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Acculturation, Social Alienation, and Depressed Mood in Midlife Women from the Former Soviet Union

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Abstract: Level of acculturation has been linked to depressed mood in studies across culturally diverse immigrant groups. The purpose of this study was to determine the effects of acculturation, social alienation, personal and family stress, and demographic characteristics on depressed mood in midlife immigrant women from the former Soviet Union. Structural equation modeling showed that higher acculturation scores, measured by English language and American behavior, were indirectly related to lower scores for depressed mood. Higher acculturation levels promoted mental health indirectly by reducing social alienation and, subsequently, lowering family and personal stress, both of which had direct relationships to symptoms of depression. These findings support the ecological framework that guided our research and point to the importance of focusing on contextual factors in developing interventions for new immigrants. Res Nurs Health 29:134–146, 2006

Keywords: cultural research; depression; women's health; social support

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Depression is one of the most commonly identified health problems for immigrants in the US as well as other receiving countries, and it is potentially one of the most debilitating to families (Gross, Brammli-Greenberg, & Remennick, 2001; Gutkovich et al., 1999). During the initial post-immigration absence of strong social networks, immigrants experience a period of relative social isolation and alienation from mainstream society during which family and ethnic social support networks become a central part of the acculturation process.

The process of acculturation has been related to depression, anxiety, and somatic symptoms. These symptoms have been reported for Latina and Asian women and older adult immigrants (Salgado de Snyder, Cervantes, & Padilla, 1990; Shin, 1994). Although an increasingly sophisticated literature is developing regarding the health of Mexican and Asian immigrants, relatively few studies have been conducted with recent immigrants from Eastern Europe, for whom pre- and post-migration experiences may create different patterns of adjustment and health risks. During the 1990s, immigrants from the former Soviet Union (FSU) comprised the largest group arriving in this country with refugee status. In 2000, combined immigration from Russia and the Ukraine made them the fifth largest population of legal immigrants admitted to the US (U.S. Census Bureau, 2002).

Low self-reported acculturation scores have been shown to be related to depressed mood in midlife women from the FSU (Miller, Sorokin, Wilbur, & Chandler, 2004), but little is known about the way social alienation and family and personal stress shape the impact of acculturation on depressed mood. Examining these pathways may facilitate identification of target areas for interventions that promote mental health for new immigrants. The purpose of this study was to determine the effects of acculturation, contextual factors (personal and family stress, and social alienation) and demographic characteristics (age and time in the US) on depressed mood in midlife immigrant women from the FSU, testing for mediation using structural equations modeling.

BACKGROUND

Acculturation is a dynamic cognitive and emotional process of accessing, understanding or adopting specific aspects or characteristics of a new culture. Acculturation is measured across several domains, including language, identity, behavior, and values. The complexity of this concept is demonstrated by research findings indicating that acculturation is a balance of adopting and maintaining behaviors that reflect new and native culture, as well as selective expression of one or the other, depending on context (Willgerodt, Miller, & McElmurry, 2002). Further, for immigrants from the FSU, acculturation may not be to a mainstream culture, but to a new Russian-American culture that is unique and has developed as a phenomenon of immigration.

The impact of the acculturation process on mental health has been studied primarily in terms of its role as a source of stress (McCubbin, Thompson, & McCubbin, 1996). Sources of acculturation stress include adapting to new language, customs, and social norms (Berry & Kim, 1989; Organista, Organista, & Kurasaki, 2003). Personal and family coping resources may mitigate the influence of stress on health, and acculturation may provide rich opportunities for challenging and growth-producing experiences (Kaplan, 1991; Pearlin & Skaff, 1996). Nevertheless, because acculturation is a process that unfolds over a relatively extended period of time and generates secondary stressful life events, it may also be considered a potential chronic stressor.

Both higher and lower scores on measures of self-reported acculturation level have been linked to higher depression scores when studied across culturally divergent immigrant groups. Findings of studies of Asian immigrants suggest that higher level of acculturation to certain aspects of the host country culture leads to better mental health status (Yeung & Schwartz, 1986; Zheng & Berry, 1991). For example, Korean immigrants with higher scores for language acculturation were found to have lower depression scores (Oh, Koeske, & Sales, 2002). Conversely, several studies of Mexican-Americans suggest an inverse relationship between acculturation and mental health, with higher acculturation predicting higher depression scores (Vega et al., 1998).

Midlife and older women from the FSU often have a great deal of difficulty adjusting to their new culture, and are believed to be at particularly high risk of acculturative stress (Miller et al., 2004). Sources of gender differences in acculturative stress include lack of valued social support and discrepancies in role expectations between native culture and host society (Aroian, Norris, Patsdaughter, & Chiang, 2003). Study findings relating to immigrants from the FSU indicate higher psychological distress in women than in

men (Birman & Tyler, 1994; Ritsner, Ponizovsky, Nechamkin, & Modai, 2001). In addition, older immigrants from the FSU have been found to have more difficulty adapting to post-immigration life than younger immigrants (Ponizovsky et al., 1998; Remennick, 2004), although there have been a few exceptions (Gutkovich et al., 1999; Ritsner & Ponizovsky, 1999). Among women, older age was found to be related to higher depression scores of Russian immigrants both in Israel and in the US (Baider, Ever-Hadani, & DeNour, 1996; Miller et al., 2004). Post-migration coping strategies play an important part in mitigating the influence of stress on health. Coping strategies that were successful for dealing with Soviet life, however, often prove less effective in the US.

In addition to personal coping resources, family relationships provide an important context for the acculturation process. For example, high acculturative stress and family dysfunction were found to be significantly associated with depression for Mexican migrant women farm workers in the Midwest (Hovey & Magana, 2003). In another study of Mexican-Americans, both family functioning and family hardiness were found to predict mental health in mothers, but acculturation level did not (McNaughton, Cowell, Gross, Fogg, & Ailey, 2004). For immigrants from the FSU, marital and intergenerational differences in values and attitudes toward retaining Russian cultural behaviors have been shown to lead to family dissension (Aroian, Spitzer, & Bell, 1996; Ben-David & Lavee, 1994).

Loss of social networks is one of the most prominent features of immigrant experience. Although this loss itself can be a source of stress, it can also affect coping ability by limiting sources of social support. Moreover, loss of old social connections, limited social interactions in a new country, and inability to navigate mainstream culture due to lack of language and cultural competency, can create an environment of isolation and alienation. Women from the FSU who retained a Russian identity were found to have higher alienation scores than men (Birman & Tyler, 1994; Vinokurov, Birman, & Trickett, 2000).

Feeling alienated combined with inadequate social support can have a great impact on immigrants' mental health. Chinese immigrants who reported living alone, being dissatisfied with help from their families, and having fewer friends were more likely to be depressed than those with stronger social networks (Mui, 1998). For FSU immigrants, having no relatives in the area of resettlement predicted depression, and elderly Russian immigrants living alone were more likely to be depressed than those who lived with others (Litwin, 1997). In studies of Korean immigrants, presence of local informal ethnic networks had long-lasting effects on mental health, and improved social interactions were related to lower acculturative stress and depression (Lee, Crittenden, & Yu, 1996). Yet the social networks of many older Korean immigrants are comprised primarily of family members. They have been found to have high ethnic attachment, and people in their social networks who are not family are almost exclusively other Koreans (Kim, 1999). A similar finding for Soviet Jewish immigrants in Israel suggests that a more limited, family-intensive network was common after immigration, representing a significant change from pre-immigration networks that included primarily non-family friends and colleagues (Litwin, 1997).

Chicago Health After Immigration (CHAI) Framework of Acculturation and Health Behavior Change

The CHAI framework of acculturation and health behavior change (Fig. 1) is the ecological framework that guided the present study. In this model, acculturation was expected to have a direct effect on health outcomes, and contextual and behavioral health status characteristics affect this relationship (Miller & Chandler, 2002). The framework was derived from the Lazarus and Folkman (1984) cognitive appraisal model of stress and coping; the McCubbin et al. (1996) resiliency model of family stress, adaptation, and adjustment; and Berry's (1997) theoretical model of adaptation to migration. These models were not intended to delineate behaviors that affect physical and psychological health outcomes of acculturative stress, such as diet or coping strategies, which are greatly influenced by the acculturation process.

In the CHAI framework, contextual and behavioral factors have the potential to alter the impact of acculturation on health outcomes, by mitigating or facilitating psychological stress or physical risks. Multiple *contextual* characteristics affect the relationship between acculturation and health, including *personal* (e.g., demographic and personality characteristics), *family* (marital and intergenerational relationships), *social network* (co-ethnic friends, host country natives), *cultural* (premigration experiences and ethnic influences), *community* (services and neighborhood environment), and *national* (immigrant health policy) attributes. Although many contextual

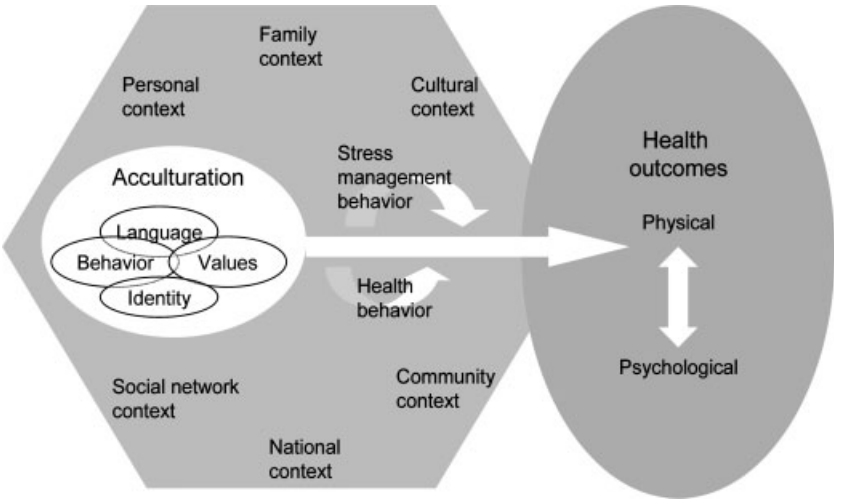

FIGURE 1. CHAI framework of acculturation and health behavior change.

characteristics are difficult to change, acculturation may affect the way they are perceived or appraised, and the process by which they produce their effect. Behavioral characteristics are potentially modifiable and include stress management (coping strategies), and health behaviors (e.g., diet, physical activity). Although presented as a linear relationship to emphasize the impact of acculturation on health status, interactions among acculturation, contextual, and behavioral factors, and health outcomes are assumed to change over the course of the post-immigration period. In this analysis, we specifically examine how acculturation is mediated through personal, family, and social network contexts to affect mental health status. Study aims were to: (1) examine the relationships among acculturation, personal and family stress, social alienation, and depressed mood; and (2) test for mediating effects among predictors on depressed mood for women from the FSU.

METHODS

The study reported here involved a cross-sectional analysis of baseline data from a study of the impact of acculturation on health and behavior change in midlife women from the FSU. Data were collected at baseline from participants in this 4-year longitudinal study designed to document the influence of acculturation, family adaptation, and health behavior on health status and well-being in midlife women from the FSU. The larger, study included baseline and three annual data collection sessions. Women were eligible for enrollment if they were 40–75 years old, immigrated to the US from the FSU within 8 years prior to recruitment, were married, and had at least one child living in the US. This sample of women resided in urban and suburban neighborhoods of a large Midwest metropolitan area.

Baseline data were collected from 226 women who met the criteria for participation. Demographic characteristics, including age, length of time in the US, education, ethnicity/religion in the FSU, and the republic from which the women had emigrated, were obtained by self-report data. The mean age of the women was 56.85 (*SD* 8.59, range 40.01–75.16). The mean number of years in the US was 3.53 (*SD* 2.28), with a range of .13–8.50 years. The women were well-educated prior to immigration to the US; 167 (78.9%) had completed at least an undergraduate degree at a university or institute, and 56 (24.8%) had completed general, specialized, or technical secondary school.

Consistent with national statistics regarding immigrants from the FSU in the US, the majority of women reported their primary ethnicity/religion in the FSU as Jewish (61.1%). The women had emigrated from 10 different Republics, but the majority came from the Ukraine (40.8%), Russia (31.2%), and Belarus (3.8%). These Republics had the highest concentration of Jews prior to the breakup of the FSU, and also the greatest number of emigrants.

Procedures

The sample was recruited from the community through Russian radio and newspaper advertisements, flyers in neighborhood businesses and clinics, announcements in English as second language (ESL) classes, and network sampling. Prospective participants called the project telephone number, which was answered by a Russian voice mail message. They were screened for eligibility over the telephone by Russian-speaking project staff who described the study in detail. Appointments were made for women who met criteria and agreed to participate.

Data collection took place individually at participants' homes or in groups of 5–10 at a convenient community meeting room. Informed consent forms were signed in the presence of the bilingual staff. All questionnaires were self-administered in Russian. In addition to self-report questionnaires, physical measures were obtained; these data are not included in the present analysis. Data collection sessions took approximately 2–3 hours. A modest cash incentive was provided after each session for travel and time reimbursement.

Measures

The committee method of translation (Garyfallos et al., 1991; Harkness & Schoua-Glusberg, 1998) was used to translate all questionnaire items into Russian for this study, with the exception of the scale used for measuring acculturation, the Language, Identity, and Behavior (LIB) Scale. The committee method uses three independent translations by bilingual translators who meet in a group with an arbitrator and come to consensus regarding a final version of the instrument. Focus groups were conducted with women who were similar to the study sample to resolve additional discrepancies and assess appropriateness and feasibility of the questions in the study population. The LIB Scale was translated into Russian by the original developers (Birman & Trickett, 2001) using direct and back translation methods (Brislin, 1986).

Current level of depressed mood was measured by the Center for Epidemiologic Studies Depression (CES-D) Scale. The CES-D is a 20-item screening questionnaire for a general population sample (Radloff, 1977). Participants respond on a 4-point scale (0 = *rarely or none of the time*, to 3 = *most or all the time*) to how they felt or behaved in the past few weeks. Four items that address positive affect are reverse-coded, and the 20 items are added together for a total score. Validity was supported by the significantly higher percentage of psychiatric patients relative to the general population (21%) scoring at or above an arbitrary cutoff score of 16. This score was established for US samples to indicate those who might need a referral for evaluation of clinical depression.

The concept of acculturation was measured by two of the subscales (English Language and American Behavior) on the Language, Identity and Behavior (LIB) Acculturation Scale (Birman & Trickett, 2001). The English Language subscale includes items related to the use of English in selected situations, such as "how much do you speak English with your husband," " . . . with your friends," " . . . at work." The American Behavior subscale examined behaviors related to lifestyle behaviors, such as "how much do you watch American movies on VCR or in movie theatres," " . . . prepare food like Americans," " . . . socialize with American friends." For the present study, the items were modified slightly to include 5 statements for the English Language subscale and 8 statements for the American Behavior subscale. Items were rated on a 4-point Likert-type scale (1 = *not at all*, to 4 = *very much*), and mean scores were calculated for both subscales. The instrument was developed with particular consideration for Russian immigrants. There are no established norms for the scores on the LIB.

A latent variable for social alienation was constructed using the Alienation Scale (Nicassio, 1993) and the Social Relations subscale of the Migration Quality of Life Scale (MQoL; Christopher, 2000). The Alienation Scale is a 10-item instrument that was developed to measure the degree of social and cultural estrangement experienced by immigrants in the US. This scale includes such items as "It is difficult for me to understand the American way of life" and "I feel all alone in America." Mean scores of the items, which are rated on a 4-point Likert-type scale (1 = *strongly disagree* to 4 = *strongly agree*), were calculated after several items were reverse-coded. The Social Relations subscale of the MQoL measures social support and is a 6-item subscale that compares satisfaction with quantity and quality of friendships in FSU versus US, as measured on a 6-point Likert scale (1 = *absolutely lutely dissatisfied*, to 6 = *absolutely satisfied*). Mean scores of item discrepancies (U.S. score minus FSU score) were calculated.

A latent variable for family stress was constructed using three family scales: Family Pressures Scale-Ethnic (FPRES-E), Family Hardiness

Index (FHI), and the Family Problem Solving Communications Scale (FPS; McCubbin et al., 1996). FPRES-E is an inventory of stressful life events and was adapted by its authors from the Family Inventory of Life Events (FILE) as a more culturally sensitive index of accumulated life events. The FPRES-E scale includes several additional items that focus on special pressures and stressors experienced by minorities (e.g., ''a child member was treated badly due to racial/ethnic prejudice).'' The FPRES-E records the degree to which life events affected the family during the preceding 12-month period. The original scale consisted of 64 items and used a 4-point scale (0 = *not a problem* to 3 = *large problem*). It was modified for this study to exclude items that were redundant or irrelevant to the population, such as ''we worry that the land we were promised will never come to us,'' or ''experienced difficulty in arranging for satisfactory child care,'' which was not pertinent to the midlife and older women. In all, 41 items were retained.

The Family Hardiness Index (FHI) was developed to measure family hardiness, conceived as a mediating factor that buffers the impact of family stress on adjustment and adaptation (McCubbin et al., 1996). The 20-item questionnaire includes 4 subscales (co-oriented commitment, confidence, challenge, and the family's sense of being in control), based on the concept of individual hardiness (Kobasa, Maddi, & Puccetti, 1982). A 4-point scale is used (0 = *false* to 3 = *true*). Negative items are reverse coded. The FHI score is obtained by summing the items.

The Family Problem Solving Communications Scale is a 10-item instrument that is rated on a 4-point Likert scale (0 = *false* to 3 = *true*). Respondents were given statements that describe various ways of dealing with problems in a family, for example, ''we yell and scream at each other,'' ''we talk things through until we reach a solution.'' Means of the items were used for the total score.

A latent variable for personal stress consisted of Perceived Stress Scale (PSS; Cohen, Kamarck, & Mermelstein, 1983) and the Sense of Coherence (SOC; Antonovsky, 1987) instruments. The PSS is a 14-item measure that includes stressful feelings or thoughts within the last month, such as ''how often have you felt nervous and stressed'' and ''how often have you been upset because of something that happened unexpectedly.'' The items are rated on a 5-point Likert-type scale (0 = *never*, to 4 = *very often*). The SOC instrument was designed to measure a personality characteristic that promotes a sense of harmony and meaning in life. SOC includes such items as ''has it happened that people whom you counted on disappointed you'' and ''do you have the feeling that you are being treated unfairly.'' A 13-item version of the scale was used in the present study. A 7-point Likert-type scale measures the frequency or extent of various aspects of a person's life related to the concept. For the total scores, means of the items were calculated.

Data Analysis

Categorical variables were summarized as percentages and quantitative variables were summarized as means and standard deviations. Structural equation modeling (SEM) was performed to test the theoretical model illustrated in Figure 1. Only personal, family, and social contextual variables were included in this examination of the influence of acculturation level on psychological health (i.e., depressed mood).

SEM is a multivariate procedure that allows examination of a set of relationships among observed and latent variables on the basis of the covariances of a given set of observed variables. Specifically, this model includes four latent variables (acculturation, social alienation, family stress, and personal stress); two exogenous variables (age, time in US); and one endogenous variable (CES-D). The final model used the maximum likelihood method of parameter estimation and was performed on the variance-covariance matrix. The chi-square statistic was used to test the null hypothesis that the reproduced covariance matrix has the specific model structure. All analyses were conducted using PROC CALIS procedure in the SAS 8.2 software package (Cary, NC).

RESULTS

Demographic characteristics of the sample are presented in Table 1. Means, standard deviations, ranges, and reliability coefficients (Cronbach's alphas) for depressed mood, acculturation, and personal, family, and social measures are summarized in Table 2. Close to 80% of the women obtained a score greater than 16 on the CES-D, the recommended screening cutoff. The mean scores for the two acculturation subscales (English Language and American Behavior) were both relatively low, although there was variability in the scores from low to high. This was expected, considering the relatively short time the women had lived in the US.

SEM analysis was conducted to determine the causal effects among the variables of acculturation,

Table 1. Sample Demographic Characteristics (*N* = 226)

Demographic characteristics	Mean (*SD*)	Range
Age	56.85 (8.59)	40.01–75.16
Time in US (years)	3.53 (2.28)	.13–8.50
	N	%
Ethnicity		
Jewish	138	61.1
Russian	55	24.3
Ukrainian	23	10.2
Other	10	4.4
Employment status		
Employed	87	38.5
Not employed	67	29.6
Retired/disability	72	31.9
Education		
College or higher	167	73.9
Professional school	53	23.5
High school	3	1.3

social alienation, family stress, personal stress, and depression. The final model obtained is shown in Figure 2. Goodness of fit indices of the model showed that the model provided a good fit ($p = .17$) with both satisfactory CFI (.95) and RMSEA (.04). Although the initial model included direct causal effects of social alienation and acculturation on depression, the path coefficients were not significant and were removed from the model. All structural parameter coefficients presented in Figure 2 were significant at the .05 level. Table 3 summarizes the direct and indirect causal effects on each of endogenous variable.

The determinant with the largest direct causal effect on depressed mood was personal stress, followed by family stress, and age. Women who were older with a higher level of personal and family stress tended to have higher CES-D scores. In addition, social alienation (.73) and acculturation (−.41) mediated through personal and family stress displayed a significant indirect causal effect on depressed mood. This model explained approximately 71% of the variance in depressed mood for the women. The single most significant determinant of personal and family stress was social alienation, exhibiting a large direct causal effect on personal stress and on family stress. The primary determinants of social alienation were acculturation and time in US. Women living in the US longer and who perceived themselves as more acculturated to American culture were less likely to feel socially alienated. For acculturation, both age and time in US showed significant direct causal effects and accounted for approximately 46% of the variance in acculturation.

DISCUSSION

Consistent with previous studies of immigrants from the FSU (Aroian, Norris, Patsdaughter, & Tran, 1998; Miller & Chandler, 2002), women in

Table 2. Summary Statistics for Acculturation, Alienation, Family and Personal Stress, and Depressed Mood

Instrument	Mean	*SD*	Range	Cronbach's alpha
American acculturation				
English Language	1.59	.59	1.00–3.80	.72
American behavioral Acculturation	2.13	.57	1.00–3.88	.79
Social alienation				
Alienation Scale	2.47	.43	.30–3.80	.72
Migration Quality of Life (Social Relations subscale)	−1.6-	1.51	−5.00–1.67	.80
Family stress				
Family Pressure Scale	.48	.46	.00–2.44	.96
Family Hardiness Index	2.07	.37	.95–2.85	.77
Family Problem Solving	2.03	.53	.30–3.00	.82
Personal stress				
Perceived Stress Scale	2.00	.48	.57–3.50	.75
Sense of Coherence	4.40	.82	1.77–6.38	.69
Depressed mood				
CES-D	23.54	9.87	1.90–49.52	.90

CES-D, Center for Epidemiologic Studies-Depression Scale.

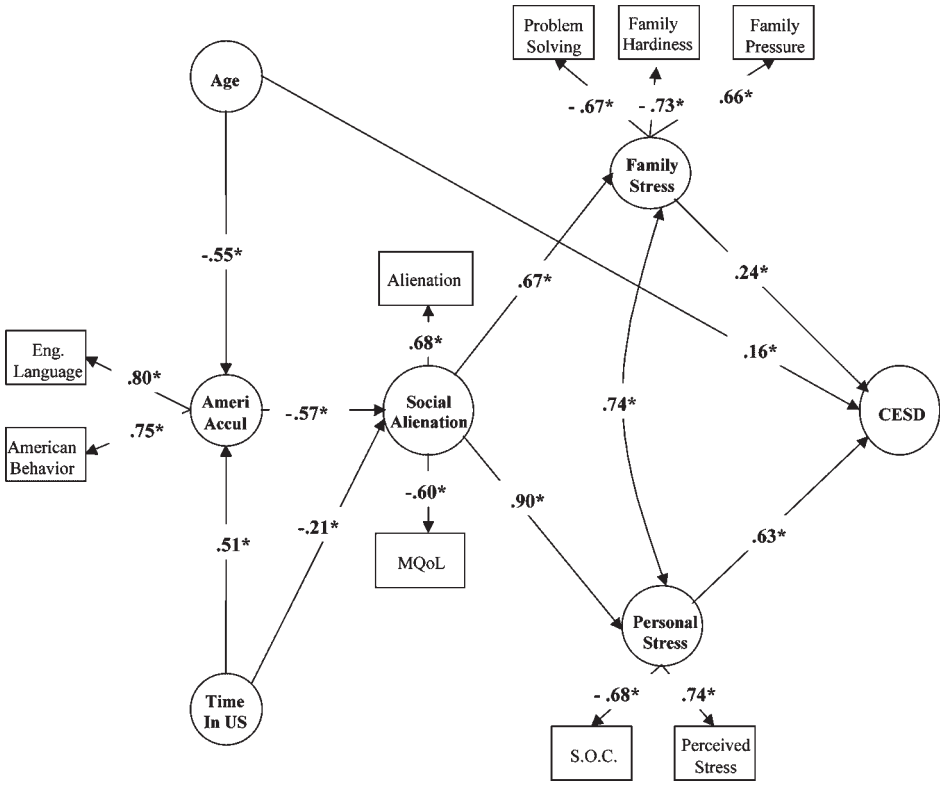

FIGURE 2. Structural equation model of acculturation, social alienation, family stress, and personal stress on depression for 226 FSU immigrant women controlling for age and time in US (Standardized Parameter Estimates). $*p < .05$, $\chi^2(41, 226) = 49.46$, $p = .17$, CFI = .95, RMSEA = .04.

this sample reported depression scores that were higher than expected in general community samples in the US. The mean score of 23.54 for the sample was well above the cut-off score of 16 for the CES-D. Although additional research is recommended to determine whether a higher cut-off score might be appropriate, depressed mood is clearly problematic for these immigrant women.

The primary purpose of this study was to determine the effects of acculturation, contextual factors, and demographic characteristics on depressed mood in midlife immigrant women from the FSU. The study findings indicate that acculturation has a strong effect on an immigrant's life, influencing personal, family, and social networks. Although our model did not show a direct relationship between acculturation and depressed mood, it demonstrates that acculturation promoted mental health indirectly in this sample by reducing social alienation and, subsequently, family and personal stress, both of which can lead directly to symptoms of depression.

Our findings regarding acculturation, social alienation, and depressed mood are consistent with a study by Oppedal, Roysamb, and Sam (2004). Using a similar statistical analysis with adolescent immigrants to Norway, they found that school social support mediated the positive relationship between host culture acculturation and mental health. Family social support, on the other hand, mediated the negative relationship between ethnic cultural competence and depression. The Oppedal et al. researchers did not identify social alienation specifically as a predictor of depressed mood but did demonstrate complex relationships among specific types of support and acculturation. In our study, we considered social alienation as a somewhat broader concept than lack of social support, one that includes a lack of comfort with cultural environment.

Table 3. Summary of Causal Effects for SEM Model on Depression

	Causal effects		
Outcome and determinants	Direct	Indirect	Total
Acculturation ($R^2 = .46$)			
Age	−.55[a]	—	−.55
Time in US	.51[a]	—	.51
Social alienation ($R^2 = .43$)			
Age	.10	.31	.41
Time in US	−.21[a]	−.29	−.50
Acculturation	−.57[a]	—	−.57
Family stress ($R^2 = .36$)			
Age	.03	.28	.31
Time in US	—	−.33	−.33
Acculturation	—	−.38	−.38
Social alienation	.67[a]		.67
Personal stress ($R^2 = .68$)			
Age	.01	.37	.38
Time in US	—	−.45	−.45
Acculturation	—	−.51	−.51
Social alienation	.90[a]	—	.90
Depression ($R^2 = .71$)			
Age	.16[a]	.31	.49
Time in US	—	−.25	−.25
Family stress	.24[a]	.47	.71
Personal stress	.63[a]	.18	.81
Acculturation	—	−.41	−.41
Social alienation	—	.73	.73

[a]Direct effect is significant at the .05 level.

Shen and Takeuchi (2001) also used structural equation modeling to examine the direct and indirect impact of acculturation on depressive symptoms in a predominately immigrant, employed sample of Chinese Americans. They found that acculturation was an indirect contributor to depressed mood, but contrary to our results, higher acculturation was associated with higher stress and, in turn, elevated symptoms of depression. The mean age of respondents was younger than that of our sample, and included both men and women. Their study did not include family measures or a specific social alienation measure, but did include perceived social support, socioeconomic status, and a personality variable (i.e., personality negativity).

A positive association of acculturation with mental health was also found in previous studies for Korean immigrants when acculturation was measured by language use and social relationships (Oh et al., 2002), and for older Mexican-Americans (Gonzalez, Haan, & Hinton, 2001). Yet like Shen and Takeuchi (2001), Heilemann, Lee, and Kury (2002) found that higher acculturation was a risk factor for depression. Shen and Takeuchi (2001) used proportion of life in the US for Chinese-Americans, and Heilemann et al. (2002) used exposure to the US in childhood as proxy measures of acculturation for Mexican-American women. These apparent contradictions might be due to the way acculturation was conceptualized and measured in these studies. In our study, two domains of acculturation were examined (English language use and American behavior). Additional research is needed to validate proxy measures of acculturation as well as immigrants' subjective appraisal of acculturation using self-report instruments.

Our study findings also outline the role that demographic characteristics play in the development of depressed mood. Consistent with literature on health of immigrants and older adults, our study demonstrates a direct positive relationship between age and depression, with older women reporting higher levels of depressed mood (Miller et al., 2004; Tran, Fitzpatrick, Berg, & Wright, 1996). Yet the indirect effect of age on depression is even greater than the direct effect for this group. Therefore, the study findings suggest that, for older women, the already heightened vulnerability to depression may be further intensified by their immigration experiences. This amplified

vulnerability to depression is due to slower acculturation leading to greater social alienation for older women than younger women.

The study findings suggest that for this sample there is no direct relationship between length of residence in the US and depression. According to the model, the positive effect of length of residence on mental health occurs through higher acculturation and by reducing social alienation. Acculturation also progresses with time, and appears to give an additional boost to the social network. Over time, immigrants gradually develop new relationships, and build social support systems. This may be facilitated by bringing immigrants closer to the mainstream culture and/or to fellow immigrants who are further along in their acculturation process, as well as making them feel more connected to the American culture.

This model demonstrates the centrality of social network in the pathway between acculturation and depressed mood, but does not explain specific mechanisms by which low acculturation leads to social alienation. Yet it is likely that inability to navigate the new cultural landscape due to low English language proficiency and understanding of the American lifestyle leaves new immigrants feeling stranded within restricted social networks. Learning a new language and accommodating to a new culture becomes increasingly difficult with age, particularly in an environment of nearly complete isolation from the mainstream. Many older immigrants live in ethnic enclaves or subsidized housing buildings having predominately older, Russian-speaking tenants. For some, their lives become confined to microcosms of Russian subculture from which they leave only on rare occasions. This is similar to the experience of other older immigrants (Treas & Mazumdar, 2002). In addition, social isolation may be intensified by a growing generational gap within their families.

Perceived family and personal stress were both strongly affected by social alienation and were, in turn, found to be important direct predictors of depressed mood. The family is perhaps the most salient context within which acculturation and psychological adaptation take place for immigrants from the FSU. This is not only because of cultural characteristics, but also because most recent immigrants have come to this country primarily to keep their families intact. Social and political contradictions in Soviet society likely contributed to the essential centrality of family and close network of friends. The Russian family structure combines the egalitarian values of Marxist philosophy with traditional Russian values favoring a patriarchal family (Cubbins & Szaflarski, 2001). As a result, women equally participate in family bread-winning activities, but are also expected to do virtually all the housework and childrearing.

In the Soviet Union, women are expected to remain quite involved with their family members even after their children become adults. Pre-migration Soviet housing and food shortages led to living arrangements in which several generations shared apartments. In particular, grandmothers often served as caregivers for grandchildren (Smith, 1996). As their children and grandchildren become more integrated in American work and school settings, midlife and older women must deal with considerable changes in their family roles.

Significant changes in social roles occur that have the potential to influence personal health status, particularly for older immigrants. Immigrants to the US leave their Russian social connections behind and lose their job-related identities. Women who become more acculturated or comfortable with life in the US over time may be more confident of their own, as well as their family's, ability to master their new surroundings. In contrast to cultural and political fatalism in the FSU, where people had few choices and autonomy was not highly valued or rewarded, they may also adopt values and behaviors that allow them to feel that they and their families have more control over their destinies. This may explain the impact of higher acculturation on decreasing social alienation and perceived family stress.

The majority of the participants were well educated, influential in their jobs and active within their families in the FSU. Their previous history of respected occupational and family standing might make them more dissatisfied and, thus, unprepared for their changed social status in their new country. In addition, Soviet policies banning organized religion and historical anti-Semitism in Eastern Europe created ambivalence for some immigrants with Jewish backgrounds. In the FSU, their nationality was considered to be Jewish, but after immigration to the US they are frequently considered Russian. The lack of religious participation in the FSU makes integration within the American Jewish community an additional acculturative barrier. The atmosphere of social and cultural isolation may have amplified the personal perception of stress, and caused them to question the meaning of their lives in the new culture, as reflected in their scores on the SOC scale.

One of the limitations of the study is that although we included a screening question for

interpersonal violence, we did not assess domestic violence with a detailed questionnaire. Previous studies of Hispanic and Chinese American samples that included immigrants (Hicks & Zhonghe, 2003; Newcomb & Carmona, 2004) have identified relationships among acculturation, family violence, and depression. This has not been explored specifically in Russian immigrants to the US. In addition, the use of alcohol has been found to be related to family violence and stress. Alcohol abuse is known to be high in Russians, but relatively low in Russians of Jewish ethnic background. Nevertheless, the findings for Russian Jewish immigrants have been somewhat equivocal (Hasin et al., 2002). In our study, the reported prevalence of both family violence and alcohol use were low (less than 10%), and we did not include these variables in the structural equation model. Family violence and substance abuse may have been underreported due to social desirability and we did not attempt to confirm self-reported information. Future studies might investigate the role of violence and alcohol use in relation to acculturation and family stress in more detail for this population.

Another limitation is the use of instruments developed primarily by US investigators for primarily American samples. Although stringent translation methods and efforts to insure conceptual equivalence were maintained, it is possible that some misunderstanding of selected concepts might have occurred since the instruments were not developed specifically for Russian immigrants.

In summary, the findings of this study highlight the complex relationships among demographic characteristics, acculturation, and depressed mood for immigrant women from the FSU. The importance of contextual factors for post-immigration adaptation is emphasized by the finding that the impact of acculturation on symptoms of depression is mediated by social alienation through its effect on family and personal stress. These findings support the ecological framework that guided our research and point to the importance of focusing on contextual factors in interventions for new immigrants.

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