comparison of problem behaviors and competencies in Turkish immigrant, Turkish and Dutch children. Social Psychiatry and Psychiatric Epidemiology, 32, 477-484.
- Bennett, D. S., Ambrosini, P. J., Bianchi, M., Barnett, D., Metz, C., & Rabinovich, H. (1997). Relationship of Beck Depression Inventory factors to depression among adolescents. Journal of Affective Disorders, 45, 127-134.
- Berk, B. B., & Hirata, L. C. (1973). Mental illness among the Chinese: Myth or reality. Journal of Social Issues, 29, 149-166.
- Berndt, T. J., Cheung, P. C., Lau, S., Hau, K., & Lew, W. J. F. (1993). Perceptions of parenting in Mainland China, Taiwan, and Hong Kong: Sex differences and societal differences. Developmental Psychology, 29, 156-164.
- Berry, J. W. (1984). Multicultural policy in Canada: A social psychological analysis. Canadian Journal of Behavioural Science, 16, 353-370.
- Berry, J. W. (1994). Acculturation and psychological adaptation: An overview. In A. Bouvy, F. J. R. van de Vijver, P. Boski, & P. Schmitz (Eds.), Journeys into cross-cultural psychology (pp. 129-141). Amsterdam: Swets & Zeitlinger.
- Berry, J. W. (1997). Immigration, acculturation, and adaptation. Applied Psychology: An International Review, 46, 5-68.
- Berry, J. W. (1999). Intercultural relations in plural society. Canadian Psychology, 40, 12-21.
- Berry, J. W., & Kalin, R. (1995). Multicultural and ethnic attitudes in Canada: An Overview of the 1991 National Survey. Canadian Journal of Behavioural Science, 27, 301-320.
- Berry, J. W., & Kim, U. (1988). Acculturation and mental health. In R. P. Dasen, J. W. Berry, & N. Sartorius (Eds.), Health and cross-cultural psychology (pp. 207-236). Newbury Park, CA: Sage.
- Berry, J. W., Kim, U., Minde, T., & Mok, D. (1987). Comparative studies of acculturative stress. International Migration Review, 21, 491-511.
- Berry, J. W., Kim, U., Power, S., Young, M., & Bujaki, M. (1989). Acculturation attitudes in plural societies. Applied Psychology: An International Review, 38, 185-206.
- Berry, J. W., Poortinga, Y. H., Segall, M. H., & Dasen, P. R. (1992). Cross-cultural psychology: Research and practice. New York: Cambridge University Press.

Birman, D., & Trickett, E. J. (1999). Cultural transitions in first generational immigrants: Acculturation of Soviet Jewish refugee adolescents and their parents. Manuscript submitted for publication.

Borrine, M. L., Handal, P. J., Brown, N. Y., & Searight, H. R. (1991). Family conflict and adolescent adjustment in intact, divorced, and blended families. Journal of Consulting and Clinical Psychology, *59*, 753-755.

Bowman, B., & Edwards, M. (1984). The Indochinese refugee: An overview. Australian and New Zealand Journal of Psychiatry, *18*, 40-52.

Brendt, T. J., Cheung, P. C., Lau, S., Hau, K., & Lew, W. J. F. (1993). Perceptions of parenting in Mainland China, Taiwan, and Hong Kong: Sex differences and societal differences. Developmental Psychology, *29*, 156-164.

Brunet, R. (1994). The bitter poison pill of multiculturalism. Alberta Report, *21*, 32-33.

Brym, R. J., Gillespie, M.W., & Gillis, A. R. (1985). Anomie, opportunity, and the density of ethnic ties: Another view of Jewish outmarriage in Canada. Review of Canadian Sociology and Anthropology, *22*, 102-112.

Callaghan, P., Yuk-Lung, C., Ida, Y. K., & Sui-Ling, C. (1998). Evidence-based care of Chinese men having transurethral resection of the prostate (TURP). Journal of Advanced Nursing, *28*, 576-583.

Campbell, I. A., Burgess, P. M., & Finch, S. J. (1984). A factorial analysis of BDI scores. Journal of Clinical Psychology, *40*, 992-996.

Carpenter, L., & Brockington, I. F. (1980). A study of mental illness in Asians, West Indians, and Africans in Manchester. British Journal of Psychiatry, *137*, 201-205.

Cashmore, J. A., & Goodnow, J. J. (1986). Influences on Australian parents' values. Journal of Cross-Cultural Psychology, *17*, 441-454.

Chan, D. W. (1985). The Chinese version of the General Health Questionnaire: Does language make a difference? Psychological Medicine, *15*, 147-155.

Chan, D. W., & Chan, T. S. C. (1983). Reliability, validity and the structure of the General Health Questionnaire in a Chinese context. Psychological Medicine, *13*, 363-371.

Chan, D. W., & Lee, B. (1993). Dimensions of self-esteem and psychological symptoms among Chinese adolescents in Hong Kong. Journal of Youth and Adolescence, *22*, 425-440.

Chan, S., & Leong, C. W. (1994). Chinese families in transition: Cultural conflicts and adjustment problems. Journal of Social Distress and the Homeless, 3, 263-281.

Chan, C., & Tsoi, M. M. (1984). The BDI and stimulus determinants of cognitive-related depression among Chinese college students. Cognitive Therapy and Research, 8, 501-508.

Chang, L., Morrissey, R. F., & Koplewica, H. S. (1995). Prevalence of psychiatric symptoms and their relation to adjustment among Chinese-American youth. Journal of the American Academy of Child and Adolescent Psychiatry, 34, 91-99.

Chao, R. K. (1999, August). The role of linguistic brokering in the ethnic identity and parent-child relations of Chinese and Mexican immigrant families. Paper presented at the SPSSI International Conference on Immigrants and Immigration, Toronto, Canada.

Cheng, C. (1998). Psychometric properties of the social-conflict scales for Chinese adolescents. Journal of Social Psychology, 138, 211-216.

Cheng, T. (1985). A pilot study of mental disorders in Taiwan. Psychological Medicine, 15, 195-203.

Cheung, P. C., & Lau, S. (1985). Self-esteem: Its relationship to the family and school social environments among Chinese adolescents. Youth and Society, 16, 438-456.

Chiu, M. L., Feldman, S. S., & Rosenthal, D. A. (1992). The influence of immigration on parental behavior and adolescent distress in Chinese families residing in two Western nations. Journal of Research on Adolescence, 2, 205-239.

Chiu, Y., & Ring, J. M. (1998). Chinese and Vietnamese immigrant adolescents under pressure: Identifying stressors and interventions. Professional Psychology: Research and Practice, 29, 444-449.

Chud, B. (1982). The threshold model: A conceptual framework for understanding and assisting children of immigrants. In R. C. Nann (Ed.) Uprooting and surviving: Adaptation and resettlement of migrant families and children (pp. 95-99). Dordrecht, Holland: D. Reidel.

Church, A. (1982). Sojourner adjustment. Psychological Bulletin, 91, 540-572.

Citizenship and Immigration Canada (1997). Facts and Figures 1996: Immigration Overview (Catalogue no. 93F0023XDB96000). Ottawa, ON: Government Services Canada.

Citizenship and Immigration Canada (2000). Facts and Figures 1999: Immigration Overview (Catalogue no. MP43-333/2000E). Ottawa, ON: Government Services Canada.

Cochrane, R. (1977). Mental illness in immigrants to England and Wales: An analysis of mental hospital admission, 1971. Social Psychiatry, *12*, 25-35.

Cochrane, R., & Bal, S. S. (1988). Ethnic density is unrelated to incidence of schizophrenia. British Journal of Psychiatry, *153*, 363-366.

Cohon, J. D., Jr. (1981). Psychological adaptation and dysfunction among refugees. International Migration Review, *15*, 255-275.

Coll, C. G., & Magnuson, K. (1997). The psychological experience of immigration: A developmental perspective. In A. Booth, A. C. Crouter, & N. Landale (Eds.), Immigration and the family (pp. 91-131). Mahwah, NJ: Lawrence Erlbaum Associates.

Con, H., Con, R. J., Johnson, G., & Wickberg, E., & Willmott, W. E. (1982). From China to Canada: A history of the Chinese communities in Canada. Toronto, ON: McClelland & Stewart.

Creese, G., & Peterson, L. (1996). Making the news, racializing Chinese Canadians. Studies in Political Economy, *51*, 117-145.

Crystal, D. S., Chen, C., Fuligni, A. J., Stevenson, H. W., Hsu, C., Ko, H., Kitamura, S., & Kimura, S. (1994). Psychological maladjustment and academic achievement: A cross-cultural study of Japanese, Chinese, and American high school students. Child Development, *65*, 738-753.

Danziger, K. (1974). The acculturation of Italian immigrant girls in Canada. International Journal of Psychology, *9*, 129-137.

Davies, L. C., & McKelvey, R. S. (1998). Emotional and behavioural problems and competencies among immigrant and non-immigrant adolescents. Australian and New Zealand Journal of Psychiatry, *32*, 658-665.

Demo, D. H., Small, S. A., & Savin-Williams, R. C. (1987). Family relations and the self-esteem of adolescents and their parents. Journal of Marriage and the Family, *49*, 705-715.

DeSantis, L., & Ugarriza, D. N. (1995). Potential for intergenerational conflict in Cuban and Haitian immigrant families. Archives of Psychiatric Nursing, *9*, 354 - 364.

Dion, K. L., & Dion, K. K. (1996). Chinese adaptation to foreign cultures. In M. H. Bond (Ed.), Handbook of Chinese psychology (pp. 457-478). Hong Kong: Oxford University Press.

Donà, G., & Berry, J. W. (1994). Acculturative attitudes and acculturative stress of Central American refugees. International Journal of Psychology, 29, 57-70.

Draguns, J. G. (1995). Cultural influences upon psychopathology: Clinical and practical implications. Journal of Social Distress and the Homelessness, 4, 79-103.

Draguns, J. G. (1996). Abnormal behavior in Chinese societies. In M. H. Bond (Ed.), Handbook of Chinese psychology (pp. 412-428). Hong Kong: Oxford University Press.

DuongTran, Q. (1996). Psychosocial correlates and depression in Vietnamese adolescents. Child and Adolescent Social Work Journal, 13, 41-50.

Dyal, J. A., & Chan, C. (1985). Stress and distress: A study of Hong Kong Chinese and Euro-Canadian students. Journal of Cross-Cultural Psychology, 16, 447-466.

Edwards, R.G., & Beiser, M. (1994). Southeast Asian refugee youth in Canada: The determinants of competence and successful coping. Canada's Mental Health, 42, 1-5.

Ekblad, S. (1988). Influence of child-rearing on aggressive behavior in transcultural perspective. Acta Psychiatrica Scandinavica, 78(344 Suppl), 133-139.

Enos, D. M., & Handal, P. J. (1986). The relation of parental marital status and perceived family conflict to adjustment in White adolescents. Journal of Consulting and Clinical Psychology, 54, 820-824.

Erikson, E. H. (1968). Identity: Youth and crisis. New York: W. W. Norton & Company.

Escobar, J. I. (1993). Psychiatric epidemiology. In A. C. Gaw (Ed.), Culture, ethnicity, and mental illness (pp. 43-73). Washington, DC: American Psychiatric Press.

Esses, V. M., & Gardner, R. C. (1996). Multiculturalism in Canada: Context and current status. Canadian Journal of Behavioural Sciences, 28, 145-152.

Evans, B., & Lee, B. K. (1998). Culture and child psychopathology. In S. S. Kazarian & D. R. Evans (Eds.), Cultural Clinical Psychology (pp.289-309). New York: Oxford University Press.

Farrell, A. D., & White, K. S. (1998). Peer influences and drug use among urban adolescents: Family structure and parent-adolescent relationship as protective factors. Journal of Consulting and Clinical Psychology, 66, 248-258.

Felsman, J. K., Leong, F. T., Johnson, M.A., & Felsman, I. C. (1990). Estimates of psychological distress among Vietnamese refugees: Adolescents, unaccompanied minors and young adults. Social Science and Medicine, 31, 1251-1256.

Fernandez-Barillas, H. J., & Morrison, T. L. (1984). Cultural affiliation and adjustment among male Mexican-American college students. Psychological Reports, 55, 855-860.

Florsheim, P. (1997). Chinese adolescent immigrants: Factors related to psychosocial adjustment. Journal of Youth and Adolescence, 26, 143-163.

Fuligni, A. J. (1998). The adjustment of children from immigrant families. Current Directions in Psychological Science, 7, 99-103.

Gao, G. (1998). An initial analysis of the effects of face and concern for "other" in Chinese interpersonal communications. International Journal of Intercultural Relations, 22, 167-482.

Gaw, A. C. (1993). Psychiatric care of Chinese Americans. In A. C. Gaw (Ed.), Culture, ethnicity, and mental illness (pp. 245-280). Washington, DC: American Psychiatric Press.

Gecas, V., & Schwalbe, M. L. (1986). Parental behavior and adolescent self-esteem. Journal of Marriage and the Family, 48, 37-46.

Georgas, J., & Papastyliaou, D. (1994). The effect of time on stereotypes: Acculturation of children of returning immigrant to Greece. In A. Bouvy, F. J. R. van de Vijver, P. Boski, & P. Schmitz (Eds.), Journeys into cross-cultural psychology (pp. 158-166). Amsterdam: Swets & Zeitlinger.

Ghaffarian, S. (1987). The acculturation of Iranians in the United States. Journal of Social Psychology, 127, 565-571.

Ghiselli, E. E., Campbell, J. P., & Zedeck, S. (1981). Measurement theory for the behavioral sciences. San Francisco: W. H. Freeman.

Ghuman, P. A. S. (1997). Assimilation or integration: A study of Asian adolescents. Educational Research, 39, 23-34.

Gil, A. G., Vega, W. A., & Dimas, J. M. (1994). Acculturative stress and personal adjustment among Hispanic adolescent boys. Journal of Community Psychology, 22, 43-54.

Gim, R. H., Atkinson, D. R., & Whiteley, S. (1990). Asian-American acculturation, severity of concerns, and willingness to see a counselor. Journal of Counseling Psychology, 37, 281-285.

Goldberg, D. P. (1972). The detection of psychiatric illness by questionnaire. London: Oxford University Press.

Goldberg, D. P., & Blackwell, B. (1970). Psychiatric illness in general practice. British Medical Journal, 2, 439-443.

Goldscheider, C., & Goldscheider, F. K. (1988). Ethnicity, religiosity, and leaving home: The structural and cultural bases of traditional family values. Sociological Forum, 3, 525-547.

Gordon, M. M. (1964). Assimilation in American life. New York: Oxford University Press.

Gorman, J. C. (1998). Parenting attitudes and practices of immigrant Chinese mothers of adolescents. Family Relations, 47, 73-80.

Greenberg, M. T., Siegel, J. M., & Leitch, C. J. (1983). The nature and importance of attachment relationships to parents and peers during adolescence. Journal of Youth and Adolescence, 12, 373-386.

Greenberger, E., & Chen, C. (1996). Perceived family relationships and depressed mood in early and late adolescence: A comparison of European and Asian Americans. Developmental Psychology, 32, 707-716.

Greenberger, E., Chen, C., Tally, S. R., & Dong, Q. (1996). Family, peer, and individual correlates of depressive symptomatology among U.S. and Chinese adolescents. Journal of Consulting and Clinical Psychology, 68, 209-219.

Guarnaccia, P. J., & Lopez, S. (1998). The mental health and adjustment of immigrant and refugee children. Child and Adolescent Psychiatric Clinics of North America, 7, 537-553.

Hall, J. A. (1987). Parent-adolescent conflict: An empirical review. Adolescence, 22, 767-789.

Halldin, J. (1985). Prevalence of mental disorder in an urban population in central Sweden in relation to social class, marital status and immigration. Acta Psychiatrica Scandinavica, 71, 117-127.

Hamid, P. N., & Wyllie, A. J. (1980). What generation gap? Adolescence, 15, 385-391.

Handy, S., Chithiramohan, R. N., Ballard, C. G., & Silveira, W. R. (1991). Ethnic differences in adolescent self-poisoning: A comparison of Asian and Caucasian groups. Journal of Adolescence, 14, 157-162.

Haour-Knipe, M. (1989). International employment and children: Geographic mobility and mental health among children of professionals. Social Science and Medicine, 28, 197-205.

Heras, P., & Revilla, L. A. (1994). Acculturation, generational status, and family environment of Philipino Americans: A study in cultural adaptation. Family Therapy, 21, 129-138.

Hertz, D. G. (1988). Identity - lost and found: Patterns of migration and psychological and psychosocial adjustment of migrants. Acta Psychiatrica Scandinavica, 78, 159-165.

Hinton, W. L., Tiet, Q., Tran, C. G., & Chesney, M. (1997). Predictors of depression among refugees from Vietnam: A longitudinal study of new arrivals. Journal of Nervous and Mental Disease, 185, 39-45.

Ho, D. Y. F. (1989). Continuity and variation in Chinese patterns of socialization. Journal of Marriage and the Family, 51, 149-163.

Ho, D. Y. F. (1996). Filial piety and its psychological consequences. In M. H. Bond (Ed.), Handbook of Chinese psychology (pp. 155-165). Hong Kong: Oxford University Press.

Horenczyk, G. (1996). Migrant identities in conflict: Acculturation attitudes and perceived acculturation ideologies. In G. M. Breakwell & E. Lyons (Eds.), Changing European identities: Social psychological analyses of social change (pp. 241-250). Oxford: Butterworth Hememann.

Hughes, J. (1982). Emotional reactions to the diagnosis and treatment of early breast cancer. Journal of Psychosomatic Research, 26, 277-283.

Hwang, K. (1990). A psychological perspective of Chinese interpersonal morality. In C. A. Seyschab, A. Sievers, & S. Szykiewicz (Eds.), Society, culture, and patterns of behavior (pp. 10-24). Bonn, Germany: Horlemann.

Johnson, G. E. (1992). Ethnic and racial communities in Canada and problems of adaptation. Ethnic Groups, 9, 151-174.

Johnson, G. E. (1994). Hong Kong immigration and the Chinese community in Vancouver. In R. Skeldon (Ed.), Reluctant exiles? Migration from Hong Kong and the new overseas Chinese (pp. 120-138). Armonk, NY: M. E. Sharpe.

Johnson, G. E., & Lary, D. (1994). Hong Kong migration to Canada: The background. In R. Skeldon (Ed.), Reluctant exiles? Migration from Hong Kong and the new overseas Chinese (pp. 87-97). Armonk, NY: M. E. Sharpe.

Jokhani, V. (1998, April). The impact of migration on the mental health of adolescents. Paper presented at the meeting of the Cross-Cultural Psychiatry Program, Department of Psychology, University of British Columbia, Vancouver, Canada.

Jöreskog, K., & Sörbom, D. (1997). LISREL 8.20 for Windows [Computer software]. Mooresville, IN: Scientific Software International.

Juthani, N. V. (1992). Immigrant mental health: Conflicts and concerns of Indian immigrants in the U.S.A. Psychology and Developing Societies, 4, 133-148.

Kartakis, P. (1998, June). Home and native land: Cultural assimilation and intergenerational conflict. Poster presented at the annual meeting of the Canadian Psychological Association, Edmonton, Alberta, Canada.

Kealey, D. J. (1989). A study of cross-cultural effectiveness: Theoretical issues, practical applications. International Journal of Intercultural Relations, 13, 387-428.

Kelloway, E. K. (1998). Using LISREL for Structural Equation Modeling. Thousand Oaks, CA: Sage.

Kerner, S. A., & Jacobs, K. W. (1983). Correlation between scores on the Beck Depression Inventory and the Zung Self-Rating Depression Scale. Psychological Reports, 53, 969-970.

Kirmayer, L. (1989). Cultural variations in the response to psychiatric disorders and emotional distress. Social Science and Medicine, 29, 327-339.

Kirmayer, L. (1998, June). Migration and mental health in the global village. Paper presented at the meeting of the Cross-Cultural Psychiatry Program, Department of Psychiatry, University of British Columbia, Vancouver, Canada.

Kleinman, A. (1982). Neurasthenia and depression: A study of somatization and culture in China. Culture, Medicine, and Psychiatry, 6, 117-190.

Kleinman, A. (1987). Anthropology and Psychiatry: The role of culture in cross-cultural research on illness. British Journal of Psychiatry, 151, 447-454.

Kleinman, A., & Kleinman, J. (1985). Somatization: The interconnections in Chinese societies among culture, depressive experience, and the meanings of pain. In A. Kleinman & B. Good (Eds.) Culture and depression (pp. 429-490). Berkley, CA: University of California Press.

Kleinman, A., & Kleinman, J. (1999). The transformation of everyday social experiences. Culture, Medicine and Psychiatry, 23, 7-24.

Klimidis, S., Stuart, G., Minas, I. H., & Ata, A. W. (1994). Immigrant status and gender effects on psychopathology and self-concept in adolescents: A test of the migration-morbidity hypothesis. Comprehensive Psychiatry, 35, 393-404.

Kline, R. B. (1998). Principles and practice of structural equation modeling. New York: Guilford Press.

Knight, G. P., & Hill, N. E. (1998). Measurement equivalence in research involving ethnic minority adolescents. In V. C. McLoyd & L. Steinberg (Eds.), Studying minority adolescents (pp. 183-210). Mahwah, NJ: Erlbaum.

Knight, R. G., Waal-Manning, H. K., & Spears, G. F. (1983). Some norms and reliability data for the State-Trait Anxiety Inventory and the Zung Self-Rating Depression scale. British Journal of Clinical Psychology, 22, 245-249.

Kraus, J. (1969). The relationship of psychiatric diagnosis, hospital admission rates, and size and age structure of immigrant groups. Medical Journal of Australia, 2, 91-95.

Krishnan, A., & Berry, J. W. (1992). Acculturative stress and acculturation attitudes among Indian immigrants to the United States. Psychology and Developing Societies, 4, 187-212.

Krupinski, J. (1984). Changing patterns of migration to Australia and their influence on the health of migrants. Social Science and Medicine, 18, 927-937.

Kuo, H. W. (1984). Prevalence of depression among Asian-Americans. Journal of Nervous and Mental Disease, 172, 449-457.

Kuo, W. (1976). Theories of migration and mental health: An empirical testing on Chinese-Americans. Social Science and Medicine, 10, 297-306.

Kuo, C., & Kavanagh, K. H. (1994). Chinese perspectives on culture and mental health. Issues in Mental Health Nursing, 15, 551-567.

Kuo, W. H., & Tsai, Y. (1986). Social networking, hardiness and immigrant's mental health. Journal of Health and Social Behavior, 27, 133-149.

Kvernmo, S., & Heyerdahl, S. (1996). Ethnic density in aboriginal Sami adolescents: The impact of the family and ethnic community contexts. Journal of Adolescence, 19, 453-463.

LaFromboise, T., Coleman, H. L. K., & Gerton, J. (1993). Psychological impact of biculturalism: Evidence and theory. Psychological Bulletin, 114, 395-412.

Lai, M. C., & Yue, K. K. (1990). The Chinese. In N. Waxler-Morrison, J. Anderson, & E. Richardson (Eds.), Cross-cultural caring: A handbook for professionals in Western Canada (pp. 68-90). Vancouver, Canada: University of British Columbia Press.

Lasry, J. M., & Sigal, J. S. (1980). Mental and physical health correlates in an immigrant population. Canadian Journal of Psychiatry, 25, 391-393.

Lay, C., & Nguyen, T. (1998). The role of acculturation-related and acculturation-nonspecific daily hassles: Vietnamese-Canadian students and psychological distress. Canadian Journal of Behavioural Science, 30, 172-181.

Le Corre, P. (1994). Canada's Hong Kong. Far Eastern Economic Review, 157, 36-37.

Lee, R. N. F. (1986). The Chinese perception of mental illness in the Canadian mosaic. Canada's Mental Health, 34, 2-4.

Lee, S. (1996). Cultural in psychiatric nosology: The CCMD-2-R and international classification of mental disorders. Culture, Medicine and Psychiatry, 20, 421-472.

Lee, A. M., & Lee, S. (1996). Disordered eating and its psychosocial correlates among Chinese adolescent females in Hong Kong. International Journal of Eating Disorders, 20, 177-183.

Lee, D. T. S., Yip, S. K., Chiu, H. F. K., Leung, T. Y. S., Chan, K. P. M., Chau, I. O. L., Leung, H. C. M., & Chung, T. K. H. (1998). Detecting postnatal depression in Chinese women. British Journal of Psychiatry, 172, 433-437.

Leung, J. P. (1998). Emotions and mental health in Chinese people. Journal of Child and Family Studies, 7, 115-128.

Leung, K. (1996). Role of beliefs in Chinese culture. In M. H. Bond (Ed.), Handbook of Chinese psychology (pp. 247-262). Hong Kong: Oxford University Press.

Leung, J., & Leung, K. (1992). Life satisfaction, self-concept, and relationship with parents in adolescence. Journal of Youth and Adolescence, 21, 653-665.

Leung, K., & Lau, S. (1989). Effects of self-concept and perceived disapproval of delinquent behavior in school children. Journal of Youth and Adolescence, 18, 345-359.

Leung, P. W. L., Salili, F., & Baber, F. M. (1986). Common adolescent problems in Hong Kong: Their relationship with self-esteem, locus of control, intelligence and family environment. Psychologica, 29, 91-101.

Li, P. S. (1998). The Chinese in Canada (2nd ed.). Toronto: Oxford University Press.

Li, X., Fang, X., Santon, B., Feigelman, S., & Dong, Q. (1996). The rate and pattern of alcohol consumption among Chinese adolescents. Journal of Adolescent Health, 19, 353-361.

Liebkind, K. (1993). Self-reported ethnic identity, depression and anxiety among young Vietnamese refugees and their parents. Journal of Refugee Studies, 6, 25-39.

Lightfoot, S. L., & Oliver, J. M. (1985). The Beck Depression Inventory: Psychometric properties in university students. Journal of Personality Assessment, 49, 434-436.

Loo, C., Tong, B., & True, R. (1989). A bitter bean: Mental health status and attitudes in Chinatown. Journal of Community Psychology, 17, 283-296.

Lorenzo, M. K., Pakiz, B., Reinherz, H. Z., & Frost, A. (1995). Emotional and behavioural problems of Asian American adolescents: A comparative study. Child and Adolescent Social Work Journal, 12, 197-112.

Loring, M., & Powell, B. (1988). Gender, race and the DSM-III: A study of the objectivity of psychiatric diagnostic behavior. Journal of Health and Social Behavior, 29, 1-22.

Lu, L. (1990). Adaptation to British universities: Homesickness and mental health of Chinese students. Counselling Psychology Quarterly, 3, 225-232.

McLoyd, V. C. (1998). Changing demographics in the American population. In V. C. McLoyd & L. Steinberg (Eds.), Studying minority adolescents (pp. 3-28). Mahwah, NJ: Erlbaum.

Ma, C. (1978). Chinese pioneers: Materials concerning the immigration of Chinese to Canada and Sino-Canadian relations. Vancouver, British Columbia, Canada: Versatile.

Ma, H. K., & Leung, M. C. (1990). The adaptation of the Family Environment Scale to Chinese children and adolescents in Hong Kong. International Journal of Psychology, *25*, 545-555.

Mägiste, E. (1992). Social isolation and juvenile delinquency in second generation immigrants. Studia Psychologica, *2*, 153-165.

Maingot, A. P. (1985). The stress factors in migration: A dissenting view. Migration Today, *13*, 26-29.

Majury, N. (1994). Signs of the times: Kerrisdale, a neighbourhood in transition. Canadian Geographer, *38*, 265-270.

Malzberg, B. (1969). Are immigrants psychologically disturbed? In S. C. Plog & R. B. Edgerton (Eds.), Changing perspectives in mental illness (pp. 395-421). New York: Hort, Rinehart & Winston.

Matsuoka, J. K. (1990). Differential acculturation among Vietnamese refugees. Social Work, *35*, 341-345.

Mehta, S. (1998). Relationship between acculturation and mental health for Asian Indian immigrants in the United States. Genetic, Social, and General Psychology Monographs, *124*, 61-78.

Mena, F. J., Padilla, A. M., & Maldonado, M. (1987). Acculturative stress and specific coping strategies among immigrant and later generation college students. Hispanic Journal of Behavioral Sciences, *9*, 207-225.

Mezey, A. G. (1960). Psychiatric aspects of human migrations. International Journal of Social Psychiatry, *5*, 245-260.

Minde, K., & Minde, R. (1976). Children of immigrants. Canadian Psychiatric Association Journal, *21*, 371-381.

Mintz, N. L., & Schwartz, D. T. (1964). Urban ecology and psychosis: Community factors in the incidence of schizophrenia and manic-depression among Italians in Greater Boston. International Journal of Social Psychiatry, *10*, 101-118.

Mirsky, J., & Kaushinsky, F. (1989). Migration and Growth: Separation-individuation processes in immigrant students in Israel. Adolescence, *24*, 725-740.

Misra, R. K., & Kilroy, M. A. (1992). Immigrant mental health: An experiential approach. Psychology and Developing Societies, 4, 149-163.

Mitchell, K. (1999). Hong Kong immigration and the question of democracy. In G. G. Hamilton (Ed.), Cosmopolitan capitalists: Hong Kong and the Chinese diaspora and the end of the twentieth century (pp. 152-166). Seattle, WA: University of Washington Press.

Morrison, S. D. (1973). Intermediate variables in the association between migration and mental illness. International Journal of Social Psychiatry, 19, 60-65.

Moos, R. H., & Moos, B. M. (1986). Family environment scale manual. Palo Alto, CA: Consulting Psychologists Press.

Moyerman, D. R., & Forman, B. D. (1992). Acculturation and adjustment: A meta-analytic study. Hispanic Journal of Behavioral Sciences, 14, 163-200.

Muhlin, G. L. (1979). Mental hospitalization of the foreign-born and the role of cultural isolation. International Journal of Social Psychiatry, 25, 258-266.

Munroe-Blum, H., Boyle, M. H., Offord, D. R., & Kates, N. (1989). Immigrant children: Psychiatric disorder, school performance, and service utilization. American Journal of Orthopsychiatry, 59, 510-519.

Murphy, H. B. M. (1963). Migration and the major mental disorders: A reappraisal. In M. B. Kantor (Ed.) Mobility and mental health (pp. 5-29). Springfield, IL: Charles C. Thomas.

Murphy, H. B. M. (1977). Migration, culture and mental health. Psychological Medicine, 7, 677-684.

Naditch, M. P., & Morrissey, R. F. (1976). Role stress, personality, and psychopathology in a group of immigrant adolescents. Journal of Abnormal Psychology, 85, 113-118.

Naidoo, J. C. (1992). The mental health of visible ethnic minorities in Canada. Psychology and Developing Societies, 4, 165-186.

Naughton, M. J., & Wiklund, I. (1993). A critical review of dimension-specific measures of health-related quality of life in cross-cultural research. Quality of Life Research, 2, 397-432.

Neelman, J., & Wessely, S. (1999). Ethnic minority suicide: A small area geographic study in south London. Psychological Medicine, 29, 429-436.

Nguyen, N. A., & Williams, H. L. (1989). Transition from East to West: Vietnamese adolescents and their parents. Journal of the American Academy of Child and Adolescent Psychiatry, 28, 505-515.

Noels, K. A., Pon, G., & Clément, R. (1996). Language, identity, and adjustment: The role of linguistic self-confidence in the acculturation process. Journal of Language and Social Psychology, 15, 246-264.

Noh, S., & Avison, W. R. (1992). Assessing psychopathology in Korean immigrants: Some preliminary results on the SCL-90. Canadian Journal of Psychiatry, 37, 640-645.

Nolen-Hoeksema, S., & Girgus, J. S. (1994). The emergence of gender differences in depression during adolescence. Psychological Bulletin, 115, 424-443.

Novy, D. M., Nelson, D. V., Goodwin, J., & Rowzee, R. D. (1993). Psychometric comparability of the State-Trait Anxiety Inventory for different ethnic subpopulations. Psychological Assessment, 5, 343-349.

Ødegaard, O. (1932). Emigration and insanity: A study of mental disease among the Norwegian-born population in Minnesota. Acta Scandinavica (Suppl.4), 1-206.

Offer, D., & Schonert-Reichl, K. A. (1992). Debunking the myths of adolescence: Findings from recent research. Journal of the American Academy of Child and Adolescent Psychiatry, 31, 1003-1014.

Olmedo, E. L. (1979). Acculturation: A psychometric perspective. American Psychologist, 34, 1061-1070.

Olowu, A. A. (1983). Counselling needs of immigrant children. New Community, 10, 410-420.

Padilla, A. M., Alvarez, M., & Lindholm, K. J. (1986). Generational status and personality factors as predictors of stress in students. Hispanic Journal of Behavioral Sciences, 8, 275-288.

Padilla, A. M., Wagatsuma, Y., & Lindholm, K. J. (1985). Acculturation and personality as predictors of stress in Japanese and Japanese-Americans. Journal of Social Psychology, 125, 295-305.

Paikoff, R. L., & Brooks-Gunn, J. (1991). Do parent-child relationships change during puberty? Psychological Bulletin, 110, 47-66.

Pak, A. W., Dion, K. L., & Dion, K. K. (1985). Correlates of self-confidence with English among Chinese students in Toronto. Canadian Journal of Behavioural Science, 17, 369-378.

Patel, N. (1992). Psychological disturbance, social support and stressors: A community survey of immigrant Asian women and the indigenous population. Counselling Psychology Quarterly, 5, 263-276.

Pawliuk, N., Grizenko, N., Chan-Yip, A., Gantous, P., Mathew, J., Nguyen, D. (1996). Acculturation style and psychological functioning in children of immigrants. American Journal of Orthopsychiatry, 66, 111-121.

Pernice, R., & Brook, J. (1994). Relationship of migrant status (refugee or immigrant) to mental health. International Journal of Social Psychiatry, 40, 177-188.

Pernice, R., & Brook, J. (1996). Refugees' and immigrants' mental health: Association of demographic and post-immigration factors. The Journal of Social Psychology, 136, 511-519.

Phillips, M. R., & Inui, T. S. (1986). The interaction of mental illness, criminal behavior and culture: Native Alaskan mentally ill criminal offenders. Culture, Medicine, and Psychiatry, 10, 123-149.

Phinney, J. S. (1990). Ethnic identity in adolescents and adults: Review of the research. Psychological Bulletin, 108, 499-514.

Phinney, J. S., Chavira, V., & Williamson, L. (1992). Acculturation attitudes and self-esteem among high school and college students. Youth and Society, 23, 299-321.

Phinney, J. S., Lochner, B. T., & Murphy, R. (1990). Ethnic identity development and psychological adjustment in adolescence. In A. R. Stiffman & L. E. Davis (Eds.), Ethnic issues in adolescent mental health (pp. 53-72). Newbury Park, CA: Sage.

Phinney, J. S., & Rotheram, M. J. (1987). Children's ethnic socialization: Themes and implications. In J. S. Phinney & M. J. Rotherham (Eds.), Children's ethnic socialization: Pluralism and development (pp. 274-292). Beverly Hills, CA: Sage.

Pollock, H. M. (1913). A statistical study of the foreign born insane in the New York state hospitals. State Hospitals Bulletin, 5, 10-27.

Pumariega, A. J. (1986). Acculturation and eating attitudes in adolescent girls: A comparative and correlational study. Journal of the American Academy of Child Psychiatry, 25, 276-279.

Rabkin, J. G. (1979). Ethnic density and psychiatric hospitalization: Hazards of minority status. American Journal of Psychiatry, 136, 1562-1566.

Rack, P. H. (1988). Psychiatric and social problems among immigrants. Acta Psychiatrica Scandinavica, 78 (344, Suppl.), 167-173.

Ray, B. K., Halseth, G., & Johnson, B. (1997). The changing 'face' of the suburbs: Issues of ethnicity and residential change in suburban Vancouver. International Journal of Urban and Regional Research, 21, 75-99.

Ray, J. J. (1984). Measuring trait anxiety in general population samples. Journal of Social Psychology, 123, 189-193.

Redfield, R., Linton, R., & Herskovits, M. J. (1936). Memorandum on the study of acculturation. American Anthropologist, 38, 149-152.

Richman, J. A., Gaviria, M., Flaherty, J. A., Birz, S., & Wintrob, R. M. (1987). The process of acculturation: Theoretical perspectives and an empirical investigation in Peru. Social Science and Medicine, 25, 839-847.

Roberts, N., & Cawthorpe, D. (1995). Immigrant child and adolescent psychiatric referrals: A five-year retrospective study of Asian and Caucasian families. Canadian Journal of Psychiatry, 40, 252-256.

Rogler, L. H. (1989). The meaning of culturally sensitive research in mental health. American Journal of Psychiatry, 146, 296-303.

Rogler, L. H. (1993). Culturally sensitizing psychiatric diagnosis: A framework for research. Journal of Nervous and Mental Disease, 181, 401-408.

Rogler, L. H. (1994). International migrations: A framework for directing research. American Psychologist, 49, 701-708.

Rogler, L. H., Cortes, D. E., & Malgady, R. G. (1991). Acculturation and mental health status among Hispanics. American Psychologist, 46, 585-597.

Rosenthal, D. A. (1984). Intergenerational conflicts and culture: A study of immigrants and nonimmigrant adolescents and their parents. Genetic Psychology Monographs, 109, 53-75.

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. The Journal of Genetic Psychology, 151, 495-541.

Rosenthal, D. A., & Feldman, S. S. (1991). The influence of perceived family and personal factors on self-reported school performance of Chinese and Western high school students. Journal of Research on Adolescence, 1, 135-154.

Rosenthal, D. A., & Feldman, S. S. (1992). The relationship between parenting behaviour and ethnic identity in Chinese-American and Chinese-Australian adolescents. International Journal of Psychology, 27, 19-31.

Rosenthal, D., Ranieri, N., & Klimidis, S. (1996). Vietnamese adolescents in Australia: Relationships between perceptions of self and parental values, intergenerational conflict, and gender dissatisfaction. International Journal of Psychology, 31, 81-91.

Roth, G., & Ekblad, S. (1993). Migration and mental health: Current research issues. Nordic Journal of Psychiatry, 47, 185-189.

Rumbaut, R. G. (1989). Portraits, patterns, and predictors of the refugee adaptation process: Results and reflections from the IHARP panel study. In D. W. Haines (Ed.), Refugees as immigrants (pp. 138-182). Torowa, NJ: Rowman & Littlefield.

Rumbaut, R. G. (1994). The crucible within: Ethnic identity, self-esteem, and segmented assimilation among children of immigrants. International Migration Review, 28, 748-794.

Rumbaut, R. G. (1997). Ties that bind: Immigration and immigrant families in the United States. In A. Booth, A. C. Crouter, & N. Landale (Eds.), Immigration and the family (pp. 3-46). Mahwah, NJ: Lawrence Erlbaum Associates.

Russell, J. A., & Yik, M. S. M. (1996). Emotion among the Chinese. In M. H. Bond (Ed.), Handbook of Chinese psychology (pp. 166-188). Hong Kong: Oxford University Press.

Rutter, M., Graham, P., Chadwick, O. F. D., Yule, W. (1976). Adolescent turmoil: Fact or fiction? Journal of Child Psychology and Psychiatry, 17, 35-56.

Rwegellera, G. G. C. (1977). Psychiatric morbidity among West Africans and West Indians living in London. Psychological Medicine, 7, 317-329.

Ryder, A. G., Alden, L. E., & Paulhus, D. L. (2000). Is acculturation unidimensional or bidimensional? A head-to-head comparison in the prediction of demographics, personality, self-construal, and adjustment. Journal of Personality and Social Psychology, 79, 49-65.

Sack, W. H., Clarke, G. N., Kinney, R., Belestos, G., Him, C., & Seeley, J. (1995). The Khumer adolescent project: Functional capacities in two generations of Cambodian refugees. Journal of Nervous and Mental Disease, 183, 177-181.

Salgado de Snyder, V. N., Cervantes, R. C., & Padilla, A. M. (1990). Gender and ethnic differences in psychosocial stress and generalized distress among Hispanics. Sex Roles, 22 441-453.

Sam, D. L. (1994). The psychological adjustment of young immigrants in Norway. Scandinavian Journal of Psychology, 35, 240-253.

Sam, D. L. (1995). Acculturation attitudes among young immigrants as a function of perceived parental attitudes toward cultural change. Journal of Early Adolescence, 15, 238-258.

Sam, D. L. (1998). Predicting life satisfaction among adolescents from immigrant families in Norway. Ethnicity and Health, 3, 5-19.

Sam, D. L., & Berry, J. W. (1995). Acculturative stress among young immigrants in Norway. Scandinavian Journal of Psychology, 36, 10-24.

Sandhu, D. S. (1997). Psychocultural profiles of Asian and Pacific Islander Americans: Implications for counseling and psychotherapy. Journal of Multicultural Counseling and Development, 25, 7-22.

Sanua, V. D. (1969). Immigration, migration, and mental illness: A review of the literature with special emphasis on schizophrenia. In E. B. Brody (Ed.), Behavior in new environments (pp. 291-352). Beverly Hills, CA: Sage.

Sayegh, L., & Lasry, J. (1993). Immigrants' adaptation in Canada: Assimilation, acculturation, and orthogonal cultural adaptation. Canadian Psychology, 34, 98-109.

Schmitz, P. G. (1992). Acculturation styles and health. In S. Iwawaki, Y. Kashima, & K. Leung (Eds.), Innovations in cross-cultural psychology (pp. 360-370). Amsterdam: Swets & Zeitlinger
Psychology and Developing Societies, 4, 117-131.

Schmitz, P. G. (1994). Acculturation and adaptation processes among immigrants in Germany. In A. Bouvy, F. J. R. vande Vijver, P. Boski, & P. Schmitz (Eds.), Journeys into cross-cultural psychology (pp. 142-157). Amsterdam: Swets & Zeitlinger.

Schneider, B. H. (1998). Cross-cultural comparison as a doorkeeper in research on social and emotional adjustment of children and adolescents. Developmental Psychology, 34, 793-797.

Schrauf, R. W. (1999). Mother tongue maintenance among North American ethnic groups. Cross-Cultural Research, 33, 175-192.

Scott, W. A., & Scott, R. (1989). Adaptation of immigrants: Individual differences and determinants. Oxford, England: Pergamon.

Searle, W., & Ward. C. (1990). The prediction of psychological and sociocultural adjustment during cross-cultural transitions. International Journal of Intercultural Relations, 14, 449-464.

Sharma, S. M. (1984). Assimilation of Indian immigrant adolescents in British society. The Journal of Psychology, 118, 79-84.

Shek, D. T. L. (1987). Reliability and factorial structure of the Chinese version of the General Health Questionnaire. Journal of Clinical Psychology, 43, 683-691.

Shek, D. T. L. (1988). Reliability and factorial structure of the Chinese version of the State-Trait Anxiety Inventory. Journal of Psychopathology and Behavioral Assessment, 10, 303-317.

Shek, D. T. L. (1989a). Sex differences in the psychological well-being of Chinese adolescents. The Journal of Psychology, 123, 405-412.

Shek, D. T. L. (1989b). Validity of the Chinese version of the General Health Questionnaire. Journal of Clinical Psychology, 45, 890-897.

Shek, D. T. L. (1990). Reliability and factorial structure of the Chinese version of the Beck Depression Inventory. Journal of Clinical Psychology, 46, 35-43.

Shek, D. T. L. (1991). What does the Chinese version of the Beck Depression Inventory measure in Chinese students - general psychopathology or depression. Journal of Clinical Psychology, 47, 381-390.

Shek, D. T. L. (1997a). Family environment and adolescent psychological well-being, school adjustment, and problem behavior: A pioneer study in a Chinese context. The Journal of Genetic Psychology, 158, 113-128.

Shek, D. T. L. (1997b). The relation of parent-adolescent conflict to adolescent psychological well-being, school adjustment, and problem behavior. Social Behavior and Personality, 25, 277-290.

Shek, D. T. L. (1998a). A longitudinal study of the relations between parent-adolescent conflict and adolescent psychological well-being. The Journal of Genetic Psychology, 159, 53-67.

Shek, D. T. L. (1998b). A longitudinal study of the relations of family factors to adolescent psychological symptoms, coping resources, school behavior, and substance abuse. International Journal of Adolescent Medicine and Health, 10, 155-184.

Shek, D. T. L. (1999). Paternal and maternal influences on the psychological well-being of Chinese adolescents. Genetic, Social, and General Psychology Monographs, 125, 269-296.

Shek, D. T. L., Chan, L. K., & Lee, T. Y. (1997). Parenting styles, parent-adolescent conflict, and psychological well-being of adolescents with low academic achievement in Hong Kong. International Journal of Adolescent Medicine and Health, 9, 233-247.

Shek, D. T. L., & Tsang, S. K. M. (1995). Reliability and factor structure of the Chinese GHQ-30 for parents with preschool mentally handicapped children. Journal of Clinical Psychology, 51, 227-234.

Short, K. H., & Johnston, C. (1997). Stress, maternal distress and children's adjustment following immigration: The buffering role of social support. Journal of Consulting and Clinical Psychology, 65, 494-503.

Siem, H. (1997). Migration and health – The international perspective. Schweizerische Rundschau für Medizin Praxis, 86, 788-793.

Sireci, S. G., Bastari, B., & Allalouf, A. (1998, August). Evaluating construct equivalence across adapted tests. Paper presented at the annual meeting of the American Psychological Association, San Francisco, CA.

Smart, J. (1994). Business immigration to Canada: Deception and exploitation. . In R. Skeldon (Ed.), Reluctant exiles? Migration from Hong Kong and the new overseas Chinese (pp. 98-119). Armonk, NY: M. E. Sharpe.

Smart, J. F., & Smart, D. W. (1993). The rehabilitation of Hispanics with disabilities: Sociocultural constraints. Rehabilitation Education, 7, 167-184.

Smith, M. S., Mitchell, J., McCauley, E. A., & Calderon, R. (1990). Screening for anxiety and depression in an adolescent clinic. Pediatrics, 85, 262-266.

Spielberger, C. D. (1983). Manual of the State-Trait Anxiety Inventory (Form Y). Palo Alto, CA: Consulting Psychologists Press.

Sprock, J., & Blashfield, R. K. (1983). Classification and nosology. In M. Hersen, A. E. Kazdin, & A. S. Bellack (Eds.), Clinical psychology handbook (pp. 289-307). New York: Pergamon Press.

Statistics Canada. (1997). 1996 Census: Immigration and citizenship (Catalogue no. 93F0023XDB96000). Ottawa, ON: Government Services Canada.

Steinberg, L., & Fletcher, A. C. (1998). Data analytic strategies in research on ethnic minority youth. In V. C. McLoyd & L. Steinberg (Eds.), Studying minority adolescents (pp. 279-294). Mahwah, NJ: Erlbaum.

Steinhausen, H. C., Winkler Metzke, C., Meier, M., & Kannenberg, R. (1997). Behavioral and emotional problems reported by parents for ages 6 to 17 in a Swiss epidemiological study. European Child and Adolescent Psychiatry, *6*, 136-141.

Stiles, D. A., Gibbons, J. L., Lie, S., Sand, T., & Krull, J. (1998). 'Now I am living in Norway': Immigrant girls describe themselves. Cross-Cultural Research, *32*, 279-299.

Sue, S., Nakamura, C. Y., Chung, R. C., & Yee-Bradbury, C. (1994). Mental health research on Asian Americans. Journal of Community Psychology, *22*, 61-66.

Sue, D., & Sue, S. (1987). Cultural factors in the clinical assessment of Asian Americans. Journal of Consulting and Clinical Psychology, *55*, 479-487.

Suinn, R. M., Rickard-Figuerona, K., Lew, S., & Vigil, P. (1987). The Suinn-Lew Asian Self-Identity Acculturation Scale: An initial report. Educational and Psychological Measurement, *47*, 401-407.

Sung, B. L. (1985). Bicultural conflicts in Chinese immigrant children. Journal of Comparative Family Studies, *16*, 255-269.

Sydiaha, D., Lafare, H. G., & Rootman, I. (1969). Ethnic groups within communities. Psychiatric Quarterly, *43*, 131-146.

Szapocznik, J., & Kurtines, W. M. (1993). Family psychology and cultural diversity. American Psychologist, *48*, 400-407.

Szapocznik, J., Scopetta, M. A., Kurtines, W. M., & Arnalde, M. A. (1978). Theory and measurement of acculturation. Interamerican Journal of Psychology, *12*, 113-130.

Taft, R. (1979). A comparative study of the initial adjustment of immigrant schoolchildren in Australia. International Migration Review, *13*, 71-80.

Taft, R., & Johnston, R. (1967). The assimilation of adolescent Polish immigrants and parent-child interaction. Merril-Palmer Quarterly, *13*, 111-120.

Tajfel, H., & Turner, J. C. (1986). The social identity theory of intergroup behavior. In S. Worchel & W. C. Austin (Eds.), Psychology of intergroup relations (pp. 7-24). Chicago: Nelson-Hall.

Tan, S. (1989). Psychopathology and culture: The Asian American concept. Journal of Psychology and Christianity, 8, 61-75.

Tanaka-Matsumi, J., & Kameoka, V. A. (1986). Reliabilities and concurrent validities of popular self-report measures of depression, anxiety, and social desirability. Journal of Consulting and Clinical Psychology, 54, 328-333.

Teri, L. (1982). The use of the Beck Depression Inventory with adolescents. Journal of Abnormal Child Psychology, 10, 277-284.

Thomas, T. N. (1995). Acculturative stress in the adjustment of immigrant families. Journal of Social Distress and the Homeless, 4, 131-142.

Tong, K. L., & Spicer, B. (1994). The Chinese palliative care patient and family in North America. Journal of Palliative Care, 10, 26-28.

Touliatos, J., & Lindholm, B. W. (1980). Behavioral disturbance in children of native-born and immigrant parents. Journal of Community Psychology, 8, 28-33.

Tran, T. V. (1987). Ethnic community supports and psychological well-being of Vietnamese refugees. International Migration Review, 21, 833-844.

Triandis, H.C., McCusker, C., Betancourt, H., Iwao, S., Leung, K., Salazar, J. M., Setiadi, B., Sinha, J. B. P., Touzard, H., & Zaleski, Z., (1993). An etic-emic analysis of individualism and collectivism. Journal of Cross-Cultural Psychology, 24, 366-383.

Tsai, J. H. (1999). Meaning of filial piety in the Chinese parent-child relationship: Implications for culturally competent health care. Journal of Cultural Diversity, 6, 26-34.

Tweed, D. L., Goldsmith, H. F., Jackson, D. J., Stiles, D., Rae, D. S., & Kramer, M. (1990). Racial congruity as a contextual correlate of mental disorder. American Journal of Orthopsychiatry, 60, 392-403.

Vega, W. A., Khoury, E. L., Zimmerman, R. S., Gil, A. G., & Warheit, G. J. (1995). Cultural conflicts and problem behaviors of Latino adolescents in home and school environments. Journal of Community Psychology, 23, 167-179.

Vega, W. A., Kolody, B. K., & Valle, J. R. (1987). Migration and mental health: An empirical test of depression risk factors among immigrant Mexican women. International Migration Review, 21, 512-529.

Vieweg, B. W., & Hedlund, J. L. (1983). The General Health Questionnaire (GHQ): A Comprehensive Review. Journal of Operational Psychiatry, 14, 74-81.

Vignes, A. J., & Hall, R. C. W. (1979). Adjustment of a group of Vietnamese people to the United States. American Journal of Psychiatry, 136, 442-444.

Wang, Y., Shen, Y., Gu, B., He, Y., & Ho., Y. (1991). A comprehensive study of behavioral problems in schoolchildren in urban areas of Beijing. Integrative Psychiatry, 7, 170-183.

Wechsler, H., & Pugh, T. F. (1967). Fit of individual and community characteristics and rates of psychiatric hospitalization. American Journal of Sociology, 73, 331-338.

Westermeyer, J., Vang, T. F., & Neider, J. (1983). A comparison of refugees using and not using a psychiatric service: An Analysis of DSM-III criteria and self-rating scales in a cross-cultural context. Journal of Operational Psychiatry, 14, 36-41.

Williams, C. L., & Berry, J. W. (1991). Primary prevention of acculturative stress among refugees. American Psychologist, 46, 632-641.

Winefield, H. R., Goldney, R. D., Winefield, A., & Tiggemann, M. (1989). The General Health Questionnaire: Reliability and validity for Australian youth. Australian and New Zealand Journal of Psychiatry, 23, 53-58.

Wong, L. L. (1997). Globalization and transnational migration. International Sociology, 12, 329-351.

Wong, S. K. (1997). Delinquency of Chinese-Canadian youth. Youth and Society, 29, 112-133.

Wong, S. K. (1998). Peer relations and Chinese-Canadian delinquency. Journal of Youth and Adolescence, 27, 641-659.

Wong-Reiger, D., & Quintana, D. (1987). Comparative acculturation of Southeast Asian and Hispanic immigrants and sojourners. Journal of Cross-Cultural Psychology, 18, 345-362.

Wu, D. Y. H. (1996). Chinese childhood socialization. In M. H. Bond (Ed.), Handbook of Chinese psychology (pp. 143-154). Hong Kong: Oxford University Press.

Yancey, W. L., Ericksen, E. P., & Juliani, R. N. (1976). Emergent ethnicity: A review and reformulation. American Sociological Review, 41, 391-403.

Yao, K., Solanto, M. V., & Wender, E. H. (1988). Prevalence of hyperactivity among newly immigrated Chinese-American children. Developmental and Behavioral Pediatrics, 9, 367-373.

Yau, J., & Smetana, J. G. (1996). Adolescent-parent conflicts among Chinese adolescents in Hong Kong. Child Development, 67, 1262 - 1275.

Ying, Y. (1988). Depressive symptomatology among Chinese-Americans as measured by the CES-D. Journal of Clinical Psychology, 44, 739-746.

Ying, Y. (1995). Cultural orientation and psychological well-being in Chinese Americans. American Journal of Community Psychology, 23, 893-911.

Ying, Y. (1999). Strengthening intergenerational/intercultural ties in migrant families. Journal of Community Psychology, 27, 89-96.

Ying, Y., & Akutsu, P. D. (1997). Psychological adjustment of Southeast Asian refugees: The contribution of sense of coherence. Journal of Community Psychology, 25, 125-139.

Ying, Y., & Liese, L. H. (1990). Initial adaptation of Taiwan foreign students to the United States: The impact of prearrival variables. American Journal of Community Psychology, 18, 825-845.

Ying, Y., & Liese, L. H. (1994). Initial adjustment of Taiwanese students to the United States: The impact of postarrival variables. Journal of Cross-Cultural Psychology, 25, 466-477.

Youniss, J. & Smollar, J. (1985). Adolescent relations with mothers, father, and friends. Chicago, University of Chicago.

Zak, I. (1973). Dimensions of Jewish-American identity. Psychological Reports, 33, 891-900.

Zivkovic, I. (1995). Adaptation patterns of parents and their children in the U.S. and Canada. in P. Noack, M. Hofer, & J. Youniss (Eds.), Psychological responses to social change (pp. 87-104). Berlin, Germany: Walter de Gruyter.

Appendix A

Background Information

1. Age: _____ 2. Grade: _____
3. Gender: Male _____ Female _____ 4. Postal Code: _____
5. Father's occupation: _____
- Mother's occupation: _____

Highest level of education your father completed

- _____ Did not finish high school
- _____ High school degree
- _____ Some college or university education
- _____ College Diploma
- _____ Professional Degree
- _____ University degree

Highest level of education your mother completed

- _____ Did not finish high school
- _____ High school degree
- _____ Some college or university education
- _____ College Diploma
- _____ Professional Degree
- _____ University degree

6. Religious Preference: _____
- How often do you attend religious services?

- _____ More than once a week
- _____ Once a week
- _____ Once a month
- _____ A few times a year
- _____ Never

7. Your Place of Birth: City/town _____ Country _____
- I moved to Vancouver at age _____ (if applicable)
8. Your Ethnic Origin (e.g., German, Vietnamese): _____
9. Parent's Country of Birth: Father _____ Mother _____
10. Parent's Ethnic Origin: Father _____ Mother _____

11. Grandparent's Country of Birth: Maternal Grandfather _____
Maternal Grandmother _____
Paternal Grandfather _____
Paternal Grandmother _____
12. Most of the people in my neighbourhood are: (Choose ONE)
Chinese or Chinese-Canadian _____
Caucasian (white) _____
Other _____
13. Have you ever been diagnosed and/or treated for a psychological problem or a psychiatric illness? Yes _____ No _____
14. Have you ever been in therapy or counselling for a psychological problem or a psychiatric illness? Yes _____ No _____

IF YOU WERE NOT BORN IN CANADA, PLEASE ANSWER THE FOLLOWING QUESTIONS:

15. How long have you lived in Canada? ____ years
16. How old were you when you arrived in Canada? ____ years old
17. Before you moved to Canada which parent(s) did you live with?
Mother and Father ____ Mother ____ Father ____ Other ____
18. Currently, which parent(s) do you live with?
Mother and Father ____ Mother ____ Father ____ Other ____
19. Did both of your parents move to Canada with you: Yes ____ No ____
My FATHER lives in Canada: All of the time: ____
Some of the time: ____
None of the time: ____
My MOTHER lives in Canada: All of the time: ____
Some of the time: ____
None of the time: ____
20. Father's occupation before moving to Canada ____
Mother's occupation before moving to Canada ____
21. My parents: (Choose ONE)
Chose to leave the country where I was born ____
Felt forced or had no choice about leaving the country where I was born ____
Not sure ____
22. Did you have a say or were you consulted about the decision to move to Canada:
Yes ____ No ____
23. Were you in favour of the decision to move to Canada: Yes ____ No ____
24. Do you plan to live in Canada in the future: Yes ____ No ____ Not Sure ____
25. Do your parents plan to live in Canada in the future: Yes ____ No ____ Not Sure ____

26. Rate YOUR ability:

1 = Not at all 2 = Not very well 3 = Somewhat Well 4= Fairly Well 5 = Very Well

I read English _____
 I speak English _____
 I write English _____
 I understand English _____

I know another language: Yes _____ No _____ IF YES: Name of language

I read my other language _____
 I speak my other language _____
 I write my other language _____
 I understand my other language _____

27. Please rate your PARENT'S ability:

1 = Not at all 2 = Not very well 3 = Somewhat Well 4= Fairly Well 5 = Very Well

My <u>mother</u> reads English _____	My <u>father</u> reads English _____
My <u>mother</u> speaks English _____	My <u>father</u> speaks English _____
My <u>mother</u> writes English _____	My <u>father</u> writes English _____
My <u>mother</u> understands English _____	My <u>father</u> understands English _____

28. Describe your parents' views about the importance of you maintaining your traditional culture. Talk about any differences there might be if you were the opposite sex.

29. Tell me about how your parents feel about you becoming more Canadian. Describe any differences there might be if you were the opposite sex.

Appendix B

**PLEASE COMPLETE THE FOLLOWING QUESTIONNAIRE ONLY IF YOU
ARE OF CHINESE ETHNIC ORIGIN**
INSTRUCTIONS

On the following pages you will find lists of statements. After reading each statement please circle the number that fits closest to your view on the following five point scale. Please answer all questions.

Strongly Disagree	Disagree (D)	Neutral (N)	Agree (A)	Strongly Agree
1	2	3	4	5

Example:

	Strongly Disagree	D	N	A	Strongly Agree
1. It is important to be actively involved in sports.	1	2	3	4	5
2. Everyone should obtain a university education.	1	2	3	4	5

This rater disagreed with the first statement and strongly agreed with the second statement.

	Strongly Disagree	D	N	A	Strongly Agree
1. Most of my friends are Chinese because I feel very comfortable around them but I don't feel as comfortable around Canadians.	1	2	3	4	5
2. There is no such thing as an ideal mate; marriage only creates problems.	1	2	3	4	5
3. These days it is hard to find anyone you can really be close friends with.	1	2	3	4	5
4. If I had a choice between Canadian and Chinese food I would definitely choose Chinese food because I enjoy it much more.	1	2	3	4	5
5. There is nowhere to live where I feel safe and comfortable.	1	2	3	4	5
6. Having Chinese organizations is necessary and worthwhile because it is important to maintain our Chinese culture and identity in Canada.	1	2	3	4	5
7. We should be proud of our Chinese culture (e.g., Tai Chi and Wu Shu) and introduce it to other Canadians.	1	2	3	4	5
8. If I were a parent I would adopt the Canadian way of child rearing by encouraging independence and individuality and discouraging the Chinese way of child rearing.	1	2	3	4	5

	Strongly Disagree	D	N	A	Strongly Agree
9. Because we live in Canada we are pressured to assimilate to a Canadian lifestyle. Thus, we should emphasize our Chinese identity and restrict our associations with Canadian society.	1	2	3	4	5
10. It is hard to find any movies worth watching.	1	2	3	4	5
11. It is important to teach children mainly Chinese values and customs so that they will not become assimilated but remain Chinese.	1	2	3	4	5
12. It is not necessary to have Chinese magazines. We should learn to adjust to the Canadian environment by learning to appreciate what it has to offer.	1	2	3	4	5
13. If I were a parent I would adopt the Canadian way of child rearing by encouraging independence and individuality while also teaching the Chinese values of obedience and respect.	1	2	3	4	5
14. Neither friends nor parents are good to talk to when I have a problem.	1	2	3	4	5
15. Because we live in Canada we do not need to know Chinese; we should focus our attention on speaking English well.	1	2	3	4	5
16. Events such as the Chinese New Year's Festival is another event supported by the government to keep minorities quiet.	1	2	3	4	5
17. I find Chinese movies boring; they cannot compare to the enjoyment I get from watching North American movies.	1	2	3	4	5
18. To be successful we must participate fully in various aspects of Canadian society while maintaining our Chinese culture and heritage.	1	2	3	4	5
19. If I had a choice between Canadian and Chinese food I would definitely choose to eat Canadian food because I enjoy it much more.	1	2	3	4	5
20. Canadians cannot appreciate Chinese culture. It is best to keep our culture to ourselves.	1	2	3	4	5
21. Television programs only distort reality and they shouldn't be trusted.	1	2	3	4	5
22. While living in Canada we can retain our Chinese cultural heritage and lifestyle and yet participate fully in various aspects of Canadian society.	1	2	3	4	5

	Strongly Disagree	D	N	A	Strongly Agree
23. Teaching children Chinese values and customs only creates a barrier with other Canadians. If I had children I would encourage them to be just like other Canadians.	1	2	3	4	5
24. Living in Canada as a Chinese person, I would want to know how to speak both Chinese and English.	1	2	3	4	5
25. We should focus our attention on developing better Chinese magazines so that we don't need to read North American magazines.	1	2	3	4	5
26. If I had a choice I would marry a Canadian who thinks like me and enjoys the same things.	1	2	3	4	5
27. To be successful in Canada we must give up our traditional Chinese lifestyle.	1	2	3	4	5
28. I would encourage children to learn about and participate fully in various aspects of North American society while also teaching them Chinese values and customs.	1	2	3	4	5
29. If I had a choice of learning Chinese sports (e.g., table tennis, badminton) or Canadian sports (e.g., baseball, hockey) I would definitely choose Chinese sports because they are much more enjoyable.	1	2	3	4	5
30. Chinese people must stick together and help each other to be successful rather than assimilating into Canadian society.	1	2	3	4	5
31. If I had a choice I would marry a Chinese person who knows and practices mainly Chinese values and customs.	1	2	3	4	5
32. Watching Chinese movies is pleasurable but I do not find North American movies interesting or entertaining.	1	2	3	4	5
33. If I had a child, I would give only a Chinese name because it is important that the child maintains his or her Chinese identity.	1	2	3	4	5
34. If I had a problem I would ask my parents for advice first.	1	2	3	4	5
35. There are no magazines that are interesting to look at.	1	2	3	4	5
36. Success is important only if it brings honour and pleasure to both you and your family.	1	2	3	4	5

	Strongly Disagree	D	N	A	Strongly Agree
37. If I had a child I would choose only a Canadian name because having a Chinese name would only emphasize his/her differences with other Canadians.	1	2	3	4	5
38. Chinese people should live together in a cluster in order to reduce the association with Canadian society.	1	2	3	4	5
39. If I had a choice of learning Chinese sports (e.g. table tennis, badminton) or Canadian sports (e.g. baseball, hockey) I would definitely choose Canadian sports because they are much more enjoyable.	1	2	3	4	5
40. We're living in Canada and that means giving up our traditional way of life and adopting a Canadian lifestyle - thinking and acting like Canadians.	1	2	3	4	5
41. The friendships that I have with Chinese people are valuable while the friendships that I have with Canadians are also valuable.	1	2	3	4	5
42. It is good to talk to my parents and friends when I have a problem because both have good advice.	1	2	3	4	5
43. Chinese New Year's Festival is an important event where Chinese people can share their rich cultural heritage with other Canadians.	1	2	3	4	5
44. Present society is changing so fast it is hard to teach children how to live and be happy.	1	2	3	4	5
45. Success is important only if it pleases and brings honour to your family.	1	2	3	4	5
46. Watching Chinese television programs is much more interesting and worthwhile than watching North American television programs.	1	2	3	4	5
47. If a parent adopts the Canadian way of child rearing the children will become spoiled and disobedient. I would adopt the Chinese way by teaching them to be obedient and respectful.	1	2	3	4	5
48. If I had to name a child I would give him/her both a Chinese and a Canadian name.	1	2	3	4	5
49. As a parent it is best to keep the children away from learning all the violence and corruption that the present society has to offer.	1	2	3	4	5

	Strongly Disagree	D	N	A	Strongly Agree
50. Having Chinese organizations only stops us from assimilating into Canadian society.	1	2	3	4	5
51. It is difficult to please and bring honour either for yourself or for your family.	1	2	3	4	5
52. Both Chinese and Canadian television programs are interesting and worth watching.	1	2	3	4	5
53. It is important for Chinese people to have our magazines so that we can read both North American and Chinese magazines.	1	2	3	4	5
54. Tai Chi or Wu Shu are not worth learning when there are so many other interesting North American activities.	1	2	3	4	5
55. It is worthwhile to participate in both Chinese and Canadian organizations.	1	2	3	4	5
56. It is important to succeed for yourself. It is less important if your family feels proud or happy about your success.	1	2	3	4	5
57. Tai Chi or Wu Shu are just examples of how uninteresting all activities are.	1	2	3	4	5
58. I enjoy watching both Chinese and North American movies.	1	2	3	4	5
59. To maintain our Chinese heritage in Canada we must concentrate our efforts on learning and teaching Chinese rather than English.	1	2	3	4	5
60. If I had a problem I would ask my friends for advice because parents don't usually have good advice.	1	2	3	4	5
61. It would be hard for me to name a child because neither a Chinese nor a Canadian name would be good.	1	2	3	4	5
62. Success only depends on being in the right place at the right time.	1	2	3	4	5
63. If I had a choice of learning Chinese sports (e.g. table tennis, badminton) or Canadian sports (e.g. baseball, hockey) I would definitely choose both Canadian and Chinese sports because they are equally enjoyable.	1	2	3	4	5
64. Having a Chinese New Year's Festival only emphasizes our differences and it makes us less acceptable to other Canadians.	1	2	3	4	5

	Strongly Disagree	D	N	A	Strongly Agree
65. Canadians are not genuinely interested in Chinese culture. We should promote Chinese culture only amongst ourselves.	1	2	3	4	5
66. Chinese people benefit by living together in the same community and it does not affect our adaptation to Canadian society.	1	2	3	4	5
67. Neither Chinese nor Canadian organizations are interesting or worthwhile to join.	1	2	3	4	5
68. If I had a choice I would marry a Chinese person who knows and practices mostly Western values and customs.	1	2	3	4	5
69. Neither national pride nor ethnic pride are important to me.	1	2	3	4	5
70. It is ridiculous for Chinese people to live together in a cluster. We should learn to live like other Canadians.	1	2	3	4	5
71. Neither North American nor Chinese food is very enjoyable.	1	2	3	4	5
72. Neither Chinese sports (e.g. table tennis, badminton) or Canadian sports (e.g. baseball, hockey) are enjoyable.	1	2	3	4	5
73. Watching North American television programs is much more interesting and worthwhile than watching Chinese television programs.	1	2	3	4	5
74. I enjoy the taste of both North American and Chinese foods.	1	2	3	4	5
75. Most of my friends are Canadians because they are enjoyable and I feel comfortable around them but I don't feel the same way about Chinese people.	1	2	3	4	5
76. I often feel helpless because I can't express my thoughts and feelings into words.	1	2	3	4	5

77. Do you identify yourself as: Canadian ____ Chinese ____ Chinese-Canadian ____

Other (please specify) _____

Appendix C

PLEASE COMPLETE THE FOLLOWING QUESTIONNAIRES ONLY IF YOU ARE OF CHINESE ETHNIC ORIGIN.

Please rate how much you agree with the following statements by circling a number between 1 and 5. Answer **both** parts of each question.

	<i>Not at all</i>				<i>Very Much so</i>
<hr/>					
1. It is important for me to					
• maintain or develop Chinese cultural traditions	1	2	3	4	5
• maintain or develop Canadian cultural traditions	1	2	3	4	5
<i>If you disagreed with both, please tell us why:</i>					
<hr/>					
2. I would be willing to marry:					
• a Chinese person	1	2	3	4	5
• a Caucasian person	1	2	3	4	5
<i>If you disagreed with both, please tell us why:</i>					
<hr/>					
3. I enjoy social activities with:					
• Chinese people	1	2	3	4	5
• Caucasian people	1	2	3	4	5
<i>If you disagreed with both, please tell us why:</i>					
<hr/>					
4. I am interested in having friends who are:					
• Chinese	1	2	3	4	5
• Caucasian	1	2	3	4	5
<i>If you disagreed with both, please tell us why:</i>					
<hr/>					
5.					
• Chinese values are important to me	1	2	3	4	5
• Western values are important to me	1	2	3	4	5
<i>If you disagreed with both, please tell us why:</i>					
<hr/>					
6. I am comfortable interacting with:					
• Chinese people	1	2	3	4	5
• Caucasian people	1	2	3	4	5
<i>If you disagreed with both, please tell us why:</i>					
<hr/>					

**PLEASE COMPLETE THE FOLLOWING QUESTIONNAIRES ONLY IF
YOU ARE OF CHINESE ETHNIC ORIGIN.**

Vancouver Index of Acculturation - Parent Form

Please rate how you think your parents would feel about the following statements by circling a number between 1 and 5. Answer both parts of each question.

	<i>Not at all</i>				<i>Very Much so</i>
<hr/>					
1. For my parents it is important to					
• maintain or develop Chinese cultural traditions	1	2	3	4	5
• maintain or develop Canadian cultural traditions	1	2	3	4	5
<hr/>					
2. My parents would want me to marry:					
• a Chinese person	1	2	3	4	5
• a Caucasian person	1	2	3	4	5
<hr/>					
3. My parents enjoy social activities with:					
• Chinese people	1	2	3	4	5
• Caucasian people	1	2	3	4	5
<hr/>					
4. My parents are interested in having friends who are:					
• Chinese	1	2	3	4	5
• Caucasian	1	2	3	4	5
<hr/>					
5.					
• Chinese values are important to my parents	1	2	3	4	5
• Western values are important to my parents	1	2	3	4	5
<hr/>					
6. My parents are comfortable interacting with:					
• Chinese people	1	2	3	4	5
• Caucasian people	1	2	3	4	5
<hr/>					

Appendix D

Please circle the appropriate number. In the past month how often have you:

	1 Never	2 Once every couple of months	3 Once a month	4 Once a week	5 Almost every day
a) Felt tired for no reason	1	2	3	4	5
b) Had a headache	1	2	3	4	5
c) Had a stomach ache	1	2	3	4	5
d) Had trouble sleeping	1	2	3	4	5
e) Lost your appetite	1	2	3	4	5
f) Overeaten	1	2	3	4	5
g) Had diarrhea	1	2	3	4	5
h) Had frequent urination	1	2	3	4	5
i) Felt dizzy	1	2	3	4	5

Appendix E

Family Environment Scale

There are 90 statements listed below. They are statements about families. You are to decide which of these statements are true of your family and which are false. If you think the statements is *True* or *Mostly True* of your family, circle the T (true). If you think the statement is *False* or *Mostly False* of your family, circle the F (false).

You may feel that some statements are true for some members of your family and false for others. Circle T if the statement is *true* for most members. Circle F if the statement is *false* for most members. If the members are evenly divided, decide what is the stronger overall impression and answer accordingly.

Remember, we would like to know what your family seems like to *you*. So do not try to figure out how other family members see your family, but do give us your general impression of your family for each statement.

1. Family members really help and support one another.	T	F
2. Family members often keep their feelings to themselves.	T	F
3. We fight a lot in our family.	T	F
4. We don't do things on our own very often in our family.	T	F
5. We feel it is important to be the best at whatever you do.	T	F
6. We often talk about politics and social problems.	T	F
7. We spend most weekends and evenings at home.	T	F
8. Family members attend church, synagogue, or Sunday school fairly often.	T	F
9. Activities in our family are pretty carefully planned.	T	F
10. Family members are rarely ordered around.	T	F
11. We often seem to be killing time at home.	T	F
12. We say anything we want to around home.	T	F
13. Family members rarely become openly angry.	T	F
14. In our family, we are strongly encouraged to be independent.	T	F
15. Getting ahead in life is very important in our family.	T	F
16. We rarely go to lectures, plays or concerts.	T	F
17. Friends often come over for dinner or to visit.	T	F
18. We don't say prayers in our family.	T	F
19. We are generally very neat and orderly.	T	F

20. There are very few rules to follow in our family.	T	F
21. We put a lot of energy into what we do at home.	T	F
22. It's hard to "blow off steam" at home without upsetting somebody.	T	F
23. Family members sometimes get so angry they throw things.	T	F
24. We think things out for ourselves in our family.	T	F
25. How much money a person makes is not very important to us.	T	F
26. Learning about new and different things is very important in our family.	T	F
27. Nobody in our family is active in sports, Little League, bowling, etc.	T	F
28. We often talk about the religious meaning of Christmas, Passover, or other holidays.	T	F
29. It's often hard to find things when you need them in our household.	T	F
30. There is one family member who makes most of the decisions.	T	F
31. There is a feeling of togetherness in our family.	T	F
32. We tell each other about our personal problems.	T	F
33. Family members hardly ever lose their tempers.	T	F
34. We come and go as we want to in our family.	T	F
35. We believe in competition and "may the best person win."	T	F
36. We are not that interested in cultural activities.	T	F
37. We often go to movies, sports events, camping, etc.	T	F
38. We don't believe in heaven or hell.	T	F
39. Being on time is very important in our family.	T	F
40. There are set ways of doing things at home.	T	F
41. We rarely volunteer when something has to be done at home.	T	F
42. If we feel like doing something on the spur of the moment we often just pick up and go.	T	F
43. Family members often criticize each other.	T	F
44. There is very little privacy in our family.	T	F
45. We always strive to do things just a little better the next time.	T	F
46. We rarely have intellectual discussions.	T	F
47. Everyone in our family has a hobby or two.	T	F
48. Family members have very strict ideas about what is right and wrong.	T	F
49. People change their minds often in our family.	T	F

50. There is a strong emphasis on following rules in our family.	T	F
51. Family members really back each other up.	T	F
52. Someone usually gets upset if you complain in our family.	T	F
53. Family members sometimes hit each other.	T	F
54. Family members almost always rely on themselves when a problem comes up.	T	F
55. Family members rarely worry about job promotions, school grades, etc.	T	F
56. Someone in our family plays a musical instrument.	T	F
57. Family members are not very involved in recreational activities outside of work or school.	T	F
58. We believe there are some things you just have to take on faith.	T	F
59. Family members make sure their rooms are neat.	T	F
60. Everyone has an equal say in family decisions.	T	F
61. There is very little group spirit in our family.	T	F
62. Money and paying bills is openly talked about in our family.	T	F
63. If there's a disagreement in our family, we try hard to smooth things over and keep the peace.	T	F
64. Family members strongly encourage each other to stand up for their rights.	T	F
65. In our family, we don't try that hard to succeed.	T	F
66. Family members often go to the library.	T	F
67. Family members sometimes attend courses or take lessons for some hobby or interest (outside of school).	T	F
68. In our family each person has different ideas about what is right and wrong.	T	F
69. Each person's duties are clearly defined in our family.	T	F
70. We can do whatever we want to do in our family.	T	F
71. We really get along well with each other.	T	F
72. We are usually careful about what we say to each other.	T	F
73. Family members often try to one-up or out-do each other.	T	F
74. It's hard to be by yourself without hurting someone's feelings in our household.	T	F
75. "Work before play" is the rule in our family.	T	F
76. Watching T.V. is more important than reading in our family.	T	F

77. Family members go out a lot.	T	F
78. The Bible is a very important book in our home.	T	F
79. Money is not handled very carefully in our family.	T	F
80. Rules are pretty inflexible in our household.	T	F
81. There is plenty of time and attention for everyone in our family.	T	F
82. There is a lot of spontaneous discussions in our family.	T	F
83. In our family, we believe you don't ever get anywhere by raising your voice.	T	F
84. We are not really encouraged to speak up for ourselves in our family.	T	F
85. Family members are often compared with others as to how well they are doing at work or school.	T	F
86. Family members really like music, art and literature.	T	F
87. Our main form of entertainment is watching T.V. or listening to the radio.	T	F
88. Family members believe that if you sin you will be punished.	T	F
89. Dishes are usually done immediately after eating.	T	F
90. You can't get away with much in our family.	T	F

1. The things that I fight about most often with my parents are:

2. Circle the number that best describes the amount of conflict that you have with your parents in each of the areas.

	Very Little	Little	Moderate	Much	Very Much
School	1	2	3	4	5
Friends	1	2	3	4	5
Dating or Boyfriend/Girlfriend	1	2	3	4	5
Type of clothes I wear	1	2	3	4	5
Rules (e.g. Curfew)	1	2	3	4	5
My attitude and/or behaviour	1	2	3	4	5

3. How well do you generally get along with your parents?

	Not well at all	Not well	Somewhat well	Well	Very well
MOTHER	1	2	3	4	5
FATHER	1	2	3	4	5

4. How would you describe your relationship with your parents?

	Not good at all	Not good	Somewhat good	Good	Very good
MOTHER	1	2	3	4	5
FATHER	1	2	3	4	5

Appendix F

To examine the factor structures of the BDI, GHQ-30, STAI-S, and STAI-T, confirmatory factor analyses using LISREL 8.20 (Jöreskog & Sörbom, 1997) were performed. Because there is not one universally accepted factor model for each questionnaire, an appropriate model (e.g. adolescent sample, Chinese participants) was chosen from the literature to test the factor structure. Based on the suggestions of previous researchers, goodness-of-fit indices employed in these analyses included the chi square/degrees of freedom ratio (X^2/df), the standardized root mean square residual (SRMR), the comparative fit index (CFI) and the non-normed fit index (NNFI; Kelloway, 1998; Kline, 1998). These indices are designed to assess both the absolute and relative fit of the model to the data. The results of the confirmatory factor analyses are found in Table 14.

For the BDI, four-factor models have been found in several studies with adolescents (Bennett et al., 1997; Teri, 1982). The model identified in the more recent study (Bennett et al.) with 328 adolescents was used for the confirmatory factor analysis. The fit indices suggested that this model provided an adequate fit for the current sample, with the X^2/df index being less than 3, the SRMR less than 0.10, and CFI and NNFI approaching 0.90.

For the GHQ-30, a confirmatory factor analysis was conducted on the five-factor model reported by Chan and Chan (1983) of 225 first-year university English-speaking Chinese students. This model is similar to the five-factor model for the GHQ-30 found with other samples of Chinese participants (Shek, 1987). As indicated in Table 14, the model was modified slightly. Instead of the minimum factor loading of 0.30 used in the

Table 14

Results of Confirmatory Factor Analysis

Measure	Model	χ^2	df	χ^2/df	SRMR	CFI	NNFI
BDI	Four-factor	283.97*	183	1.55	0.065	0.89	0.89
GHQ-30	Five-factor (original)	752.91*	394	1.91	0.11	0.84	0.83
GHQ-30 ^a	Five-factor (modified)	699.28*	392	1.78	0.079	0.87	0.85
STAI-S	Two-factor	330.66*	169	1.96	0.065	0.91	0.90
STAI-T	Two-factor (original)	420.43*	170	2.47	0.13	0.75	0.72
STAI-T ^b	Two-factor (modified)	293.94	169	1.74	0.073	0.88	0.86

Note. $n = 164 - 173$. SRMR = Standardized Root Mean Square Residual; CFI = Comparative Fit Index; NNFI = Non-Normed Fit Index.

^aTo improve fit, factor loadings greater than 0.20 rather than 0.30 were used for two items (4 and 6) in order to allow them to be included in the model.

^bTo improve fit, item 16 was added to the model and item 12 was loaded on Factor 2 rather than Factor 1.

* $p < .05$

principal components analysis by Chan and Chan, factor loadings of 0.20 were used allowing two additional items to be included in the analysis. Including these additional items made the model more comparable to models proposed by other researchers (Shek). It also improved the fit of the model and suggested that overall the five-factor model provided an adequate fit for the current sample.

The model used for the STAI-S and STAI-T was based on the factor structure found in the original validation sample of 424 grade 10 students (Spielberger, 1983) and supported by research with Chinese-speaking adolescents (Shek, 1988). Separate comparative factor analyses were run for each subscale. As illustrated in Table 14, fit indices for the STAI-S indicated that the two-factor model provided a good fit to the data. For the STAI-T, the original model was only a marginally good fit to the data. However, one item that did not load on either factor in the original two-factor model was added to the model because this was more consistent with the findings of other studies (Shek, 1988; Spielberger, Air Force sample). Another item loaded onto one factor for girls and the other factor for boys in the original model. In the current analysis, this item was loaded onto the factor on which it loads more consistently in the literature (Shek; Spielberger). The fit indices for the modified model were adequate (see Table 14). This suggests that overall the two-factor model for the STAI-T provided a reasonable fit for the current sample.

VITA AUCTORIS

Iris Sharir was born on October 27, 1971 in Israel. She moved to Canada in August 1976. In June 1989, she graduated from Ross Sheppard Composite High School in Edmonton, Alberta. She continued her studies at McGill University in Montreal, Quebec, where she graduated with a Bachelor of Arts degree (Honours Psychology) in May 1993. She received her Masters of Arts (Clinical Psychology) from the University of Windsor in September 1996 and is currently a doctoral candidate at the same institution.