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An Investigation into the Cross-Cultural Adaptation of Immigrants to  
Urban and Rural Canada Using the Multidimensional Individual Difference Acculturation (MIDA)  
model

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### Abstract

In the present chapter, the processes of acculturation experienced by immigrants living in rural and urban settings in Canada are examined. Comparative analyses using the MIDA (Multidimensional Individual Differences Acculturation) model were conducted with immigrants living in rural and urban settings. Two hundred twelve first-generation immigrants living in rural (n=106) and urban (n=106) areas in the province of Ontario, Canada participated in the study. The results demonstrated that the urban sample scored significantly higher on measures of adjustment than the rural sample. There were, however, several consistent relations between predictors and outcome measures in the MIDA model for both samples. The findings are discussed with reference to the relative isolation of the rural sample, Canadian policy toward immigrants, and measurement issues.

### Patterns of Immigrant Settlement

Every year, millions of people migrate from their country of birth in search of new opportunities, a decision that may be motivated by any combination of economic, social and political reasons. Since 1990, the number of migrants has skyrocketed; a phenomenon driven in part by a surge in migration to countries that are both developed and high-income, including Canada, the United States, and New Zealand (Zlotnick, 2007). As of 2005, there were over 190 million migrants worldwide (United Nations [UN], 2005a). In the same year, Canada was home to over 6 million migrants (UN, 2005a), with an additional 251,511 arriving in 2006 (Citizenship and Immigration Canada [CIC], 2006). Immigration is important for Canada's population growth. In fact, immigration constitutes approximately two thirds of Canada's annual population growth (Statistics Canada, 2006).

Despite the annual influx of immigrants, Canada's smaller cities and rural areas are failing to attract a significant number of immigrants. At present, about 75% of immigrants in Canada live in Toronto, Montréal or Vancouver, commonly referred to as Canada's "gateway cities" (Krahn, Derwing, & Abu-Laban, 2003). This skewed settlement pattern is neither limited to immigrant populations nor exclusive to Canada. In 2005, the vast majority of people resided in urban settings: 74.1% worldwide, and 80.1% within Canada (UN, 2005b). Furthermore, worldwide population growth increased annually by .5% in urban areas and decreased by .4% in rural settings from 2000-2005. This trend is expected to continue; by 2030, it is projected that 80.8% of the world population and 84.4% of Canadians will live in urban settings.

In Canada, the continually increasing preference for urban living may reflect, in part, a government policy that has shifted its focus from agricultural development (Krahn et al., 2003) to attracting skilled workers and professionals (Kelley & Trebilcock, 1998). Through the first few decades of the 20<sup>th</sup> century, settlements in rural Canada received the majority of new immigrants (Kelley &

Trebilcock, 1998; Knowles, 1997). After the Second World War, immigration patterns shifted to urban settlement, where they have remained since.

The shift in settlement patterns and subsequent over-representation of immigrants in Canada's large urban centres has had both positive and negative consequences. On one hand, immigrant/ethnic clustering can serve to provide social support and resources (Walton-Roberts, 2005). On the other hand, the same clustering can lead to isolation of immigrants and "a reduction in the level of acceptance by Canadians that would affect, not only immigrants, but many of those who have already arrived." (Collacott, 2002; cited in Walton-Roberts, 2005, p. 13). Immigrant concentration can be problematic for both urban and rural Canadian communities. Rapid population growth and ethno-linguistic diversity places a major burden on Canada's three gateway cities in terms of service provision (Walton-Roberts, 2005). Furthermore, rural areas suffer because they are unable to obtain the workers and population growth provided by immigration (Walton-Roberts, 2005). To combat these and other related problems, there is a call for dispersion of immigrants outside of the gateway cities and into Canada's smaller communities and rural areas (CIC, 2001; McIsaac, 2003). With this has come a need for researchers to explore various aspects of immigration in rural regions such as settlement patterns, resource needs, and characteristics of psychological and sociocultural adaptation (Di Biase & Bauder, 2005; Laaroussi & Walton-Roberts 2005; Safdar, Fuller, & Lewis, 2007).

Various reasons have been proposed to explain immigrants' preference for urban living in Canada. A lack of immigration to Atlantic Canada prompted the formation of the Atlantic Metropolis Atlantique (AMA), a body of academic researchers, government representatives, and non-governmental organizations. The aim of AMA is to address and perhaps ameliorate factors hindering regional immigration (Akbari & Mandale, 2005). The obstacles that the AMA highlights are not exclusive to Atlantic Canada; they tend to affect smaller cities and rural areas from coast to coast. Specific impediments to the attraction of immigrants include: (1) limited accessibility in the form of direct

international flights; (2) limited exposure to and familiarity with Canada beyond Toronto, Montréal, and Vancouver; (3) regional job deficits; (4) the possibility of unfavourable experiences due to negative attitudes and discrimination from members of the receiving society, including employers; and (5) limited government-based immigration-related resources (Akbari & Mandale, 2005). Good (2005) found that local policies are influenced by ethnic diversity, such that Canadian municipalities are more likely to adopt truly multicultural local policies that serve immigrant communities, if their ethnic configuration is either bi- or multicultural (Good, 2005). This is a reactive rather than proactive approach: responding to immigrants' needs when they are already there, rather than pursuing policies that encourage movement to smaller cities and rural areas by adopting multicultural policies in anticipation of their arrival.

Walton-Roberts (2005) also suggests that municipal governments do little to recruit immigrants to their communities. Prior to immigration, individuals are not given opportunities to obtain information about small communities in Canada. For immigrants to gain the necessary knowledge about smaller communities, these communities must disseminate information about economic opportunities and social services (Di Biase & Bauder, 2005). Furthermore, once immigrants have arrived in a rural community, services designed to assist them and retain their commitment to living in the community are often not available (Walton-Roberts 2005). Attraction and retention of immigrants also depends on the economic and social factors within a region. Better employment prospects coupled with opportunities to maintain and form social networks are attractive features to immigrants. Despite some research indicating that better employment opportunities do not necessarily exist in larger urban areas, immigrants tend to perceive prospects as more plentiful in major cities. For example, Walton-Roberts (2005) found that immigrants in rural areas and mid-size cities have a higher income and more likely to be employed than those settled in Vancouver. However, other research has found that immigrants who have settled in rural areas in Canada are disadvantaged economically, with lower wages and less opportunity for upward mobility than those in the large cities (Vera-Toscano, Weersink & Phimister, 2003). In some cases,

newcomers to Canada are forced to relocate out of smaller urban centres and rural areas because of difficulty locating employment. For example, Sherrell, Hyndman and Preniqi (2005) found that a small but sizeable proportion of Kosovar refugees who settled in smaller cities and rural areas outside of the Greater Vancouver Regional District (GVRD) chose to relocate. Although they reported liking the communities where they had settled, they cited a lack of employment opportunities and social support as their reason for typically relocating to much larger cities in British Columbia, Alberta, and Ontario. Furthermore, those who settled the farthest from Vancouver experienced the greatest difficulties in language and employment acquisition. These examples illustrate that urban regions offer, and are perceived as offering, better economic and social opportunities for immigrants.

The tendency for immigrants in Canada to gravitate toward larger cities has resulted in a body of research that focuses primarily on immigration within urban contexts (e.g. Bauder & Sharpe, 2002; Bourne, 1989; Lo & Wang, 1997; Safdar, Lay & Struthers, 2003). As a result, research observing patterns, motivations, and cultural orientations of immigrants in rural areas of Canada remains understudied. In focusing solely on immigrants within urban contexts, many questions about the adjustment of immigrants in rural settings remain unexplored. To assume that research including only urban samples will also apply to rural populations is a faulty assumption that could leave policy makers misinformed and have negative consequences for the adjustment of rural immigrants.

#### Acculturation and Adjustment of Immigrants

A series of factors have been identified as relevant to the adjustment of immigrants. These factors have been categorized as core and peripheral variables. Ward and Kennedy (1993) and Safdar et al. (2003) refer to core factors as robust predictors that affect the adjustment process of many acculturating groups whereas peripheral factors are situation- or culture-specific predictors. Two recent models of acculturation, proposed to describe the relationships between these core factors (Arends-Toth & van de Vijver, 2006; Safdar et al., 2003), are similar in a variety of respects. They both include

psychological distress, and in- and outgroup contact, as outcome variables measuring immigrants' adjustment. The predictor variables in both models are measures of psychological constructs (e.g., psychological well-being and cultural competence) and/or individuals' perception of their circumstances. Furthermore, the two variables connecting the predictors and the outcome variables in both models are measures of acculturation attitudes. These two models were arrived at independently and through different methods, one theoretical, based on the available literature (Arends-Toth & van de Vijver, 2006), the other empirically derived (Safdar et al., 2003), and their concordance indicates a degree of validity.

The most widely accepted view of acculturation processes (Berry, 2003) describes four possibilities based on positive or negative attitudes to one's old culture, and the new culture to which one is adapting. Integration suggests a positive attitude toward maintenance of one's old culture and adoption of the new one. Separation (or segregation) involves a positive attitude toward maintaining one's old culture and a rejection of the new one. Assimilation is the abandonment of one's old culture and the adoption of the new one. Finally, Marginalisation results from the abandonment of one's old culture and non-engagement with the new culture.

In the present study, the model proposed by Safdar et al. (2003), referred to as the Multidimensional Individual Difference Acculturation model (MIDA), will be examined, as it has proven robust over a variety of samples (Safdar, 2002). It is an empirically derived model that corresponds closely to the theoretical model presented by Arends-Toth and van de Vijver (2006). The factors in the model are discussed below.

#### *Overview of the Present Research*

The goal of the present research was to conduct comparative analyses in order to examine the applicability of Safdar et al.'s (2003) acculturation model to immigrants living in both rural and urban settings. The predictor variables were psychological skills and include: Psychosocial Resources (which

include resilience or positive psychological functioning and certain skills, such as language, which comprise cultural competence), Co-national Connectedness (which refers to a high level of ethnic identification and the presence of social support from family and ingroup members), and Perceived Discrimination as measure of perceived self and group discrimination. These variables are identical to those used by Safdar et al. (2003), with the exception of discrimination which was used instead of hassles. Safdar (2002; Safdar et al., 2003) included both acculturation specific hassles, such as discrimination, and acculturation non-specific or general hassles, such as lack of time and money. Safdar and Lewis (in press) reported that acculturation specific hassles better predict psychophysical distress than do general hassles. In the present study we aimed to examine acculturation specific hassles (i.e., discrimination) as it is the most salient example of acculturation specific hassles (Safdar & Lewis, in press).

The outcome variables were measures of acculturation adaptation and include: Ingroup Contact, Outgroup Contact (both measures of socio-cultural adaptation) and Psychophysical Distress (measure of psychophysical adaptation). Additionally, the MIDA model included separation and assimilation which predicted socio-cultural adaptation. In the present study, instead of incorporating two of the four acculturation modes, we included the two dimensions of acculturation as discussed by Berry (2003). These are acculturation orientations toward Old Culture Maintenance and New Culture Acquisition. Within the proposed model, these attitudinal variables have the potential either to directly affect the adaptation (outcome) variables, or to interact with the other predictor variables.

We are unaware of any research to date observing differences in the adjustment of immigrants in urban and rural populations. Thus, our investigation will be exploratory in nature. Our main focus of concern is whether a specific set of constructs previously found to be associated with successful acculturation are similarly applicable to immigrants who live in rural and urban settings. We anticipated that the MIDA model will be broadly applicable to both urban and rural immigrant groups, although

there may be differences, we make no specific hypotheses about these differences as there are no previous urban/rural comparison upon which to base such hypotheses. However, based on previous studies on the MIDA model we made the following hypotheses:

Hypothesis 1: Immigrants with high Psychosocial Resources are more likely to express a positive attitude toward contact with the larger society (New Culture Acquisition), are more likely to maintain contact with the larger society (Outgroup Contact), and are less likely to report psychological and physical symptoms (Psychophysical Symptoms) than those with fewer resources.

Hypothesis 2: Immigrants with high Connectedness are more likely to express a positive attitude toward maintaining their ethnic culture (Old Culture Maintenance) and are more likely to maintain contact with their ethnic community (Ingroup Contact).

Hypothesis 3: Immigrants who perceive high levels of Discrimination are anticipated to experience more Psychophysical symptoms.

Hypothesis 4: Immigrants who have a positive attitude toward maintenance of their heritage culture (Own Culture Maintenance) are more likely to maintain contact with their ethnic community (Ingroup Contact). Furthermore, immigrants who have a positive attitude toward contact with the larger society (New Culture Acquisition) are more likely to have contact with members of the larger society (Outgroup Contact).

## METHOD

### *Participants*

Two hundred twelve first-generation immigrants living in rural ( $n=106$ ) and urban ( $n=106$ ) areas in the province of Ontario, Canada participated in this study. The general selection criteria for participants were that they had reached the age of 18 and had come to Canada after 1990 (i.e. had lived in Canada for between 6 months and 17 years)<sup>i</sup>. Most urban participants reported having been in Canada

for more than four years (54.3%) whereas their rural counterparts most frequently reported having been in Canada for between two and four years (42.5%).

The majority of participants indicated their gender to be female in both the urban (67.3%) and rural (71.4%) samples. The most frequently reported age range in both groups was 35-44 (40% urban, 34.9% rural). Most participants indicated that they were married or in a common-law relationship (71.2% urban, 84% rural). In the urban sample, most respondents reported a household size of two (12.4%), three (45.7%), or four (27.6%), as did the rural sample (two, 21.7%; three, 35.8%; four, 24.5%). A large portion of the rural sample, however, also reported household sizes between 5-8 people (14.1%). Reported household sizes in both samples were higher than the national and provincial averages.

The majority of each sample (87.8% urban, 80.2% rural) indicated having at least some form of post-secondary education. Specifically, almost 42% of each sample reported having a university degree, the remainder reported a college certificate or some post-secondary education (27.4% urban, 19.8% rural), or a graduate degree (18.9% in both samples). Unemployment rate for both samples was higher than the national rate in Canada 5% (12% of the urban sample and 25% of the rural sample were unemployed). The rural sample had significantly higher number of unemployed than the urban sample,  $t(202) = -2.55, p < .05$ . The most frequently reported household income was \$20,000- \$39,999 for urban participants (30.2%), whereas the most commonly reported annual income for rural participants was less than \$20,000.

The vast majority of urban (98.1%) and rural (93.4%) participants reported that their first language was neither English nor French (Canada's two official languages). All urban participants were born in an Eastern European country according to the grouping recognised by the United Nations: Belarus, Bulgaria, Czech Republic, Hungary, Poland, Republic of Moldova, Romania, Russian Federation, Slovakia and Ukraine. The two largest immigrant groups were from Poland (26%) and

Ukraine (26%). The rural sample, however, was more diverse in terms of country of origin, with 40% hailing from Asia (including East and South Asia), with the largest groups being Chinese (13.2%) and Vietnamese (9.4%). Sixteen percent came from South America and the Caribbean, with the largest national group being Colombian (9.4%). Fifteen percent indicated European origin, 8% indicated African origin, and 6% indicated Middle Eastern origin.

Most participants in both samples were self-identified as Christians (84.8% urban, 52.7% rural). Twenty-seven percent of rural participants indicated that they had no religious affiliation compared to 8.5% of urban participants. A small percentage reported being Muslim (3.8% urban, 4.7% rural). The remaining participants reported a range of religious affiliations, including but not limited to Buddhist, Hindu and Sikh. About half of both urban (54.8%) and rural (54.9%) participants reported that they attended their respective religious institution (e.g. church, temple, mosque) on a regular basis.

### *Procedure*

Rural participants were recruited from multicultural centers and ESL classes after identifying Census Sub-Divisions (counties or towns) with less than 100,000 residents that were logistically accessible. At this point, researchers either travelled to the location and facilitated a session, where questionnaires were distributed and collected on the same day, or mailed the questionnaires to the organizations and had participants complete the survey and mail them back in a self-addressed stamped envelope. The return rate of questionnaires in the rural sample was above 60%. All participants were provided with a small remuneration for their participation.

Urban participants were primarily recruited from the Greater Toronto Area. Recruitment sources included, but were not limited to, schools and organizations offering ESL classes to new immigrants, school boards, and community centres and churches serving the Eastern European population.

### *Measures*

All the scales in this study were compiled into a single booklet and administered to participants in the English language. After demographic information was collected, participants completed measures related to the variables included in the MIDA model.

#### *Psychosocial Resources*

Psychosocial resources is a composite predictor variable, made up of psychological well-being and linguistic competence<sup>ii</sup>.

*Psychological Well-Being Scale.* This 18-item scale is a measure of positive psychological functioning, referring to the presence of wellness in one's life rather than the absence of illness (Ryff & Singer, 1996). Individual items reflect the construct's six components: self acceptance (example item, "I like most aspects of my personality"), positive relations with others (e.g. "People would describe me as a giving person, willing to share my time with others), autonomy (e.g. "I judge myself by what I think is important, not by the values of what others think is important"), environmental mastery (e.g. "I am quite good at managing the many responsibilities of my daily life"), purpose in life (e.g. "Some people wander aimlessly through life, but I am not one of them") and personal growth (e.g. "For me, life has been a continuous process of learning, changing, and growth"). There are three items for each component. Each item is rated on a 5-point Likert-scale ranging from "Strongly Disagree" (1) to "Strongly Agree" (5). The Cronbach's alpha coefficient was .76 for both the urban and rural samples.

*Self-rated Language Competence Scale.* This 4-item scale is an adaptation of Lay, Fairlie, Jackson, Ricci, Eisenberg, Sato et al.'s (1998) measure of cultural competence. Items measured self-rated oral, comprehensive, reading, and writing skills and were rated from "Not at all" (1) to "Very well" (5). The Cronbach's alpha coefficient for this scale was .94 for both the urban and rural samples.

#### *Co-national Connectedness*

Co-national connectedness is our second composite predictor variable. Co-national connectedness involves the degree of identification with one's heritage culture (ethnic identity) and level of perceived social support from one's ingroup.

*Ethnic Identity Scale.* This 15-item scale was adapted from a measure by Cameron, Sato, Lay, and Lalonde (1997). Three aspects of ethnic identity are considered: the cognitive centrality of one's ethnic origins (e.g. "Being a member of my ethnic group is important to my sense of what kind of person I am"), ingroup ties and similarity to one's ethnic group (e.g. "I have more in common with my ethnic group than any other ethnicity") and affective evaluation of one's ethnic group (e.g. "I feel good about the value system of my ethnic group"). Participants were asked to rate each statement on a 5-point Likert-scale, ranging from "Strongly Disagree" (1) to "Strongly Agree" (5). Cronbach's alpha coefficients for this scale were .90 (urban) and .87 (rural).

*Perceived Ingroup Social Support Scale.* This 4-item scale is an adaptation of the Multi-dimensional Scale of Perceived Social Support (Zimet, Dahlem, Zimet, & Farley, 1988). Participants rated perceived support systems from members of their ethnic ingroup on a 5-point Likert-scale ranging from "Strongly Disagree" (1) to "Strongly Agree" (5). Specific items included "I can count on friends from my ethnic group when things go wrong". Participants rated each item on a 5-point Likert-scale, ranging from "Strongly Disagree" (1) to "Strongly Agree" (5). Cronbach's alpha coefficient for this measure was .86 (urban) and .87 (rural).

#### *Perceived Discrimination*

Perceived discrimination is our third composite predictor variable, involving the self-reported degree of discrimination experienced by oneself and one's ingroup.

*Perception of Self- and Ingroup Discrimination.* We used two 3-item subscales of Barrette, Bourhis, Personnaz, and Personnaz's (2004) measure of discrimination: perception of self-discrimination (example item: "To what extent have you been personally victim [sic] of discrimination

in stores, banks, or restaurants?") and perception of ingroup discrimination (e.g. "To what extent do members of your own group experience discrimination in your community?"). Each item was rated from "Not at all" (1) to "Always" (5). The Cronbach's alpha coefficients for perceived self-discrimination were .76 (urban) and .77 (rural). The Cronbach's alpha coefficients for perceived ingroup discrimination were .75 (urban) and .76 (rural).

#### *Own Culture Maintenance and New Culture Acquisition*

*Acculturation Attitude Scale.* This 16-item acculturation attitude scale is a revised version of Kim's (1984) *Acculturation Attitudes Scale*. This measure has two 8-item subscales, one measuring attitudes toward aspects of participants' heritage culture, and the other examining attitudes toward aspects of Canadian culture. The same eight topics were included in each of the subscales: food, music, friendship, marriage, naming children, club membership, newspaper readership, television viewing, and preferences about the ethnic composition of their neighbourhood. Sample items included: "I like to get news from my ethnic group source (e.g., T.V., newspapers, magazines, internet, etc)." and "I prefer to live in a neighbourhood with a large number of Canadians". Each item was rated on a 5-point scale ranging from "Strongly Disagree" (1) to "Strongly Agree" (5). The Cronbach's alpha coefficients for the attitudes toward ethnic culture subscale were .84 (urban) and .82 (rural); alpha coefficients for attitudes toward the Canadian culture were .84 (urban) and .77 (rural).

#### *Psychophysical Distress*

*Psychophysical Symptoms Scale.* We adapted this 18-item checklist from Kohn, Gruevich, Pickering, and Macdonald's (1994) *Health Problems Inventory – Revised* and *The Stress Symptoms Checklist* (Cheng & Hamid, 1996). Participants rated the frequency and intensity with which they experienced 18 psychological and physical symptoms. Items were rated on a 4-point scale, ranging from "Rare or none of the time (Less than 1 day per week)" (1) to "All of the time (5-7 days per week)" (4). Cronbach's alpha coefficient for this measure was .81 (urban) and .85 (rural).

*Ingroup and Outgroup Contact*

*Individual Network of Ethnic Contacts (INEC)*. This 12-item measure is based on Landry and Bourhis' (1997) questionnaire measuring participants' contact with members of Canadian society, their own ethnic group and other immigrant groups. An example item is "How often are you (or were you) in contact with your friends who are: (A) members of your own group; (B) English-Canadians; (C) immigrants settled here? Each item is rated from "Rarely" (1) to "Very Frequently" (5). The Cronbach's alpha coefficients for the 4-items measuring contact with ethnic group were .65 (urban) and .74 (rural). For the 4-items measuring contact with Canadians, Cronbach's alpha coefficients were .71 (urban) and .81 (rural) and the 4-items measuring contact with other immigrants were .71 (urban) and .78 (rural).

## RESULTS

*Descriptive Statistics*

The means and standard deviations for each of the variables are presented in Table 1. Missing data revealed by preliminary analyses were replaced using maximum likelihood estimation (MLE). Participants in both samples reported a low level of Psychophysical Distress ( $M_{\text{rural}} = 1.85$ ;  $M_{\text{urban}} = 1.69$ ), indicating that, generally, individuals in the current samples reported a satisfactory level of psychological adjustment. A 2 (urban vs. rural) x 2 (gender) x 8 (variables in the MIDA model) Multivariate Analysis of Variance (MANOVA) indicated a significant multivariate effect for urban and rural samples, Wilks' Lambda = .86,  $F(8, 198) = 4.16$ ,  $p < .001$ ,  $\eta^2 = .14$ . The two groups differed significantly from each other on three of the eight variables in model: urban participants reported more Ingroup Contact,  $F(1, 205) = 12.12$ ,  $p = .001$ ,  $\eta^2 = .06$  than their rural counterparts. Rural participants reported more positive attitudes toward New Culture Acquisition,  $F(1, 205) = 9.97$ ,  $p < .01$ ,  $\eta^2 = .05$ , and more Psychophysical Distress,  $F(1, 205) = 4.75$ ,  $p < .05$ ,  $\eta^2 = .02$ . No Gender effect, Wilks' Lambda = .94,  $F(8, 198) = .16$ ,  $p = .06$ , or interaction effect (rural/urban x Gender), Wilks' Lambda = .97,  $F(8, 198) = .81$ ,  $p < .60$ , was found.

### *Model Specification*

We conducted Structural Equation Modeling (SEM) in order to examine the complex interrelationships between the constructs and the fit of the data to the proposed model (Schumacker & Lomax, 2004; Ullman, 1996). Attitudes toward Own Culture Maintenance, attitudes toward New Culture Acquisition, Psychophysical Distress, and Ingroup and Outgroup Contact were measured using single measures and were treated as observed variables. Psychosocial resources, co-national connectedness and perception of discrimination were measured using composite variables. Specifically, the overall measure of Psychosocial Resources consisted of the mean standardized scores for psychological well-being and language competence. The Co-National Connectedness composite was formed by taking the mean standardized scores for ethnic identity and perceived ingroup social support. Finally, the mean standardized scores on perceived discrimination toward oneself and toward the ingroup formed the composite score for Discrimination. These composite factors, which were developed by Safdar (2002) through factor analysis, were treated as observed variables in the model.

### *Analysis and Model Modification*

A variation of the MIDA model proposed by Safdar et al. (2003) was initially tested for both the urban and rural samples. We ran a multi-sample model, which allowed us to test a single model with two different samples simultaneously (Schumacker & Lomax, 2004).

Initial SEM analysis tested the MIDA model as proposed by Safdar et al. (2003) indicated a poor fit,  $X^2(30, N = 212) = 116.08, p < .001, NC = 3.87, GFI = .89, CFI = .70, RMSEA = .12$ . Given that the Goodness-of-fit index was below .90, the Root Mean Square Error of Approximation was higher than the acceptable range (.00 to .08), and the ratio of Chi-square and degrees of freedom was greater than 3.0 indicating a poor fit (Raykov & Marcoulides, 2000), the model was deemed unacceptable. In addition, the Chi-square was significant, indicating a difference between the observed and the estimated data. To improve the model, the Lagrange multiplier test (LM) and the Wald test were examined to

identify additional important and unimportant parameters in the model. Modifications were carried out one at a time. The model was modified by removing one non-significant path (Discrimination-attitudes toward Own Culture Maintenance) and adding two paths (Discrimination-attitudes toward New Culture Acquisition and attitudes toward Own Culture Maintenance-Psychophysical Distress). As both samples were run together, these paths were added for both groups, but Discrimination and attitudes toward New Culture Acquisition was added to the urban sample, and was constrained to zero in the rural sample; and the path between attitudes toward Own Culture Maintenance and Psychophysical Distress was added to the rural sample, and was constrained to zero in the urban sample. Additionally, the error variances between attitudes toward New Culture Acquisition and attitudes toward Own Culture Maintenance was connected in the urban model and the path was constrained in the rural model. The final modified model had significantly better fit indices,  $X^2(25, N = 212) = 33.09, p = .35, NC = 1.32, GFI = .96, CFI = .97, RMSEA = .04$  (see Figures 2 & 3). Based on Chi-square difference test, the revised model had a significantly better fit than the earlier one,  $X^2(5) = 82.99, p < .001$ .

#### *Relations between Variables in the Model*

*Urban.* In the final urban model, Psychosocial Resources were significantly and negatively related to attitudes toward Own Culture Maintenance ( $\beta = -.12$ ) and Psychophysical Distress ( $\beta = -.12$ ), indicating that individuals reporting high psychosocial resources were less likely to be oriented toward their heritage culture or to report psychophysical distress. Psychosocial Resources was significantly and positively related to Outgroup Contact ( $\beta = .30$ ), indicating that individuals reporting high psychosocial resources (a composite of psychological well-being and linguistic competence) are also more likely to have contact with members of the receiving society. This provides partial support for Hypothesis 1; we predicted a positive relation between Psychosocial Resources and Outgroup Contact and a negative relation between Psychosocial Resources and Psychophysical Distress. Additionally, we predicted a

positive relation between Psychosocial Resources and attitudes toward New Culture Acquisition but instead a negative relation between Psychosocial Resources and Own Culture Maintenance was found.

Co-national connectedness was significantly and positively related to attitudes toward Own Culture Maintenance ( $\beta = .54$ ) and Ingroup Contact ( $\beta = .39$ ), indicating that individuals reporting higher connectedness were more likely to be oriented toward their heritage culture and maintain ingroup contact. This provides support for Hypothesis 2.

Discrimination was negatively and significantly related to attitudes toward New Culture Acquisition ( $\beta = -.32$ ) and positively and significantly related to Psychophysical Distress ( $\beta = .21$ ), indicating that individuals reporting higher levels of perceived discrimination were also less likely to be oriented toward Canadian culture and more likely to experience psychophysical distress. Although we did not predict a relation between Discrimination and New Culture Acquisition, the relation between Discrimination and psychophysical Distress was consistent with Hypothesis 3.

Six non-significant paths remained in the model<sup>iii</sup>: 1) Attitudes toward Own Culture Maintenance and Ingroup Contact; 2) Attitudes toward New Culture Acquisition and Outgroup Contact; 3) Attitudes toward New Culture Acquisition and Psychophysical Distress; 4) Attitudes toward Own Culture Maintenance and Outgroup Contact; 5) Co-national connectedness and attitudes toward New Culture Acquisition; and 6) Attitudes toward New Culture Acquisition and Ingroup Contact. No support for Hypothesis 4 was found.

*Rural.* Psychosocial Resources were positively and significantly related to Outgroup Contact ( $\beta = .27$ ) and negatively and significantly related to Psychophysical Distress ( $\beta = -.27$ ), indicating that individuals reporting high psychosocial resources were more likely to achieve contact with members of the receiving society, and less likely to report psychophysical distress. This provides partial support for Hypothesis 1; we predicted a positive relation between Psychosocial Resources and Outgroup Contact and a negative relation between Psychosocial Resources and Psychophysical Distress. However, unlike

our prediction no relation between Psychosocial Resources and attitudes toward New Culture Acquisition was found.

Co-national connectedness was positively and significantly related to Ingroup Contact ( $\beta = .31$ ), indicating that individuals reporting high connectedness were more likely to maintain contact with members of their ingroup. Co-national connectedness was also positively related to both old culture maintenance ( $\beta = .44$ ) and New Culture Acquisition ( $\beta = .10$ ). This provides support for Hypothesis 2.

Discrimination was positively and significantly related to Psychophysical Distress ( $\beta = .11$ ), indicating that those reporting high perceptions of discrimination were more likely to experience psychophysical distress. This provides support for Hypothesis 3.

Additionally, it was found that attitudes toward New Culture Acquisition was positively and significantly related to Psychophysical Distress ( $\beta = .20$ ) and Ingroup Contact ( $\beta = .35$ ), indicating that individuals with positive attitudes toward new culture acquisition were more likely to experience psychophysical distress and maintain contact with their ingroup. Attitudes toward Own Culture Maintenance were also found to be positively and significantly related to Psychophysical Distress ( $\beta = .19$ ). None of these relations were predicted.

Four non-significant paths remained in the model: 1) Attitudes toward Own Culture Maintenance and Ingroup Contact; 2) Attitudes toward New Culture Acquisition and Outgroup Contact; 3) Attitudes toward Own Culture Maintenance and Outgroup Contact; 4) Psychosocial Resources and attitudes toward Own Culture Maintenance. No support for Hypothesis 4 was found. The first three paths were also non-significant in the urban model.

#### *Modes of Acculturation*

We conducted further analyses to explore acculturation attitudes of the participants in the rural and urban settings. Using median splits, we divided participants into those scoring high or low on the two dimensions (see Playford & Safdar, 2007 for full description), and created four modes of

acculturation. It was found that in the rural sample 18% of participants were categorized as having integrationist attitudes, 18% were separationist, 23% favoured assimilation, and 35% favoured marginalization. In the urban sample 20% of participants favoured integration, 20% favoured separation, 18% assimilation, and 32% marginalization. There was no significant difference between the rural and urban samples on the division into four modes of acculturation.

## DISCUSSION

The study described above demonstrated differences and correspondences between the processes of acculturation experienced by immigrants living in rural and urban settings in Canada. The results of the present research also provide broad support for the reliability of the MIDA model (Safdar et al., 2003) which, with minor adjustments, provided an acceptable fit with the data from both samples. Firstly, the differences between the two samples on the predictor, attitudinal and outcome variables is informative. The urban sample scored more favourably on two of the three measures of adjustment: they had more ingroup contact and they reported less psychophysical distress, indication of better socio-cultural and psychophysical adaptation. The only other difference between the two samples is that the rural sample scored higher on (i.e. had a more positive attitude toward) New Culture Acquisition. This positive attitude does not appear to benefit them, however, compared to the urban sample who appear to be better adjusted to their new environment on two of the three outcome measures. The rural sample, in fact, scored less favourably, but insignificantly so, on all predictor variables (more Discrimination, fewer Psychosocial Resources, and weaker Co-national Connectedness). However, they do not appear to be in a significantly worse situation, in terms of the predictor variables measured here, and yet despite their positive attitude to their new culture, they adjust less well than their urban counterparts. Other factors must, of course, contribute the variance that is unexplained by the model. The larger society's attitudes and policies are likely to contribute, perhaps substantially, to this unexplained variance.

*Consistencies Across Data Sets*

Several relationships between predictor and outcome measures were consistent across both samples, and with the original model. All these relations were consistent with our hypotheses. These were (1) between Psychosocial Resources and Outgroup Contact (Hypothesis 1), (2) inversely between Psychosocial Resources and Psychophysical Distress (Hypothesis 1); (3) between Co-national Connectedness and Ingroup Contact (Hypothesis 2), and (4) between Discrimination (hassles in the original model) and Psychophysical Distress (Hypothesis 3). These consistencies across the data sets indicate relationships that appear stable across acculturation situations, particularly so, as the measures were not identical in the present study and Safdar et al.'s (2003). They are good candidates to be regarded as core variables (Ward & Kennedy, 1993; Safdar et al., 2003).

*Comparison of the Original MIDA Model with the Present Models*

Although Co-national Connectedness was associated with maintenance of one's original culture in both samples in the present study and in Safdar et al.'s model (in which the measure was of separation), the present measures of acculturation attitudes were not identical to those used by Safdar et al. (2003), suggesting that the above relation is quite robust. Safdar and colleagues' measures involved two components, a positive attitude to one culture and a negative attitude to the other, separation including both maintenance of one's own culture and rejection of the new one, and assimilation involving acceptance of the new one and abandonment of one's original one. In their data, separation was associated both with ingroup contact and, negatively with outgroup contact, both of which are logical outcomes from an attitude favouring separation. Assimilation showed a converse pattern, a positive association with outgroup contact and an inverse association with in-group contact.

These findings were not repeated in the present samples, in which connectedness to one's ethnic group does not imply a negative attitude towards acquiring the new culture; and a positive attitude toward maintaining one's own culture is not linked with reduced contact with the new one (indeed, the

reverse is the case for the rural sample). This indicates the desirability of the dimensional measures used in the present study, over the two strategies measured by Safdar et al. (2003), in which acceptance of one culture necessarily implies rejection of the other.

They might also reflect differences between samples. Safdar et al.'s (2003) sample was Iranian, quite a well-resourced group in Canada. The present urban sample was Eastern European and the rural sample was mixed, but nearly half were Asian. It is possible that Safdar et al.'s sample's in- and out-group contacts reflect their acculturation preferences because they have the resources to act on them (i.e. they can have contact with either their ingroup, or the outgroup, or both, if they choose). This would appear not to apply here, certainly to the present rural sample, whose positive attitude toward the new culture is not translated into contact with the larger society (Outgroup Contact).

#### *Findings Specific to Rural Sample*

There were several relations between variables that were specific to the rural sample, none of which were predicted. First, there was a positive relation between Co-National Connectedness and attitudes Toward New Culture Acquisition. Second, there was a positive relation between New Culture Acquisition and Ingroup Contact (the more positively disposed they were toward acquiring the new culture, the more contact they had with their own group), but not Outgroup Contact. These two relations appear somewhat paradoxical: the more the rural immigrants are connected to their own group, the more they like the other culture; and the more they like the other culture, the more contact they have with their own group. One possible interpretation is that contact with their own group enables the confidence to want to engage with the new culture, or, from the other angle, the more isolated they are from their own group, the less inclined they are to take on the task of acquiring a new culture. This may be the more likely interpretation as they scored significantly lower on Ingroup Contact than the urban sample. Third, it was also found that, for this rural sample, positive attitudes to maintaining their own culture, and to

acquiring the new one, are both linked with psychophysical distress. They appear to be in a complex, and perhaps relatively disempowered, situation.

One inverse relation that was evident in the urban sample but absent in the rural sample was between Psychosocial Resources and Own Culture Maintenance. This finding is not easy to interpret as more Psychosocial Resources were linked with more Outgroup Contact in both groups. In the urban samples, this seemed to be accompanied by a reduced interest in maintaining their own culture. Perhaps the urban samples are in a better position to choose to abandon their own culture, whereas the rural samples are influenced more by extraneous factors.

#### *Findings Specific to Urban Sample*

For the urban sample, there was a negative association between Discrimination and New Culture Acquisition that was not evident in the rural data and was not predicted. It is a plausible relation: if one experiences more discrimination, one is less likely to feel positively disposed towards acquiring the new culture. Conversely, if one behaves as if disinterested in the new culture, one might prompt discrimination. The question is, perhaps, why the relation was absent in the rural data and, again, their relative disempowerment seems a possibility. Perhaps participants in rural areas have to maintain a positive view of the new culture irrespective of whether they experience discrimination. They are, as has been seen, in a relatively isolated situation.

#### *Policy*

Personal factors, in the form of psychological well-being that contributes to Psychosocial Resources, are important in predicting successful acculturation, but it is also important to have cultural and, in particular, linguistic competence. This has implications for the Canadian policy makers, as successful acculturation will be hampered even for hardy immigrants who receive little welcome or mentoring (acquisition of appropriate skills). The only variable that predicts Outgroup Contact across the three samples (including Safdar et al., 2003) is Psychosocial Resources. Those who report more

psychosocial resources also report less distress and more engagement with members of the larger society. Policies promoting linguistic competence, for example, which contributes to Psychosocial Resources, would increase contact between immigrants and the larger society and reduce Psychophysical Distress (i.e. improve health outcomes) among immigrant groups.

Similarly, action to reduce discrimination would also enhance health outcomes among immigrants, as those who report more discrimination (or hassles) also report more psychophysical distress. These consistent relationships should be informative for policy makers in designing programmes that could encourage immigrants to move to, and stay in, rural Canada. As things stand, rural immigrants have a more positive attitude towards Canadian culture than their urban counterparts, but this does not translate into positive adaptation outcomes. This is not to do with the predictor variables measured here, or the immigrants' attitudes to acculturation. In terms of the potential predictor variables identified by Arends-Toth & Van de Vijver (2006), this leaves characteristics of immigrants' society of origin, or characteristics of the larger society, as possible predictors. As they are from diverse societies of origin, it is more likely that it is characteristics of the larger society that make immigration to rural Canada a difficult proposition, and this is the responsibility of Canadian policy makers, not immigrants relatively isolated both from their own, and from Canadian, society.

The division of the two samples into the four cells of Berry's model resulted in a surprisingly high proportion (around a third of all participants in both samples) appearing to favour marginalisation. This might be partly due to our conceptualization of acculturation (contact versus adoption or identification conceptualization) and the use of median split versus scalar split (see Playford & Safdar, 2007, for review). Another finding that is, perhaps, surprising is the absence of gender differences, or effects for gender. Other research, including studies in Ontario, has suggested that the factors causing psychological stress for male and female immigrants can be different, and the experience of adaptation for men and women is unlikely to be identical (Bilge & Berry, 2002; Thapa & Hauff, 2005). This

demonstrates, however, that the levels of, linkages between, the variables can have a degree of consistency

### *Limitations*

It is possible, of course, that the relative heterogeneity of the rural sample could account for some of the differences between the rural and urban samples. If heterogeneity were a factor, however, this would have the effect of attenuating or obscuring relationships. They have, in common, that they are immigrants in rural Canada, and this is enough to produce systematic differences from an urban sample. Nevertheless, the extension of research such as this with larger samples of separate groups would be desirable. In fact, it is relatively difficult to produce such samples precisely because of the problem of limited immigration to rural Canada.

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Table 1

Means and Standard Deviations and for Each Variable for the two samples

	Urban Mean (SD)	Rural Mean(SD)
Psychological Well-Being	3.70 (.39)	3.77 (.44)
Language Competence	3.64 (.89)	3.54 (.91)
Ethnic Identity	3.72 (.54)	3.53 (.65)
Ingroup Social Support	4.14 (.72)	4.08 (.96)
Ingroup Discrimination	1.76 (.84)	1.86 (.79)
Self-discrimination	1.34 (.57)	1.43 (.56)
Own Culture Maintenance	3.58 (.61)	3.84 (.51)
New Culture Acquisition	3.87 (.56)	3.74 (.61)
Ingroup Contact	3.81 (.90)	3.44 (.89)
Outgroup Contact	3.61 (1.07)	3.34 (1.01)
Psychophysical Distress	1.69 (.46)	1.85 (.51)

Table 2  
Correlation coefficients between the variables in the Model: Urban Sample

	1	2	3	4	5	6	7	8
1. Psychosocial Resources	1							
2. Co-National Connectedness	.37**	1						
3. Discrimination	-.11	-.10	1					
4. New Culture Acquisition	.13	.08	-.41**	1				
5. Own Culture Maintenance	.10	.59**	.09	.21*	1			
6. Ingroup Contact	.33**	.33**	-.10	.01	.09	1		
7. Outgroup Contact	.34**	.18	-.21*	.07	-.07	.57**	1	
8. Psychophysical Distress	-.24*	-.16	.36**	-.04	.14	-.04	-.13	1

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

Table 3  
Correlation coefficients between the variables in the Model: Rural Sample

	1	2	3	4	5	6	7	8
1. Psychosocial Resources	1							
2. Co-National Connectedness	.20*	1						
3. Discrimination	-.08	-.02	1					
4. New Culture Acquisition	.17	.19	-.07	1				
5. Own Culture Maintenance	.04	.65**	.10	.13	1			
6. Ingroup Contact	.13	.44**	-.07	.28**	.37**	1		
7. Outgroup Contact	.22*	-.06	-.06	.07	-.09	-.05	1	
8. Psychophysical Distress	-.37**	.04	.17	.15	.26**	.00	-.14	1

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

Figure 1

*The Original Multidimensional Individual Difference Acculturation (MIDA) Model (Safdar et al., 2003)*

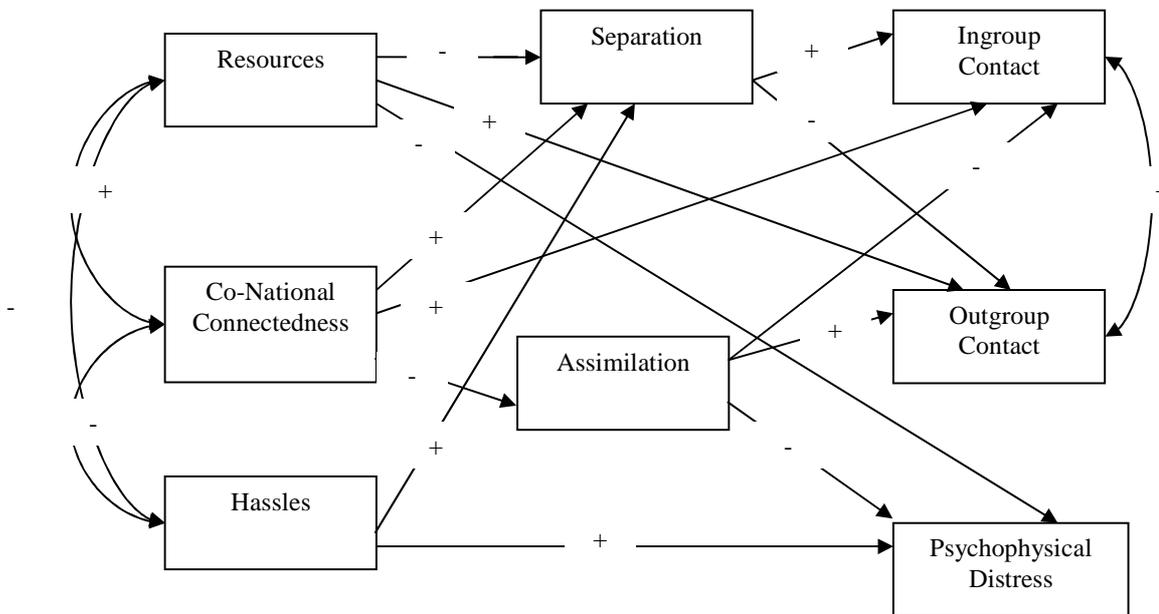
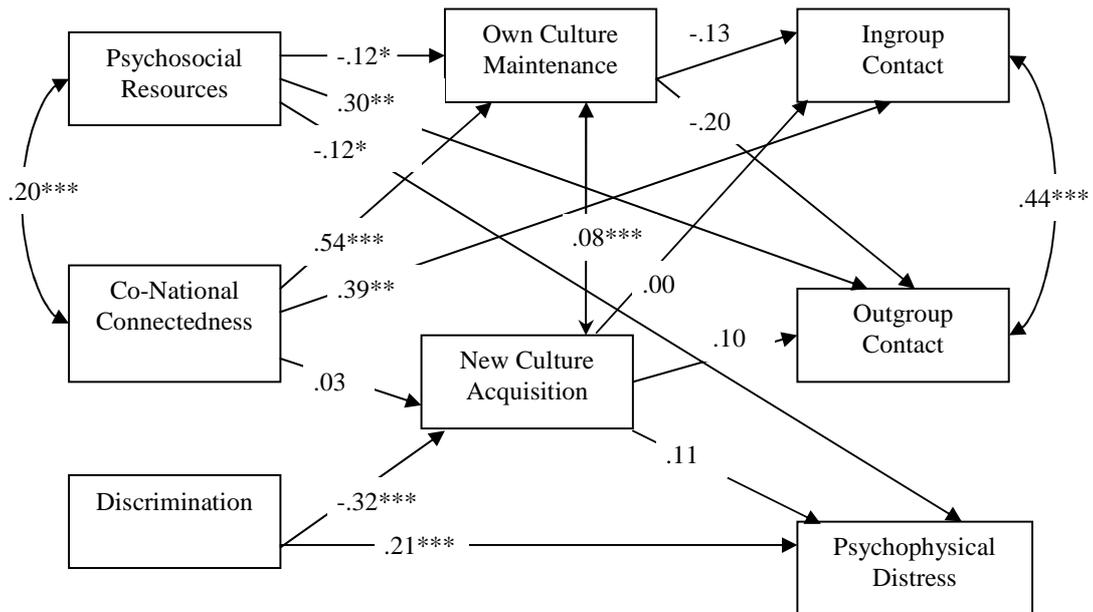


Figure 2

*The MIDA Model for Immigrants in Urban Canada*

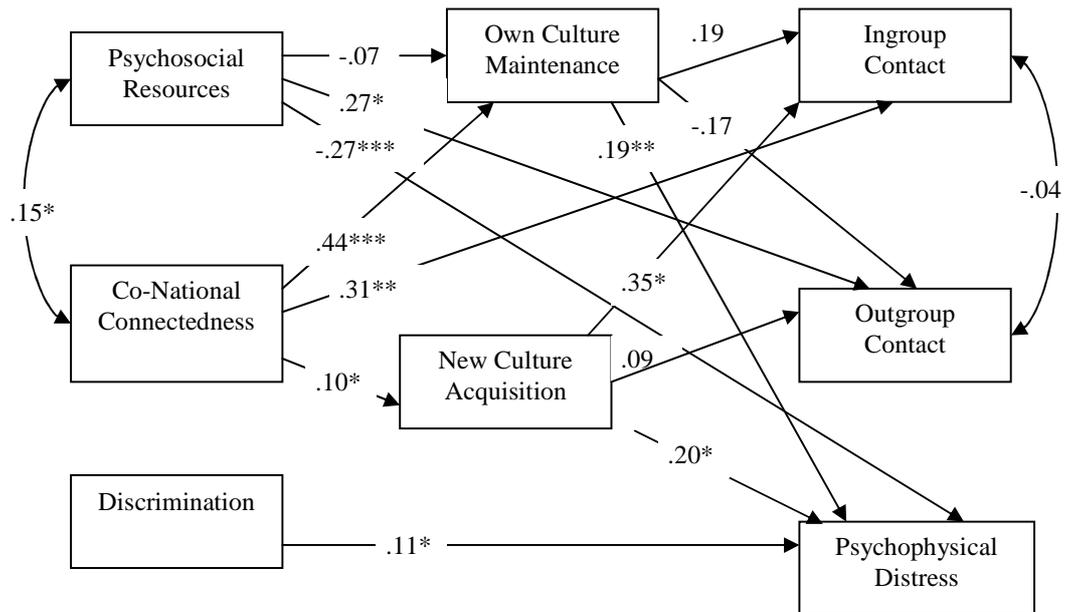


\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

For ease of presentation, measurement errors (E) have been omitted in the model and presented as follows: Psychosocial Resources  $E = .63$ ; Co-national connectedness  $E = .45$ ; Discrimination  $E = .78$ ; Own Culture Maintenance  $E = .20$ ; New Culture Acquisition  $E = .31$ ; Ingroup Contact  $E = .71$ ; Outgroup Contact  $E = 1.01$ ; Psychophysical Distress  $E = .17$ .

Figure 3

The MIDA Model for Immigrants in Rural Canada



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

For ease of presentation, measurement errors (E) have been omitted in the model and presented as follows: Psychosocial Resources E = .64; Co-national connectedness E = .83; Discrimination E = .72; Own Culture Maintenance E = .21; New Culture Acquisition E = .25; Ingroup Contact E = .59; Outgroup Contact E = .95; Psychophysical Distress E = .18.

## Endnote

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<sup>i</sup> The rural sample was discussed by Safdar et al. (2007), but no comparison with another group was made then and the MIDA model was not tested.

<sup>ii</sup> Safdar et al. (2003) also included outgroup social support within this composite variable.

<sup>iii</sup> Other non-significant paths were not removed as deletion of these paths did not contribute to better fit indices. Furthermore, given that no hypothesis was made about two way paths connecting exogenous or endogenous variables, the addition or omission of these paths are not discussed in details in the text. The error variances, however, are presented in each figure.