Models of cultural adjustment for child and adolescent migrants to Australia:

Internal process and situational factors

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Abstract

Building on previous cultural adjustment profile work by Sonderegger and Barrett (submitted), the aim of this study was to propose an organisational structure for a number of single risk factors that have been linked to acculturative-stress in young migrants. In recognising that divergent situational characteristics (e.g., school level, gender, residential duration in Australia, social support, and cultural predisposition) are selectively paired with internal processing characteristics (e.g., emotional stability, self-worth/acceptance, acculturation/identity, and future outlook), a top-down path model of acculturative-stress for children and adolescents was proposed and validated. Self-report ratings obtained from primary ($n=131$) and high school ($n=142$) students of former-Yugoslavian and Chinese backgrounds were analysed for internal reliability. To determine goodness of model fit, path analysis utilising regression procedures was employed. Specific cross-cultural profiles are discussed.

KEY WORDS: Stress, Culture, Acculturation, Adolescent, Children.

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Self-psychology literature generally purports that how young people see themselves in relation to the rest of the world is largely defined by the meaning attributed to interactions with their environment. Just as ethnic and cultural heritage influence the social-construction of the family unit, family experiences often serve as the context for identity development. One's cultural concept of self is formed from knowledge of, interaction with, and emotional responses to family and social group membership (McNeil, Kee, & Zvolensky, 1999). Being able to identify with, and feel accepted in a particular environment is usually synonymous with external support, and internal feelings of self-worth and belonging.

As independent risk and protective factors, considerable research over the past two decades has identified social support and self-esteem to be bi-directionally linked with young people's ability to cope with stressful situations (Cederbald, Höök, Irhammar, & Mercke, 1999). However, recent studies (Barrett, Sonderegger, & Sonderegger, in press; Sonderegger & Barrett, submitted) have revealed that such risk and protective factors are not universally predictive, and are mediated by other specific influences (e.g., duration in host culture, acculturation style, self-concept). Moreover, coping styles and preferences have been observed to vary from culture to culture (Barrett, Sonderegger, Sonderegger, 2001; Barrett, Sonderegger, & Xenos, in press). Considering that different ethnic groups vary in their values, beliefs, rituals, and traditions, Greene, Jensen, and Jones (1996) contend that the process of adjusting to a new and unfamiliar environment is likely to be influenced by the extent to which migrants identify with their cultural heritage. While many studies have examined acculturation (adjusting to a new culture) among specific cultural or migrant groups,

and have identified singular internal process and situational variables that contribute to the development of particular cultural adjustment styles and acculturative-stress, few studies have examined whether ethnically diverse migrant groups acculturate differently, and if so, why, and what are the implications? Even fewer research initiatives have mapped the patterns of cultural adjustment among children and adolescent migrant sub-groups.

Much research into the cultural adjustment patterns of migrants has revealed that resistance to cultural change or rejection of cultural heritage is highly stressful (Berry & Kim, 1987). Conversely, the pursuit of integrative adjustment (adopting the host culture while maintaining traditional cultural integrity) has been found to serve as a buffer against acculturative-stress and related psychopathology (Berry, 1998). However, contemporary research endeavours have found greater between ethnic group acculturation differences than within, suggesting that cultural adjustment style is not the sole determinant of acculturative-stress. Sonderegger and Barrett (submitted) identified affiliation with new cultural norms and involvement in cultural traditions of origin among children and adolescents to vary between Chinese and former-Yugoslavian cultural groups. In this study, 273 primary and high school students (comprised of former-Yugoslavian and Chinese cultural groups) completed self-report measures of acculturation, internalising symptoms, social support, self-concept/esteem, ethnic identity, and future outlook, and were compared by gender, school level, cultural group, heterogenic ethnicity, and residential duration variables. Inspection of the combined cultural group data revealed bicultural adjustment to be overall least correlated with internalising symptoms. However, when compared cross-culturally with Chinese migrant youth, former-Yugoslavian students reported greater cultural integration (identification and involvement with culture of origin and

Australian cultural norms), yet also higher levels of anxiety. Because culture influences every area of the human psychological and behavioural experience, it may not be reasonable to examine the acculturation process without evaluating the role of culture itself. The complex interplay of cultural variables that influence the situational and internal process elements of cultural adjustment are yet to be fully delineated.

While maintaining links to one's culture of origin is important for positive self-esteem and mental health (Pinderhughes, 1989), individuals may be influenced to devalue the distinct attributes of their ethnic group as a consequence of minority group discrimination. Children and adolescents are particularly vulnerable to cultural devaluation by their majority group peers who, from a social perspective, may perceive cultural differences as threatening (Greene et al., 1996). At a time when it is very important to be accepted by peers and not feel separate from the majority culture, young people may be more likely than other family members to adopt an "assimilation" style of acculturation, thereby rejecting identification with their ethnic heritage. Coupled with deficient social support, ethnic minority school students struggling with their cultural identity development have been found to exhibit more behaviour problems and lower self-esteem (Cederbald, Höök, Irhammar, & Mercke, 1999; Pawliuk et al., 1996; Pinderhughes, 1989). Ponterotto, Baluch, and Carielli (1998) also reports identity confusion and poor acculturation to be related to increased levels of anxiety, and poor mental health. With multifaceted and compounded difficulties being paired with migration, it is not surprising that acculturative-stress has been found to be a major cause of internalising problems (Berry, 1998). Even though several single risk and protective factors have been linked with acculturative-stress, culturally specific path models of acculturative-stress are yet to be developed and validated for child and adolescent migrants (whether separately or collectively).

In 1987, Berry and Kim published a path model for key factors that moderate the relationship between acculturation and psychopathology. Over the period of 1969-1985, a series of acculturative-stress studies conducted with more than one thousand adult migrants to Canada, provided general support for their model. While Berry and Kim's model of cultural adjustment remotely taps into both situational (nature of the larger society, type of acculturating group, modes of acculturation, and demographic/social characteristics) and internal process (modes of acculturation and psychological characteristics) pathways of acculturation, the model is not sensitive enough to delineate explicit characteristics and relationships. Consequently, the purpose of the present study is to propose an organisational structure for single risk factors that have been identified with acculturative-stress in young people. Considering the multifactor stressors that accompany cultural change often culminate in the experience of stress and anxiety (Winter & Young, 1998), acculturative-stress in the proposed model is represented by internalising symptoms (anxiety, trauma and hopelessness).

Based on existing transnational studies and data obtained from Sonderegger and Barrett (submitted), a number of hypotheses about the relationship between variables that lead to acculturative-stress are tested. In so doing, a new path model of acculturative-stress among young migrants to Australia is proposed. Specifically, it is hypothesised that social support and ethnic nationalism variables will influence overall self-concept and the internal processing of self-esteem. It is expected that the effects of these variables will indirectly predict anxiety, trauma, and hopelessness, as directly moderated by self-esteem. Considering adolescent years are important in the formation of self-, family- and community-identity, teenagers are predicted to respond to acculturation change differently to children. While the model proposed in this study applies the same situational and internalising process characteristics for all

participants, cultural adjustment variance between age and cultural groups is expected.

Method

Participants

This study forms one aspect of broader research with migrant and refugee youth. The same database has previously been utilised (see Sonderegger & Barrett, submitted). The sample of 273 children and adolescents (138 females and 135 males) constituted 131 primary and 142 high school students who immigrated to Australia from former-Yugoslavian ($n=125$) and Chinese ($n=148$) backgrounds. Students were recruited from Queensland and Victorian schools located in metropolitan districts, and ranged in age from 6 to 19 years (mean primary school age = 10.3 years, mean high school age = 14.2).

Measures

As detailed in Sonderegger & Barrett (submitted), a comprehensive assessment package was created to appraise a range of experiences identified in the cross-cultural literature as being encountered by young migrants and refugees. The package included measures of cultural adjustment, self-concept, social support, self-esteem, anxiety, trauma, and hopelessness. The specific inventories examined in this study were selected according to cultural, and age appropriateness.

Cultural Adjustment. The Bicultural Involvement Questionnaire (BIQ; Szapocznik, Kurtines, & Fernandez, 1990) is a 33-item acculturation scale. Through the measurement of cultural practices and behavioural norms, the BIQ yields profiles of bi- and mono-cultural identification. For the purposes of the present study, only identification with participants' culture of origin (Ethnic Nationalism) was analysed.

Low scores are representative of little cultural identification and high scores indicate greater identification.

Social support. The Survey of Children's Social Support (SOCSS; Durbow & Ullman, 1989) measures the degree of perceived social support among children. The 38-item scale of available behaviours measure social support according to three sub-factors: Emotional/informational support (17 items), Emotional/esteem-enhancing support (12 items), and Tangible support (9 items). Combined, these scales provide a measure of Total Support for which Durbow and Ullman (1989) report good validity.

For older participants, the 23 item Social Support Appraisal Scale (SSAS; Vaux et al., 1986) was employed to gauge the level of perceived emotional and physical support received from family (8 items), friends (7 items), and others in general (8 items). As with the SOCSS, these factors combine to produce a total social support score. The SSAS has been previously validated and used in different countries/cultures (e.g., Bolognini, Plancherel, Bettschart, & Halfon, 1996).

Self-esteem. The Self-Esteem Inventory (SEI; Coopersmith, 1981) is a 58-item self-report questionnaire that measures general self, social self-peers, home-parents, and school-academic aspects of self-esteem. As in previous studies (e.g., Barrett et al., 2001; Barrett, Sonderegger, & Xenos, in press), to offset the high number of items included in the assessment package, "social self-peers" and "school-academic" scales were combined to produce a social-, self-, and school-esteem representative total, yielding a possible range of 0 to 16. Although earlier versions of the SEI have been trialed with a variety of cultural groups (e.g., Owens & Gustafson, 1971; Strodbeck, 1972), culture specific norms are unavailable. Low scores are representative of low self-esteem, and greater scores indicate high self-esteem.

The Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965) was employed to measure global feelings of personal self-worth and self-acceptance in adolescents. The scale (revised in 1978 by Bachman, O'Malley & Johnston) has only 10 items. Low scores that fall close to or below the scale's median (Wylie, 1989) are indicative of poor self-esteem and higher scores represent greater self-esteem.

Anxiety and trauma symptoms. The Revised Children's Manifest Anxiety Scale (RCMAS; Reynolds & Richmond, 1978) is a 37-item revision of the Manifest Anxiety Scale (Castaneda, McCandless, & Palermo, 1965) employed to measure anxiety-related symptoms within physiological, worry/over-sensitivity, and social concerns/concentration domains of general anxiety. The RCMAS has previously been used in a number of cross-cultural studies (see Barrett et al., 2001; Dong, Yang, & Ollendick, 1994; Ginsburg & Silverman, 1996), and has been observed to acceptably correlated at .71 with the Spence Children's Anxiety Scale (Spence, 1997).

The Trauma Symptom Checklist for Children (TSCL; Briere, 1996) is a 54 item self-report inventory that assesses the symptoms of experienced trauma across six clinical scales (Anxiety, Anger, Depression, Posttraumatic Stress, Dissociation [with two subscales: Overt Dissociation and Fantasy], and Sexual Concerns [with two subscales: Sexual Preoccupations and Distress]), and two validity scales. As with previous investigations, only the clinical scales (excluding Sexual Concerns and subscales) were incorporated for the purposes of this study.

Future outlook. The Kazdin Hopelessness Scale (KHS; Kazdin, French, Unis, Esveltd-Dawson & Sherick, 1983) is a 17-item scale specifically designed for primary school age children to measure pessimistic future expectancies. While no cross-cultural standardised norms have been established, the KHS has previously been used among culturally diverse communities (e.g., Vinas & Domenech, 1998) and is

reported to be a valid measure of hopeless childhood cognitions (Kazdin, Rodgers, & Colbus, 1986).

The Beck Hopelessness Scale (BHS; Beck, Weissman, Lester, & Trexler, 1974) is a 20 item self-report inventory designed to measure pessimistic expectations among older participants. As with the KHS, the BHS has previously been employed in cross-cultural research (e.g., Tanaka, Sakamoto, Ono, Fujihara, & Kitamura, 1998) and is psychometrically sound (Steed, 2001).

Self-concept. The Self-Description Questionnaire, Version One (SDQ-I; Marsh, 1987) was designed to measure aspects of self-concept among primary school age children. The SDQ-I measures social and academic achievement self-concepts, which is comprised of general self, physical appearance, physical abilities, peer relations, parent relations, general school, mathematics, and reading sub-scales. For the purposes of this study, only “Peer relations”, “Parent relations”, and “General-Self” scales of the SDQ-I were included. Combined, these scales yield a representation of total self-concept.

The Self-Description Questionnaire, Version Two (SDQ-II; Marsh, 1990) was designed to measure self-concept among adolescents. The SDQ-II measures the same self-concepts as the SDQ-I, with the exception of the Peer scale which has been modified to tap same-sex and opposite-sex relations. The SDQ-II additionally includes Emotional Stability and Honesty-Trustworthy scales. For the purposes of the present study, only “Parent Relations”, “Emotional Stability”, “Verbal”, and “General-Self” scales of the SDQ-II were administered to obtain a representation of total self-concept. The SDQ Versions One and Two are psychometrically valid and have previously been used among diverse cultures (e.g., Marsh & Smith, 1987; Roberts, 1997; Roberts & Schnieder, 1999).

Procedural Variables

Considering the assessment of culturally diverse participants is commonly impeded by methodological pitfalls, a number of pre-emptive strategies employed by previous research programs (e.g., Barrett, Moore, & Sonderegger, 2000; Barrett et al., 2001, in press; Barrett, Sonderegger, & Xenos, in press) were used for the current investigation. As detailed in Sonderegger & Barrett (submitted), participants were administered the assessment packages in culture specific 'English as a second language' (ESL: Chinese and former-Yugoslavian) class groups. To control for differences in reading and writing ability, trained bilingual Mental Health Professionals (fluent in the relevant cultural sub-group language) verbally administered the assessment packages in both English and the native languages of participants. Participants were only required to tick the appropriate answer that best described their experience.

Results

Path models of cultural adjustment allow hypotheses about the relationship between variables that lead to acculturative-stress to be tested. The adequacy of fit for the proposed model would ideally best be tested via the use of structural equation modelling software. However, dividing the sample pool by age and culture does not provide sufficient statistical power. Consequently, path analysis utilising regression procedures was employed for the purposes of this investigation. Prior to analysis, participants' scores on each psychometric inventory were analysed for internal reliability. Where variables featured inadequate reliability coefficients, non-loading items were removed to produce a modified variable with satisfactory alpha level ($> .70$). Pearson's Product Moment correlation analyses were performed for both primary and high school groups among Chinese and former-Yugoslavian participants.

Observed relationships between variables helped to predict an appropriate model of acculturative-stress. Separate standard multiple regression equations were performed for each endogenous variable (those preceded by predictor variables) included in the model. Indirect effects were established by multiplying direct path beta weights. Beta weights were summed to produce the total indirect effect where more than one indirect path connected predictor and designated dependent variables.

Primary School Children

Chinese Origin. The alpha coefficients for self-report scales were found to adequately measure acculturation (BIQ = .83), social support (SOCS = .95), self-esteem (SEI = .83), self-concept (SDQ-I = .94), hopelessness (KHS = .83), anxiety (RCMAS = .90), and trauma (TSCL = .96) variables. Table 1 presents bivariate correlations for each of the cultural adjustment variables. Significant positive relationships were found between anxiety and trauma ($r = .65$), anxiety and hopelessness ($r = .70$), and trauma and hopelessness ($r = .96$). In turn, these internalising symptoms were found to negatively correlate with social support ($r = -.45; -.29; -.46$), self-esteem ($r = -.66; -.61; -.70$), and self-concept ($r = -.45; -.49; -.55$), respectively. Ethnic nationalism was found to positively correlate with trauma ($r = .30$), social support ($r = .27$), self-esteem ($r = .29$), and self-concept ($r = .44$).

Table 1. Pearson Correlations Between Latent Functions of Cultural Adjustment Among Students of Chinese and Former-Yugoslavian Backgrounds

Variables	1	2	3	4	5	6	7
<i>Primary School Students of Chinese Background</i>							
1. Ethnic Nationalism	1	.27*	.29*	.44**	-.22	-.20	-.30*
2. Social Support		1	.40**	.50**	-.46**	-.45**	-.29*
3. Self-Esteem			1	.61**	-.70**	-.66**	-.61**
4. Self-Concept				1	-.55**	-.45**	-.49**
5. Hopelessness					1	.70**	.69**
6. Anxiety						1	.65**
7. Trauma							1
<i>Primary School Students of Former-Yugoslavian Background</i>							
1. Ethnic Nationalism	1	.22	.22	.26	-.18	-.17	-.21
2. Social Support		1	.59**	.67**	-.74**	-.58**	-.72**
3. Self-Esteem			1	.76**	-.77**	-.70**	-.77**
4. Self-Concept				1	-.69**	-.62**	-.83**
5. Hopelessness					1	.64**	.72**
6. Anxiety						1	.71**
7. Trauma							1
<i>High School Students of Chinese Background</i>							
1. Ethnic Nationalism	1	.10	-.15	.01	-.08	.05	.03
2. Social Support		1	-.37**	-.07	-.28*	.35**	.45**
3. Self-Esteem			1	.57**	-.15	-.53**	-.42**
4. Self-Concept				1	-.40**	-.32**	.34**
5. Hopelessness					1	-.01	-.06
6. Anxiety						1	.55**
7. Trauma							1
<i>High School Students of Former-Yugoslavian Background</i>							
1. Ethnic Nationalism	1	-.39**	.06	.22	-.24*	-.14	-.35**
2. Social Support		1	.05	-.63**	.49**	.45**	.65**
3. Self-Esteem			1	-.22	-.40**	.27*	-.04
4. Self-Concept				1	-.52**	-.47**	-.50**
5. Hopelessness					1	.21	.39**
6. Anxiety						1	.72**
7. Trauma							1

Note. * = Significant at .05; ** = Significant at .01; Primary School Chinese Background N=72; Primary School Former-Yugoslavian Background N=70; High School Chinese Background N=76; Former-Yugoslavian Background N=55

The hypothesised acculturative stress model was tested with Chinese primary school participants (see Figure 1) utilising path analysis. Table 2 presents the direct, indirect, and total effects for each of the predictor variables. Self-esteem, self-concept, ethnic nationalism, and social support accounted for 45.1% of the variance in anxiety. Self-esteem and social support emerged as the only significant individual predictors. Self-esteem was found to have the strongest direct effect on anxiety ($\beta = -.56$), followed by social support ($\beta = -.27$). The strongest total effect (direct + indirect; $\beta = -.56$) was demonstrated by self-esteem, followed by social support ($\beta = -.42$). For trauma, self-esteem, self-concept, ethnic nationalism, and social support accounted for 37.7% of the variance. Self-esteem emerged as the only significant direct individual predictor of trauma ($\beta = -.47$). The strongest total effect (direct + indirect; $\beta = -.47$) was demonstrated by self-esteem, followed by ethnic nationalism ($\beta = -.25$). Lastly, self-esteem, self-concept, ethnic nationalism, and social support accounted for 51.3% of the variance in hopelessness. Self-esteem and social support emerged as the only significant direct individual predictors. Self-esteem was found to have the strongest direct effect on hopelessness ($\beta = -.53$), followed by social support ($\beta = -.21$). The strongest total effect (direct + indirect; $\beta = -.53$) was demonstrated by self-esteem, followed by social support ($\beta = -.43$). The model for primary school aged children of Chinese origin depicted in Figure 1 shows anxiety, trauma, and hopelessness to be primarily determined directly by self-esteem and social support (excluding trauma), and indirectly by social support and ethnic nationalism via self-concept and self-esteem. The findings here only provide general support for this model, as the observed model for this sample is different to the hypothesis. Interestingly, the model predicts anxiety, trauma, and hopelessness differently.

Figure 1. Direct and Indirect Effects of Ethnic Nationalism, Social Support, Self-Esteem, and Self-Concept on Anxiety, Trauma, and Hopelessness for Primary School Children of Chinese Background (N=76)

Table 2. Direct, Indirect and Total Effects for predicting Anxiety, Trauma, and Hopelessness using Ethnic Nationalism, Australianism, Social Support, Self-Esteem, and Self-Concept for Primary School Children of Chinese Background

<i>Causal Effects</i>					
Outcome variables	Predictor variables	Direct	Indirect	Total	R^2
Anxiety	Self-Esteem	-.56***	-	-.56	.45***
	Self-Concept	.07	-	.07	
	Ethnic Nationalism	-.01	-.09	-.09	
	Social Support	-.27*	-.15	-.42	
Trauma	Self-Esteem	-.47***	-	-.47	.38***
	Self-Concept	-.14	-	-.14	
	Ethnic Nationalism	-.09	-.16	-.25	
	Social Support	-.02	-.21	-.23	
Hopelessness	Self-Esteem	-.53***	-	-.53	.51***
	Self-Concept	-.13	-	-.13	
	Ethnic Nationalism	.03	.01	.04	
	Social Support	-.21*	-.22	-.43	
Self-Esteem	Self-Concept	.49***	-	.49	.35***
	Ethnic Nationalism	.06	.18	.24	
	Social Support	.13	.20	.33	
Self-Concept	Ethnic Nationalism	.36***	-	.36	.37***
	Social Support	.40***	-	.40	

Note: * = $p < .05$; ** = $p < .01$; *** = $p < .001$.

Former-Yugoslavian Origin. The alpha coefficients for self-report scales were found to adequately measure acculturation (BIQ = .73), social support (SOCS = .95), self-esteem (SEI = .87), self-concept (SDQ-I = .96), hopelessness (KHS = .82), anxiety (RCMAS = .89), and trauma (TSCL = .98) variables. Significant positive relationships (see Table 1) were found between anxiety and trauma ($r = .71$), anxiety and hopelessness ($r = .64$), and trauma and hopelessness ($r = .72$). Similar to Chinese primary school participants, these internalising symptoms were found to negatively correlate with social support ($r = -.58$; $-.72$; $-.74$), self-esteem ($r = -.70$; $-.77$; $-.77$),

and self-concept ($r = -.62; -.83; -.69$), respectively. No significant relationships were observed between ethnic nationalism and other variables.

The hypothesised model was tested for Former-Yugoslavian primary school participants (see Figure 2) utilising path analysis. Table 3 presents the direct, indirect and total effects for each of the predictor variables. Self-esteem, self-concept, ethnic nationalism, and social support accounted for 55.8% of the variance in anxiety. Self-esteem emerged as the only significant direct individual predictor of anxiety ($\beta = -.39$). The strongest total effect (direct + indirect; $\beta = -.55$) was demonstrated by social support, followed by self-esteem ($\beta = -.39$). For trauma symptomatology, self-esteem, self-concept, ethnic nationalism, and social support accounted for 70.9% of the variance. Self-concept emerged as the only significant direct individual predictor of trauma ($\beta = -.48$). The strongest total effect (direct + indirect; $\beta = -.66$) was demonstrated by social support, followed closely by self-concept ($\beta = -.48$). Lastly, self-esteem, self-concept, ethnic nationalism, and social support accounted for 70.6% of the variance in hopelessness. Self-esteem and social support emerged as the only significant individual predictors. Social Support ($\beta = -.40$) was found to have the strongest direct effect on hopelessness, followed closely by self-esteem ($\beta = -.39$). Likewise, the strongest total effect (direct + indirect; $\beta = -.73$) was demonstrated by social support, followed by self-esteem ($\beta = -.39$). The model for primary school aged children of former-Yugoslavian origin depicted in Figure 2 shows anxiety and hopelessness to be primarily determined directly by self-esteem and social support (hopelessness only), and indirectly by social support via self-concept and self-esteem. Trauma appears to be directly determined by self-concept, and indirectly by social support via self-concept. As with children of Chinese origin, the findings here provide only some general support for this model as the observed path loadings for this

sample is different to that which is hypothesis. Similarly, the model predicts internalising symptoms of acculturative stress in different ways.

Figure 2. Direct and Indirect Effects of Ethnic Nationalism, Social Support, Self-Concept, and Self-Esteem on Anxiety, Trauma, and Hopelessness for Primary School Children of Former-Yugoslavian Background (N=55)

Table 3. Direct, Indirect and Total Effects for predicting Anxiety, Trauma, and Hopelessness using Ethnic Nationalism, Australianism, Social Support, Self-Esteem, and Self-Concept for Primary School Children of Former-Yugoslavian Background

<i>Causal Effects</i>					
Outcome variables	Predictor variables	Direct	Indirect	Total	R^2
Anxiety	Self-Esteem	-.40*	-	-.40	.56***
	Self-Concept	-.25	-	-.25	
	Ethnic Nationalism	-.02	-.08	-.10	
	Social Support	-.18	-.38	-.56	
Trauma	Self-Esteem	-.24	-	-.24	.71***
	Self-Concept	-.48**	-	-.48	
	Ethnic Nationalism	.06	-.08	-.02	
	Social Support	-.22	-.44	-.66	
Hopelessness	Self-Esteem	-.39*	-	-.39	.71***
	Self-Concept	-.17	-	-.17	
	Ethnic Nationalism	.01	-.07	-.06	
	Social Support	-.40**	-.33	-.73	
Self-Esteem	Self-Concept	.62***	-	.62	.57***
	Ethnic Nationalism	.08	.06	.14	
	Social Support	.15	.40	.55	
Self-Concept	Ethnic Nationalism	.10	-	.10	.45***
	Social Support	.65***	-	.65	

Note: * = $p < .05$; ** = $p < .01$; *** = $p < .001$.

High School Adolescents

Chinese Origin. The alpha coefficients for the self-report scales were found to adequately measure acculturation (BIQ = .84), self-concept (SDQ-II = .86), hopelessness (BHS = .73), anxiety (RCMAS = .85), and trauma (TSCL = .94) variables. SSAS items initially yielded an alpha coefficient of .67. Following the exclusion of items 10, 13, and 22, the alpha coefficient for social support was increased to .80. Similarly, RSES items initially yielded an alpha coefficient of .30. Following the exclusion of items 1, 3, 4, 7, 8, and 10, the alpha coefficient for self-esteem increased to .65. These modified self-esteem and social support variables

were included for all further analysis. A significant positive relationship (see Table 1) was found between anxiety and trauma ($r = .55$). In turn, these internalising symptoms were found to negatively correlate with self-esteem ($r = -.53$; $-.42$) and self-concept ($r = -.32$; $-.34$), and positively with social support ($r = .35$; $.45$), respectively. Unlike primary school groups, a negative relationship was observed between hopelessness and anxiety. Hopelessness was also observed to negatively correlate with social support ($r = -.28$) and self-concept ($r = -.40$). No significant relationships were observed between ethnic nationalism and other variables.

The hypothesised model was tested with Chinese high school adolescents (see Figure 3) utilising path analysis. Table 4 presents the direct, indirect and total effects for each of the predictor variables. Self-esteem, self-concept, ethnic nationalism, and social support accounted for 34.7% of the variance in anxiety. Self-esteem emerged as the only significant direct individual predictor of anxiety ($\beta = -.40$). The strongest total effect (direct + indirect) was equally demonstrated by social support ($\beta = .42$), followed closely by self-esteem ($\beta = -.40$). Similar to anxiety symptoms, self-esteem, self-concept, ethnic nationalism, and social support accounted for 34.7% of the variance for trauma. Social support emerged as the only significant direct individual predictor ($\beta = .34$). The strongest total effect (direct + indirect; $\beta = .47$) was demonstrated by social support, followed by self-esteem ($\beta = -.25$). Lastly, self-esteem, self-concept, ethnic nationalism, and social support accounted for 25.3% of the variance in hopelessness. Self-concept ($\beta = -.44$) and social support ($\beta = -.27$) emerged as the only significant direct individual predictors of hopelessness. The strongest total effect (direct + indirect; $\beta = -.44$) was demonstrated by self-concept, followed by social support ($\beta = -.34$). The model for high school adolescents of Chinese origin depicted in Figure 3 shows anxiety, trauma, and hopelessness to be

primarily determined directly by self-esteem and social support, and indirectly by social support via self-concept and self-esteem. The findings here are not as supporting as with primary school models. Again, differences between the pathways to anxiety, trauma, and hopelessness are observed.

Figure 3. Direct and Indirect Effects of Ethnic Nationalism, Social Support, Self-Concept, and Self-Esteem on Anxiety, Trauma, and Hopelessness for High School Adolescents of Chinese Background (N=72)

Table 4. Direct, Indirect and Total Effects for predicting Anxiety, Trauma, and Hopelessness using Ethnic Nationalism, Australianism, Social Support, Self-Esteem, and Self-Concept for High School Adolescents of Chinese Background

<i>Causal Effects</i>					
Outcome variables	Predictor variables	Direct	Indirect	Total	R^2
Anxiety	Self-Esteem	-.40*	-	-.40	.35***
	Self-Concept	-.07	-	-.07	
	Ethnic Nationalism	.05	.04	.09	
	Social Support	.24	.18	.42	
Trauma	Self-Esteem	-.25	-	-.25	.35***
	Self-Concept	-.18	-	-.18	
	Ethnic Nationalism	.08	.04	-.04	
	Social Support	.34**	.13	.47	
Hopelessness	Self-Esteem	.14	-	.14	.25**
	Self-Concept	-.44**	-	-.44	
	Ethnic Nationalism	-.05	-.02	-.03	
	Social Support	-.29*	.02	-.27	
Self-Esteem	Self-Concept	.58***	-	.58	.54***
	Ethnic Nationalism	-.15	.07	-.08	
	Social Support	-.39***	-.05	-.44	
Self-Concept	Ethnic Nationalism	-.12	-	-.12	.02
	Social Support	-.09	-	-.09	

Note: * = $p < .05$; ** = $p < .01$; *** = $p < .001$.

Former-Yugoslavian Origin. The alpha coefficients for self-report scales were found to adequately measure acculturation (BIQ = .82), social support (SSAS = .84), self-concept (SDQ-I = .90), hopelessness (KHS = .79), anxiety (RCMAS = .93), and trauma (TSCL = .97) variables. Similar to Chinese adolescents, RSES items initially yielded a relatively poor alpha coefficient of .45. Following the exclusion of different items 2, 5, 6, 8, and 9, the alpha coefficient for self-esteem increased to .78. This modified self-esteem variable was included for all further analysis. Table 1 presents bivariate correlations for Former-Yugoslavian primary school participants for each of the cultural adjustment variables. Significant positive relationships (see Table 1) were

found between anxiety and trauma ($r = .72$), and trauma and hopelessness ($r = .39$). Both anxiety and trauma were found to associate negatively with self-concept ($r = -.47$; $-.50$) and positively correlate with social support ($r = .45$; $.65$) respectively. A positive relationship was also observed between anxiety and self-esteem ($r = .27$). Hopelessness was found to negatively correlate with self-concept ($r = -.52$) and self-esteem ($r = .40$), and positively correlate with social support ($r = .49$). Ethnic nationalism was found to negatively correlate with social support ($r = -.39$), trauma ($r = -.35$) and hopelessness ($r = -.24$).

The hypothesised model was tested with Former-Yugoslavian high school adolescents (see Figure 4) utilising path analysis. Table 5 presents the direct, indirect and total effects for each of the predictor variables. Self-esteem, self-concept, ethnic nationalism, and social support accounted for 34.5% of the variance in anxiety. Self-esteem and social support emerged as the only significant individual predictors. Social support was found to have the strongest direct effect on anxiety ($\beta = .38$), followed by self-esteem ($\beta = .27$). The strongest total effect (direct + indirect; $\beta = .52$) was demonstrated by social support, followed by self-esteem ($\beta = .27$). For trauma symptomatology, self-esteem, self-concept, ethnic nationalism, and social support accounted for 50.7% of the variance. Social support emerged as the only significant direct individual predictor of trauma ($\beta = .62$). The strongest total effect (direct + indirect; $\beta = .68$) was demonstrated by social support, followed by self-concept ($\beta = -.09$). Lastly, self-esteem, self-concept, ethnic nationalism, and social support accounted for 55.0% of the variance for hopelessness. Self-esteem and self-concept emerged as the only significant individual predictors. Self-esteem was found to have the strongest direct effect on hopelessness ($\beta = -.48$), followed by self-concept ($\beta = -.47$). The strongest total effect (direct + indirect; $\beta = -.51$) was demonstrated by social

support, followed closely by self-esteem ($\beta = -.48$) and self-concept ($\beta = -.47$). The model for high school adolescents of former-Yugoslavian origin depicted in Figure 4 shows anxiety and hopelessness to be primarily determined directly by self-esteem and social support (anxiety only), and indirectly from social support via self-concept and self-esteem. Trauma appears directly predicted by social support. Compared with the models proposed for other cultural and age categories, the findings here reveal different relationship dynamics between variables. Again, distinct pathways to anxiety, trauma, and hopelessness are evident.

Figure 4. Direct and Indirect Effects of Ethnic Nationalism, Social Support, Self-Concept, and Self-Esteem on Anxiety, Trauma, and Hopelessness for High School Adolescents of Former-Yugoslavian Background (N=70)

Table 5. Direct, Indirect and Total Effects for predicting Anxiety, Trauma, and Hopelessness using Ethnic Nationalism, Australianism, Social Support, Self-Esteem, and Self-Concept for High School Adolescents of Former-Yugoslavian Background

<i>Causal Effects</i>					
Outcome variables	Predictor variables	Direct	Indirect	Total	R^2
Anxiety	Self-Esteem	.27*	-	.27	.35***
	Self-Concept	-.18	-	-.18	
	Ethnic Nationalism	.06	.02	.08	
	Social Support	.38*	.14	.52	
Trauma	Self-Esteem	.01	-	.01	.51***
	Self-Concept	-.09	-	-.09	
	Ethnic Nationalism	-.07	.01	-.06	
	Social Support	.62***	.06	.68	
Hopelessness	Self-Esteem	-.48***	-	-.48	.55***
	Self-Concept	-.47***	-	-.47	
	Ethnic Nationalism	-.03	.02	-.01	
	Social Support	.24	.27	.51	
Self-Esteem	Self-Concept	-.32*	-	-.32	.07
	Ethnic Nationalism	.03	.02	.05	
	Social Support	-.14	.21	.07	
Self-Concept	Ethnic Nationalism	-.05	-	-.05	.40***
	Social Support	-.65***	-	-.65	

Note: * = $p < .05$; ** = $p < .01$; *** = $p < .001$.

Discussion

This study proposed an organisational structure for single risk factors that have been identified with acculturative-stress in young people. Age and culturally distinct groups were found to vary considerably in the goodness of model fit, with variable pathways predicting the dimensions of acculturative stress in different ways. Of the universal risk and protective factors for acculturative-stress that are proposed in the model, social support and ethnic nationalism were hypothesised to influence overall self-concept and the internal processing of self-esteem, which in turn would moderate the prediction of anxiety, trauma, and hopelessness. Among primary school children

of Chinese background, those who reported minimal social support and minimal identification with their cultural heritage were more likely to exhibit poor self-concept and low self-esteem, plausibly leading to the development and/or maintenance of internalising symptoms. According to Phinney (1992), exploration of the meaning of one's ethnicity which follows acceptance and cultural assimilation, is likely to contribute to a more secure sense of identity as a minority group member.

Considering children are likely to adjust to their new cultural environment much quicker than older migrants, and do not have to contend as much with pressures to hide or change their ethnicity for the sake of peer acceptance observed among adolescents, peer and family support may be more accessible. However this is not always the case with children of Chinese origin. Many Chinese children who migrate to Australia are devoid of parental support due to business obligations in the country of origin (Tam, 2002). Sonderegger and Barrett (2002) report that without access to such family support, the trauma of cultural relocation is observed to intensify. It therefore makes intuitive sense that a child's degree of social support and ethnic identity predicts overall self-concept. With the dimensions of self-concept constituting peer relations, parent relations, and general-self appraisal, it is not surprising that the components which predict self-concept also influence self-esteem. The observation that feeling good about one's self corresponds with fewer anxiety and trauma symptoms and a less pessimistic future outlook, suggests that self-esteem serves as a protective factor against acculturative-stress.

A similar pattern of cultural adjustment was observed for primary school children of former-Yugoslavian background. Inspection of direct and indirect effects suggest that children who receive minimal social support are likely to have poor self-concept and low self-esteem, leading to the development and/or maintenance of

internalising symptoms. However, unlike Chinese children, identification with one's ethnicity did not significantly influence self-concept as predicted. While this finding may appear to suggest that bicultural identification is independent of one's concept of self, Sonderegger and Barrett (submitted) found that among children of primary school age, young former-Yugoslavian migrants reported significantly higher self-concept than participants of Chinese background. Insomuch as former-Yugoslavian and Anglo-Australians share a predominantly Caucasian population base, and Australian socio-cultural norms and language aspects are more similar to those of Europe than Asia, it is theorised that former-Yugoslavian students may be better able to identify with their Australian peers than Chinese students who are physically and linguistically more diverse. In this regard, the development of self-concept may have more to do with default physical and linguistic influences of race and culture than acculturation.

Unlike primary school children, inspection of direct and indirect effects among high school adolescents of Chinese background revealed social support to have a negative influence on self-esteem, which in turn is theorised to predict the development and/or maintenance of anxiety and trauma symptoms. Although one's concept of self also predicts self-esteem, and is observed to directly influence hopelessness, the direct effect of self-esteem on hopelessness was not significant. Moreover, neither social support nor ethnic identification were observed to influence self-concept, thereby failing to support the hypothesis. Similar to the previous observation, it may be theorised that the formation of self-concept is independent to social and cultural influences. Although Sonderegger and Barrett (submitted) found that young migrants from Chinese background reported the lowest levels of affiliation with both host and origin cultures, suggesting resistance to one's ethnicity may lead to

poor self concept, the present finding suggests ethnic identification has relatively little impact on self-concept, esteem, and acculturative-stress.

Similar to Chinese adolescents, the path loadings of high school adolescents of former-Yugoslavian background are considerably different to those observed in the primary school models. Inspection of direct and indirect effects suggests that social support is inversely related to self-concept and has a negative influence on anxiety and trauma. Although both self-concept and self-esteem adequately predict hopelessness according to expected trends (i.e., one's positive self-view serving as a buffer against pessimistic expectations of the future), the direct relationships between self-esteem, self-concept, and anxiety are not as would be expected. Moreover, social support appears positively related to anxiety and trauma. For former-Yugoslavian adolescents, this model appears to represent the internalising symptoms of anxiety and trauma differently to that of hopelessness.

The interesting social support dynamic presented in this model serves as a quandary in the face of much research that has found deficient social support to be paired with adverse behaviour problems and poor mental health, and visa versa, greater social support serving as a buffer against psychopathology (e.g., Cederbald et al., 1999; Pawliuk et al., 1996; Pinderhughes, 1989). However, it should be noted that the impact of social support may be determined by circumstances and cultural socialisation practices (Knight, Verdin, & Roosa, 1994; Green & Werner, 1996). Zivcic (1993) asserts that the ability of parents to assist youth in coping with the negative consequences of stress may be questionable if adults themselves are experiencing distress. In this regard, it may be theorised that despite the degree, the quality of social support received by adolescents of former-Yugoslavian background may be impaired as a consequence of parental exposure to war. According to Zivcic,

distressed parents may not only provide inadequate support, but also be an additional source of stress to their children. Considering distressed parents may be preoccupied with their own psychological trauma, Yule (1989) has revealed that distressed youth resist disclosing personal concerns so as not to be a further burden source of stress for parents. This problem is confounded by the fact that due to immediate cultural and language barriers, parents are often the only form of social support available to migrant youth. As a result, Zivcic contends that migrant youth of distress parents frequently find themselves isolated to cope with negative feelings they can neither understand nor resolve. Therefore, to further understand the role social support plays among youth of former-Yugoslavian backgrounds, researchers would do well to not only conduct more detailed culturally sensitive examination of the role social support plays in acculturative-stress, but to concurrently examine the experiences of both youth and their parents.

In summary, while cultural and age adjustment differences appear evident, the studies hypothesis is only partially supported. The goodness of fit for the proposed organisational structure of single risk and protective factors associated with cultural adjustment (Models 1-4) appeared better for some groups than others. Interestingly, distinct pathways to anxiety, trauma, and hopelessness were revealed. In this regard, it may be inaccurate to assume that the development of internalising symptoms is universal in experience. Particularly, the divergent role of social support appears to be a significant factor in each model. Conversely, identification with ones ethnic heritage appears to play a lesser role than initially thought. However, as with most cross-cultural investigations, due care is required when interpreting the results of this study. Without robust culturally validated measures, and in the absence of established cultural norms for existing inventories, the true meaning of scores may be masked.

Despite the apparent differences between cultural groups, it remains unclear to what extent divergent self-reports are due to actual experiential differences, and to what degree socialisation and linguistic variables influence ratings. Consequently, extending child and adolescent research across cultural and ethnic boundaries is important to help explain the developmental nature of culturally specific socialisation processes, especially among migrant groups. However tentative, the findings from this study may serve as a platform from which to develop a better understanding of the cultural adjustment experiences of young people who migrate from Chinese and former-Yugoslavian backgrounds. Further cultural specific identification of the situational and internalising process variables that influence cultural adjustment may not only help mental health professionals understand how culture mediates the development or prevention of psychopathology but also aid in the deployment of effective coping strategies. According to Winter and Young (1998), the further acquisition of knowledge about migration related stressors will not only help mental health professions become better equipped to meet the needs of diverse cultural populations, but will engender a healthy respect for cross-cultural differences. The findings presented herein are testimony to the argument that cultural groups have unique migrational experiences and specific needs.

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