

Acculturation and Psychological Adjustment of Vietnamese Refugees: An Ecological Acculturation Framework

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Abstract Acculturation to the culture of the host society as well as to one's heritage culture have been shown to impact immigrants' adjustment during the years following resettlement. While acculturation has been identified as an important factor in adjustment of Vietnamese immigrants (Birman and Tran in *Am J Orthopsychiatr* 78(1):109–120. doi:10.1037/0002-9432.78.1.109, 2008), no clear pattern of findings has emerged and too few studies have employed an ecological 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, and examining mediators of these relationships for adult Vietnamese refugees (N = 203) in the United States. We call this approach the Ecological Acculturation Framework (EAF). Results of a structural equation model (SEM) showed that job satisfaction fully mediated the relationship between American acculturation and psychological distress, demonstrating that this relationship was specific to an occupational domain. However, while Vietnamese acculturation predicted co-ethnic social support satisfaction, it did not predict reduced psychological distress. Implications

for a life domains approach, including domain specificity, are discussed.

Keywords Refugee · Acculturation · Life domain specificity · Social support · Occupation

Introduction

In this paper we take a community psychology, ecological, life domains approach to understanding the impact of acculturation on adjustment of Vietnamese refugees resettled in the United States (US). Our ecological approach to acculturation, which we call the Ecological Acculturation Framework (EAF), builds on Bronfenbrenner's (1977) conceptualization of human development as occurring within varied levels of systems, including microsystems in which individuals participate directly—such as home, school, or workplace. The largest system within which the more proximal systems are embedded is the macrosystem, which represents the cultural context that influences other systems at play. For immigrants, however, the macrosystem of the host society is not the only culture that influences adaptation in specific contexts. Rather, the microsystems immigrants participate in vary by culture (Birman and Simon 2014), with some settings being oriented to the host culture, such as the school or workplace, and others to the heritage culture, such as the home.

In this paper we examine adjustment of Vietnamese refugees in the US using the EAF. With the end of the Vietnam War in 1975, the US evacuated approximately 200,000 South Vietnamese refugees. 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 (Central

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Intelligence Agency 2015). Over the next two decades, hundreds of thousands of these “boat people,” as they were called, arrived in the US. Today, Vietnamese refugees represent the fifth largest immigrant group resettled in the US (Robert Mullins International 2011) and one of its fastest-growing ethnic communities (Migration Policy Institute 2015; Newgeography 2015). Vietnamese refugees are likely to experience challenges in adapting to the US because the two cultures are very different, and cultural distance, or a larger gap between cultures of two societies, has been shown to make cultural adaptation more difficult (Berry 1997; Liebkind and Jasinskaja-Lahti 2000; Rasmussen et al. 2013). Research has described some challenges to adjusting occupationally (Stein 1979; Yamane 2015) and psychologically (Lin et al. 1979; Tingvold et al. 2015) for this group and acculturation has been identified as an important factor in their adjustment (e.g., Tran et al. 2014). However, research on the relationship between acculturation and adjustment within this population has been largely acontextual and inconclusive.

The Ecological Acculturation Framework (EAF): A Life Domains Perspective on Acculturation and Adjustment

The EAF suggests that understanding how well an immigrant has adapted to a new country requires assessment of adjustment across a range of contexts, because successful adaptation is a function of the fit between the characteristics of individuals and the requirements of the settings in which they function. That is, individuals may be well-adjusted in some contexts but not in others (Birman et al. 2014), whether these represent specific settings or life domains (Swindle and Moos 1992). In our view, life domains refer to a set of activities individuals engage in across a cluster of settings around a set of life goals, such as occupational, family, and social relationships. As with settings, activities associated with particular life domains for immigrants are often embedded within different cultural contexts so that the school and occupational domains often involve settings culturally oriented to the mainstream culture, whereas the family domain is oriented toward the heritage culture.

The implication of the EAF is that the relationship between acculturation and adjustment varies by context, and depends upon the life domains in which this relationship occurs, as suggested by past research (Arends-Tóth and Van de Vijver 2007; Birman et al. 2014; Leu et al. 2011; Nguyen et al. 1999). The EAF challenges the mainstream tradition in acculturation research that promotes the idea that there is a best acculturative style independent of context (e.g., see meta-analysis by Nguyen

and Benet-Martinez 2012), or that it is enough to assess sociocultural adaptation of immigrants as behavioral competence in the host culture only (Ward and Kennedy 1994). As argued elsewhere, bilinear or independent measurement of acculturation to the host and heritage culture facilitates taking this life domains approach because it allows researchers to test differing effects of host and heritage acculturation on adjustment in different domains (Birman et al. 2014).¹

An important issue within the life domains perspective involves whether studies consider *domain specificity*. Domain specificity refers to the notion that host and heritage culture acculturation have advantages in specific contexts of immigrants' lives. For instance, in the occupational domain, being more American acculturated (e.g., greater English language competency) could increase occupational success, which in turn may decrease psychological distress. Vietnamese acculturation, on the other hand, may not offer advantages for one's occupational adjustment, but could decrease distress through its impact on adjustment in a different domain. For instance, Vietnamese cultural skills and values can facilitate how refugees interact with their Vietnamese friends and family members, which in turn, reduces distress.

Domain specificity is important because it helps show that the context surrounding refugees matters for how acculturation impacts psychological adjustment (Tsai et al. 2002). Arends-Tóth and van de Vijver (2004) defined domain specificity as specific situations across which “an individual's preference for adaptation and maintenance may vary” (p. 22). Through factor analysis of acculturation items, they posited that immigrants preferred host culture acculturation in the public domain (e.g., work, school), and heritage culture acculturation in the private domain (e.g., home; Arends-Tóth and Van de Vijver 2007).

However, guided by our EAF, we take a more differentiated contextual approach to consider how different settings can affect how host and heritage acculturation predict psychological adjustment. From a contextual perspective, domains are not merely situations in which immigrants *prefer* one type of acculturation over another. Rather, domains are cultural contexts that exert different adaptive requirements, or *acculturative press*. While immigrants may hold *preferences*, acculturation to the host and heritage culture reflects acquiring the cultural knowledge and skills (i.e. resources) they need to adapt in these different contexts. For example, the make-up of adult Vietnamese refugees' social networks is likely to consist of other Vietnamese refugees. On the other hand, work places in the US are likely to be American-oriented culturally. In

¹ For an extensive discussion of acculturation measurement and bilinear approaches, please see Birman and Simon (2014).

this case, Vietnamese acculturation would likely be a resource in the co-ethnic social domain, but not in the American-oriented occupational domain. As a result, if Vietnamese acculturation is a predictor of overall psychological adjustment, its effect may be *specific* to its impact on the domain of co-ethnic social support (but not occupational adjustment). Domain specificity helps explain why certain domains matter and others do not for the ways in which some types of acculturation impact psychological adjustment.

Testing for Domain Specificity

Prior research provides support for the concept of domain specificity, because host and heritage acculturation have been found to predict adjustment differently in different life domains. For instance, studies in the social domain have found that host culture acculturation predicts better adjustment with host society peers, while heritage acculturation predicts better social adjustment with co-ethnic peers who share the immigrant's heritage (Birman et al. 2002; Ryder et al. 2000). It is worth noting that, most studies do not separate the social network into host and co-ethnic peers as these did. For instance, one study found that both host and heritage culture acculturation predicted positive social adjustment (Kang 2006), but did not specify whether these relationships were with members of the host or heritage culture. As a result we cannot determine whether these social relationships were occurring in host and/or heritage culture contexts. Therefore, because co-ethnic and host culture networks differ in their cultural requirements, from a contextual perspective it is important to take the ethnic make-up of the social relationships assessed into account since acculturation likely affects them differently.

Further, some studies have found that the relationships between host and heritage acculturation and a global measure of psychological adjustment (e.g., distress) are mediated by indices of adjustment in specific life domains. For example, a recent study of former Soviet Jewish refugees in the US (Birman et al. 2014) found that both American and Russian acculturation predicted greater life satisfaction but through different paths (occupational adjustment and co-ethnic social support respectively). Oppedal et al. (2004) found that host society social support mediated the relationship between host culture acculturation and self-esteem, whereas family support mediated the relationship between heritage culture acculturation and self-esteem. However, neither of these studies established whether these relationships were domain specific (i.e., that each mediator is unique to host versus heritage acculturation and psychological adjustment). For example, Birman et al. (2014) did not test whether co-ethnic social support

was a mediator of host culture acculturation, or occupational adjustment a mediator of heritage culture acculturation in predicting life satisfaction and reduced symptoms of distress.

In the present study, domain specificity refers to whether the relationship between acculturation and psychological adjustment is mediated by adjustment in a specific life domain. We propose that to test for domain specificity, a model must determine that a variable from one domain mediates the relationship between host or heritage culture acculturation and psychological adjustment and that adjustment in the other domain does not serve as a mediator. To our knowledge, no studies of acculturation and psychological adjustment have been published which tested for domain specificity using this multiple mediation method. The present study adds to the literature on this topic by testing for domain specificity of paths from host and heritage culture acculturation to psychological adjustment through adjustment in two life domains where adult refugees spend the majority of their lives: the occupational and the co-ethnic social life domains.

Occupational, Social, and Psychological Adjustment

Occupational Adjustment

The importance of finding employment for refugees is underscored by the Office of Refugee Resettlement's (ORR) emphasis on their becoming "self-sufficient as quickly as possible" (Office of Refugee 2007, pp. C-6). In practice, refugee resettlement agencies encourage refugees to take the *first* job offered to them, regardless of whether it is a good match for a refugee's skill level or interest. However, taking any job to avoid being unemployed may not be sufficient for positive occupational adjustment, particularly if it is in a sector of employment that does not offer upward mobility, or if the employee's appraisal (Lazarus and Folkman 1984) of their job is that it is unsatisfying.

In this study, we focus on job satisfaction as our measure of occupational adjustment because many refugees' current employment—even when considered high status or well paid by objective measures—may be lower than their pre-migration work status or not in line with their professional identity (Vinokurov et al. 2000). For example, a person who was previously a physician may be able to get a job that provides a sufficient income to support their family as a store manager but the "brain waste" (Pires 2015) and loss of professional identity often result in low job satisfaction.

Acculturation to the host culture has been found to predict better occupational adjustment (e.g., Birman et al.

2014; de Castro et al. 2010; Nekby and Rödin 2010) since jobs are most commonly associated with the dominant culture and require the use of skills such as speaking the dominant language and adhering to cultural norms of the host society. In turn, occupational adjustment has been found to predict better psychological adjustment for immigrants and refugees (Beiser and Hou 2001; Blight et al. 2006; Vinokurov et al. 2000). As mentioned above, occupational adjustment served as a mediator of the relationship between American acculturation and psychological distress for Soviet Jewish refugees in one recent study (Birman et al. 2014). In studies that measured heritage acculturation, it was found to be unrelated to occupational adjustment (e.g., Jian 2012). Therefore, theoretical and empirical evidence provides support for testing a measure of occupational adjustment as a plausible *domain specific* mediator between host culture acculturation and psychological adjustment for Vietnamese refugees to the US.²

Social Support

For immigrants, co-ethnic social support (CESS) has been found to be particularly important in predicting psychological adjustment. Social support has been defined as socially mediated coping by Gottlieb (1988) because it helps people face stressful events (such as immigrating) and can prevent poor health. Adult immigrants are likely to maintain their primary close relationships with co-ethnic friends and family members (Birman et al. 2014; Shin 2014). Vietnamese refugees have tended to form strong co-ethnic social networks within their community and exchanged not only emotional, but also financial and informational support (Gold 1992; Simich et al. 2003). Given the importance of CESS, difficulties in relationships with members of co-ethnic networks can be particularly damaging for psychological adjustment (Beiser 2006; Birman and Tran 2008; Hurtado-de-Mendoza et al. 2014; Mui 1998).

CESS is a heritage culture domain, therefore several studies have found that greater levels of heritage culture acculturation predicted greater satisfaction with social support from co-ethnic peers or family among various immigrant groups (e.g., Birman et al. 2005; Chan and Birman 2009; Singh et al. 2015). These findings support the notion that heritage culture acculturation including

language use, heritage cultural behavior, and a strong heritage identity can provide immigrants with access to and greater satisfaction with CESS through interactions with members of their co-ethnic community.

Present Study: Hypotheses and Proposed Statistical Model

The goal of the present study is to take a contextual, life domains approach—referred to as the EAF—to testing whether the relationships between acculturation (measured bilinearly) and psychological adjustment are domain specific, mediated by adjustment in two different life domains (occupational and co-ethnic social). Specifically (Fig. 1), given the differing demands put on immigrants in domains related to host culture acculturation (occupational adjustment) and heritage culture acculturation (family and co-ethnic friendships), we hypothesized that American acculturation would predict better job satisfaction, which would in turn predict less psychological distress (hypothesis 1). We also hypothesized that Vietnamese acculturation would predict more CESS satisfaction, which would in turn predict less psychological distress (hypothesis 2). Further, to establish domain specificity, we predicted that job satisfaction, *but not CESS satisfaction*, would fully mediate the relationship between American acculturation and psychological distress; whereas CESS satisfaction, but not job satisfaction, would fully mediate the relationship between Vietnamese acculturation and psychological distress. The hypothesized model is illustrated in Fig. 1.

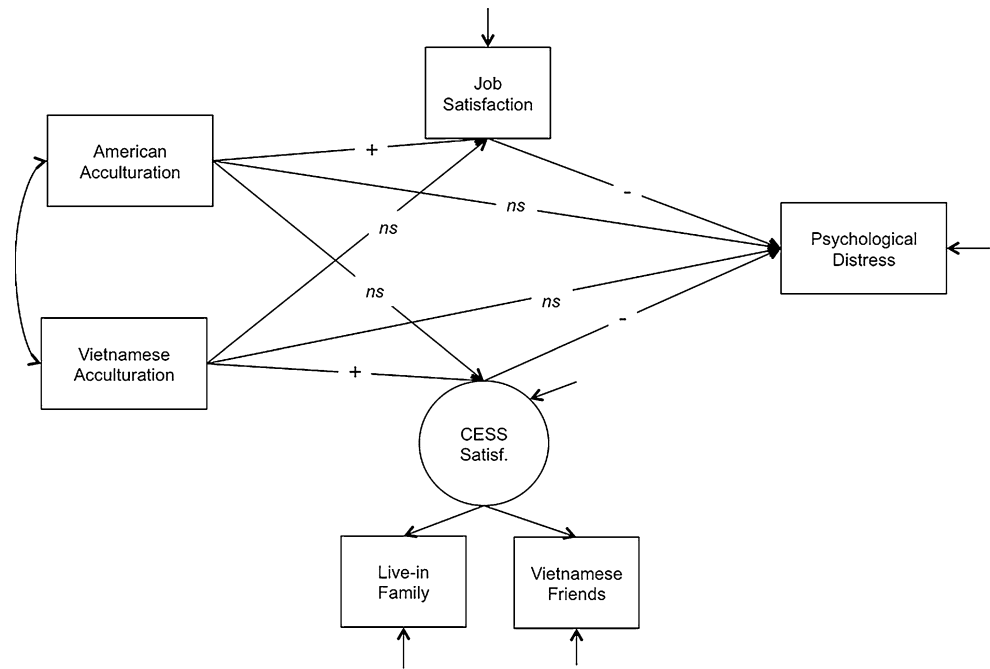
Methods

Setting and Procedures

This study analyzed archival, cross-sectional survey data collected from a community sample of Vietnamese refugees settled in the Maryland suburbs of Washington D.C., the 6th largest Vietnamese community in the US (Migration Policy Institute 2015). This relatively large and established Vietnamese community is home to Vietnamese-owned businesses including a Vietnamese-American shopping center complete with over 120 stores, churches, a Mutual Assistance Associations (MAA) and other institutions. For this study, bilingual Vietnamese research assistants (RAs) who had connections within the MAA recruited participants through convenience and subsequent snowball sampling. RAs collected data using paper and pencil surveys in participants' homes, and were available to assist participants with surveys. Surveys took approximately 1 hour to complete and participants were given a \$15 incentive (see Trickett and Jones 2007 for more information).

² There is also 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 and Bjorntorp 2000), which is a physiological measure of stress.

Fig. 1 Hypothesized SEM for the relationship between acculturation and distress mediated through two different life domains



Participants

Participants were 203 refugee adults (98 women, 105 men), who were of working age at the time of the study (age 22–65; $M = 48.78$, $SD = 7.14$). All were born in Vietnam and the majority identified as ethnically Vietnamese (95.6 %, $n = 195$), but also Chinese (1.5 %, $n = 3$), and Hmong (1 %, $n = 2$). The majority of participants were currently employed (86.3 %, $n = 176$) and most were still working at their first job (74.1 %, $n = 157$) with others working at their second through eighth jobs.³ The average socioeconomic index of men in this sample reflected relatively low status professions such as electrician or contractor. For women, they were in professions such as manicurists (U.S. Department of Health & Human Services 2002). On average, participants had been in the US for 11.51 years ($SD = 6.60$, range 9 months–27.25 years). Their average age of arrival was 37.25 years old,

³ Some ($n = 25$ out of 203) reported that they were not employed and of them, some ($n = 11$ out of 25) still completed the job satisfaction questionnaire. Further, a small number of participants ($n = 7$ out of 25) did not report whether they were working but two of them completed the job satisfaction questionnaire. The data from these 18 participants who completed the job satisfaction questionnaire were included because they may have not wanted to disclose their job because they were working in the informal economy or did not have a job title to report (e.g., homemakers), but still had a subjective opinion of how satisfied they were with life in their occupational domain which they wanted to share. Full Information Maximum-Likelihood (FIML) was used to handle the missing data from those who did not complete the job satisfaction measure but did complete the other measures.

($SD = 10.69$, range 5.92–59.25). 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 statistics available for the national Vietnamese immigrant community in the US (Terrazas and Batog 2010) as to decade of arrival and age. 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 2015). Similar to this sample, the majority of immigrants in the US in 2008 were of working age (Migration Policy Institute 2015). Participants in this sample were less educated than the national average of Vietnamese immigrants (Migration Policy Institute 2015) and have a higher employment rate (U.S. Department of Health & Human Services 2002). Other studies have also found that it is common for the majority of refugees to stay in their first job for a long time (Mangain and Collins 2003).

Measures

All measures were translated into Vietnamese and back-translated into English using de-centering procedures as outlined by Brislin (1986).

Psychological Adjustment

Psychological adjustment was measured using the Indochinese version of the Hopkins Symptom Checklist

(HSCL-25; Mollica et al. 1987) developed for this population ($\alpha = 0.96$). The HSCL-25 measures psychological distress on a four-point Likert scale ranging from 1 (not at all distressing) to 4 (extremely distressing) by asking participants to rate the “degree of [their] discomfort or worry connected with some problem [e.g., feeling hopeless about the future] during the past week.”

Acculturation

American and Vietnamese acculturation were measured using the Language, Identity, and Behavioral Acculturation Scale (LIB; Birman and Trickett 2001), which was adapted for a Vietnamese population (Birman et al. 2002). This scale measures acculturation to American and Vietnamese cultures independently and includes questions about identity (e.g., “I think of myself as being Vietnamese”) and behavior (e.g., “How much do you celebrate Vietnamese holidays?”). In addition, the American acculturation index includes measures of language competence (e.g., “How well do you understand English on tv or at the movies?”). Vietnamese language items were not administered based on Vietnamese community members’ feedback that it would not be culturally appropriate, because it could imply that the researchers were questioning participants’ fluency in their native language. The LIB items are rated on a four-point Likert scale ranging from 1 (not at all) to 4 (very well/very much). Items are summed and averaged to determine an overall American Acculturation Index (AAI; $\alpha = 0.94$) and Vietnamese Acculturation Index (VAI; $\alpha = 0.85$). Higher mean scores on each index represent greater acculturation.

Job Satisfaction

Job satisfaction was measured with an 11-item scale ($\alpha = 0.90$) used by the Jewish Appeal Federation of New York refugee resettlement agency (Berkowitz 2000) to assess occupational adjustment of refugees. It has face validity and was deemed appropriate in pilot interviews with Vietnamese refugees. The scale asks participants how satisfied they are with aspects of their current 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. In addition, to describe the ethnic context of their work setting, participants were asked about the ethnic makeup of their workplace (i.e., if there were other Vietnamese in the organization where they work and, if applicable, the approximate percentage).

Co-Ethnic Social Support Satisfaction

A measure called co-ethnic social support satisfaction was created using a 6-item scale adopted from Seidman et al.’s (1995) 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 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.

Results

Prior to testing the measurement model and hypotheses, all variables were examined for missing values, and for the fit between their distributions and the assumptions of multivariate analysis.⁴ Descriptive data—including correlations, means, and standard deviations of all study variables—can be seen in Table 1. Of note, on average, participants were not significantly distressed according to a clinical cutoff of 1.75 (Mollica et al. 1987). Participants were significantly more acculturated to Vietnamese than American culture [$t(203) = 22.01, p < 0.01$]. Respondents reported to be very satisfied with co-ethnic social support from both their live-in family and their Vietnamese friends; however they were significantly more satisfied with CESS⁵ from family [$t(200) = 11.12, p < .01$]. Reports of job satisfaction were

⁴ Job satisfaction was missing data at random (Little’s MCAR: $\chi^2_{19} = 21.44, ns$; MNAR with HSCL-25: $t(8.7) = -1.40, ns$) on 9.8 % of cases according to the Missing Value Analysis function within SPSS version 20. Remaining variables were missing 5 % or less of data. Therefore, for hypothesis testing, 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 and Hayes 2008).

⁵ Prior to being used in the SEM, 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 and from Vietnamese friends were 0.69 and 0.74 respectively, with both indicators fixed to 1 because the model was under-identified when only one indicator was fixed. This measurement model was just-identified ($df = 0$). 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-

Table 1 Means, standard deviations, and pairwise correlations between study variables (N = 203)

	Psych. distress	Amer. Acc	Viet. Acc. ^b	Job Satisfaction	CESS: family	CESS: friends	Gender	Time in US
<i>M</i>	1.45 ^a	2.32	3.43	3.44	2.76	2.38	–	11.62
<i>SD</i>	0.51	0.54	0.43	0.81	0.35	0.47	–	6.63
Amer. Acc	–0.13*	–	–	–	–	–	–	–
Viet. Acc.	0.03	–0.11	–	–	–	–	–	–
Job Satisfaction	–0.25**	0.26**	0.14	–	–	–	–	–
CESS: family	–0.08	0.04	0.17*	0.07	–	–	–	–
CESS: friends	–0.11	0.00	0.25**	0.11	0.35**	–	–	–
Gender	0.14*	–0.13	0.05	–0.07	–0.08	–0.05	–	–
Time in US	0.17	0.39**	–0.04	0.25**	–0.11*	0.01	0.03	–
Age of arrival	0.05	–0.33**	0.15**	–0.21**	0.17**	–0.00	–0.15**	–0.76**

* $p < 0.05$; ** $p < 0.01$

^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

normally distributed and fell at the midpoint of the scale on average. Interestingly, 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 the majority (70.7 %) of participants reporting that their workplace was 30 % Vietnamese or less.

Structural Equation Model

An SEM was estimated in Mplus, version 6.12 (Muthén and Muthén 1998–2011) using Full Information Maximum-Likelihood (FIML) estimation to model the direct and indirect effects of American and Vietnamese acculturation on psychological distress using 5000 bootstrapped samples (Fig. 2). The model had good fit [$\chi^2(10, N = 203) = 10.19, p = 0.42$] indicated by a non-significant p value (Schermele-Engel et al. 2003), low (i.e., < 3.0 ; Jöreskog and Sörbom 1993) χ^2/df ratio (1.02), and high CFI (0.99) and TLI (0.99). The model had low badness-of-fit indicated by the Root Mean Square Error of Approximation (RMSEA = 0.01, CI 0.00–0.08, $p = 0.77$; Browne and Cudeck 1992; MacCallum et al. 1996; Steiger 1990) and the Standardized Root Mean Square Residual (SRMR = 0.05; Bentler 1995; Hu and Bentler 1995). Specific direct and indirect effects are presented in Table 2 and discussed below.

Hypothesis 1: American Acculturation The direct path from American acculturation to psychological distress was

not significant. For indirect paths, job satisfaction fully mediated the relationship between American acculturation and psychological distress with a small (Kline 1998) effect ($b = -0.07, p < 0.05$), whereas CESS satisfaction was not a mediator,⁶ demonstrating a *domain specific* indirect effect of American acculturation on psychological distress, as hypothesized.

Hypothesis 2: Vietnamese Acculturation The direct path from Vietnamese acculturation to psychological distress was not significant. Further, CESS did not predict psychological distress. Thus, although Vietnamese acculturation had a small (Kline 1998) effect ($b = 0.18, p < 0.01$) on satisfaction with CESS, its hypothesized indirect effect through CESS on psychological distress was not significant. Surprisingly, Vietnamese acculturation had a medium-sized (Kline 1998) effect ($b = 0.32, p < 0.05$) on job satisfaction though job satisfaction did not play a mediating role between Vietnamese acculturation and distress.

Discussion

Our goal was to apply the EAF to the study of acculturation and psychological adjustment for Vietnamese refugees in the US, by using a bilinear measure of host and heritage culture acculturation to test mediators from different life domains. Findings provide support for the EAF by

Footnote 5 continued

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.

⁶ Psychological distress was also tested as a mediator to rule out the alternative “selection model” hypothesis. This alternate hypothesis was not supported in this sample; psychological distress did not mediate American nor Vietnamese acculturation and job satisfaction.

Fig. 2 FIML SEM model for sample (N = 203) using 5000 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. * $p < 0.05$, ** $p < 0.01$. Note. Total effects in parentheses

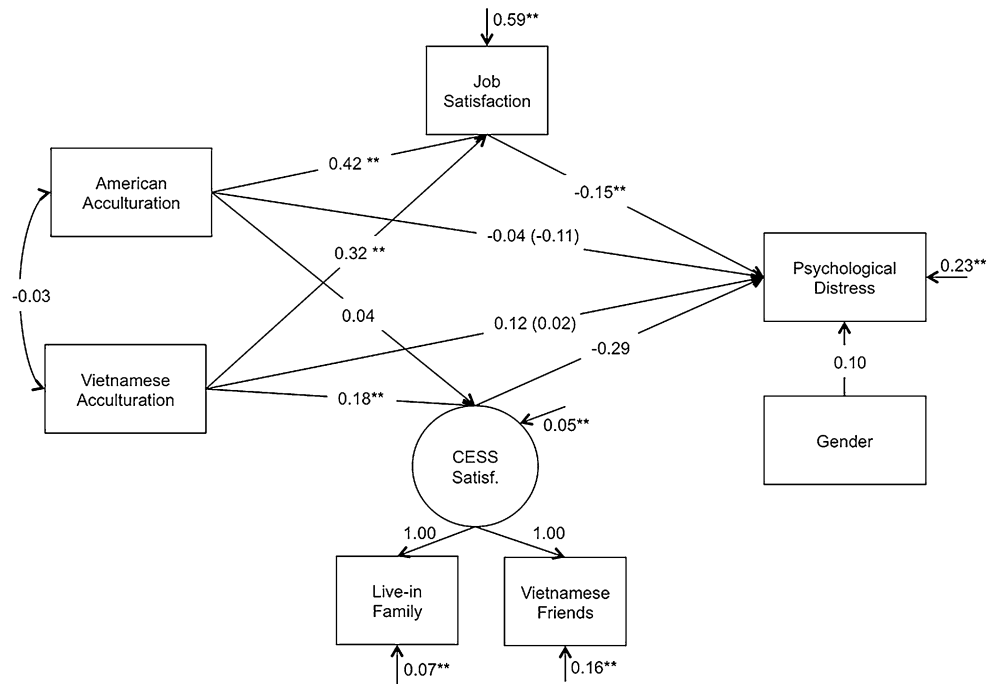


Table 2 Tests of indirect (mediating) relationships between acculturation and psychological distress

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, 0.10]	Job Sat.	-0.07*	0.03	[-0.13, -0.02]
					CESS Sat.	-0.01	0.02	[-0.11, 0.01]
	Viet. Acc.	0.12	0.09	[-0.06, 0.30]	Job Sat.	-0.05	0.03	[-0.12, 0.01]
					CESS Sat.	-0.05	0.06	[-0.21, 0.02]
	Job Sat.	-0.15**	0.05	[-0.25, -0.05]				
CESS Sat.	-0.29	0.28	[-0.94, 0.17]					
Job satisfaction	Amer. Acc.	0.42**	0.11	[0.20, 0.65]				
	Viet. Acc.	0.32*	0.13	[0.07, 0.59]				
CESS satisfaction	Amer. Acc.	0.04	0.04	[-0.04, 0.12]				
	Viet. Acc.	0.18**	0.05	[0.08, 0.28]				

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

demonstrating that the effect of American acculturation on psychological adjustment was domain specific, mediated through job satisfaction within the occupational domain.

The main finding of this study was that American acculturation reduced psychological distress, and this effect was specific to the occupational domain, as job satisfaction fully mediated this relationship and CESS was not a mediator. This finding is consistent with past research on the link between occupational and overall psychological adjustment with other refugee and immigrant groups (Birman et al. 2014; Chung 2001; de Castro et al. 2008; de

Castro et al. 2010; Vinokurov et al. 2000). For example, Birman et al. (2014) found that for immigrants from the former Soviet Union, higher American acculturation predicted better occupational success, which in turn predicted better psychological adjustment operationalized as improved life satisfaction and reduced symptoms of distress. However, these prior studies did not test for domain specificity. Since job satisfaction, but not CESS satisfaction, fully mediated the relationship between 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 occupational domain. As Shen and Takeuchi (2001) suggest, it was only by testing multiple mediators that we were able to fully explain what accounts for the path from American acculturation to psychological distress.

Importantly, job satisfaction was the only direct predictor of psychological distress in this study. These findings highlight the powerful impact working in a satisfying job can have on an immigrants' psychological well-being. Under ORR's current policy, refugees are encouraged to take the first job that becomes available to them, even when the job is low paying and of low socio-economic status (Chiswick et al. 2005). This strategy is advocated because of the assumption that once refugees become employed, they will be able to move up to better jobs. However in our sample, an astounding 74 % were still working at their first job after having lived in the country for an average of 11–12 years. These findings suggests that it may be important for refugees to spend more time searching for a better first job because job mobility is so rare for this population. In addition, our findings underscore the importance of finding a *satisfying* job, since this is associated with improved mental health. We realize that, unfortunately, it may not always be practical or feasible for refugees to remain unemployed for a prolonged period of time in order to wait for gainful employment and that they often need to accept lower paying, less satisfying jobs in order to support themselves and their families.

On the other hand, Vietnamese acculturation did not have an indirect or direct effect on psychological adjustment in this study, despite prior findings that heritage culture acculturation helps reduce distress for other immigrant groups (Asvat and Malcarne 2008; Birman et al. 2014; Knipscheer and Kleber 2007; Schwartz et al. 2011). A possible explanation is that, as found in past research, Vietnamese acculturation remains fairly stable for those who arrived at an older age, regardless of time in a host country (Liebkind 1996). Therefore, Vietnamese acculturation may not have as much of an effect on psychological adjustment (at least as measured by a Western-bound scale)—or the change that occurs after immigration—as do other forms of change such as American acculturation or occupational adjustment.

Contrary to expectations, CESS satisfaction did not mediate the relationship between Vietnamese acculturation and psychological adjustment, nor did it predict psychological distress. Given past research (Birman and Taylor-Ritzler 2007; Birman et al. 2014; Oppedal et al. 2004) this lack of findings was surprising. One explanation is that there may be statistical power limitations due to limited variability in the CESS satisfaction variable, as well as the sample size given model complexity. Further,

psychological needs such as the need to belong to a social group and feel satisfied with social support from co-ethnic peers may not be quite as crucial during the initial transition to a host society for refugees as the more fundamental needs such as job security, food, and shelter.

At the same time, though Vietnamese acculturation did not have an effect on psychological distress, it was related to both higher job satisfaction and higher CESS satisfaction, two indicators of adjustment or quality of life in particular life domains. The link between Vietnamese acculturation and CESS is consistent with prior research on the relationship between heritage culture acculturation and co-ethnic social support (Birman 1998; Birman et al. 2002; 2005; Chan and Birman 2009). The finding that greater levels of Vietnamese acculturation predicted higher job satisfaction, however, was unexpected, given that job satisfaction was conceptualized to be an aspect of an American-oriented life domain. In contrast, past literature on heritage culture acculturation and occupational adjustment has found either a negative relationship (Vinokurov et al. 2000) or no relationship at all (Nekby and Rödin 2010).

There are several possible explanations for this unexpected finding. One 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 explanation could be related to the Asian value of "humility." As Henderson and Chan (2005) indicated, humility and expressing gratitude for what you have is valued over material wealth or individual success. In other words, immigrants who are highly acculturated to Vietnamese culture may experience high job satisfaction even if their job status is low because they are more likely to adhere to the value of humility. In addition, they may consider their job status 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.

Importantly, another plausible explanation is that work settings for some refugees may be heritage culture-oriented settings, contrary to our initial assumption. In a comparative study of refugee communities in San Francisco, Gold (1992) found that Vietnamese refugees were more likely than former Soviets to find employment in their ethnic communities within businesses operated by family and friends. Finding jobs in such informal economies is common for immigrants who cannot access the more regulated, English-speaking, and potentially racist formal economy (Marcelli et al. 1999; Moore 2015). As ethnic enclaves become more established and integrated with the formal economy, co-ethnic networks give immigrant access to those jobs as well (Portes et al. 1989). Most participants in

our study had Vietnamese co-workers in their workplace. Though they may not have been in the majority, the presence of even a few members of their co-ethnic networks may have allowed them to create a Vietnamese-oriented subculture in the workplace. This possibility leads us to consider the importance of understanding cultural characteristics of the specific settings where immigrants are adapting, and not assuming that the occupational domain represents a host culture context. Work in sociology, economics, and related disciplines on formal and informal economies in ethnic enclaves can help inform our understanding of how acculturation to host and/or heritage culture can provide resources for refugees in their occupational adjustment.

Conclusion and Limitations

Limitations of the study are that it uses cross-sectional data and cannot speak to causation or capture the developmental nature of the acculturation and occupational adjustment processes. The HSCL-25—originally developed for a clinical sample—was negatively skewed in this community sample given that the clinical cutoff is 1.75 but the scale ranges from 1 to 4, perhaps because participants were reluctant to report high distress. 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. Further, in this study we did not sufficiently assess the cultural characteristics of the occupational contexts, which prevented us from having a better understanding of the reasons why Vietnamese acculturation was related to job satisfaction in this study. Though the current study did not have enough statistical power to do so, future research should explore whether gender moderates these relationships, as suggested by Leu et al. (2011).

Despite these limitations, our findings suggest the value of the Ecological Acculturation Framework, which is an ecological, life domains approach to studying acculturation and psychological adjustment of immigrants. By measuring host culture and heritage culture acculturation in a bilinear fashion we were able to consider which kinds of acculturation are adaptive for immigrants in which settings, as well as to test for domain specificity of their effects.

Our study underscores that acculturation unfolds for refugees in specific settings, and these settings vary in their cultural characteristics. While the media and some political leaders in the US assume that immigrant integration involves shedding their heritage culture and becoming more Americanized, the increasing diversity of the US population, as well as the local neighborhoods and institutions where individuals spend their time, implies that

immigrants live their lives in diverse cultural contexts, many of which require knowledge of their heritage culture. Increasingly, these contexts include not only those traditionally associated with the private sphere of family and close friends, but also public settings such as the workplace. Appreciating the cultural landscape of these specific microsystems and life domains in today's multicultural societies is critical to understanding the relationship between acculturation and adjustment.

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