Acculturation and Psychological Adjustment of

Vietnamese Immigrants in the United States

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THESIS

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This thesis is dedicated to my fiancé, James Salo, whose unconditional love, support, and enthusiasm made this project possible.

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LIST OF ABBREVIATIONS

AAI	American Acculturation Index
CESS	Co-ethnic Social Support
CFI	Confirmatory Fit Index
EPR	Employment Rate
FIML	Full Information Maximum-Likelihood
HPA	Hypothalamic-Pituitary-Adrenal
HSCL	Hopkins Symptom Checklist
IRB	Institutional Review Board
LIB	Language, Identity, and Behavioral
M	Mean
MCAR	Missing Completely at Random
MNAR	Missing Not at Random
MVA	Missing Value Analysis
ORR	Office of Refugee Resettlement
RMSEA	Root Mean Square Error of Approximation
ROVR	Resettlement Opportunities for Vietnamese Returnees
SD	Standard Deviation
SEI	Socio-Economic Index
SEM	Structural Equation Modeling
SES	Socio-economic Status
SRMR	Standardized Root Mean Square Residual
TLI	Tucker-Lewis Index

LIST OF ABBREVIATIONS (continued)

UN   United Nations

UNHCR   United Nations High Commissioner for Refugees

US   United States

VAI   Vietnamese Acculturation Index

SUMMARY

Acculturation to the new, host culture and acculturation to heritage culture have been shown to impact immigrants' adjustment during the years following resettlement. While acculturation has been noted as an important factor in adaptation of Vietnamese immigrants (Birman & Tran, 2008), specific findings of the relationship between acculturation and psychological adjustment within this population have been inconsistent. These inconsistencies may be a result of two issues in the acculturation field today: measuring acculturation using unilinear or forced-choice rather than bilinear scales, and failure to use a life domains approach. The purpose of this paper is to contextualize the study of acculturation and adjustment by taking an ecological approach to exploring these relationships across several life domains, using a bilinear scale (Birman & Trickett, 2001), and examining mediators of these relationships for adult Vietnamese male and female immigrants in the United States. Results of a structural equation model (SEM) showed that job satisfaction fully mediated the relationship between American acculturation and psychological distress and that job satisfaction was predicted by both American and Vietnamese acculturation. Implications for a life domains approach, including domain specificity, are discussed.

I.	**INTRODUCTION**

Acculturation has been defined as "those phenomena which result when groups of individuals having different cultures come into continuous first-hand contact, with subsequent changes in the original cultural patterns of either or both groups" (Redfield, Linton, & Herskovits, 1936, p. 149). Refugees and immigrants (referred to collectively as "immigrants" going forward) experience the acculturation process when resettling in a new country. The cultural changes of individual members of such a group are referred to as *psychological* acculturation (Birman, 1994). Current models of the psychological acculturation[1] process include changes in cultural patterns relating to one's heritage culture *and* host culture (Birman, 1994) in a bilinear fashion. Both have been shown to impact immigrants' psychological adjustment during the years following resettlement (e.g., Berry, Phinney, Sam & Vedder, 2006; Birman, Persky, & Chan, 2010).

The Vietnamese immigrant community is of particular interest for this research not only because they are the fifth largest immigrant group resettled in the United States (US; Robert Mullins International, 2011), but also because they are one of the fastest-growing ethnic communities in the US (National Alliance of Vietnamese American Service Agencies, 2007). Although acculturation has been noted as an important factor in the adaptation of this group (Birman & Tran, 2008), research findings on the relationship between acculturation and adjustment within this population (Nguyen, Messé, & Stollak, 1999) and other immigrant populations (Rogler, Cortes, & Malgady, 1991) have been inconsistent.

This study takes an ecological approach to understanding acculturation. Bronfenbrenner's (1977) ecology of human development provides a framework with which to critique

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[1] The term "acculturation" will be used going forward to refer to "psychological acculturation," as is done in other literature (e.g., Birman, 1994).

acculturation and adjustment literature. He defined ecology of human development as:

> the scientific study of the progressive, mutual accommodation, throughout the life span, between a growing human organism and the changing immediate environments in which it lives, as this process is affected by relations obtaining within and between these immediate settings, as well as the larger social contexts, both formal and informal in which the settings are embedded. (Bronfenbrenner, 1977, p. 514)

This suggests that when studying acculturation of individuals, one must examine how they adapt within the context of different settings and at various levels of analysis. This includes microsystems within various life domains immediately surrounding the individual such as home, school, or workplace and larger systems such as the overarching macrosystem that provides a cultural context and influence on the other systems at play. For immigrants, the microsystems that they interact with vary by culture and may include settings unique to an immigrant population such as refugee service agencies or ethnic enclaves.

Past literature has not reached a consensus on whether acculturation to host and/or heritage culture leads to positive, negative, or a mix of psychological adjustment outcomes for immigrants. Specifically, two issues in the acculturation field today have been highlighted as sources of inconsistency. The first issue is measurement of acculturation as assimilation (i.e., an increase in host and simultaneous decrease in heritage culture acculturation), rather than as a bilinear process of involvement with both the host and the heritage culture that captures the complexities and multiple outcomes of the acculturation process. The second reason for mixed findings is that researchers rarely take a contextual, life domains approach to understanding different aspects of acculturation (i.e., to host and heritage culture) as predicting adjustment differently in various microsystems. For example, acculturation to the heritage culture may

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facilitate adjustment in the home, whereas acculturation to the host culture may be helpful for adjustment at work. These microsystem-level factors may serve as outcomes of acculturation or as mediators of the relationship between host and/or heritage culture acculturation and psychological adjustment. However, the majority of the current literature on Vietnamese immigrants focuses on assessing direct effects of acculturation on psychological symptoms or adjustment, without considering that "the link between acculturation and adjustment is dependent on the adaptive requirements of particular settings or life domains of immigrants' lives" (Birman, Chan, & Tran, under review, p. 6).

Therefore, the purpose of this study is to explore the relationship between acculturation and psychological adjustment using a bilinear scale (Birman & Trickett, 2001), and to examine the mediators of this relationship across life domains for Vietnamese immigrants in the US. Specifically, this study tests the hypothesis that adjustment in different life domains mediates the relationship between acculturation to the host and heritage cultures and psychological adjustment.

A.   **Background**

1.   **Vietnamese immigrants in the US**

Prior to reviewing the literature, I will provide an overview of the waves of Vietnamese migrations to the US in order to better situate this particular sample in a historical context. With the end of the Vietnam War in 1975, the US evacuated approximately 200,000 South Vietnamese refugees, with priority given to those who had aided the US military. Starting in 1977, there was a second wave of Vietnamese refugees who fled by boat to escape worsening conditions, including "reeducation" camps enacted by the Communist regime (World Factbook, 2009). Over the next two decades, hundreds of thousands of these "boat people," as they were

called, arrived in the US. Although the majority of Vietnamese immigrants to the US were

considered refugees according to the United Nations High Commissioner for Refugees

(UNHCR) definition[2], others have arrived in the US as non-refugees. For instance, later waves of

Vietnamese immigrants did not all have refugee status; they consisted of people reuniting with

relatives resettled in the US, including children who had been fathered by American military

personnel (often called "Amerasians") and admitted to the US with their relatives under the 1989

Humanitarian Operation Program.

Washington D.C., the setting of the present study, is home to the fifth largest Vietnamese

refugee community in the US[3], with 44,000 refugees (National Alliance of Vietnamese American

Service Agencies, 2007). Therefore, Vietnamese immigrants in the Washington D.C area may

have access to Vietnamese resources and a network of several generations of Vietnamese

immigrants. This network has provided opportunities for the formation of ethnic enclaves and

maintenance of Vietnamese culture through Vietnamese stores, churches, and services/agencies

such as Vietnamese speaking doctors located in the area. On one hand, Vietnamese immigrants

faced challenges to adapting to the US such as blocked economic mobility, while on the other

hand, their adaptation was aided by a strong identification with the immigrant community (Gold,

1992).

Cultural distance, or the gap between cultures of two societies, has been shown to impact

the cultural adaptation of groups such that adaptation is easier for groups whose heritage culture

is less culturally distant from the host culture (Berry, 1997; Liebkind & Jasinskaja-Lahti, 2000;

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[2] Someone who "owing to a well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality, and is unable to, or owing to such fear, is unwilling to avail himself of the protection of that country." (UN General Assembly, 1950)

[3] At the time of data collection

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Ward & Kennedy, 1992; Ward & Searle, 1991). In many ways, "Eastern" Vietnamese culture

and "Western" American culture are distant (Liebkind & Jasinskaja-Lahti, 2000). Therefore,

Vietnamese immigrants face challenges in adapting to the US.

Vietnamese culture is influenced by Confucian philosophy, similar to the cultures of

many neighboring East Asian countries. Namely, Vietnamese culture is characterized as

communal with filial piety[4] as the most important value. Family, especially elders and ancestors,

are prioritized in Vietnamese culture, which dictates how social relationships function and the

high prevalence of ancestor worship. This means that the success and image of the community to

which a person belongs, especially their family, are given priority over individual success

(Nguyen, Messé, & Stollack, 1999). Within Vietnamese culture, the "family" extends beyond the

Western concept of the nuclear family to include more distant relatives and multiple generations,

who often live together under one roof. Therefore, family and Vietnamese friends are very

important for this population.

Research suggests that Vietnamese immigrants in the U.S. do not tend to assimilate.

Even when they acculturate to the American culture, they continue to maintain their heritage

culture (e.g. Gold, 1994). The notion that immigrants can both acquire the American culture and

maintain their native culture in resettlement is reflected in newer developments in acculturation

theory, as described in the next section.

2.   **Acculturation theory**

When studying the relationship between acculturation to host and heritage culture

and psychological adjustment, researchers have asked the question, "Which type of acculturation

is best?" Acculturation researchers have historically thought that acculturation to the host culture

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[4] respect for elders

is beneficial, and that maintaining one's heritage culture is detrimental to an immigrant's psychological adjustment (Gordon, 1964). More recently, researchers (e.g. Berry, Phinney, Sam, & Vedder, 2006) have posited that an "integration" or bicultural acculturation strategy is "best." However, it is difficult to determine which type of acculturation is best when the measurement of acculturation varies as much as it does within the field.

In addition, the all-encompassing question, "Which type of acculturation is best?" assumes there is one answer that will apply to all immigrants and in all situations. From an ecological perspective, the answer is likely "it depends." To answer this more contextual question, it is more useful to determine the factors that contribute to how acculturation affects psychological adjustment and the mechanisms or mediators that explain this relationship within various life domains. This paper aims to do just that by examining the relationship between acculturation and psychological adjustment in context.

3.   **Measurement of acculturation**

Historically, acculturation was measured with unilinear (Carranza, You, Chhuon, & Hudley, 2009; Cuéllar, Harris, & Jasso, 1980; Marin et al., 1987; Suinn, Khoo, & Ahuna, 1995; Szapocznik, Scopetta, Kurtines, & Aranalde, 1978) and foursquare scales (e.g., Kwak & Berry, 2001), but the field has moved beyond these methods. Berry's fourfold paradigm of acculturation has been critiqued for being theoretically and statistically unsound (Rudmin, 2006; Rudmin & Ahmadzadeh, 2001). Bilinear measurement of acculturation, in which host and heritage culture are measured independently of each other (Birman & Simon, in press; Rudmin, 2006; Ryder et al., 2000), has advantages over the other formats in determining how acculturation is related to adjustment. Many have favored measurement models that take into account the potential for an orthogonal, or statistically unrelated, relationship (Birman, 1994;

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Cortes, Rogler, & Malgady, 1994; Nguyen, Messé, & Stollack, 1999; Oetting & Beauvais, 1991; Sanchez & Fernandez, 1993). Whether acculturation to host and heritage cultures are found to be statistically orthogonal within a given sample or not, the potential exists; such a pattern could only be discovered with the bilinear measurement strategy.

4.   **<u>Life domains approach</u>**

This study employs a life domains approach to understanding the relationship between acculturation and adjustment. Bilinear measurement of host and heritage culture acculturation is consistent with this approach. The ways that host and heritage culture acculturation predict immigrant adjustment depend on contextual factors such as the life domains in which adjustment is measured (e.g., family, occupational, academic) as found in past research (Arends-Toth & Van de Vijver, 2007; Nguyen, Messé, & Stollack, 1999). The theoretical reason for this is that host and/or heritage culture acculturation may provide immigrants access to different resources to aid in adaptation in different contexts. Therefore, how an immigrant adjusts will depend on the adaptation requirements of that context. Life domains, made up of microsystems (i.e., the most proximal ring in Bronfenbrenner's concentric circles; Bronfenbrenner, 1977), are a way to organize or categorize these contexts within which an immigrant adapts.

For instance, the positive effect of American acculturation on psychological adjustment may be specific to its benefits in the occupational life domain and may not be relevant in the co-ethnic social domain (i.e., social network of people who share your ethnicity) in which Vietnamese acculturation *would* have a salient effect. Therefore, bilinear measurement is essential to capture these contextual differences in how immigrants acculturate and adjust across life domains. In the next section, I will review the body of literature on the relationship between

host and heritage culture acculturation and adjustment, measured with bilinear scales, and I will discuss whether a life domains approach was used in these studies.

B.   **Literature Review**

  1.   **Acculturation and adjustment**

From an ecological perspective, studies that only ask how someone has adjusted at the individual level assume that adjustment does not vary by context. On the other hand, studies that consider how an individual adjusts in particular ecological contexts by assessing functioning in various life domains are "ecologically valid" (Bronfenbrenner, 1977).

A literature search was conducted in November 2011 to review studies that assessed the relationship between acculturation and psychological adjustment of immigrants from diverse backgrounds using bilinear measures. Only nineteen studies that used bilinear measures of acculturation and examined its relationship to adjustment were identified through a systematic PsychINFO literature search[5]. Ten studies examined only the direct effects between acculturation and psychological adjustment of the individual at the center of Bronfenbrenner's (1977) concentric circle model of development. Six studies took a contextual life domains approach by testing how host and heritage culture acculturation predict adjustment outcomes across *multiple*

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[5] All articles were empirical, peer-reviewed journal articles published in English between 2000-2011. An initial search used the following search terms: acculturat* in the title, immigra* or refugee* in the title, abstract, or descriptors (to refine the population of interest), and adjustment, mental, distress, depress*, anxi* or trauma* in the title. This was supplemented with a separate PsycINFO search to identify articles with acculturat* in the title; orthogonal*, bidimension*, two dimension*, bilinear or bilevel in the abstract (i.e., terms used to describe "bilinear" measures); and adjust* or mental health in the abstract. Additionally, several studies (Asvat & Malcarne, 2008; Birman & Tran, 2008; Cachhellin, Phinney, Schug, & Stiregel-Moore, 2006; Gim Chung, Kim, & Abreu, 2004; Nguyen, Messé, & Stollak, 1999; Schwartz et al., 2011) known to address this topic based on past reviews (Birman & Simon, in press) were added. This search resulted in 77 articles, a surprising 58 of which were eliminated because they either did not measure acculturation or adjustment or did not analyze acculturation as a predictor (n = 14), they used forced choice questionnaires to measure acculturation or analyzed results using Berry's four-square model (n = 11), were about acculturative gaps in families rather than individual acculturation (n = 3), the sample did not include immigrants (n = 2), proxy measures were used to estimate acculturation (n = 1), they measured acculturation unilinearly (n = 26), or they tested moderation which is beyond the scope of this paper (n = 1). The remaining 19 articles were the only articles that measured acculturation in a bilinear fashion and are reviewed here with an ecological lens.

life domains for immigrants within the same study. In other words, these studies included multiple criterion variables of adjustment, all of which fall within the microsystem level. The remaining three studies took a life domains approach by taking a step further, and testing mediators from various life domains to explain the relationship between acculturation and psychological adjustment.

a.   **Acculturation and psychological adjustment**

The 10 articles that assessed direct relationships between acculturation (measured bilinearly) and psychological adjustment operationalized it in a number of ways, including depression, anxiety, alienation, quality of life, eating disorders, distress/stress, self-esteem, happiness, loneliness, well-being, physical and emotional health symptoms, and risky behavior. Similar to past reviews of this literature (Rogler, Cortes, & Malgady, 1991), no consistent trend emerged. In different studies, host and heritage culture acculturation were each found to predict positive and negative psychological adjustment outcomes, and in some cases, no relationship or mixed results between multiple indicators of adjustment were found.

i.   **Host culture acculturation and psychological adjustment**

Of the 10 studies that measured host culture acculturation and psychological adjustment, the majority (n = 4) found no relationship between host culture acculturation and psychological adjustment. Three studies found that host culture acculturation predicted <u>positive</u> adjustment. Birman and Tran (2008) found that American identity and behavioral acculturation predicted less alienation for adult Vietnamese immigrants in the US, but American language, identity, and behavioral acculturation were not predictive of the other adjustment indicators (i.e., depression, anxiety, or life satisfaction). In two studies, Chen, Benet-Martinez, and Bond (2008) found that host culture acculturation predicted better psychological

adjustment as defined by better self-esteem, life satisfaction, happiness, and less loneliness for Mainland Chinese immigrants to Hong Kong[6]. Knipscheer, Drogendijk, Gülşen, & Kleber (2009) found that for adult Turkish (but not Kurdish) immigrants in the Netherlands, high host culture acculturation (specifically the subscale measuring social interactions with Dutch natives) predicted less vulnerability to post-traumatic stress.

Host culture acculturation predicted <u>negative</u> psychological adjustment in two of these 10 studies. Asvat and Malcarne (2008) found that for university students from South Asia and the Middle East living in North America, high personal mainstream identification predicted more past-year (but not lifetime) depressive symptoms. For adult Mexican immigrants in the US, an orientation toward Anglo-American culture was associated with negative adjustment, specifically increased eating disorders (Cachelin, Phinney, Schug, & Stiregel-Moore, 2006).

Four of the 10 studies found <u>no relationship</u> between host culture acculturation and psychological adjustment measures such as depression for Muslim immigrants from Asia and the Middle East in the US (Abu-Bader, Tirmazi, & Ross-Sheriff, 2011), or mental health for Ghanaian immigrants in the Netherlands (Knipscheer & Kleber, 2007). Similarly, Campos, Schetter, Walsh, and Schenker (2007) found that Anglo orientation was not related to pregnancy anxiety or stress (but it was related to lower infant birth weight which is often used as an indicator of maternal stress during pregnancy) for Mexican immigrant women in the US. Also, host culture acculturation did not have any unique contributions in predicting distress in Shim and Schwartz's study (2008) of Korean immigrants to the US.

In one study, Schwartz et al. (2011) found <u>mixed</u> results in that host culture acculturation led to different psychological adjustment outcomes for different groups of university students in

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[6] According to the article, the term "immigrant" is used because there is a quota for how many people can "immigrate" from Mainland China to Hong Kong (Chen, Benet-Martinez, & Bond, 2008).

the US. They found that host culture acculturation predicted fewer instances of driving while under the influence of drugs or alcohol or being driven by someone who was under the influence for Black immigrants but it predicted more sexual risk taking and hazardous alcohol use for East Asian immigrants. Therefore, research draws into question whether there is a relationship between American acculturation and psychological adjustment.

    ii.   **Heritage culture acculturation and psychological adjustment**

      Heritage culture acculturation predicted <u>positive</u> psychological adjustment in three of the 10 studies. Asvat and Malcarne (2008) found that for university students from South Asia and the Middle East living in North America, high personal heritage identification predicted less lifetime (but not past-year) depressive symptoms. Schwartz et al. (2011) found that heritage practices and collectivist values were predictive of fewer health risk behaviors for Hispanic university students in the US. Knipscheer and Kleber (2007) found that a strong affiliation with Ghanaian cultural traditions predicted better mental health for adult Ghanaian immigrants to the Netherlands.

  Two of these 10 studies found that heritage culture acculturation predicted <u>negative</u> psychological adjustment. Abu-Bader, Tirmazi, and Ross-Sheriff (2011) found that higher heritage culture acculturation predicted more depression for older Muslim immigrants in the US. In one study, Chen, Benet-Martinez, and Bond (2008) found that identification with ethnic culture predicted worse psychological adjustment for college students from Mainland China living in Hong Kong but in a second study they found that identification with Mainland Chinese culture did not predict psychological adjustment.

  Three studies had <u>mixed findings</u> regarding the relationship between heritage culture acculturation and adjustment. Birman and Tran (2008) found that Vietnamese behavioral

acculturation predicted more anxiety among adult Vietnamese immigrants in the US, but also more life satisfaction. Campos, Schetter, Walsh, and Schenker (2007) found that Mexican orientation was related to less stress but more pregnancy anxiety (but it was not related to infant birth weight) for Mexican immigrant women in the US. Knipscheer, Drogendijk, Gülşen, and Kleber (2009) found that for adult Turkish immigrants in the Netherlands, maintaining their traditions predicted less vulnerability for posttraumatic stress whereas for adult Kurdish immigrants, holding on to their traditions predicted more vulnerability for posttraumatic stress.

Finally, two studies <u>did not find a relationship</u> between heritage culture acculturation and measures of psychological adjustment, such as eating disorders in Mexican immigrants in the US (Cachelin, Phinney, Schug, & Stiregel-Moore, 2006) or distress in Korean immigrants to the US (Shim & Schwartz, 2008).

To summarize, measuring the direct relationship between host and heritage culture acculturation and psychological adjustment has resulted in mainly non-significant findings for host culture acculturation and positive, negative, mixed, and non-significant findings for heritage culture acculturation. No pattern emerges to explain these findings, despite the use of bilinear measurement of host and heritage culture acculturation. This could be because these studies are on different groups of immigrants in different host countries and under various circumstances. In addition, these studies only looked at this relationship acontextually. I will now review the six studies that measured acculturation and adjustment contextually using a life domains approach.

b.   **Microsystem level analyses using life domains**

Six studies utilized a life domains approach by measuring the direct relationship between acculturation and adjustment across multiple life domains, using bilinear measurement of host and heritage culture acculturation. Past research (Birman, Trickett, &

Vinokurov, 2002; Nguyen, Messé, & Stollak 1999) has identified four life domains relevant to immigrants: family, social, academic/occupational, and personal (i.e., individual). Each of these six studies measured the relationship between acculturation and adjustment in the personal life domain in addition to at least one, but often multiple, microsystems. I will now review findings for differential adjustment in different microsystems to determine what trends, if any, exist to explain acculturation and adjustment within each.

i. **<u>Family domain</u>**

Four of the six studies that assessed adjustment in the family domain found that host and/or heritage culture acculturation predicted <u>positive</u> adjustment within the family domain. Specifically, Ryder, Alden, and Paulhus (2000) found that higher heritage culture acculturation, but not host culture acculturation, predicted more family life satisfaction for ethnic Chinese, a diverse group of acculturating individuals, and East Asians (trending). Alternatively, Birman, Trickett, and Vinokurov (2002) found that both American and Russian acculturation predicted more perceived parental support for adolescent immigrants from the FSU in the US. Similarly, Rodriguez, Mira, Paez, and Myers (2007) found that adult Mexican immigrants in the US who had higher host culture acculturation endorsed more *familism* (i.e., prioritizing of the family unit) and that higher heritage culture acculturation predicted more perceived social support from family members. Nguyen, Messé, and Stollak (1999) found that both higher host and heritage culture acculturation predicted better family relationships for adolescent Vietnamese immigrants in the US.

Two studies found that host and/or heritage culture acculturation predicted <u>negative</u> family adjustment. Gim Chung, Kim, and Abreu (2004) found that for Asian college students in the US, higher host culture acculturation was associated with more intergenerational conflict

regarding dating and marriage issues and higher heritage culture acculturation was associated with more conflict in intergenerational family relationships. Kang (2006) found that Asian acculturation, not including heritage language, was associated with more conflict with parents for Asian university students in the US but that American acculturation was not significantly correlated with parental conflict.

ii.   **Social domain**

The three studies that assessed the relationship between acculturation and adjustment in the social domain assessed social adjustment differently. Birman, Trickett, and Vinokurov (2002) found that American acculturation predicted greater social support from American peers and Russian acculturation predicted greater social support from Russian peers for adolescent immigrants from the FSU in the US. Similarly, Ryder, Alden, and Paulhus (2000) found that higher host culture acculturation predicted better interpersonal adjustment (i.e., less shyness) among Westerners in Chinese, East Asian, and a diverse group of acculturating individuals, whereas higher heritage culture acculturation predicted worse interpersonal adjustment among co-ethnic peers for Chinese immigrants only. Kang (2006) found that both American acculturation and Asian acculturation were associated with good peer relationships for Asian university students in the US.

Kang's (2006) study did not specify the ethnic makeup of the "peer relationships" in her study. Birman et al. (2002) and Ryder et al (2000) showed that host and heritage culture acculturation might affect social adjustment differently depending on whether social relationships with host society or co-ethnic community members were measured. Therefore, it is important to measure host society and co-ethnic peer networks separately since they represent different microsystems.

iii. **Academic domain**

Of the four studies that measured adjustment in the academic domain, all found that host culture acculturation predicted <u>positive</u> academic adjustment (Kang, 2006; Nguyen, Messé, & Stollak, 1999; Ryder, Alden, & Paulhus, 2000; Birman, Trickett, & Vinokurov, 2002), but heritage culture acculturation had positive (Birman, Trickett, & Vinokurov, 2002), negative (Kang, 2006), or no (Nguyen, Messé, & Stollak, 1999; Ryder, Alden, & Paulhus, 2000) effect on academic adjustment. Very few of the studies using a life domains approach were conducted with adults. Instead of the academic domain relevant for children and youth, the occupational domain is relevant for adult immigrants (Birman, Trickett, & Vinokurov, 2002).

To summarize, while the literature review of acculturation and psychological adjustment above yielded mixed results, results were only slightly more consistent within the microsystem level. Generally, host culture acculturation appeared to predict positive adjustment outcomes across all domains, whereas the relationship between heritage culture acculturation and adjustment differed across life domains. First, within the family domain, both host and heritage culture acculturation were shown to be predictive of positive family adjustment outcomes. Second, in the social domain, host culture acculturation consistently predicted positive social adjustment in this sample of articles but the relationship between heritage culture acculturation and social adjustment was mixed. More research is needed that differentiates between social support from host society and co-ethnic peers. Third, for academic adjustment there was evidence that higher host culture acculturation predicted better academic adjustment but heritage culture acculturation had positive, negative, or no effects on academic adjustment. However, the occupational domain is more relevant for adult immigrants. In conclusion, it appears that when

the relationship between acculturation and adjustment is examined across multiple life domains, whether across studies or within a single study sample, the relationship varies depending on the type of acculturation considered and the life domain in which adjustment is measured.

      c.   **<u>Mediation</u>**

To explain these inconsistent findings in regards to how immigrants adjust it may be beneficial to look beyond the direct effect between acculturation and psychological adjustment by exploring mediators of this relationship across multiple life domains. Some have posited that looking at mediators is not only beneficial, but is crucial. For instance, in a study of 983 Chinese Americans, Shen and Takeuchi (2001) found that host culture acculturation had both positive (through socio-economic status; SES) and negative (through stress) indirect effects on depression; these relationships were explained through different mediators. Therefore, they concluded that, "merely testing the direct relationship between acculturation and mental health outcomes may obscure the dual role that acculturation plays in psychological functioning" (Shen & Takeuchi, 2001, pp. 410-411). This provides evidence that it may be important to assess mediators of acculturation and psychological adjustment.

Of the 19 studies identified in this review, only three tested for mediation to explain the relationship between acculturation and adjustment. All three studies found full or partial mediation of acculturation and psychological adjustment.

Oppedal, Røysamb, and Sam (2004) found that, longitudinally, increases in host culture acculturation predicted better mental health (i.e., less depression and anxiety, more self-esteem), as mediated by more social support from the host society network of classmates (i.e., adjustment in a host society domain) for adolescent immigrants in Norway. They also found that ethnic culture competence (i.e., heritage culture acculturation) predicted better mental health as

mediated by more family support (i.e., adjustment in a heritage culture domain) for adolescent immigrants living in Norway (Oppedal, Røysamb, & Sam, 2004).

Costigan and Koryzma (2011) found that the relationship between host culture acculturation, but not heritage culture acculturation, and psychological adjustment was partially mediated by self-perceived parenting efficacy for Chinese immigrant parents in Canada, such that more host culture acculturation predicted greater parenting efficacy which in turn predicted better psychological adjustment. They explained that parenting efficacy might be related to host society acculturation because Canadian acculturation allows parents to access parenting resources in the community and be able to communicate with teachers. In the third study, positive family relationships were found to partially mediate American acculturation and distress and to fully mediate Russian acculturation and distress for adolescents from the FSU such that more acculturation led to better family relationships which in turn predicted less distress (Birman & Taylor-Ritzler, 2007).

Although mediators were tested in only three studies, all of them tested mediation in the social domain. Therefore, the social network is an important life domain in which to consider the relationship between acculturation and adjustment. These three mediation studies are informative because they differentiated between host society and co-ethnic peer social support, which is important, as previously discussed (Birman et al., 2002; Ryder et al., 2000).

2.   **Summary of literature review**

Much of the literature on the relationship between acculturation and psychological adjustment aims to answer the question, "which type of acculturation is best?" A review of the literature leaves us without a consistent answer to this question. Instead, this review identified three factors on which the relationship between acculturation and adjustment may depend. The

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first factor is that it depends on which type of acculturation – host or heritage – is being considered. The second is that it depends on the life domain in which the relationship between host and heritage culture acculturation and adjustment is being measured. Finally, it depends on how the mechanisms of acculturation and adjustment are functioning, as the literature has shown that mediators vary for host versus heritage culture acculturation and by life domain.

The purpose of the present study is to assess mediators of host and heritage culture acculturation and psychological adjustment and to determine domain specificity of these relationships to the occupational and/or social (which combines peers and family) domain for adult Vietnamese immigrants.

C.   **Domain Specificity**

Within the life domains approach, domain specificity refers to whether a mediator is specific to the relationship between host culture <u>or</u> heritage culture acculturation and psychological adjustment (Arends-Toth & Van de Vijver, 2007). In other words, if these relationships are mediated by an indicator of adjustment in one domain (e.g., occupational adjustment) but not the other (e.g., co-ethnic social support satisfaction) then I can conclude *domain specificity* of the relationship between host or heritage culture acculturation and psychological adjustment (Arends-Toth & Van de Vijver, 2007). Domain specificity is important because it demonstrates how acculturation and adjustment differ in various ecological contexts. To test this, a model must determine that a variable mediates the relationship between host, but not heritage, culture acculturation and psychological adjustment, or vice versa.

Oppedal, Røysamb, and Sam's (2004) mediational study provides support for domain specificity of host society social support to a host domain, but these researchers did not test whether host society social support also mediated the relationship between heritage culture

acculturation and adjustment. Therefore, they fail to show domain specificity of the host culture domain. Similarly, they did not test whether family support also served as a mediator for Norwegian acculturation so they cannot conclude domain specificity of the heritage culture domain. On the other hand, Costigan and Koryzma (2011) found domain specificity for parenting efficacy to the host domain in their study by testing the paths from both host and heritage acculturation to psychological adjustment through parenting efficacy. Finally, Birman and Taylor-Ritzler (2007) found that family relationships was not a domain specific mediator since it mediated the relationship between both American *and* Russian acculturation on adjustment. The present study will look for domain specificity in the occupational and social domains. Below I review the literature on acculturation and occupational adjustment and then social adjustment of adult immigrants.

1.   **Occupational adjustment**

A contribution of the present study is that it adds to the literature on acculturation and adjustment by measuring adjustment in the occupational domain. Occupational adjustment is defined in this study as the process of change that occurs in an immigrant's life related to their career and employment. For immigrants, the occupational adjustment process begins with their first job in the host country and continues through subsequent jobs. Occupational adjustment is measured in multiple ways in the literature including: employment status (e.g., unemployed, underemployed, or gainfully employed), satisfaction with said employment status (e.g., satisfaction with financial means it provides), and status consistency compared to the last job held in their heritage country.

Employment status refers to whether someone is unemployed, underemployed according to their skills and experience, or gainfully employed in a job commensurate with their skills and

experience. The Office of Refugee Resettlement (ORR) underscores the importance of employment by stating that finding employment is a priority for newly arriving refugees and asylees in order for them to become "self-sufficient as quickly as possible" (ORR, 2007, p. C-6). In practice, refugees are encouraged to take the *first* job offered to them. However, taking any job to avoid being unemployed may not be sufficient for positive occupational adjustment. In addition to being employed, the employee's appraisal (Lazarus & Folkman, 1984) of their job as satisfying is an important factor in occupational adjustment.

Measures of job satisfaction capture how immigrants appraise their employment status. Several factors can contribute to how satisfied an immigrant is with their current job (or jobs, as is often the case for immigrants). Such factors range from the level of financial support a job offers, to stress, job stability, or the amount of hours a job requires. Another source of low job satisfaction for many immigrants is a current work status that is lower than their pre-migration work status. For example, a person who was previously a physician may be able to get a job that "pays the bills" as a taxi driver but this reduction in status and the "brain waste" (Mahroum, 2000) of transferrable skills could contribute to low job satisfaction. This person may also feel low job satisfaction because they are no longer able to work in a job that is closely related to their professional identity, such as may be the case with a physician who is now working as a taxi driver. These components of occupational adjustment - employment status and job satisfaction - are related but distinct issues. Finding full-time employment in the host country (i.e., employment status) may not necessarily predict occupational satisfaction (Mace, Atkins, Fletcher, & Carr, 2005).

It has been shown that occupational adjustment for immigrants, including obtaining employment and being satisfied with it, is related to their acculturation and to their psychological

adjustment, hence its potential for serving as a mediator in the path from acculturation to psychological adjustment. The following review of past research suggests that host culture acculturation predicts positive occupational adjustment, but it is unclear whether heritage culture acculturation has predictive power.

    a.   **<u>Acculturation and occupational adjustment</u>**

        i.   **<u>Host acculturation and occupational adjustment</u>**

The process of host culture acculturation can help immigrants find and keep work because it will enable them to communicate with employers and people in the workplace and gain access to American social networks to get job leads. Several studies have found that higher host culture acculturation is related to occupational adjustment. For instance, assimilation and integration (two acculturation "strategies" which include high host acculturation) were found to predict a higher probability of being employed (Nekby & Rödin, 2009). Vinokurov, Birman, and Trickett (2000) found that immigrants from the FSU who were similarly employed to their previous profession reported higher levels of American acculturation than those who were unemployed or underemployed. In addition, Beiser and Hou (2001) found that by the end of their first decade in Canada, English fluency (a component of host culture acculturation) predicted employment status for immigrants. Similarly, immigrants who were assimilated were more likely to be fully employed in a job commensurate with their qualifications and experience (in conjunction with pre-interview job-hunting behaviors) for skilled immigrants in New Zealand (Mace, Atkins, Fletcher, & Carr, 2005).

However, measurement issues plague this field in the same way they do in other literature on acculturation, since most studies use measures of assimilation, acculturation to the host culture only, or proxy measures (Miller & Kerlow-Myers, 2009). Given these measurement

issues, "it is possible that some degree of our current knowledge of acculturation and its relation to career processes is limited, incomplete, and perhaps at times, misleading" (Miller & Kerlow-Myers, 2009, p. 376), and may explain contradictory findings. For example, Potocky-Tripodi (2003) found that "economic adaptation" (measured as a latent variable combining employment status with annual earnings) was not explained by "acculturation," or other variables considered including flight-related characteristics, host-related characteristics, or adaptation stress (Potocky-Tripodi, 2003). However, in their study, only proxy measures (e.g. length of residence in US) were used to measure acculturation. Therefore, it appears that host acculturation is related to occupational adjustment when measured with a scale designed to assess acculturation.

ii.   **Heritage acculturation and occupational adjustment**

Based on the current literature, heritage culture acculturation does not seem to be related to occupational adjustment. One study found that refugees from the FSU who were similarly employed to their previous profession reported less Russian acculturation than those who were unemployed (Vinokurov, Birman, & Trickett, 2000). Nekyby and Rödin (2009) concluded that the amount of heritage culture acculturation did not matter for employment outcomes based on their findings that assimilated and integrated immigrants did not differ significantly in employment probabilities. They explained that these two groups of immigrants had attachment to the host culture in common and therefore this commonality explained the employment outcomes, not their differing heritage culture. These findings are consistent with the idea that occupational adjustment is relevant to a host culture domain and therefore, host culture acculturation plays an import role in occupational adjustment whereas heritage culture acculturation does not.

b.   **Occupational and psychological adjustment**

Occupational adjustment, including both employment status and job satisfaction, impacts a person's psychological adjustment. In general, occupational adjustment has been linked to psychological adjustment because of the stress induced by low SES and unemployment (Taylor & Repetti, 1997). In addition, for immigrants, occupational adjustment has been linked to psychological adjustment because of the distress incurred when they experience low job satisfaction and status inconsistency (Chen, Smith, & Mustard, 2010; de Castro, Gee, & Takeuchi, 2008) or high employment frustration (de Castro, Rue, & Takeuchi, 2010).

The employment status component of occupational adjustment has been linked to psychological adjustment in the general employment literature. There is theoretical support for models in which unemployment is a risk factor for poor mental health as opposed to the opposite "selection" model in which poor mental health leads to unemployment (Dohrenwend, 1978). Further empirical support for the unemployment causation model is that lower occupational status has been shown to lead to poor regulation of the hypothalamic-pituitary-adrenal (HPA) axis (Rosmond & Björntorp, 2000), which is a physiological measure of stress.

With respect to employment status, within the immigrant literature, Blight, Ekblad, Persson, and Ekberg (2006) found that for refugees from Bosnia-Herzegovina living in Sweden, being unemployed predicted poor mental health for men, but not women, in a cross-sectional study. Similarly, Beiser and Hou (2001) found that unemployment predicted depression for Southeast Asian refugee men, but not women (for the women, depression actually predicted employability) in a 10-year longitudinal study. Additionally, a progressive trend was found for refugees from the FSU such that being unemployed, underemployed, or similarly employed was associated with increasing life satisfaction respectively and less alienation for the similarly

employed group (Vinokurov, Birman, & Trickett, 2000). Finally, Chung and Bemak (1996) found that being on welfare (a proxy for unemployment) at any point in an immigrant's life is a risk factor for psychological distress for Vietnamese, Cambodian, Laotian, and Hmong immigrants in the US. Therefore, there seems to be both cross-sectional and longitudinal evidence that employment status predicts psychological adjustment, however this finding is more consistent for men than women. The implication here is that it is important to examine these processes separately for men and women.

The job satisfaction component of occupational adjustment, including status inconsistency, has also been linked to psychological adjustment. Specifically, de Castro, Rue, and Takeuchi (2010) found that among 1,181 Asian American immigrants in the labor force, worse mental health was predicted by more employment frustration, defined as a self-report of perceived difficulty finding work due to Asian decent, while controlling for everyday discrimination. Similarly, de Castro, Gee, and Takeuchi (2008) found that high job dissatisfaction predicted more psychological distress among 1,381 Filipino immigrants. Chen, Smith, and Mustard (2010) found that status inconsistency (i.e., being over-qualified for your job) predicted a decline in mental health status over time for immigrants to Canada, and that this decline could be explained in part by low job satisfaction.

In conclusion, better occupational adjustment, including higher job satisfaction, has been found to be predicted by higher host culture acculturation, and has been found to predict better psychological adjustment for immigrants, especially men. Therefore, theoretical and empirical evidence provides support for testing occupational adjustment as a plausible mediator between host culture acculturation and psychological adjustment in Vietnamese immigrants to the US. Further, a stronger relationship between occupational and psychological adjustment can be

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expected for men than for women.

2.   **Social support**

Social support has been defined as *socially mediated coping* by Gottlieb (1988) because it buffers against stressful events to prevent poor health; social support has similarly been referred to as a "mediating process" by Seidman et al. (1995, p. 356). Social support was identified as a potential mediator of acculturation and psychological adjustment in two studies reviewed above (Birman & Taylor-Ritzler, 2007; Oppedal, Røysamb, & Sam, 2004).

For immigrants, social support can be conceptualized as coming from co-ethnic peers and family or from members of the host culture (Birman, Trickett, & Vinokurov, 2002). For instance, in the two studies reviewed above (Birman & Taylor-Ritzler, 2007; Oppedal, Røysamb, & Sam, 2004), social support was measured as coming from either family or peers and was found to be a significant mediator of both host and heritage culture acculturation and psychological adjustment.

a.   **Social support and psychological adjustment**

Co-ethnic social support (CESS) has been found to predict better psychological adjustment for immigrants. Two studies have particularly contributed to our theoretical understanding of this phenomenon. Simich, Beiser, and Mawani (2003) learned through a qualitative study that some refugees in Canada were seeking social support from their co-ethnic community as a means to affirm shared experiences, in addition to receiving functional (i.e., informational, instrumental, and emotional) social support. Participants in this study noted that validation of their shared experiences through CESS was helpful for their well-being. As a means to further underscore the importance of CESS, Lay and Nguyen (1998) found that higher levels of reported in-group hassles (i.e. "stressors that resulted from conflicts with peers and

family within the general Vietnamese context," p. 176), but not out-group hassles (related to majority group members), predicted higher levels of depression in Vietnamese immigrant college students living in Canada. Therefore, more CESS and less conflict with co-ethnic peers and family have been found to be especially important for the psychological adjustment of immigrants.

As Lazarus and Folkman's (1984) stress and coping model suggests, it is not only the size or presence of a social support network that is related to adjustment but also a person's *appraisal* of that network. For instance, Beiser (2006) found that presence of a like-ethnic community was protective against mental illness over time in Southeast Asian immigrants living in Canada. This study only measured the amount or presence of social support. However, two studies measured how satisfied immigrants were with the social support they received. First, Birman and Tran (2008) found that greater satisfaction with social support from Vietnamese friends and one's spouse predicted less depression. In addition, Mui (1998) found that for elderly Chinese immigrants living in the US, both the absence of social support (living alone) and being dissatisfied with help from family members predicted more depression. Interestingly, in this study the size of the family network did not relate to depression.

An immigrant may have many co-ethnic friends but feel dissatisfied with the social support they receive, in which case this is likely to negatively affect their psychological adjustment. Conversely, an immigrant may have a few close, satisfying friendships and as a result, be well adjusted psychologically. Therefore, more research is needed on how satisfaction with social support, especially from a co-ethnic network, predicts psychological adjustment for immigrants. In addition, based on evidence that the construct of social support may differ by gender (Schwarzer & Leppin, 1989; Tamres, Janicki, & Helgeson, 2002; Taylor et al., 2000), it

would be useful to explore whether this relationship differs for men and women.

b.   **Acculturation and social support**

Heritage culture acculturation has been found to predict CESS among various immigrant groups. These findings are to be expected given that heritage culture acculturation provides immigrants with access to CESS through language use, heritage cultural behavior, and a strong heritage identity. Further, adult immigrants are likely to maintain their primary close relationships with co-ethnic friends and family members. Gold (1992) noted that Vietnamese refugees formed strong co-ethnic social networks within their community and exchanged not only emotional, but also financial and informational support. Therefore, for adult immigrants, social support from co-ethnic peers is likely to provide socially mediated coping (Gottlieb, 1988) to aid in their psychological adjustment. Therefore, CESS may be a mechanism that explains the relationship between heritage culture acculturation and psychological adjustment.

Several studies have found that greater levels of heritage culture acculturation predicted greater satisfaction with social support from co-ethnic peers or family. Chan and Birman (2009) found that greater levels of Vietnamese acculturation predicted more satisfaction with social support from same-race friends for Vietnamese immigrant students living in the US. Two studies found that more Russian acculturation predicted more perceived support from Russian peers, less loneliness, and more perceived support from parents for Soviet Jewish refugee adolescents living in the US (Birman, Trickett, & Vinokurov, 2002; Birman, Trickett, & Buchanan, 2005). In addition, Birman (1998) found that heritage culture acculturation, and not American acculturation, predicted positive self-perceptions of competence with and acceptance by Latino peers in Latino immigrant adolescents living in the US. One study took a life domains approach

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by testing social support as a mediator of heritage culture acculturation and psychological adjustment. Oppedal, Røysamb, and Sam (2004) found that more social support from family and friends mediated higher ethnic culture competence (i.e., heritage culture acculturation) and less mental ill-health. Taken together, these five studies suggest that higher levels of heritage culture acculturation predict more CESS and satisfaction with said support. There is little research on the effects of satisfaction with CESS on psychological adjustment but Mui's (1998) study highlights the importance of measuring how immigrants appraise the social support they receive.

D.   **Present study: Research questions and proposed statistical model**

The goal of the present study is to take a contextual, life domains approach to testing mediators of acculturation, measured bilinearly, and psychological adjustment in Vietnamese immigrants living in the US. This involves testing mediators from two different life domains (occupational and social) to determine whether the relationships between host and heritage culture acculturation and psychological adjustment are explained through domain specific factors. The review of occupational and social adjustment literature suggests that occupational adjustment in the form of job status and satisfaction is a potential mediator of host culture acculturation and psychological adjustment (for men especially) whereas CESS satisfaction from family and Vietnamese friends is a potential mediator of heritage culture acculturation and psychological adjustment for Vietnamese immigrants in the US.

Specifically, given the differing demands put on immigrants in domains related to host culture acculturation (such as occupational adjustment) and heritage culture acculturation (such as maintaining family and co-ethnic relationships) I hypothesize that:

1)   American acculturation will predict better occupational adjustment, which will in turn predict less psychological distress. Further, I predict that occupational

adjustment, <u>but not CESS satisfaction</u>, will fully mediate the relationship between American acculturation and psychological distress. In other words, I predict that the relationship between American acculturation and psychological adjustment will have domain specificity to the occupational domain.

    a.   In addition, for men there will be a significantly stronger relationship between job satisfaction and psychological distress than for women.

2)   Vietnamese acculturation will predict more CESS satisfaction, which will in turn predict less psychological distress. Further, I predict that CESS satisfaction, <u>but not occupational adjustment</u>, will fully mediate the relationship between Vietnamese acculturation and psychological distress. In other words, I predict that the relationship between Vietnamese acculturation and psychological adjustment will have domain specificity to the co-ethnic social domain.

    a.   In addition, the path from CESS satisfaction to psychological distress will be tested for gender differences in an exploratory fashion since there is not enough evidence with which I can make a hypothesis.

These hypotheses are in keeping with the ecological theory that acculturation to American and Vietnamese cultures are differently related to mental health depending on context and the demands of that environment (Vinokurov, Trickett, & Birman, 2002).

To test these hypotheses, I used structural equation modeling (SEM) which allows for multiple mediation testing. Since there is little research on the relationships between host and heritage culture acculturation, psychological adjustment, occupational adjustment, and CESS satisfaction in Vietnamese immigrants, I will look to theory and studies on other immigrant

populations to specify my model and to inform my predictions for specific paths within the

model (see *Figure 1*). In addition, there is evidence that some of these paths will differ by

gender. Therefore, three parameters will be tested by gender: a) the path from occupational

adjustment to psychological distress, b) the path from CESS satisfaction to psychological

distress, and c) the correlation between American and Vietnamese acculturation[7].
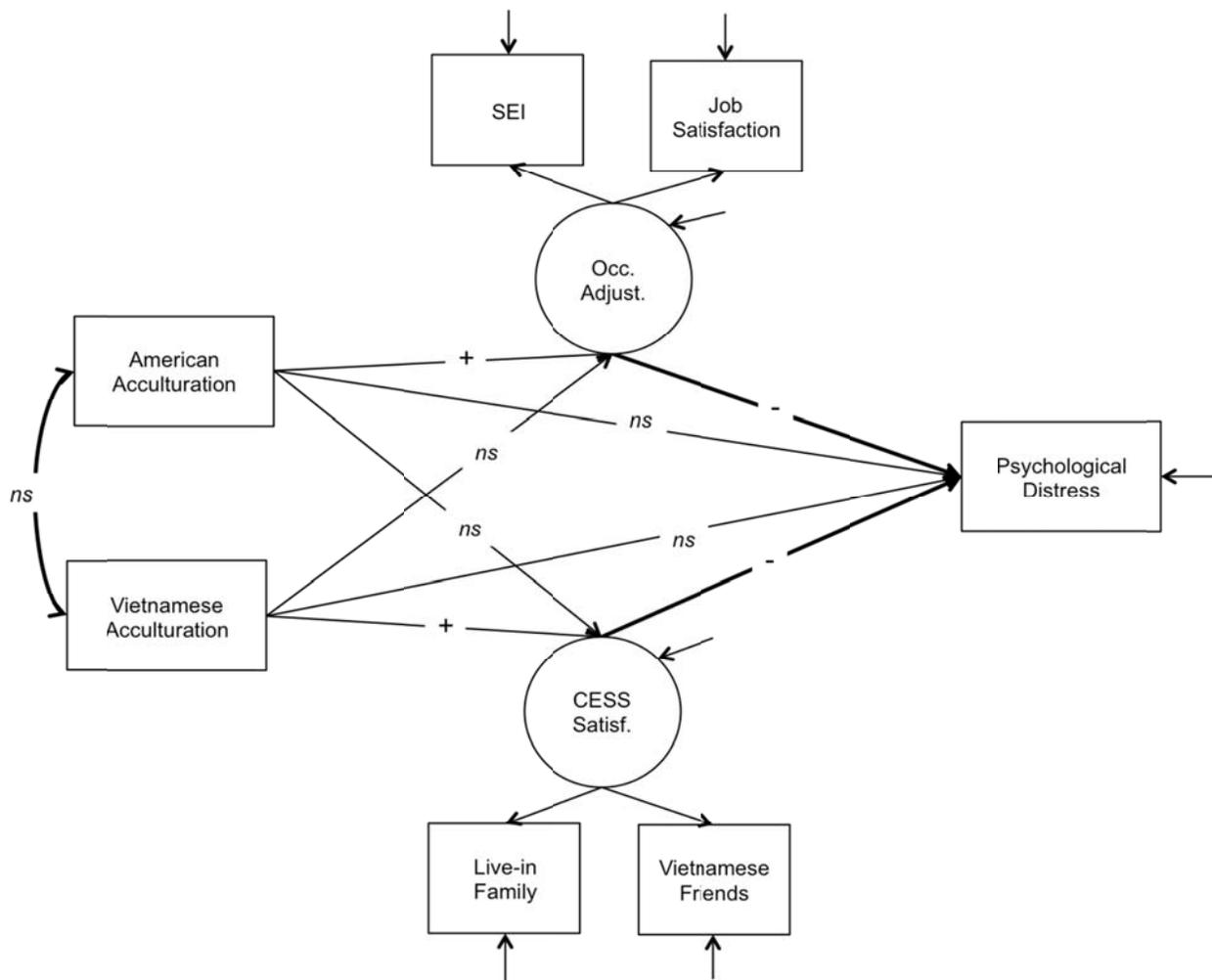
Figure 1. Hypothesized SEM for multi-group analysis of the relationship between acculturation

and distress mediated through two different life domains

Note. Bold paths analyzed by gender.

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[7] This third parameter test is exploratory in nature.

II.   **METHOD**

This study analyzed cross-sectional survey data collected in 2002 from a community

sample of Vietnamese immigrants settled in suburbs of Washington D.C. Although three studies

have been published from this data set (Birman & Tran, 2008; Ho & Birman, 2010; Trickett &

Jones, 2007), these data have not been explored with respect to the proposed mediation

hypotheses.

A.   **<u>Procedures</u>**

The original data collection was approved by a university Institutional Review Board

(IRB) in Maryland and this analysis was approved by the University of Illinois at Chicago's IRB

in March 2011. Three bilingual Vietnamese research assistants who had connections within the

Vietnamese community recruited participants. They utilized a convenience sampling strategy

and subsequently invoked snowball recruitment methods in which recruited participants

nominated other Vietnamese immigrants from their community to be contacted. Research

assistants collected data using paper and pencil surveys in participants' homes once informed

consent was explained and collected. The research assistants were available to answer questions

or assist participants in completing surveys. Participants were given a $15 incentive to participate

in the study (see Trickett & Jones, 2007 for further detail on these procedures).

B.   **<u>Participants</u>**

The majority of participants were living in the Maryland suburbs of D.C. There were a

few inclusion criteria for this study. First, investigators recruited participants who arrived from

Vietnam in the US with official refugee status and recruitment snowballed out to include

immigrants in their communities. Of recruited participants, 41.2% (n = 84) arrived with refugee

status. Others arrived as "boat people" (a subset of the refugee population; 27%, n = 55), through

the family reunification program (23.5%, n = 48), as "Amerasians" (2%, n = 4), under the "Resettlement Opportunities for Vietnamese Returnees" (ROVR) program (1.5%, n = 3), or through other programs (3.9%, n = 8). All participants were first-generation immigrants. Second, they had to be of working age (> 21 years) at the time of the study. This sample ranged in age from 22-65 years (M = 48.78, SD = 7.14).

The sample in this data set includes 204 adults (98 women and 105 men, one not reported). Participants were all former citizens of Vietnam and the majority identified as ethnically Vietnamese (95.6%, n = 195), but also Chinese (1.5%, n = 3), and Hmong (1%, n = 2). Of the participants who disclosed their religion, 34.9% were Buddhist, 53.3% were Catholic, 3.8% were Protestant, 2.4% followed no religion, and 0.9% practiced another religion. In addition, the majority of participants (79.2%) practiced ancestor worship, often in combination with another religion. In addition to Vietnamese, some spoke Chinese (n = 4) and French (n = 11) fluently. On average, participants had been in the US for 11.51 years (SD = 6.60, range = 9 months to 27.25 years) at the time of the study. Their average age of arrival was 37.25 years old, (SD = 10.69, range = 5.92 to 59.25).

All but four of the participants were married (98%). Most people lived with their family members and only 6.2% of participants had people outside of their family living with them. Family members living in participants' houses included children, spouse, siblings, grandchildren, and parents.

The majority of participants were currently employed (86.3%, n = 176) and most were still working at their first job (74.1%, n = 157). This sample has a high employment rate compared with other Vietnamese immigrants in 2002

(http://archive.acf.hhs.gov/programs/orr/data/02arc7.htm)[8]. Interestingly, 72.4% (n = 76) of men and 61.2% (n = 63) of women reported that there were other people from Vietnam where they work. On average, participants had 10.65 years of formal education, 15.6% of participants had a college degree, and 15.6% had a license or certificate from a trade or technical school.

This sample is similar to the national Vietnamese immigrant community in the US. The US saw the most rapid growth of Vietnamese immigrants in the 1990s, which is when the majority of participants in this sample arrived (Migration Policy Institute, 2010). Further, the majority of immigrants in the US in 2008 were of working age, similar to this sample in 2002 (Migration Policy Institute, 2010). Some differences about this sample are that they are less educated than the national average of Vietnamese immigrants (Migration Policy Institute, 2010).

C.   **Measures**

All measures used for this study were translated into Vietnamese and back-translated into English using de-centering procedures as outlined by Brislin (1986). This technique included one person translating the "source" measure into Vietnamese and then a second person translating the measure back into a "target" English measure. Demographic information was collected including time in US, gender, religion, job status, current age, and age of arrival because they have been found to be covariates in past research (Birman & Trickett, 2001; Fazel & Young, 1988).

1.   **Criterion variable: Psychological adjustment**

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[8] Specifically, ORR provided the following useful analysis: "the overall EPR [employment rate] for all refugees [16 and over] who came to the U.S. between 1997 and 2002 (as a group) was 60.8 percent (65.6 percent for males and 55.2 percent for females). As a point of reference, the employment rate for the U.S. population was 66.6 percent in 2002…As with the EPR, the labor force participation rate of refugees increases with time in the U.S. The labor force participation rate for the 2002 arrivals was 51 percent, for example, but reached 72 percent for refugees who arrived in 1998. [Data] reveals significant differences between the employment rates of seven refugee country-of-origin groupings. The EPR for the seven refugee groups ranged from a high of 77 percent for refugees from Vietnam and 68 percent for refugees from Eastern Europe and Latin America (exceeding the EPR from the U.S. population), to a low of 45 percent for refugees from the former Soviet Union."
(http://archive.acf.hhs.gov/programs/orr/data/02arc7.htm)

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Psychological adjustment was measured using the Indochinese version of the Hopkins Symptom Checklist (HSCL-25; Mollica et al., 1987; see APPENDIX A). The HSCL-25 has been used previously as a measure of psychological distress (i.e., the reverse of positive psychological adjustment) in the form of anxiety and depression in Vietnamese immigrants (Mollica, 1987). The HSCL-25 measures psychological distress on a four-point Likert scale ranging from 1 (not at all distressing), 2 (a little), 3 (quite a bit), to 4 (extremely distressing) by asking participants to rate the "degree of their discomfort or worry connected with some problem during the past week." The HSCL-25 had a Cronbach's alpha of 0.96 for this sample indicating good internal reliability. A total score can be calculated by computing an average across all 25 items. Within the Indochinese population, distress scores above 1.75 on the total score are categorized as significant emotional distress (Mollica, et al., 1987). Finally, since both anxiety and depression express gender differences, gender information was collected to use as a grouping variable for the multi-group SEM analysis.

2.   **Predictor variables**

American and Vietnamese Acculturation were measured using the Language, Identity, and Behavioral Acculturation Scale (LIB; Birman & Trickett, 2001; see APPENDIX B), which was previously adapted for a Vietnamese population. This scale measures acculturation to American and Vietnamese cultures independently and includes questions about identity and behavior. In addition, the American acculturation index includes measures of language competence. Vietnamese language items were not administered based on Vietnamese consultant feedback that it would not be culturally appropriate to ask about fluency in Vietnamese, because it could imply that the researchers were questioning participants' fluency in their native language. The LIB items are summed and averaged to determine an overall

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American Acculturation Index (AAI; $\alpha = 0.94$) and Vietnamese Acculturation Index (VAI; $\alpha = 0.85$). Higher mean scores on each index represent greater acculturation.

3.   **Mediators**

     a.   **Job satisfaction**

Job satisfaction was measured using an 11-item measure ($\alpha = 0.90$) used by the Jewish Appeal Federation of New York (Berkowitz, 2000; see APPENDIX C) to assess occupational adjustment of refugees within a refugee resettlement agency. It has face validity and had high reliability in pilot interviews with refugees. The scale asks participants how satisfied they are with aspects of their current[9] work situation, such as intellectual stimulation, job status, and compensation. Responses are on a five point Likert-scale ranging from 1 (not at all satisfied) to 5 (very satisfied). An overall job satisfaction score is computed by averaging responses on all 11 items; a higher mean score represents greater job satisfaction. This scale was only administered to employed participants.

     b.   **Socio-economic status**

Socio-economic status was measured using a socio-economic index (SEI) code that was assigned to each participant's job. Participants were asked their profession, job title, and type of organization in which they worked. Then, each job was coded using Entwistle and Astone's (1994) procedure, which assigns numbers ranging from 1 (lowest status job) to 100 (highest status job) to differentiate occupations based on their socioeconomic implications.

As previously discussed, for immigrants, status inconsistency between their pre-migration job and their current job is often a source of job dissatisfaction. In order to measure status *inconsistency*, I would have to compare participants' current SEI to their pre-migration

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[9] For some, this may refer to their first job in the US and for others it may be their eighth job.

SEI, but since these codes are based on US occupations, this comparison would lack validity.

Therefore, in this study, satisfaction with job status is captured within the job satisfaction

measure (described above) by asking participants to respond to how satisfied they feel with "job

status" and "intellectual stimulation."

        c.   **Co-ethnic social support satisfaction**

A factor called co-ethnic social support satisfaction was created using a 3-

item scale adopted from Seidman et al.'s (1995; see APPENDIX D) Social Support

Microsystems Scales. This scale assesses how satisfied participants are with: 1) the help they

receive with private matters, 2) financial matters, and 3) the amount of enjoyment they get from

two social support providers in their co-ethnic network: family living with them (i.e., spouse and

other family members; $\alpha = 0.79$) and Vietnamese friends ($\alpha = 0.64$). These two groups of people

served as indicators of the CESS satisfaction factor ($\alpha = 0.77$). Items are rated on a 3-point

Likert scale ranging from 1 (not at all) to 3 (a great deal) and are averaged together to provide an

overall CESS satisfaction score for live-in family and Vietnamese friends.

III.   **RESULTS**

Prior to testing the measurement model and hypotheses, all of the study variables were examined for missing values, and for the fit between their distributions and the assumptions of multivariate analysis. Three cases were deleted because they were missing almost all data on variables of interest. SEI was missing on 37.7% of cases[10]. Therefore, in the final model, occupational adjustment was represented by job satisfaction alone, and not SEI. Job satisfaction was missing data at random (Little's MCAR: χ^2,19 = 21.44, *ns*; MNAR with HSCL-25: $t(8.7)$ = -1.40, *ns*) on 9.8% of cases according to the Missing Value Analysis (MVA) function within SPSS. Remaining variables were missing 5% or less of data. Therefore, for hypothesis testing, Full Information Maximum-Likelihood (FIML) was used to handle missing data (Enders, 2006). The distributions of all variables, except job satisfaction ($W(175)$ = 0.99, *ns*), were non-normal according to the Shapiro-Wilk test (1965). However, transforming these non-normal variables was not necessary since the bootstrapping method used to test mediation corrects for non-normality by creating a normal distribution of k samples (Preacher & Hayes, 2008). Therefore, a multi-group SEM was specified using FIML and bootstrapping to test the multiple mediator model.

A.   **Measurement Model**

The measurement model assessed the degree to which two indicators of CESS satisfaction loaded onto this hypothesized latent construct. The standardized factor loadings for CESS satisfaction from live-in family members, including the spouse, and from Vietnamese friends were 0.69 and 0.74 respectively, with both indicators fixed to 1 because the model was

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[10] A large amount of SEI data was missing because it was only collected for those who reported that they were currently working and SEI codes were dependent on three other employment variables: profession, job title, and type of organization. It is possible that participants were reluctant to report employment information if they were working for cash rather than "on the books."

under-identified when only one indicator was fixed. This measurement model was just-identified ($df = 0$) since it only had two indicators. However, since CESS satisfaction is correlated with at least one other variable in the SEM (i.e., Vietnamese acculturation), it was reasonable to proceed with analyses (Kline, 2011). The fit indices for this measurement model indicated a poor ($\chi^2(0, N = 201) = 0.00$, $p = 0.00$) to good (RMSEA = 0.00, 0.0-0.00, $p = 0.00$; SRMR = 0.00; CFI = 1.00; TLI = 1.00) fit. Therefore, the CESS satisfaction factor can be used in the SEM estimated below.

B.   **Descriptives**

Descriptive data, including means and standard deviations of all study variables, can be seen in *TABLE I*. Of note, on average, participants were not significantly distressed ($M = 1.45$, $SD = 0.51$) according to a clinical cutoff of 1.75 (Mollica, et al., 1987) but women ($M = 1.52$, $SD = 0.51$) were significantly more distressed than men ($M = 1.38$, $SD = 0.51$; $t(189) = -1.95$, $p < 0.05$). Participants were significantly more acculturated to Vietnamese ($M = 3.43$, $SD = 0.43$) than American ($M = 2.32$, $SD = 0.54$; $t(203) = 22.01$, $p < 0.01$) culture. Respondents seemed to be very satisfied with co-ethnic social support from both their live-in family ($M = 2.76$, $SD = 0.35$ on a three-point scale) and their Vietnamese friends ($M = 2.38$, $SD = 0.47$ on a three-point scale); however they were significantly more satisfied with CESS from family ($t(200) = 11.12$, $p < .01$). Reports of job satisfaction were normally distributed and therefore fell at the midpoint of the scale on average ($M = 3.44$, $SD = 0.81$), indicating a range of how satisfied participants were at work. In addition, there were few differences between men and women, at the item level, on the job satisfaction measure (see *TABLE II*). Men were significantly more satisfied with their medical insurance and pension than women. The average SEI of men in this sample ($M = 44.83$, $SD = 19.59$) reflected relatively low status professions such as interviewers, auctioneers, correspondence clerks, telephone operators, dispatchers, service industry supervisors, and

electricians (Entwisle & Aston, 1994). The average SEI of women ($M = 34.95$, $SD = 15.49$) was significantly lower than the male sample and reflected professions such as typists (Entwisle & Aston, 1994). The modal profession for women was manicurist (12.7%, n = 13), which represents an SEI of 26.39.

TABLE I

MEAN ACCULTURATION AND ADJUSTMENT OF VIETNAMESE MALE AND FEMALE IMMIGRANTS

	Male		Female			Total	
Variable	*M*	*SD*	*M*	*SD*	T-test	*M*	*SD*
Psychological distress [a]	1.38	0.51	1.52	0.51	$p < 0.05$	1.45	0.51
American acculturation	2.39	0.52	2.25	0.54	*ns*	2.32	0.54
Vietnamese acculturation [b]	3.41	0.42	3.45	0.43	*ns*	3.43	0.43
Job Satisfaction	3.49	0.76	3.38	0.86	*ns*	3.44	0.81
CESS satisf.: family	2.79	0.31	2.73	0.38	*ns*	2.76	0.35
CESS satisf.: friends	2.41	0.45	2.36	0.49	*ns*	2.38	0.47
Socio-economic Index	44.83	19.59	34.95	15.49	$p < 0.01$	40.69	18.53

[a] Scores above 1.75 are categorized as significant emotional distress (Mollica, et al., 1987).
[b] Index comprised of identity and behavioral acculturation dimensions only.

TABLE II

MEAN JOB SATISFACTION SCORES BY ITEM FOR EACH GENDER

Item	Male		Female		T-test
	M	*SD*	*M*	*SD*	
Salary	3.46	1.09	3.35	1.10	*ns*
Intellectual stimulation	3.22	1.18	3.17	1.14	*ns*
Satisfaction from work	3.60	1.05	3.67	1.06	*ns*
Working conditions	3.55	1.07	3.57	1.05	*ns*
Job stability	3.18	1.14	3.20	1.13	*ns*
Number of working hrs.	3.69	0.99	3.64	1.11	*ns*
Stress	2.94	1.22	3.04	1.08	*ns*
Professional status	3.37	1.03	3.25	1.09	*ns*
Work schedule	3.73	0.97	3.65	1.00	*ns*
Medical insurance	4.03	1.09	3.25	1.39	$p < 0.01$
Pension	3.76	1.21	3.22	1.36	$p < 0.01$

Tables *TABLE III,* *TABLE IV*, **and**

TABLE V **show pairwise correlations of study variables for the total, male, and female**

sample. The correlation between American and Vietnamese acculturation was explored by

gender. For men, American and Vietnamese acculturation were not correlated (i.e., they

found to be statistically orthogonal) as can be seen in *TABLE IV* **and in the SEM (b = 0.01,**

ns)**. For women, they were negatively correlated (see**

TABLE V; b = -0.06, $p < 0.05$). This gender difference was found to be significant using a χ^2-

difference test ($\chi^2(1) = 4.35$, $p < 0.05$).

For the total sample, American acculturation was negatively correlated with the age of

participants when they arrived in the US ($r = -0.33$, $p < 0.01$) and positively correlated with how

long a participant had lived in the US ($r = 0.39$, $p < 0.01$). Vietnamese acculturation was

positively correlated with age of arrival ($r = 0.15$, $p < 0.01$) and not correlated to time in the US

($r = -0.04$, *ns*).

Since SEI was a variable of interest but was not included in the SEM, I will report

relevant correlation results here. SEI was positively correlated with American acculturation and

job satisfaction for men, whereas for women, it was positively correlated with American

acculturation and negatively correlated with Vietnamese acculturation but not with job

satisfaction. For men, SEI accounted for 19% of the shared variance in job satisfaction. All other

relationships between variables are discussed in the context of the path model below.

TABLE III

PAIRWISE CORRELATIONS BETWEEN STUDY VARIABLES FOR TOTAL SAMPLE

	Psych. distress	Amer. Acc	Viet. Acc.	Job Satisfaction	CESS: family	CESS: friends	Gender	SEI	Time in US
Amer. Acc	-0.13*								
Viet. Acc.	0.03	-0.11							
Job Satisfaction	-0.26**	0.26**	0.14						
CESS: family	-0.08	0.04	0.17*	0.07					
CESS: friends	-0.12	0.01	0.25**	0.11	0.35**				
Gender	0.13*	-0.13	0.05	-0.07	-0.08	-0.04			
SEI	-0.17	0.52**	-0.22*	0.35**	0.04	-0.03	-0.25**		
Time in US	0.17	0.39**	-0.04	0.25**	-0.11*	0.01	0.03	0.42**	
Age of arrival	0.05	-0.33**	0.15**	-0.21**	0.17**	-0.00	-0.15**	-0.32**	-0.76**

$* p < 0.05$, $** p < 0.01$

TABLE IV

PAIRWISE CORRELATIONS BETWEEN STUDY VARIABLES FOR MALE SAMPLE

	Psych. distress	Amer. Acc	Viet. Acc.	Job Satisfaction	CESS: family	CESS: friends	SEI	Time in US
Amer. Acc	-0.17							
Viet. Acc.	-0.07	0.03						
Job Satisfaction	-0.34**	0.30**	0.13					
CESS: family	-0.09	0.11	0.25**	0.11				
CESS: friends	-0.06	0.04	0.30**	0.15	0.38**			
SEI	-0.19	0.52**	-0.08	0.43**	0.14	0.00		
Time in US	-0.21*	0.47**	-0.13	0.35**	0.04	0.05	0.65**	
Age of arrival	0.18	-0.38**	0.20*	-0.22*	0.19	0.01	-0.55**	-0.76**

$* p < 0.05, ** p < 0.01$

TABLE V

PAIRWISE CORRELATIONS BETWEEN STUDY VARIABLES FOR FEMALE SAMPLE

	Psych. distress	Amer. Acc	Viet. Acc.	Job Satisfaction	CESS: family	CESS: friends	SEI	Time in US
Amer. Acc	-0.06							
Viet. Acc.	0.14	-0.25**						
Job Satisfaction	-0.16	0.23*	0.16					
CESS: family	-0.05	-0.03	0.10	0.03				
CESS: friends	-0.16	-0.04	0.21*	0.07	0.32**			
SEI	-0.01	0.47**	-0.37**	0.16	-0.12	-0.10		
Time in US	0.01	0.40**	-0.04	0.25**	-0.12	-0.00	0.44**	
Age of arrival	0.07	-0.35**	0.15*	-0.22**	0.16*	-0.01	-0.33**	-0.76**

$*p < 0.05, **p < 0.01$

C.   **Structural Equation Model**

To test for the hypothesized mediation by gender, a multi-group SEM was

simultaneously estimated for men and women[11] in Mplus, version 6.12 (Muthén & Muthén,

2012) using FIML estimation to model the direct and indirect effects of American and

Vietnamese acculturation on psychological distress using 5,000 bootstrapped samples. The SEM

(see *Figure 2*) had good fit (χ^2(18, N = 203) = 39.23, p = 0.95). This model had low badness of

fit scores, indicating good fit (RMSEA= 0.00, 0.0-0.0, p = 0.99; SRMR = 0.05). Finally, the

model had high goodness of fit scores, indicating that the model fit the data well (CFI = 1.00;

TLI = 1.24). Next, specific direct and indirect effects hypothesized in the model were examined

(see *TABLE VI*). All paths were constrained to be equal in men and women unless specified

below.

1.   **Hypothesis 1**

The direct path from American acculturation (b = -0.04, *ns*) to psychological

distress was not significant. Indirect paths between American acculturation and psychological

distress through job satisfaction and satisfaction with CESS were examined. As predicted in

hypothesis 1, American acculturation predicted job satisfaction (b = 0.42, p < 0.01), which in

turn predicted psychological distress (b = -0.15, p < 0.01). American acculturation did not

predict CESS satisfaction (b = 0.04, *ns*). To test hypothesis 1a, a χ^2-difference test was conducted

to determine whether gender differences existed in the path from job satisfaction to

psychological distress. Contrary to predictions, no gender difference was found for this

parameter (χ^2(1) = 1.99, *ns*).

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[11] The SEM was first estimated separately for the male and female sample. Since the models had equally good fit
(Male: χ^2(5, N = 105) = 3.14, p = 0.68; AIC = 821.62; BIC = 880.01; Female: χ^2(5, N = 98) = 3.27, p = 0.66; AIC =
850.79; BIC = 907.66) it was determined that they could be estimated simultaneously.

Job satisfaction and CESS satisfaction were then examined as mediators of American acculturation and psychological distress. Job satisfaction fully mediated the relationship between American acculturation and psychological distress (b = -0.06, 95% CI [-0.11, -0.01]), whereas CESS satisfaction was not a mediator (b = -0.01, 95% CI [-0.29, 0.02]). In other words, American acculturation had a *domain specific* indirect effect on psychological distress that was fully mediated by job satisfaction (occupational domain) but not CESS (social domain), as hypothesized. The total effect of American acculturation on psychological distress (including the direct effect and indirect effects through both mediators) accounted for 55% of the variance in psychological distress.

2. **<u>Hypothesis 2</u>**

The direct path from Vietnamese acculturation (b = 0.14, *ns*) to psychological distress was not significant. Next, indirect paths between Vietnamese acculturation and psychological distress were examined. As predicted in hypothesis 2, Vietnamese acculturation predicted satisfaction with CESS (b = 0.29, *p* < 0.01). Previously, when the SEM was tested separately in men and women, CESS did not predict psychological distress for either sample, contrary to expectations. Therefore, this parameter was not tested for gender differences and was rather estimated for men and women simultaneously. Therefore, in the final SEM, CESS satisfaction did not predict psychological distress (b = -0.26, *ns*). Also surprisingly, Vietnamese acculturation was a significant predictor of job satisfaction (b = 0.31, *p* < 0.05).

Finally, CESS satisfaction and job satisfaction were tested as mediators of Vietnamese acculturation and psychological distress. Contrary to predictions, CESS satisfaction did not mediate this relationship (b = -0.07, 95% CI [-0.10, 0.01]). In addition, job satisfaction did not mediate the relationship between Vietnamese acculturation and psychological distress (b = -0.05,

95% CI [-0.13, 0.02]) as predicted. Thus, the domain specificity hypothesis was not supported for the relationship between Vietnamese acculturation and psychological distress through CESS satisfaction (social domain). The total effect of Vietnamese acculturation on psychological distress (including the direct effect and indirect effects through both mediators) accounted for 19% of the variance in psychological distress.

TABLE VI

TESTS OF INDIRECT (MEDIATING) RELATIONSHIPS BETWEEN ACCULTURATION AND PSYCHOLOGICAL DISTRESS FOR

MEN AND WOMEN

Outcome variables	Predictors	Direct effects			Mediators	Specific indirect effects		
		b	*SE* (boot)	95% CI		b	*SE* (boot)	95% CI
Psych Distress	Amer. Acc.	-0.04	0.07	[-0.17, 0.09]	Job Sat.	-0.06*	0.03	[-0.11, -0.01]
					CESS Sat.	-0.01	0.02	[-0.29, 0.02]
	Viet. Acc.	0.14	0.10	[-0.04, 0.36]	Job Sat.	-0.05	0.03	[-0.13, 0.02]
					CESS Sat.	-0.07	0.08	[-0.10, 0.01]
	Job Sat.	-0.15**	0.05	[-0.24, -0.05]				
	CESS Sat.	-0.26	0.26	[-0.99, 0.09]				
Job Satisfaction	Amer. Acc.	0.42**	0.11	[0.20, 0.63]				
	Viet. Acc.	0.31*	0.13	[0.06, 0.56]				
CESS Satisfaction	Amer. Acc.	0.04	0.06	[-0.09, 0.14]				
	Viet. Acc.	0.29**	0.09	[0.10, 0.44]				

p < 0.05
**p* < 0.01
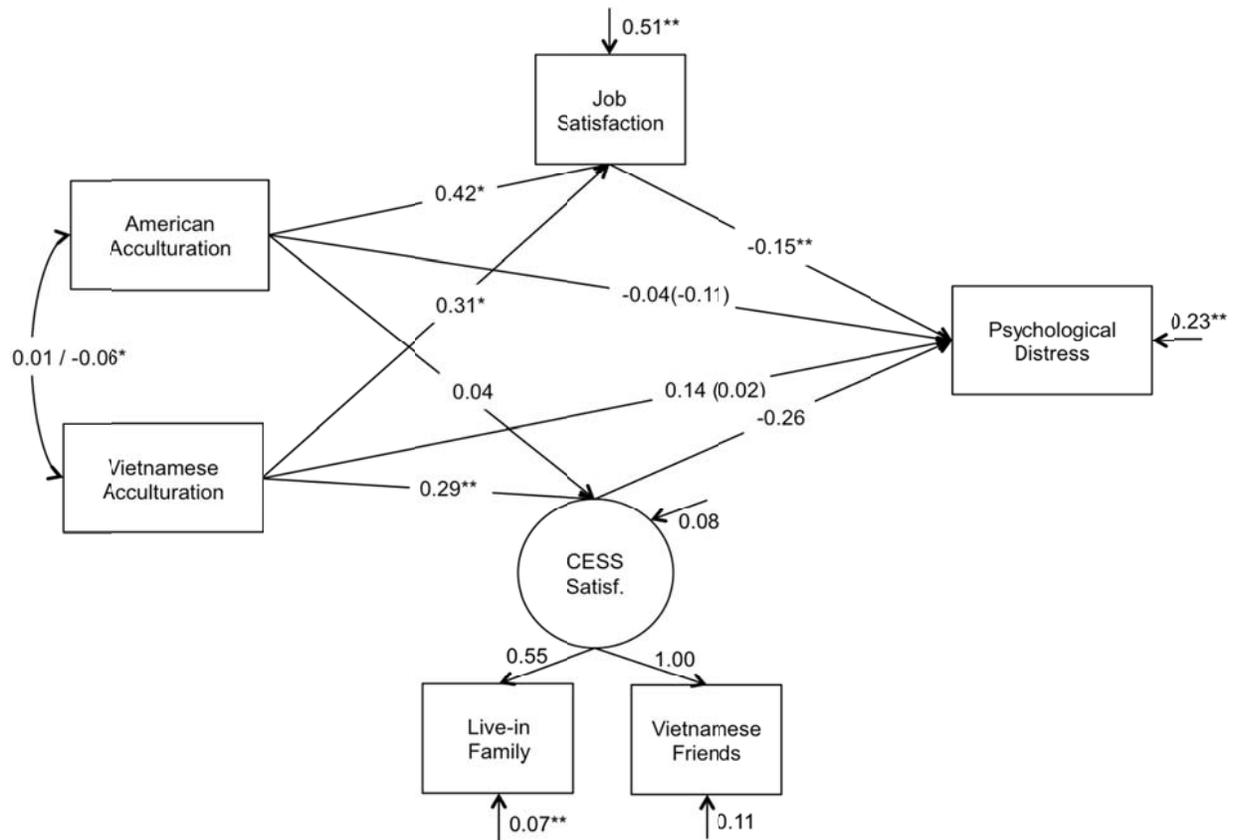
Figure 2. FIML SEM model for multi-group sample using 5,000 bootstrapped samples with unstandardized regression weights for the indirect relationships between American and Vietnamese acculturation and psychological distress through job and co-ethnic social support satisfaction. Model fit was good: $\chi^2(18, N = 203) = 39.23$, $p = 0.95$; RMSEA= 0.00, 0.0-0.0, $p = 0.99$; SRMR = 0.05; CFI = 1.00; TLI = 1.24.

*$p < 0.05$, **$p < 0.01$

Note. Total effects in parentheses. For acculturation correlation, male estimate reported first, female second.

V. DISCUSSION

The goal of this study was to take an ecological approach to the study of acculturation and psychological adjustment, by measuring host and heritage culture acculturation independently, and testing mediators from different life domains in men and women. Overall, an ecological approach allowed me to discover several important findings. Namely, by measuring American and Vietnamese acculturate separately, I found that acculturation functions differently for men and women. An ecological approach also helped me establish domain specificity of the relationship between American acculturation and psychological distress to an occupational domain because job satisfaction (but not CESS satisfaction) fully mediated this relationship. In addition, the importance of job satisfaction within the occupational domain was highlighted. Job satisfaction was the only variable directly affecting psychological adjustment in this model, and it was predicted by both American and Vietnamese acculturation. The only finding related to CESS satisfaction was that it was predicted by Vietnamese acculturation. It was surprising that CESS did not have any other direct or mediating effects in the model.

A. **Acculturation Patterns**

Consistent with past research (Birman & Trickett, 2001; Szapocznik & Kurtines, 1980), American acculturation was negatively correlated with age of arrival and positively with time in US for both men and women. This means that the younger an immigrant was when they arrived and the longer they have lived in the US, the more acculturated they are to American culture. As in prior research (Liebkind, 1996), the study also found that time in US was not related to Vietnamese acculturation, suggesting that these immigrants did not lose their attachment to Vietnamese culture over time. Age of arrival was positively correlated with Vietnamese acculturation for men and women, consistent with prior findings that those who arrived at an

older age are more likely to maintain their heritage culture in immigration (Liebkind, 1996).

Interestingly, in the multi-group SEM model, host and heritage culture acculturation were orthogonal for men but were negatively correlated for women. These findings speak to the utility of bilinear measurement of acculturation used in this study. Since American and Vietnamese acculturation were measured separately, the study was able to examine the presence or absence of orthogonality, and found differences for men and women.

This finding is consistent with past research (Birman & Tyler, 1994) that found a similar pattern for former Soviet Jewish men and women. This means that for women, as American acculturation increases, their Vietnamese acculturation subsides (or vice versa) whereas for men, fluctuations in American acculturation are unrelated to their Vietnamese acculturation. For women, this may mean that they must choose between American and Vietnamese acculturation when adapting to various contexts, thereby making it more difficult to be bicultural (i.e., experience high American *and* high Vietnamese acculturation). This biculturalism challenge may have implications in various life domains, as discussed below. All other parameters in the SEM functioned similarly for men and women so they are discussed together.

B.   **Employment and Psychological Adjustment for Immigrants**

1.   **American acculturation and occupational adjustment**

In this sample, greater levels of American acculturation predicted higher job satisfaction. This finding is consistent with past research (Birman, Chan, & Tran, under review) and ecological theory. From an ecological perspective, occupational adjustment is related to a host society domain so it makes sense that American acculturation would be related to job satisfaction. It is also consistent with theory that the process of American acculturation (e.g., English language development, knowledge of American behavioral norms) can give immigrants

access to employment, thereby providing access to better jobs which may afford a better quality

of life and/or be closer to their previous employment status (Birman, Chan, & Tran, under

review).

In turn, more job satisfaction was found to predict less psychological distress. This

finding is consistent with past research (Birman, Chan, & Tran, under review; de Castro, Gee, &

Takeuchi, 2008; de Castro, Rue, & Takeuchi, 2010) and highlights the powerful impact working

in a satisfying job can have on an immigrant's psychological well-being. Under ORR's current

policy, immigrants are encouraged to take the first job that becomes available to them when they

enter this country. These jobs are often of a low socio-economic status, and are low paying

(Chiswick, Lee, & Miller, 2005). This finding suggests that perhaps it may be worth allowing

immigrants to spend a little more time to search for a *satisfying* job since this is associated with

improved mental health. Not only is improved mental health better for the individual, but it is

also better for the health of our communities and economy. For instance, mental health is

associated with fewer sick days on the job and less burden on the welfare system (Goetzel,

Hawkins, Ozminkowski, & Wang, 2003). Therefore, policy makers who encourage immigrants

to prioritize speedy employment over employment well suited to them should consider possible

implications for their health and the health of their communities.

The main finding of this study was that job satisfaction fully mediated the relationship

between American acculturation and psychological distress. This finding is consistent with past

research (Birman, Chan, & Tran, under review; Chung, 2001; Vinokurov et al., 2000). For

instance, Birman, Chan, and Tran (under review) found that for immigrants from the FSU, higher

American acculturation predicted better occupational success, which in turn predicted better

psychological adjustment operationalized as life satisfaction. However, these prior studies did

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not test for domain specificity. Since job satisfaction, but not CESS satisfaction, fully mediated American acculturation and psychological adjustment in the present study, this indicates that a significant portion of the relationship between American acculturation and psychological adjustment is specific to the domain of occupational adjustment. As Shen and Takeuchi (2001) suggest, it was only by testing multiple mediators that I was able to fully explain what accounts for the path from American acculturation to psychological distress. However, domain specificity does not necessarily rule out other influences on the relationship between acculturation and adjustment.

2.   **<u>Vietnamese acculturation and occupational adjustment</u>**

A surprising finding from this study was that greater levels of Vietnamese acculturation predicted higher job satisfaction. First, it was not expected that Vietnamese acculturation would be related to job satisfaction at all. Second, the positive direction of the relationship between Vietnamese acculturation and an employment variable is inconsistent with past research. Past literature has found either a negative relationship (Vinokurov, Birman, & Trickett, 2000) or none at all (Nekby & Rödin, 2009). The present finding suggests that being more acculturated to Vietnamese culture has the potential to increase Vietnamese immigrants' satisfaction with their jobs, and also that Vietnamese acculturation is advantageous to immigrants in domains outside of the co-ethnic social domain.

There are several possible explanations for this unexpected finding. One possible explanation for why Vietnamese acculturation predicted job satisfaction is that if an immigrant maintains close ties with relatives in Vietnam, they may exhibit higher Vietnamese acculturation and may be more likely to find satisfaction in a job that allows them to send remittances back to their family living in Vietnam (Gold, 1992). Another plausible explanation is drawn from past

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findings that Vietnamese immigrants tend to find employment via and with other Vietnamese immigrants rather than working at jobs with mostly Americans (Gold, 1992). In this sample, 72.4% of men and 61.2% of women reported that there was at least one other Vietnamese employee in their organization. However, most were still an ethnic minority in their organization with 70.7% of participants reporting that their workplace was 30% Vietnamese or less. Therefore, for Vietnamese immigrants, being highly acculturated to Vietnamese culture may provide access to more satisfying jobs *or* if they are highly acculturated to Vietnamese culture, they may be more satisfied to be in a job in which there are other people from Vietnam.

Another explanation could be related to the Asian value of "humility." As Henderson and Chan (2005) indicate, humility and expressing gratitude for what you have is valued over material wealth or individual success. In other words, for immigrants who are highly acculturated to Vietnamese culture, they may experience high job satisfaction even if their job status (i.e., SEI) is low because they are more likely to adhere to the value of humility. Further, they may consider their SEI and general occupational adjustment an improvement from what they had in Vietnam, making it more likely that they would feel satisfied with their job in the US.

Further, with both American and Vietnamese acculturation related to job satisfaction, it may be possible to assert that biculturalism or additive acculturation is advantageous, as it is a combination of resources that acculturation to both cultures provides that is most beneficial. A better test of this possibility (at the expense of parsimony) would have been to test the interaction between American and Vietnamese acculturation. In this case, while American acculturation provides skills and access to well paid and prestigious employment, Vietnamese acculturation may contribute to job satisfaction through other mechanisms. Biculturalism could allow immigrants to navigate their workplaces with greater ease given they have already successfully

adapted to a new culture (i.e, American culture) and could apply these adaptation skills to a new work culture.

Given that Vietnamese acculturation and American acculturation are negatively correlated with each other for women (and not correlated for men) but both are positively correlated with job satisfaction, the dynamics of these relationships are different for women. For them, if acculturation involves an either/or process of being either American or Vietnamese acculturated, attaining job satisfaction may be more difficult since, according to this study, a person's job satisfaction would benefit from higher acculturation on both accounts.

It is also important to point out that job satisfaction is only one measure of occupational adjustment, and findings may have been different if SEI had been included. Unfortunately, I was not able to assess the potential mediating role of SEI in this study but correlations with this variable proved interesting. For both men and women, SEI was positively correlated with American acculturation. For men, SEI was not related to Vietnamese acculturation, but for women it was negatively correlated with Vietnamese acculturation. In other words, for men, greater levels of American acculturation were related to a higher SEI but Vietnamese acculturation was not related to SEI. For women, greater American acculturation was *also* related to a higher SEI while higher levels of Vietnamese acculturation were related to a lower SEI. In addition, SEI was positively related to job satisfaction for men but was surprisingly unrelated for women. That is, women's satisfaction with their job was independent of the status of that job, but for men, status was closely tied to satisfaction. Therefore, job satisfaction may be operating differently than SEI in how they relate to acculturation and contribute to occupational adjustment, especially for women.

Taken together, the statistical importance of job satisfaction for this sample was twofold.

It served as a domain specific mediator between American acculturation and psychological distress and it was predicted by Vietnamese acculturation. This finding implies that American acculturation may benefit an immigrant's well-being by increasing their job satisfaction and that Vietnamese acculturation can also work to increase their job satisfaction. Therefore, it is important to prioritize job satisfaction, and to encourage or provide support for *both* host culture acculturation and heritage cultural maintenance when immigrants resettle given the impact it has on their job satisfaction and in turn their psychological adjustment.

C.   **Satisfaction with Co-ethnic Social Support**

Higher levels of Vietnamese acculturation predicted greater CESS satisfaction. However, CESS satisfaction did not predict psychological distress nor did it mediate the relationship between Vietnamese acculturation and psychological adjustment. Given past research (Birman, Chan, & Tran, under review; Birman & Taylor-Ritzler, 2007; Oppedal, Røysamb, & Sam, 2004) it was surprising that neither Vietnamese acculturation nor satisfaction with CESS predicted psychological adjustment. There are a couple possible explanations for this finding. First, there may be statistical power issues due to the sample size or model complexity which precluded my ability to detect an effect. Second, the CESS satisfaction variable may have essentially functioned as a constant given its limited variability within this sample, thereby making it too weak to have an effect. Finally, Vietnamese acculturate may simply not be a predictor of psychological distress at all in this study. Perhaps social support does not have a buffering effect against distress for this sample. While unexpected, these findings are interesting nonetheless because they show how taking a life domains approach allowed me to fully examine the relationships between acculturation and psychological adjustment. In other words, a life domains approach allowed me to study the social domain and to see its lack of effects for psychological

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distress in this study.

D.   **<u>Limitations</u>**

Limitations of these data are that they are cross-sectional so I cannot imply causation or capture the developmental nature of processes such as acculturation or occupational adjustment. In addition, the HSCL-25 may not have been the best measure of psychological distress for this sample given that the clinical cutoff is 1.75 but the scale ranges from 1 to 4. This means that all non-distressed participants were captured in the lower half of the scale, causing the outcome variable to be negatively skewed. For the variable to be normally distributed, over 50% of the sample would have to be considered "significantly distressed" which seems unlikely given this is a community, rather than a clinical, sample. While normality is not a requirement for bootstrapping, this may still indicate that the HSCL-25 did not fully describe the psychological adjustment experience of this sample.

There were limitations related to operationally defining occupational adjustment as well. First, there were not enough data to include SEI as an indicator of a latent occupational adjustment factor. Therefore, this more "objective" measure of occupational adjustment was missing and we were left with only the appraisal. Given the relationships to acculturation and job satisfaction discussed above, the SEI variable may have helped explain why Vietnamese acculturation predicted occupational adjustment or why there were no gender differences found in the relationship between occupational adjustment and psychological distress. Second, some participants held multiple jobs and it was not necessarily clear when answering the job satisfaction measure whether they were referring to their "primary" job or the combination of multiple jobs. It is common for immigrants to hold multiple jobs. They may feel differentially satisfied with each job or with the reality that they have to work at more than one job. The

measure of job satisfaction used in this study did not instruct participants to respond based on a particular job so the results could be an under- or over-estimate of how satisfied immigrants were with their occupational situation (and in turn their psychological distress) on the whole if they were only responding based on the job they prefer more or less. Therefore, it is important to find ways to capture, either quantitatively or qualitatively, occupational adjustment when participants are employed at multiple workplaces at one time. Conversely, it would also be interesting to measure how satisfied unemployed participants are with their job status. This would increase the variance in the job satisfaction variable, and it is plausible that people could have a range of appraisals of their unemployed status. For instance, they may find it fulfilling to be retired or a homemaker (referred to in these data as "unemployed"). Further, those who were unemployed might have been the most psychologically distressed, and excluding those from the model who did not complete the job satisfaction measure may have made it more difficult to detect certain effects (e.g., CESS satisfaction on psychological distress).

E.   **Conclusion and Directions for Future Research**

There are several recommendations for future research based on the findings of this study and the limitations just discussed. First, future research should continue to take an ecological, life domains approach to studying acculturation and psychological adjustment of immigrants given the importance of this approach discussed here. Naturally, replication of this study in similar and different samples will be important in order to test whether this model (and especially the domain specificity of job satisfaction) fits other data equally well. In addition, studying these processes longitudinally would be useful to observe changes over time. For instance, it would be interesting to see the trajectory of occupational adjustment and if it has a differential effect on psychological adjustment over time as work experience in the host country is gained and the SEI

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returns to the pre-migration SEI. Finally, more qualitative research is needed, especially to understand the relationship between Vietnamese acculturation and job satisfaction.

To conclude, this study contributed to the literature on the acculturation and adjustment of Vietnamese immigrants in the US by taking a life domains approach in which multiple mediators were tested for domain specificity. The utility of measuring host culture and heritage culture acculturation in a bilinear fashion was demonstrated. Further, American and Vietnamese acculturation were found to predict job satisfaction, and Vietnamese acculturation predicted co-ethnic social support satisfaction. Finally, job satisfaction was found to fully mediate the relationship between American acculturation and psychological distress. Domain specificity was found in this study for the relationship between American acculturation and psychological distress to the occupational domain. Bringing an ecological lens to the study of acculturation and psychological adjustment across life domains allowed me to examine the nuances of how job satisfaction and CESS satisfaction do (or do not) mediate these relationships. Promoting job satisfaction at the policy or local intervention level is important given its impact on psychological adjustment for immigrants in the US.

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APPENDICES

APPENDIX A

Hopkins Symptom Checklist-25

Below is a list of complaints that people sometimes have. Please mark for each instance the number of the answer that best describes the degree of your discomfort or worry connected with some problem <u>during the past week, including today</u>.

	Not at all distressing	**A little**	**Quite a bit**	**Extremely distressing**
1. Suddenly scared for no reason………………..........................	1	2	3	4
2. Feeling fearful……………………...................................	1	2	3	4
3. Fainting, dizziness, or weakness………................................	1	2	3	4
4. Nervousness or shakiness inside….......................................	1	2	3	4
5. Heart pounding or racing……………………...................…	1	2	3	4
6. Trembling……....……………………….....................	1	2	3	4
7. Feeling tense or keyed up...	1	2	3	4
8. Headaches………………… ……................................	1	2	3	4
9. Spells of terror or panic……………………………......	1	2	3	4
10. Feeling restless, can't sit still…………………...................	1	2	3	4
11. Feeling low in energy, slowed down……...........................	1	2	3	4
12. Blaming yourself for things..	1	2	3	4
13. Crying easily………………………………………....	1	2	3	4
14. Loss of sexual interest or pleasure…………................…..	1	2	3	4
15. Poor appetite……………………………................…..	1	2	3	4
16. Difficulty falling asleep, staying asleep.............................	1	2	3	4
17. Feeling hopeless about the future…………………............	1	2	3	4
18. Feeling blue…………………………………………...	1	2	3	4
19. Feeling lonely…………...………………………..........	1	2	3	4
20. Thoughts of ending your life……...………………….......	1	2	3	4
21. Feeling of being trapped or caught…………………..........	1	2	3	4
22. Worrying too much about things…………………..............	1	2	3	4
23. Feeling no interest in things.......................................…	1	2	3	4
24. Feeling everything is an effort…………………….......…..	1	2	3	4
25. Feelings of worthlessness……………………………....…	1	2	3	4

APPENDIX B

Language, Identity, and Behavioral (LIB) Acculturation Scale

Language

We are interested in learning how living in the U.S has affected your language abilities. Please circle the response that corresponds with your language ability.

	Not at all		Very well, like a native	
1. How would you rate your ability to speak ***English***:				
(a) with colleagues at work...	1	2	3	4
(b) with American friends	1	2	3	4
(c) on the phone	1	2	3	4
(d) with strangers	1	2	3	4
(e) overall	1	2	3	4
2. How well do you understand ***English***:				
(a) on TV or at the movies ....….……	1	2	3	4
(b) in newspapers or in magazines	1	2	3	4
(c) on the phone..	1	2	3	4
(d) overall	1	2	3	4

If your native language is <u>NOT</u> Vietnamese, please answer questions 3-6 also. Otherwise, go to the next page.

What is your native language? _____

3. How would you rate your ability to speak ***your native language***:				
(a) with family …………......................................……	1	2	3	4
(b) with Vietnamese friends ....……	1	2	3	4
(c) on the phone ....……	1	2	3	4
(d) with strangers ....……	1	2	3	4
(e) overall ....……	1	2	3	4
4. How well do you understand ***your native language***:				
(a) on TV or at the movies ....……	1	2	3	4
(b) in newspapers or in magazines	1	2	3	4
(c) on the phone..	1	2	3	4
(d) overall	1	2	3	4

5. How would you rate your ability to speak *your native language*:

(a) with family …………...............……............……	1	2	3	4
(b) with Vietnamese friends ....…	1	2	3	4
(c) on the phone	1	2	3	4
(d) with strangers	1	2	3	4
(e) overall ....………	1	2	3	4

6. How well do you understand *your native language*:

(a) on TV or at the movies	1	2	3	4
(b) in newspapers or in magazines	1	2	3	4
(c) on the phone...	1	2	3	4
(d) overall	1	2	3	4

Identity

We are interested in learning about your identification with your ethnic background. We realize that some of you also have a background other than ethnic Vietnamese, such as Chinese or Hmong. Please answer the questions below concerning your ethnic identity.

	Not at all		**Very much**	
1. I think of myself as being *American* ....…	1	2	3	4
2. I feel good about being *American*…..	1	2	3	4
3. Being *American* plays an important part in my life................	1	2	3	4
4. I feel that I am part of *American* culture...............................…	1	2	3	4
5. If someone criticizes *Americans* I feel they are criticizing me	1	2	3	4
6. I have a strong sense of being *American*	1	2	3	4
7. I am proud of being *American* ....…	1	2	3	4
8. I think of myself as being *Vietnamese*	1	2	3	4
9. I feel good about being *Vietnamese*	1	2	3	4
10. Being *Vietnamese* plays an important part in my life............	1	2	3	4
11. I feel that I am part of *Vietnamese* culture............................	1	2	3	4
12. If someone criticizes *Vietnamese* I feel they are criticizing me	1	2	3	4
13. I have a strong sense of being *Vietnamese*	1	2	3	4
14. I am proud that I am *Vietnamese*	1	2	3	4

If you consider yourself as having <u>another ethnic background</u>, answer questions 15-21.

What ethnicity do you consider yourself (e.g., Hmong, Chinese)?_____

15. I think of myself as being _____........................…	1	2	3	4

16. I feel good about being _____........................… 1 2 3 4
17. Being _____ plays an important part in my life... 1 2 3 4
18. I feel that I am part of _____ culture................… 1 2 3 4
19. If someone criticizes _____, I feel they are criticizing me 1 2 3 4
20. I have a strong sense of being _____.................... 1 2 3 4
21. I am proud that I am _____.................................. 1 2 3 4

Behavior

We are interested in how much you take part in American and Vietnamese activities. Please circle the response that indicates to what extent the following statements are true about the things that you do.

How much do you speak *English:*	Not at all			Very much
1. at home? ....……...	1	2	3	4
2. with your neighbors...	1	2	3	4
3. with friends?…...	1	2	3	4

How much do you:

4. read *American* books, newspapers, or magazines?...................…	1	2	3	4
5. eat at *American* restaurants?..…	1	2	3	4
6. watch *American* movies on VCR or in movie theaters?...……	1	2	3	4
7. eat *American* food?...	1	2	3	4
8. attend *American* concerts, exhibits, etc………………………...	1	2	3	4
9. buy groceries in *American* stores……………………………..	1	2	3	4
10. go to *American, English speaking* doctors?…………….....	1	2	3	4
11. socialize with *American* friends?……………………………	1	2	3	4
12. celebrate *American* holidays?………………………………	1	2	3	4

How much do you speak *Vietnamese*:

1. at home ....……	1	2	3	4
2. with neighbors..	1	2	3	4
3. with friends	1	2	3	4

How much do you:

4. read *Vietnamese* books, newspapers, or magazines?................	1	2	3	4
5. eat at *Vietnamese* restaurants?…………………..................…	1	2	3	4
6. watch *Vietnamese* movies on VCR?…………………….......…	1	2	3	4
7. eat *Vietnamese* food?...	1	2	3	4
8. attend *Vietnamese* concerts, exhibits, etc…………………...	1	2	3	4
9. shop at *Vietnamese* grocery stores?......................................	1	2	3	4
10. go to *Vietnamese-speaking* doctors?…………………..........	1	2	3	4
11. socialize with *Vietnamese* friends?....................................	1	2	3	4
12. celebrate *Vietnamese* holidays?…………………………....	1	2	3	4

APPENDIX C

Job Satisfaction Scale

How would you evaluate your <u>current work situation</u>? Please indicate how satisfied you are with the following aspects of your current work situation.

	Not at all Satisfied				**Very Satisfied**
1. Way of life which your salary affords	1	2	3	4	5
2. Intellectual stimulation	1	2	3	4	5
3. Satisfaction from work	1	2	3	4	5
4. Working conditions	1	2	3	4	5
5. Fear of losing your job/stability	1	2	3	4	5
6. Number of working hours	1	2	3	4	5
7. Stress (tension) at work	1	2	3	4	5
8. Job status	1	2	3	4	5
9. Work schedule	1	2	3	4	5
10. Medical insurance given by job	1	2	3	4	5
11. Pension/Retirement benefits	1	2	3	4	5

APPENDIX D

Adapted Social Support Microsystems Scale (Co-ethnic)

1. How much can you count on the support of the following people, when you need to *talk over private matters*?

	Not at all	Somewhat	A great deal
(a) Vietnamese friends	1	2	3
(b) Spouse	1	2	3
(c) Family members living with you	1	2	3

2. How much can you count on the support of the following people when you *need money or other things*?

	Not at all	Somewhat	A great deal
(a) Vietnamese friends	1	2	3
(b) Spouse	1	2	3
(c) Family members living with you	1	2	3

3. How much *enjoyment* do you get from your interactions with the following people?

	Not at all	Somewhat	A great deal
(a) Vietnamese friends	1	2	3
(b) Spouse	1	2	3
(c) Family members living with you	1	2	3

Office for the Protection of Research Subjects (OPRS)
Office of the Vice Chancellor for Research (MC 672)
203 Administrative Office Building
1737 West Polk Street
Chicago, Illinois 60612-7227

Exemption Granted

March 13, 2011

Dina Birman, PhD
Psychology
1007 W Harrison, M/C 285
Chicago, IL 60612
Phone: (312) 413-2637 / Fax: (312) 413-4122

RE: Research Protocol # 2011-0146
"Former Soviet and Vietnamese Refugee Adults and Adolescents (Previously UIC Research Protocol Number 2003-0282)"

Dear Dr. Birman:

> **Please note that this exemption determination does NOT include approval for the following key research personnel as they have not completed Initial Investigator Training: Tim Tasker and Lindsay Bynum.** Once these individuals have completed Initial Investigator training, please submit an Amendment adding them as key research personnel.

Your Claim of Exemption was reviewed on March 11, 2011 and it was determined that your research protocol meets the criteria for exemption as defined in the U. S. Department of Health and Human Services Regulations for the Protection of Human Subjects [(45 CFR 46.101(b)]. You may now begin your research.

Please note the following regarding your research:

Exemption Period:	**March 11, 2011 – March 10, 2014**
Sponsor(s):	None
Performance Site(s):	UIC
Subject Population:	Existing de-identified data previously collected under UIC Research Protocol #2003-0282
Number of Subjects:	929

The specific exemption category under 45 CFR 46.101(b) is:
(4) Research involving the collection or study of existing data, documents, records, pathological specimens, or diagnostic specimens, if these sources are publicly available or if the information is recorded by the investigator in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects

Current Investigator Training Periods- Please be reminded that Investigators/Key Research Personnel must maintain current Investigator Training in order to avoid losing approval to conduct human subject research:

1) Edison Trickett: May 22, 2009 – **May 22, 2011**
2) Meredith Poff: July 6, 2009 – **July 6, 2011**
3) Dina Birman: July 29, 2009 – **July 29, 2011**
4) Corrina Simon: August 31, 2010 – August 31, 2012
5) Shanika Blanton: February 26, 2011 – February 26, 2013

You are reminded that investigators whose research involving human subjects is determined to be exempt from the federal regulations for the protection of human subjects still have responsibilities for the ethical conduct of the research under state law and UIC policy. Please be aware of the following UIC policies and responsibilities for investigators:

1. Amendments You are responsible for reporting any amendments to your research protocol that may affect the determination of the exemption and may result in your research no longer being eligible for the exemption that has been granted.

2. Record Keeping You are responsible for maintaining a copy all research related records in a secure location in the event future verification is necessary, at a minimum these documents include: the research protocol, the claim of exemption application, all questionnaires, survey instruments, interview questions and/or data collection instruments associated with this research protocol, recruiting or advertising materials, any consent forms or information sheets given to subjects, or any other pertinent documents.

3. Final Report When you have completed work on your research protocol, you should submit a final report to the Office for Protection of Research Subjects (OPRS).

Please be sure to:

→Use your research protocol number (listed above) on any documents or correspondence with the IRB concerning your research protocol.

We wish you the best as you conduct your research. If you have any questions or need further help, please contact me at (312) 355-2908 or the OPRS office at (312) 996-1711. Please send any correspondence about this protocol to OPRS at 203 AOB, M/C 672.

Sincerely,
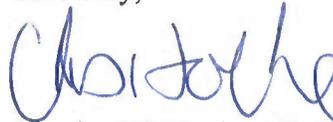
Charles W. Hoehne, B.S., C.I.P.
Assistant Director, IRB # 2
Office for the Protection of Research Subjects

cc: Gary E. Raney, Psychology, M/C 285

VITA

CORRINA D. SIMON, MA

RESEARCH INTERESTS: well-being of conflict-affected (i.e. refugee, torture survivor, asylum seeker) youth and adults, acculturation, promoting healthy adaptation and preventing psychological distress, family systems, recovery from trauma, community psychology intervention, ecological theory, occupational and academic adjustment

EDUCATION:

University of Illinois at Chicago, Chicago, IL
Ph.D, Clinical Psychology, expected 2016

Clark University, Worcester, MA
M.A., International Development & Social Change, 2008

Clark University, Worcester, MA
B.A., Psychology and International Development & Social Change, *cum laude,* 2006
University of London, London Internship Program, Spring 2005

PEER-REVIEWED PUBLICATIONS:

Birman, D. & **Simon, C. D.** (in press) Acculturation research: Challenges, complexities, and possibilities. In F. Leong, L. Comas-Diaz, G. Nagayama Hall, & J. Trimble (Eds.), *APA Handbook of Multicultural Psychology*. Washington, D.C.: American Psychological Association.

Cordova, J. V., Cautilli, J., **Simon, C. D**., & Axelrod-Sabag, R. (2006). Behavior analysis of forgiveness in couples therapy. *International Journal of Behavioral and Consultation Therapy*, *2*(2), 192-214. Retrieved from http://www.baojournal.com.

OTHER PUBLICATIONS:

Simon, C. **D.** & Piwowarczyk, L. (2008). *Boston Center for Refugee Health & Human Rights: Job kit guidebook.* Boston Medical Center: Boston, MA.

Simon, C. **D.** (2008). *Redefining "basic" needs: Resettlement challenges and health of refugee families.* (Unpublished master's thesis). Clark University, Worcester, MA.

Simon, C. **D.** (2006). *A motivational forgiveness intervention for post-trauma populations: A psychology of international development.* (Unpublished undergraduate honors thesis). Clark University, Worcester, MA.

Simon, **C**. **D.** & Newman, M. (2005, July). The Hungarian gold train: A proposed settlement. *Association of Jewish Refugees Journal*. Retrieved from http://www.ajr.org.uk/index.cfm/section.journal/issue.Jul05/article=198.

PRESENTATIONS:

Simon, C. D. (2013, June). *An Ecological Structural Equation Model of Host and Heritage Acculturation and Psychological Adjustment in Vietnamese Immigrants to the US.* Poster presented at the 14th SCRA Biennial, Coral Gables, FL.

Simon, C. D. (2013, January). *A review of global immigration research organizations: Considerations for interdisciplinary collaboration.* Poster presented at the biennial meeting of Transforming Multicultural Psychology: Engagement, Renewal, and Action across Generations, Houston, TX.

Simon, C. D., (2012, October). An ecological model of acculturation and adjustment in Vietnamese immigrants. Presented at the Annual Midwest Ecology Conference, Hickory Corners, MI.

Simon, C. D. (2012, June). Mediators of acculturation and psychological adjustment in Vietnamese immigrants. In D. Birman (Chair), *Theory, measurement, and findings: Acculturation of immigrant adolescents, adults, and families from Vietnam, Korea, and Iraq.* Symposium conducted at the International Conference of Community Psychology Biennial Conference, Barcelona, Spain.

Simon, C. D., (2011, October). Acculturation theory and measurement. In M. E. Wellman (Chair), *Acculturation and adjustment of immigrants: An exploration of mediators and moderators.* Symposium conducted at the Annual Midwest Ecology Conference, Chicago, IL.

Simon, C. D. (2010, February). English language training and the use of film for survivors of torture and trauma. Presented at the Idaho Conference on Refugees, Boise, ID.

Simon, C. D. (2009, September). Vocational and employment issues. Presented at Building NESTT: Working with Survivors of Torture, Burlington, VT.

Simon, C. D. (2009, September). Social work and social services. Presented at Building NESTT: Working with Survivors of Torture, Burlington, VT.

Simon, C. D. (2009, June). From arrival to recertification. Roundtable conducted at The National Conference on Refugee Professional Recertification, East Lansing, MI.

Piwowarczyk, L. & **Simon, C. D.** (2008, July). *Vocational rehabilitation with torture survivors* [Webinar]. Retrieved from http://healtorture.hutman.net/social-services-webinars?id=11#.

Simon, C. D. (2008, April). Reaching out to marginalized groups. Panel conducted at From Innovations to Practice: The Promise and Challenge of Recovery for All, Boston, MA.

Simon, C. D. (2007, October). Speak my language: Employment needs of non-English speakers who have disabilities. Panel conducted at Mission: Employment 3 Conference, Marlborough, MA.

Simon, C. D. (2006, December). Memory, narrative, and forgiveness: Reflections on the truth and reconciliation in "post" apartheid South Africa. Presented at Clark University IDCE Department Brownbag, Worcester, MA.

RESEARCH EXPERIENCE:

University of Illinois at Chicago, Immigration Initiative   Chicago, IL
Research Assistant   January 2012 – May 2013
- Built immigration initiative website using Google Sites
- Assisted with grant writing
- Assembled information on international immigration research centers
- Helped develop an inventory of immigration researchers at UIC
- Co-facilitated meetings

Lutheran Refugee and Immigrant Services   Worcester, MA
Graduate Research Team Member   January 2007 - June 2007
- Participated in research design and IRB submission
- Conducted 8 needs assessment interviews with families about health and resettlement
- Transcribed and analyzed interview data

Clark University, Psychology Department   Worcester, MA
Couples Lab Teaching and Research Assistant   January 2003 – December 2004
- Served as liaison between Undergraduate Marital Research Lab course and Graduate Lab
- Participated in weekly graduate student meetings for the Couples Lab for Marital Satisfaction
- Coded couples' interactions during videotaped Marriage Checkup interactions

TEACHING EXPERIENCE:

University of Illinois at Chicago   Chicago, IL
Contact teaching assistantships
- Introduction to Research in Psychology Spring 2011, Fall 2011 (TA coordinator), Fall 2012
Non-contact teaching assistantships
- Psychological Adaptation of Immigrants   Spring 2012
- Community Psychology   Fall 2010, Summer 2011
Guest Lecturer
- Community Psychology: "The Methods of Community Research"   Summer 2011

BU School of Medicine: Master of Arts in Mental Health and Behaviorial Medicine Boston, MA
Guest Speaker, Career & Vocational Counseling Course   March 2008
- Taught lesson on career guidance for refugees

Lexington High School, Peer Mediation Program   Lexington, MA
Mediation Trainer and Role Play Observer   January 2007
- Assisted with mediation training for 25 high school peer mediators

Clark University, Residential Life and Housing   Worcester, MA
Mediation Trainer   January 2006 & January 2007
- Designed and co-led mediation training for 45 Undergraduate Resident Advisors

Clark University, Gryphon & Pleiades   Worcester, MA
Mediation Workshop Leader   February 2006
- Recruited co-facilitators, designed and led mediation workshop for Gryphon & Pleiades Annual Leadership Conference: *Our Walls and Beyond*

HONORS & AWARDS:

2012   Student Travel Award to ECO: Society for Community Research & Action
2012   Travel Award: University of Illinois at Chicago Graduate College
2012   Scholarship Award: International Conference of Community Psychology
2012   Student Travel Award to ICCP: Society for Community Research & Action
2012   Travel Award: University of Illinois at Chicago Graduate Student Council
2012   PhD Student Travel Award: University of Illinois at Chicago College of Liberal Arts & Sciences
2012   Graduate Student Travel Award: University of Illinois at Chicago Department of Psychology
2005-06   Fiat Lux Honor Society: Clark University
2005-06   Gryphon & Pleiades Honor Society: Clark University
2006   Thomas M. Dolan '62 Award for Outstanding Commitment to the Community: Clark University

PROFESSIONAL ACTIVITIES:

Assistant ad-hoc reviewer with Dina Birman, Ph.D. for journals: *American Journal of Community Psychology, Cultural Diversity and Ethnic Minority Psychology, International Journal of Intercultural Relations*

PROFESSIONAL EXPERIENCE

Office of Applied Psychological Services, University of Illinois at Chicago   Chicago, IL
Graduate Student Clinician, Practicum   January 2011 – present
- Administers neuropsychological assessments to adults and children
- Writes psychological assessment reports

- Provides psychotherapy to adults and children, specializing in Cognitive Behavior Therapy
- Conducts clinical intake interviews

Boston Center for Refugee Health & Human Rights, Boston Medical Center   Boston, MA
Vocational Rehabilitation Specialist, Behavioral Health Department   May 2007 – present
- Provided Vocational Rehabilitation services to ~90 survivors of torture/trauma each year
- Facilitated bi-weekly support groups and 8-week Job Readiness Workshop Series
- Managed all Vocational Rehabilitation program development, grant writing and maintenance
- Designed a Career Development Program which included logic model and evaluation plan
- Supervised Resource Coordinator, Volunteers and Public Health Practicum Students
- Coordinated English Program and Cultural Orientation Workshop Series
- Served on Jewish Vocational Services' Business Advisory Council

International Rescue Committee   San Francisco, CA
Casework and Development Intern, Child Specialist   June 2006 - August 2006
- Assisted 2 caseworkers in advocating for refugee clients to access community resources
- Lived with and mentored 3 young, Liberian refugee sisters ages 9, 11 and 12 for 5 weeks
- Planned film screening to recruit new donors and volunteers
- Assisted Job Developer with "Job Club" for clients seeking employment

International Institute of Mediation and Historical Conciliation   Boston, MA
Undergraduate Intern   May 2005 – August 2005
- Developed online knowledge base of research relevant to current projects
- Attended meetings with grant providers, trustees and fellows
- Identified 20 grant opportunities for future projects

Association of Jewish Refugees   London, UK
Volunteer Coordinator Intern   January 2005 – April 2005
- Wrote 2 articles for the AJR Journal
- Wrote and distributed monthly Volunteer's Newsletter
- Accompanied a holocaust survivor one day per week on outings for Befriending Program
- Planned activities for members at the Holocaust Survivor's Centre
- Assisted Volunteer Coordinator with overseeing volunteers

Worcester Community Action Council   Worcester, MA
Volunteer Small Claims Mediator   October 2005 – May 2006
- Mediated over 20 hours in small claims court
- Completed 33 hours of mediation training, 5 hours of small claims court observation
- Attended the 2005 Association of Dispute Resolution Conference

Soliya Connect Program   Boston, MA / Internet-based
Dialogue Co-Facilitator, Intern, Participant   October 2004 – May 2006
- Co-Facilitated 9-week online dialogue for 6 students to improve intercultural awareness
- Assisted Director in creating a Facilitator's Manual
- Completed training to serve as facilitator for 8-10 week dialogue course
- Participated in online dialogue program between US and Arab students

GRADUATE SCHOOL & ALUMNI SERVICE ACTIVITIES:

- Chicago Alumni Council, Clark University, 2010-present
- Alumni and Parent Admissions Program Volunteer, 2009-present
- Alumni Class Agent and Boston Alumni Council, Clark University, 2006-2010
- Accelerated BA/MA Representative, IDCE Graduate School Council, 2007
- Difficult Dialogues Day of Listening Facilitator, Clark University, 2006-2007

PROFESSIONAL MEMBERSHIPS:

International Society for Traumatic Stress Studies, Members since January 2013
Psi Chi Honor Society, Member since October 2012
Society for a Science of Clinical Psychology, Student Member since May 2012
American Psychological Associations, Student Affiliate Member since May 2011
- Division 12: Society of Clinical Psychology
- Division 27: Society for Community Research & Action