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Immigrant Women: Risk and Protective Factors Associated with Depression and Anxiety Disorders

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Disorders

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Abstract

Purpose: The purpose of this review was to provide an international perspective on the effects of immigration on the mental health of women. Many of the current reviews focus on one ethnic group and the many factors influencing their mental health. This review examined many ethnic groups but attempted to focus on immigration-related factors that may act as risk or protective factors for depression and anxiety in first- and second-generation immigrant women.

Method: A search of electronic databases for peer-reviewed articles resulted in 30 studies, of which 19 were reviewed for this analysis. The search was limited to studies published in the last 15 years (2000−2015), considering depression and anxiety disorders in first- and second-generation immigrant women between the ages of 18 and 65 years.

Results: The results varied; with some studies showing an association between immigration-related factors and poor mental health and others suggesting that this effect may be influenced by unknown variables. Results also varied for generational status, with some studies suggesting that second-generation immigrants may have worse mental health outcomes than first-generation immigrants. Again, these findings were often closely linked with other immigration-related factors.

Conclusion: Immigrants face a unique set of challenges and this is clearly reflected in their fragile mental health status. There is a need for a clearer understanding of the immigration-related factors that have the greatest effects on the mental health of these populations.

Keywords: Acculturation, family and cultural conflict, family cohesion, region of origin, perceived discrimination

Immigrant Women: Risk and Protective Factors Associated with Depression and Anxiety

Disorders

Prior to the 1960s, immigration was often unidirectional from Europe to the United

States, a population largely derived from Europe. There was a rise in the diversity of immigrants

in the mid-1960s with a majority of immigrants today coming from Asia, Latin America and

Africa. Diverse populations face a different climate and tolerance levels that vary depending on

time of immigration and country of origin. This leads to unique challenges when trying to

understand and address the needs of immigrant populations today.

According to the U.S. Census Bureau's (2011) Current Population Survey (CPS), 40

million (13%) of the U.S. population is foreign-born. This is a significant portion of the

population facing the challenges associated with immigration as well as the daily challenges

faced by the native-born population. This extra burden can leave immigrants vulnerable to

mental health issues. The World Health Organization (WHO) defines mental health as "a state of

well-being in which every individual realizes his or her own potential and can cope with the

normal stresses of life, can work productively and fruitfully, and is able to make a contribution to

her or his community" (World Health Organization [WHO], 2014a, p. 1). Mental health can be

compromised by stressors of daily life including living and working conditions, exposure to

discrimination, social isolation, exposure to violence, and poor health (WHO, 2014b).

Depression and anxiety disorders are the most common mental health issues associated

with these daily life stressors. About 6.7 % of U.S. adults suffer from depression at some point in

their life, with women being more likely than men to develop a depressive disorder in their

lifetime. "Anxiety disorders affect about 40 million American adults age 18 years and older

(about 18%) in a given year, women are 60% more likely than men to experience an anxiety

disorder over their lifetime" (National Institute of Mental Health [NIMH], n.d., p. 1). The

process of immigrating to a new country heightens the daily life stressors identified by WHO as

likely to compromise mental health. It comes as no surprise then, that like U.S.-born women,

many studies have shown that immigrant women have higher rates of depression and anxiety

disorders in comparison to immigrant men and the general population (Coid et al., 2008;

Hollander, Bruce, Ekberg, Burstrom, & Ekblad, 2013). The higher rates of mental disorders in

immigrant women are attributed to post-migration stressors like lack of social support, family

and cultural conflict, unemployment, acculturative stress, and discrimination, which are also risk

factors for depression and anxiety disorders (Coid et al., 2008; Hollander et al., 2013; Miszkurka,

Goulet, & Zunzunegui, 2010). Immigrants make up 19.8% of the population in Canada and

Australia, and 13% of the population in the United States, and women constitute half of that

population (Gushulak, Pottie, Roberts, Torres, & DesMeules, 2011). There is little known about

the mental health of immigrant women in different countries and the risk and protective factors

that contribute to poor mental health in this population.

Study Aim and Objectives

The aim of this paper was to identify immigration-related risk and protective factors for

depressive and anxiety disorders in immigrant women. A comprehensive review of this nature

can provide health officials with an international perspective on the mental health disparities of

immigrant women. This perspective allows for the teaching and the use of culturally competent

practices which will ultimately help to improve the mental health of immigrant women.

Research Questions

What are the immigration-related risk and protective factors for depressive and anxiety disorders in immigrant women supported by the published quantitative research? Do these quantitative studies show a difference in risk and protective factors for depression and anxiety between first-generation and second-generation immigrants?

Definition of Immigrant

For the purpose of this review, an *immigrant* was defined following Higginbottom and colleagues (2013, p. 67) and the Canadian Council for Refugees (2010, Terms for Immigrants) as "a person who has settled permanently in another country." This definition excluded *refugees* and *asylum seekers* because the pre-migration factors for refugees and asylum seekers often include high levels of psychological stress and ,at times, physical trauma associated with war, political persecution, or natural disasters. These populations are often displaced due to extreme, life-threatening conditions in their countries of origin. The psychological repercussions for these women and their protective and risk factors would likely differ from other immigrant groups. Asylum seekers and refugees may also spend long periods of time in refugee camps and/or detention centers which are often over-crowded, dirty, and poorly resourced. Living in these conditions for such lengths of time can lead to mental health issues (Kirmayer et al., 2011). Illegal immigrants were also excluded because of their additional post-migration factors like fear of persecution and deportation, which are not experienced by legal immigrants.

Age at Migration: First-generation vs. Second-generation

A first-generation immigrant is someone who has settled permanently in another country at the age of 12 or older; a second-generation immigrant is someone who was either born in the host country to first-generation immigrants or who settled permanently in another country before

the age of 12 years (Kirmayer et al., 2011). Research on the mental health of immigrants has shown that immigrants who arrive before the age of 12 tend to have similar health patterns to second-generation immigrants who are born in the host country (Kirmayer et al., 2011). This distinction is important because risk and protective factors present differently in second-generation immigrants (Kirmayer et al., 2011). These second-generation women spend their formative years in the country their families have relocated to and often acculturate to the host culture faster than their first-generation parents. This can be positive in terms of language ability and social status, but it can also lead to family and cultural conflict. Women and girls are particularly vulnerable to family and cultural conflict due to vastly different gender roles between their culture of origin and the host culture (Berry, 1997). The inter-generational conflict this causes is often used to explain the higher levels of depression and anxiety disorders in second-generation immigrant women (Alegría et al., 2008; Takeuchi, Alegría, Jackson, & Williams, 2007; Takeuchi, Zane, et al., 2007). This conflict strips away family support, which has often acted as a protective factor against mental disorders in first-generation immigrants (Masood, Okazaki, & Takeuchi, 2009).

Literature Review

This review focused on risk and protective factor relevant to the experience and mental health of immigrant women. These include factors including acculturation, family and cultural conflict, length of stay and region of origin. Each of these factors can act as a protective or as a risk factor depending on the context, the other factors in play, and the particular group of women in question. Other factors such as socioeconomic status, employment, and education were excluded because they affect all populations and are not specific to immigration and immigrants (Kirmayer et al., 2011).

Acculturation

The *Merriam-Webster Dictionary* defines acculturation as "cultural modification of an individual, group, or people by adapting to or borrowing traits from another culture; *also*: a merging of cultures as a result of prolonged contact" (Merriam-Webster, Incorporated, 2015, Definition of Acculturation section, para 1). In the case of immigrants, it is usually the immigrants adapting to, or borrowing from, the culture of their host country. This consists of changes in or adoption of language, cultural and ethnic identity, attitudes and values, social customs and relations, gender roles, food and music, and media use (American Psychological Association, Presidential Task Force on Immigration (APAPTFI), 2012)). Berry (1997) discussed acculturation in terms of four pathways: marginalization, assimilation, separation, and integration.

1) *Marginalization* is the rejection of both culture of origin and host culture;

2) *Assimilation* is the rejection of one's culture of origin in preference of the host culture;

3) *Separation* is the rejection of the host culture in order to maintain ones culture of origin; and

4) *Integration* is the acceptance and maintenance of both the host culture and one's culture of origin.

Assimilation was historically perceived as the ideal pathway for immigrants. That goal has changed in recent years. A really high or really low degree of acculturation for one culture over the other is often associated with worse psychological outcomes (Berry, 1997; Choi, Miller, & Wilbur, 2009; Morawa & Erim, 2014). Because acculturation does not occur in isolation, an immigrant cannot choose their level of acculturation. There are many mediating factors like the level of acceptance from the host country (e.g., attitudes toward immigrants), the level of

acceptance from their community of origin (e.g., social support), and the resources the immigrant

embraces to aid in their acculturation, such as language ability. When these factors hinder or

complicate the process of acculturation, they can lead to acculturative stress, which is a risk

factor for mental health issues like depression and anxiety disorders (Berry, 1997; Hovey &

Magana, 2000; Morawa & Erim, 2014). On the other hand, an immigrant's ability to 1)

acculturate with both acceptance from the host country and support from their community of

origin and 2) access the resources and benefits of both cultures can be a protective factors against

depression and anxiety disorders (Choi et al., 2009; Ayers et al., 2009).

Family and Cultural Conflict/ Social Support

There have been many studies conducted on family conflict/family cohesion and cultural

conflict or lack thereof, as protective or risk factors for the mental health of immigrants.

According to Alegría et al. (2008), *family cohesion* is defined as "the emotional bonding that

family members have toward one another" (p. 357). *Family conflict* is the disruption of those

emotional bonds within a family and *cultural conflict* results from a family member rejecting

traditional cultural values and norms in favor of the cultural values and norms of the host society

(Alegría et al., 2008). Some immigrants leave behind family and friends and thus leave behind

their social ties and support system. Once they arrive in the host country they are tasked with

creating and maintaining new ties in a new environment. The loss of these social ties and support

is especially difficult for immigrants who come from collectivistic societies where family and

community relationships are highly valued (Salas-Wright, Kagotho, &Vaughn, 2014) and they

strive to re-create ties within the immigrant community. Other immigrants come to the host

country with their families, but struggle to maintain family cohesion while acculturating to the

host society. It follows that for an immigrant from a collectivistic society, family and cultural

conflict would be a risk factor for depression and anxiety disorders, where a cohesive family relationship would be protective against such disorders (Alegría et al., 2008; Masood et al., 2009; Wu & Chow, 2013). Unfortunately, creating or maintaining familial ties in a new setting can be a strain on the immigrants. One study found that South Asian immigrant women had higher levels of distress due to lack of support from their extended family (Masood et al., 2009).Strong family ties can also help lower the risk of depression and other mental disorders. Alegría et al. (2008) found family cohesion in Latinos who immigrated to the United States was associated with lower rates of psychiatric disorders.

It is possible that some immigrants could have lower mental health risk in their new environments than the local population: this is described as the *immigrant paradox*. The concept of the immigrant paradox is the idea that first-generation immigrants are likely to have a lower risk of mental disorders compared to the host population and subsequent immigrant generations, whose risk for mental disorders begin to mirror those of the host population (Alegría et al., 2008). The immigrant paradox is often attributed to the benefits of stronger family and community ties common in most immigrant communities. Second- and subsequent generations of immigrants do not have the same ties to their communities and families due to the process of acculturation where they begin to associate with the host culture. This typically includes an emphasis on independence and individuality that is not common in first-generation immigrants. Thus, the benefits of strong family and cultural ties are often lost (Takeuchi, Zane, et al., 2007). Some authors also suggest that the immigrant paradox can be attributed to the healthy migrant effect, where healthy populations are more likely to successfully migrate and more likely to pass the medical screenings required of immigrants (Salas-Wright, Kagotho, &Vaughn, 2014). Other authors argue that socioeconomic conditions and ethnic discrimination in the host country

contribute to poor health conditions for second-generation immigrants and the host population

(Missinne & Bracke, 2010).

Region of Origin/Perceived Discrimination

Region of origin plays a role in the mental health of immigrants through factors such as

perceived discrimination and racism. Immigrants arriving from racially/ethnically homogenous

countries are exposed to overt and subtle forms of new discrimination. This new generation of

immigrants are often people of color from countries in Africa, Asia, Latin America, and the

Caribbean who have to deal with racial discrimination in their new country based on visible

physical characteristics such as skin color and traditional dress on top of the stigmas associated

with being an immigrant. They are often profiled and lumped into a single group of 'others'

despite how they might self-identify (APAPTFI, 2012).

Part of the WHO's definition of good mental health is that, among other things, an

individual is able to cope with daily stresses of life. Harrell (2000, p. 43) states that for

immigrants and people of color, these daily life stressors include experiences of race in

"interpersonal, collective, cultural-symbolic, and sociopolitical contexts" that those in the

dominant or host culture do not experience. She describes this racism-related stress as:

> The race-related transactions between individuals or groups
>
> and their environment that emerge from the dynamics of
>
> racism, and that are perceived to tax or exceed existing individual
>
> and collective resources or threaten well-being (Harrell, 2000, p.3).

Studies on racism-related stress and perceived discrimination show negative impacts on

the mental health of those affected (APAPTFI, 2012; Harrell, 2000; Smokowski, Chapman, &

Bacallao, 2007). For example, a 2006 longitudinal study conducted with African-American

women in Detroit found an association between self-reported daily discrimination and poor

mental and physical health. An increase in the amount of discrimination encountered over time

led to an increase in the symptoms of depression. This association held true even when the

effects of income and education were accounted for (Schulz et al., 2006).

This literature review focused on defining the terms most frequently addressed in this

review while providing readers with a background for concepts like the immigrant paradox. It

outlined the risk and protective factors that were used to draw the conclusions discussed in the

results section of this review. It also served to equip readers with a greater understanding of these

factors. The following sections of the review were organized around the risk and protective

factors in the same manner as the literature review.

Methods

A comprehensive literature search following Higginbottom and colleagues' (2013)

method was conducted using electronic databases and websites of journals for peer-reviewed,

empirical, quantitative studies: the databases PubMed, EBSCO, and PsychINFO, and the

journals *Transcultural Psychiatry* (Sage Journals) and *Culture, Psychiatry, & Medicine* (Springer

International Publishing) were reviewed for relevant articles. The search terms *mental health*

of/and immigrant women and the *mental health of/and foreign-born women* as well as *depression*

and anxiety disorders of/and foreign-born women, and *depression and anxiety disorders of/and*

immigrant women were used.

As shown in Table 1, the population of interest was limited to immigrant women between

the ages of 18 and 65 years, the age bracket of adults most commonly used in surveys and

studies in the literature. All countries of origin were accepted, but countries of relocation were

limited to Western countries like the United States, Canada, Australia, and countries in Western

Europe, which receive large numbers of immigrants and have the most available data on this

population.

Table 1

Screening and Selection Criteria of Articles

Criteria for inclusion (Closely follows language of Higginbottom et al., 2013)
1. Publication date 2000−2015
2. English language
3. Empirical studies
4. Predictors related to a diagnosis of major depression and anxiety disorders
5. Study participants are immigrant women; where there is mixed sample of immigrant women and non-immigrant women or immigrant women and immigrant men each paper must have findings specific to immigrant women

Searches were limited to quantitative studies conducted in the last 15 years (2000−2015).

Only article titles and abstracts written in English were reviewed. When articles included data for

men or non-immigrant women, only data regarding immigrant women were considered.

The search and review process is illustrated in Figure 1. The articles pulled for this study

with titles and abstracts that matched the above search criteria were stored in RefWorks 2.0

software (ProQuest, LLC), which is a web-based cloud service that is designed to store and

organize articles for the quick and easy creation of reference pages. The reference pages of the

articles stored in RefWorks were checked in order to find other studies that matched the search

criteria as well, a process described as a *cross-reference check*. Once an additional article was

pulled from the reference pages of the original article, both the original and the additional article

were read with two research questions in mind: *What are the immigration-related risk and*

protective factors for depressive and anxiety disorders in immigrant women supported by the

published quantitative research? Do these quantitative studies show a difference in risk and

protective factors for depression and anxiety between first-generation and second-generation

immigrants? All articles that attempted to answer the research questions were pulled aside for

further analysis. An inventory of these articles and the protective and risk factors listed within

them was constructed.
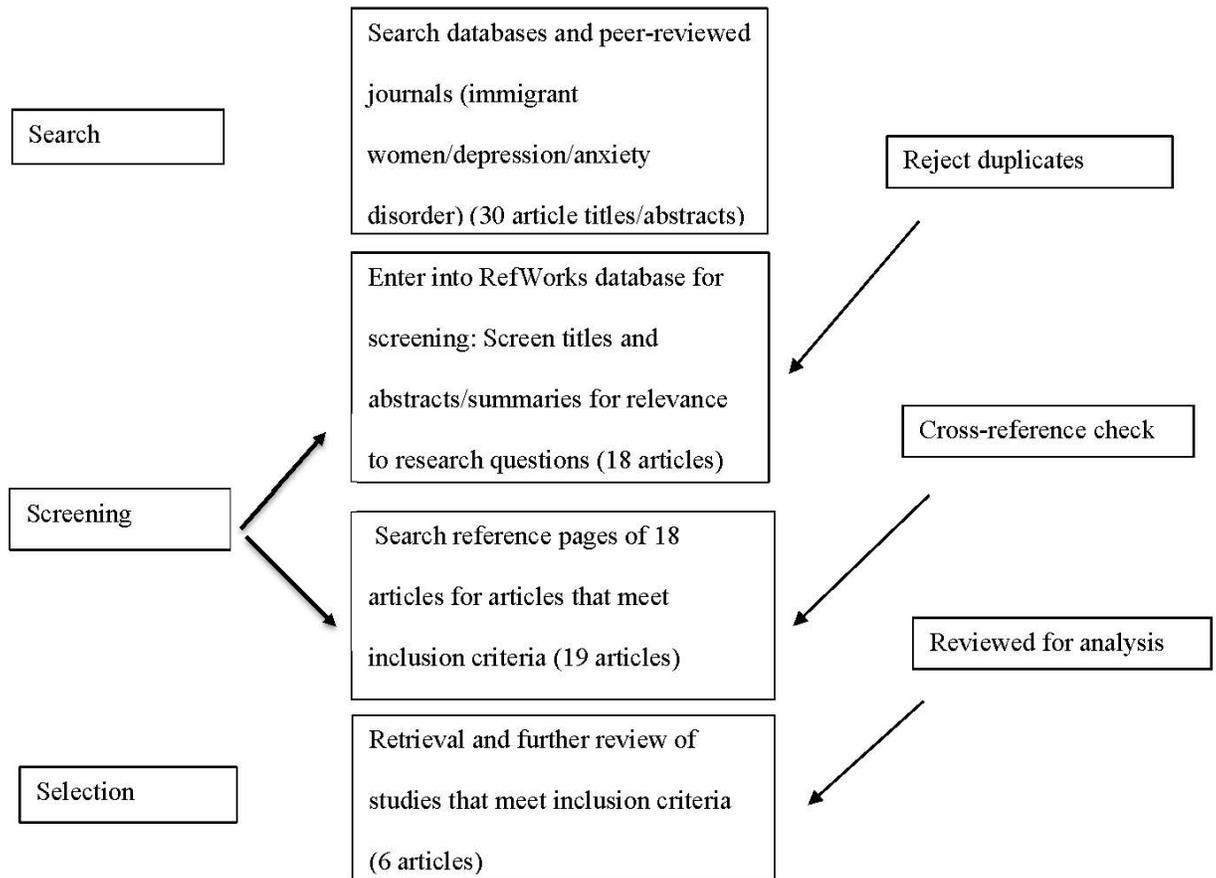
Figure 1. Search and selection process of articles for literature review.

Results

Search and Selection Results

The original search criteria produced 30 article titles and abstracts. After checking for

duplicate studies, 18 articles remained. The articles were stored in RefWorks for further

screening. After critical appraisal of the full articles, the 18 articles were all found to be matches

for the inclusion criteria (Table 1). A cross-reference check was done for these 18 articles. This

resulted in the addition of one article, for a total of 19 articles. After further review, 13 of the 19

articles were excluded from the final analysis for the reasons specified in Table 2.

Table 2

Studies Excluded from Analysis

Citation	Reason not included in analysis	Notes
Takeuchi, D. T., Zane, N., Hong, S., Chae, D. H., Gong, F., Gee, G. C… Alegría, M. (2007)	Acculturation indicator was inconsistent with other studies (focused only on language proficiency)	
Lau, A. S., Tsai, W., Shih, J., Liu, L. L., Hwang, W., & Takeuchi, D. T. (2013)	Used very different definition of 1st vs. 2nd generation immigrant from the definition chosen for this analysis	Results reported by generation
De-Wit, M., Tuinebreijer, W., Dekker,J., Beekman,A-J., Gorissen, W., Schrier, A . . . Verhoeff, A. (2008)	Focused on socio-economic factors not specific to immigrants or immigration	
Gushulak, Pottie, Roberts, Torres, & DesMeules (2011)	Did not present results specific to depression or anxiety disorder	
Hovey, J.D., & Magana, C. (2000)	Included factors specific to migrant workers which are an excluded population	
Lara-Cinisomo, S., Griffin, B. A., & Daugherty, L. (2009)	Study population was limited to mothers with depression. Did not want to account for possibility of post-partum depression	
Levecque, K., Lodewyckx, I., & Vranken, J. (2007)	Risk and protective factors were not immigration specific	
Levecque, K., Lodewyckx, I., & Bracke, P. (2009)	Findings were not specific to immigrant women	
Missinne, S., & Bracke, P. (2012)	Results not specific to immigrant women	
Miszkurka, M., Goulet, L., & Zunzunegui, M. V. (2010)	Results specific to pregnant women. Did not want to account for other possible factors	
Schulz, A.J., Gravlee, C.C., Williams, D.R., Israel, B.A., Mentz, G., & Rowe, Z. (2006).	Addressed factors and population outside of immigrants/immigration	
Smokowski, P., Chapman, M., & Bacallao, M. (2007)	Results not specific to immigrant women	
Wu, Q., & Chow, J. C. (2013)	Host country excluded	

The following review of the six quantitative results was organized to mirror the literature

review of the qualitative literature; it has the same sub-headings of the risk and protective factors

found in the six studies. Table 3 shows the break-down of the six studies that were analyzed.

Table 3

Inventory of Studies Included in Analysis

Topic	Citation	Population /Sample Size	Risk Factors	Protective Factors	First- vs. Second- Generation Difference
Accultura-tion	Choi, Miller, & Wilbur (2009)	n=178 Korean women	N/A	Acculturation	Yes
	Ayers, Hofstetter, Usita, Irvin, Kang & Hovell (2009)	n=591 Korean women	Immigrant stress	Acculturation Social support	N/A
	Morawa & Erim (2014)	n=471 Turkish women	N/A	Acculturation	Yes
Family/ Cultural Conflict and Social Support	Molina & Alcantra (2013)	n=1,427 Latina women	Family cultural conflict Family burden	Family cohesion Social support	No
	Ai, Weiss, & Fincham (2014)	n=1,427 Latina women	Family conflict	Family cohesion	N/A
Region of Origin/ Perceived Discrimina-tion	Kim & Noh (2013)	n=394 women from five ethnic communi-ties	Perceived discrimination	N/A	N/A
	Ai, Weiss, & Fincham (2014)	n=1,427 Latina women	Perceived discrimination	N/A	Yes

Acculturation

Choi, Miller, and Wilbur (2009) conducted a cross-sectional study to examine a

hypothesized association between acculturation and depression in immigrant Korean women in

the United States. They interviewed 200 Korean women between the ages of 18 and 64 who

were born in Korea and had immigrated to the United States. Complete data was collected for

178 of the 200 women. The majority of the women were college-educated and married, with a

mean age of 41 years. A cluster analysis divided the women into four groups; Korean (45%,

n=80, of the sample), American (22%, n=40), marginalized (26%, n=46), and bi-cultural (7%,

n=12). The 'Korean' cluster included women who scored high on culture of origin orientation

and Korean language use. The 'American' cluster scored high on host culture orientation and use

of English language. The 'marginalized' cluster, defined as women who did not identify with

either the Korean or American culture, scored low on orientation to both cultures and high on use

of the Korean language. The 'bicultural' cluster, defined as women who identified strongly with

both the Korean and American culture, scored high on orientation to both cultures and use of

both languages. There was a significant difference in age of migration (p=0.011), with women in

the marginalized cluster being older (x=27.9 years) than the American cluster (x=22.2 years) and

bicultural cluster (x=20.5 years). Depression scores from the Center for Epidemiologic Studies

Depression Scale (CES-D) were also significantly different between the clusters (p=0.007), with

the marginalized cluster women scoring highest (x=14.2). The American cluster scored the

lowest (x=8.7) on the depression scale.

In 2007, another study was conducted with immigrant Korean women to determine the

effects of "acculturation, immigrant stress, and social support on depression" (Ayers et al., 2009,

title). The population sample consisted of 591 Korean women aged 18 and older chosen

randomly from a phone book for the telephone survey. Depression was measured by a short (10

question) version of the CES-D. The Suinn-Lew Asian Self-identity Acculturation to U.S.

Society Scale adapted for a telephone interview was used to measure level of acculturation.

Immigrant stress was measured using the Demands of Immigration Scale and social support was

measured using the Interpersonal Support Evaluation List. They conducted both bivariate and

multivariate association analysis. The bivariate analysis showed a negative association between

acculturation and depression (r=-0.119, p=0.01). Immigrant stress was associated with

depression (r=0.231, p=0.01). Social support was also negatively associated with depression (r=-0.293, p=0.01). They then compared the relationship between acculturation and immigrant stress

and found a negative association (r=-0.512, p=0.01). In this analysis, immigrant stress had a

stronger association with depression than acculturation and higher levels of acculturation were

associated with reduced levels of depression and immigrant stress. This suggests that

acculturation might have more of an effect on depression through its effect on immigrant stress

than it does on depression alone (Ayers et al., 2009).

Morawa and Erim (2014) recruited 254 primary care patients and 217 psychosomatic

outpatients, of Turkish origin between 2011 and 2013. (Psychosomatic describes patients whose

physical symptoms are believed to be caused or aggravated by mental health factors.) They

measured the level of acculturation, strategy used to acculturate (marginalization, separation,

integration, assimilation), and depressive symptoms. They then analyzed gender and migration

influences on the levels of acculturation and depression. Depression was measured using a

Turkish version of the Beck Depression Inventory and acculturation was measured using a

Turkish version of the Frankfurt Acculturation Scale (FRACC). The scale was then divided into

the four categories representing strategies for acculturation model (Figure 2) (Morawa & Erim,

2014) Turkish women represented 53.7% of the sample (n=471). No difference was found

between men and women in their level of acculturation to either host or culture of origin.

However, women showed significantly higher levels of depression (x=21.8) than men (x=15.1,

p<0.001). First-generation immigrants scored higher on the BDS (m=20.2) than the second-

generation (14.0, *p*<0.001), indicating higher levels of depression. Overall, there was a

significant difference in levels of depression depending on the acculturation strategy used

(F=8.56 *p*<0.001). Those who used the integration strategy scored lower on the depression scale

(m=14.6) compared to the marginalized cluster (m=23.5), suggesting that integrating with the

majority population was protective against depression in this sample.
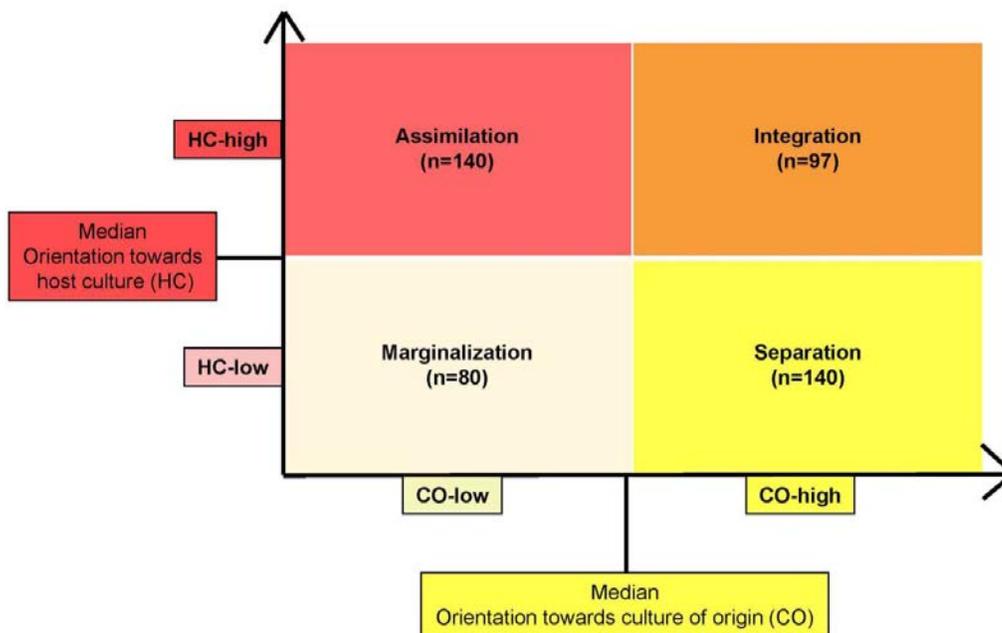
Figure 2. Strategies for Acculturation Model as reflected in the Frankfurt Acculturation Scale

(FRACC). This figure shows the different strategies used for acculturation by immigrants.

Copied from Morawa & Erim, 2014, p. 9509.

Family/Cultural Conflict and Social Support

   Molina and Alcantra (2013) used data from the National Latino and Asian American

Study (NLAAS) to explore the effects of household structure and family ties on the

psychological well-being of U.S. born and immigrant Latino women. The sample size for Latino

women in the NLAAS was 1,427; 43% (n=521) were US-born and 57% (906) were immigrants.

The Kessler Psychological Distress scale (K-10) was used to measure the prevalence of depression and anxiety symptoms. Household structure, family ties, family risks, and family resources were also measured. In U.S.-born Latinas, the study found that family cultural conflict and family burden were associated with higher risk for psychological distress. Family cohesion and family support had no significant association with psychological distress. An association between family cultural conflict and family burden with psychological distress was also found in immigrant Latinas. As with U.S.-born Latinas, there was no significant association between family cohesion and family support. The authors concluded that family cultural conflict and family burden act as risk factors for psychological distress in both U.S.-born and immigrant Latinas, yet family cohesion and support do not act as protective factors in the same populations.

Ai, Weiss, and Fincham (2014) also used the NLAAS study to analyze family factors and general anxiety disorder major depressive disorder, and suicidal ideation in Latina Americans (n=1,427). Major depressive disorder (MDD), generalized anxiety disorder (GAD), and suicidal ideation (SI) were measured by the World Mental Health Survey Initiative version of the World Mental Health Composite International Diagnostic Interview (WMH-CIDI). The study found U.S.-born Latinas to be five times more likely to suffer from major depressive disorder, but did not find an association between MDD and family factors like cohesion or conflict. Family cohesion was a protective factor for Latino women against GAD; one measured unit increase in family cohesion reduced the likelihood of GAD by 20% (Ai, Weiss, & Fincham, 2014, p. 4). Family cohesion did not act as a protective factor for GAD in men, which emphasizes the significance of family cohesion as a protective factor for women.

Region of Origin/ Perceived Discrimination

Kim and Noh (2013) studied the effects of discrimination on depression in five

immigrant communities in Toronto, Canada, using data from the Toronto Study of Settlement

and Health (TSSH). The communities sampled were first-generation immigrants aged 18 years

and older from Ethiopia, Vietnam, Iran, Korea, and Ireland (n=920). Depression was measured

using the Center for Epidemiologic Studies Depression Scale (CES-D). The Everyday

Discrimination Scale was used to measure discrimination (Williams et al., 2008). The sample

was comprised of 49.2% women and 19.6 to 22.6% for each ethnic group, with the exception of

Ethiopia, for which the sample was only 12.4%. Women were significantly less likely to

experience discrimination than men (β=-1.623, p<.0001) but women showed greater depression

from discrimination (β=.254 + 1.195) than men (β=.254). This was especially true for

Vietnamese women, who had significantly higher discrimination-related depressive symptom

compared to the men. Irish women were also more sensitive to discrimination-related depression

compared to Korean, Ethiopian, and Iranian women. Both Ethiopian men and women reported

the highest levels of discrimination, yet had low levels of discrimination-related depression.

Ai and colleagues (2014) also explored the effects of perceived discrimination on

experienced major depressive disorder (MDD) and generalized anxiety. Depression was

measured by the average level of perceived daily discrimination reflected by the answers to nine

survey questions: possible scores range from one (1: never perceive discrimination) to sex (6:

perceive discrimination almost every day) (Ai et al., 2014, p. 3). Perceived discrimination

increased the odds of a major depressive disorder (MDD) diagnosis (incrementally) by 46%.

This was true for U.S.-born Latinas and first-generation immigrants with a length of stay of at

least 11 years.

Discussion

Immigration has long been a controversial global and local issue. Governments have struggled with finding a balance between allowing freedom of movement in order to increase diversity and allow growth in opportunities for all people and in order to care for ever-increasing populations that arrive with their own issues and who struggle to adapt to their new environment.

This review was an attempt to map out the burden of mental health issues such as depression and anxiety disorders in immigrant women due to immigrant- or immigration-specific stressors. Immigrants face a different set of factors that act as protective or risk factors to their mental well-being. Factors like acculturation, family and cultural conflict, social support, and region of origin either enhance or mediate the effects of immigrant stress that may lead to depression or anxiety. These factors act differently depending on the immigrant's country of origin, age at relocation, race and ethnicity, and level of perceived discrimination.

Acculturation was closely linked to age at migration and at what level the immigrants chose to acculturate to the host culture, but was also linked to levels of immigrant stress. Women who were marginalized from both their own and the host culture suffered the highest levels of depression and first-generation immigrants had higher levels of depression compared to second-generation immigrants. Higher levels of acculturation were associated with both reduced depression and immigrant stress. Interestingly, there was no direct relationship between acculturation and depression. Instead, acculturation reduces the risk of depression by reducing immigrant stress, which does have a direct effect on depression. This is a great example of the complication of variables including compounding effects of multiple factors and the non-linear associations that result from the multiple factors. It is difficult to look at any of these factors separately and get a direct measurement of their effect on depression and anxiety disorders in

immigrant women. Many of these factors are related to each other and to other variables unique to immigration, to gender, to age, to race and discrimination, and many other variables that were not considered in this analysis.

Similarly, family and cultural conflict and social support behaved differently in foreign-born versus U.S.-born Latino women (Molina & Alcantra, 2013). Although family conflict was associated with psychological distress in both groups in one study, another study found that U.S.-born Latinas were five times more likely to suffer from major depressive disorder (MDD), although they did not find an association between MDD and family conflict (Ai et al., 2014). The former study found family cohesion/social support did not act as a protective factor for either foreign or U.S.-born Latina women, but the latter study found family cohesion to be a protective factor for generalized anxiety disorder. This effect was not found for the men in that study, showing that gender plays a significant role in the association between family cohesion and anxiety disorder (Molina & Alcantra, 2013).

The results for region of origin were even more complex as the studies included participants from numerous countries. For example, one study found that, although women reported less discrimination than men, they had higher levels of discrimination-related depression. The effects of discrimination on depression was higher in some groups of women than it was in others, but the group that reported the highest levels of discrimination (Ethiopian) had the lowest level of discrimination-related depression (Kim & Noh, 2013). Another study found that perceived discrimination had an incremental effect on depression, but that this was only true for the U.S.-born and the first-generation individuals that had a length of stay in host country of at least 11 years. If the foreign-born immigrant had a high-school-level of education, that effect was nullified. The same did not hold true for the U.S.-born sample (Ai et al., 2014).

Limitations

There were some limitations to this analysis. It covers studies based on different ethnic groups with varying results, so the findings cannot be generalized to all immigrants. However, looking at several different ethnic groups does allow for a more international perspective. The population of interest ranges from newly-arrived immigrants to second-generation immigrants: it is possible that the understanding of depression and anxiety would differ between these groups of women. The studies also used cross-sectional data, which do not allow conclusions on the causality of depression and anxiety. We can, however, observe the strength of the associations. The use of cross-sectional data and studies only accounts for each variable once: it does not take into account changes across the different phases of an individual's life. Mental disorders, the symptoms and the factors associated with them change in intensity and duration throughout an individual's life. This would be better accounted for by a life course approach or longitudinal studies. The data used in this analysis are largely self-reported, so it is possible that the results are skewed. The wide range of studies considered also means that there were differences in data collection, translation, and instruments used, which could account for the varying results.

<div align="center">

Conclusion

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Migration is increasing with the growing number of conflicts around the world. There will be larger numbers of immigrants, most of them refugees, who will have experienced high levels of trauma and insecurity. Researchers and practitioners in the United States and other receiving nations need to be ready to provide effective mental health support and services to these populations. This analysis of these studies serves to describe the complicated relationship between immigration-related factors and the mental health of immigrant women while bringing to light the multitude of roles played by these factors. In order to understand the mental health of

immigrant women, close attention needs to be paid to the interaction of these factors. Further

studies need to be conducted on the effect of immigration-related factors on depression and

anxiety in women and the most effective ways to mitigate these factors.

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Appendix A: List of Competencies Met in CE

Tier 1 Core Public Health Competencies

Domain #1: Analytic/Assessment Skills
Describes factors affecting the health of a community (e.g., equity, income, education, environment)
Identifies quantitative and qualitative data and information (e.g., vital statistics, electronic health records, transportation patterns, unemployment rates, community input, health equity impact assessments) that can be used for assessing the health of a community
Applies ethical principles in accessing, collecting, analyzing, using, maintaining, and disseminating data and information
Uses information technology in accessing, collecting, analyzing, using, maintaining, and disseminating data and information
Selects valid and reliable data
Selects comparable data (e.g., data being age-adjusted to the same year, data variables across datasets having similar definitions)
Identifies gaps in data
Collects valid and reliable quantitative and qualitative data
Uses quantitative and qualitative data
Contributes to assessments of community health status and factors influencing health in a community (e.g., quality, availability, accessibility, and use of health services; access to affordable housing)
Domain #2: Policy Development/Program Planning Skills
Identifies current trends (e.g., health, fiscal, social, political, environmental) affecting the health of a community
Describes implications of policies, programs, and services
Domain #3: Communication Skills
Conveys data and information to professionals and the public using a variety of approaches (e.g., reports, presentations, email, letters)
Domain #4: Cultural Competency Skills
Describes the concept of diversity as it applies to individuals and populations (e.g., language, culture, values, socioeconomic status, geography, education, race, gender, age, ethnicity, sexual orientation, profession, religious affiliation, mental and physical abilities, historical experiences)
Domain #5: Community Dimensions of Practice Skills
Recognizes relationships that are affecting health in a community (e.g., relationships among health departments, hospitals, community health centers, primary care providers, schools, community-based organizations, and other types of organizations)
Suggests relationships that may be needed to improve health in a community
Domain #6:Public Health Sciences Skills
Recognizes limitations of evidence (e.g., validity, reliability, sample size, bias, generalizability)
Domain #7: Financial Planning and Management Skills
N/A
Domain #8: Leadership and Systems Thinking Skills
N/A

Concentration Specific Competencies

Global Health:
Identify strategies that strengthen community capabilities for overcoming barriers to health and well-being
Conduct evaluation and research related to global health
Enhance socio-cultural and political awareness