

# Understanding Immigration and Psychological Development: A Multilevel Ecological Approach

Bryant T. Jensen

**ABSTRACT.** Approximately one in five children in the U.S. are born to immigrant families in which at least one parent is foreign-born. Existing theoretical frameworks suggest that immigration experiences can increase acculturative stress and lead to developmental psychopathology in immigrant children. These models, however, do not account for levels in the environment that trigger this stress and/or serve as forms of resilience. Drawing from Bronfenbrenner's multilevel, bioecological model of development, this paper presents a framework that charts environmental processes which generate or buffer acculturative stress and, therefore, mediate the impact of immigration on psychological well-being. Empirical research shows that Mexican immigrants, on the whole, fare better than U.S.-born groups in terms of mental health outcomes. These results are explained in the context of the presented theoretical model. Though further research is needed, preliminary evidence suggests that encouraging "enculturation," as opposed to "acculturation," has positive mental health repercussions for Mexican American children. Further research using the presented theoretical framework as well as policies and practices that incorporate and leverage the cultural strengths of Mexican immigrant children should be pursued.

**KEYWORDS.** Immigration, development, psychopathology, children, Mexican-American, acculturation, research synthesis

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## INTRODUCTION

Our world is becoming increasingly globalized. Technological advances and international markets make traveling and communicating from long distances easier and more affordable. Corollary to merging markets, expedited trade, and political and private agreements for economic collaboration between nations is the hybridity of cultural groups and traditions (Cancini, 2004). Cultures collide as politically and economically marginalized populations seek prosperity in foreign, more affluent and stable countries. As a result, languages, beliefs, and values traditionally isolated by geographical and infrastructural borders confront and engage one another now more than ever. As a case example, the influx of Mexican immigration to the United States has dramatically risen over the past few decades. In 2003, 35% of the foreign-born population in the U.S. was of Mexican origin (Larsen, 2004). Moreover, approximately one in five school-age children in the U.S. are born to an immigrant family.

Developmental and psychological theories posit that immigrant children are at risk to develop a psychopathological condition due to stress associated with acculturation. The immigration experience has been presented in past literature (García-Coll & Magnuson, 1997) as causing acculturative stress which leads to psychopathology (e.g., anxiety, mood, and post-trauma disorders). These models, however, do not take into account personal resilience (Berger, 2002), and the multilevel influences within the environment on psychological well-being (a catch-all phrase meaning contentment, satisfaction, belonging, and typical levels of mood and anxiety). This paper frames the impact of immigration on psychological development in terms of Bronfenbrenner's bioecological model of development. It describes the processes that mediate the psychological effect(s) of immigration, and discusses ways in which resilience and positive psychological well-being emerge when the environment buffers the acculturative stress associated with immigration. Several studies comparing Mexican-born populations to the U.S.-born groups are evaluated to determine how immigration, in general, has influenced psychological outcomes for the largest immigrant group in the U.S. Various interpretations of these data are explored, and research findings are discussed in terms of the presented theoretical framework. A brief discussion of future research and implications for policymakers and practitioners working with Mexican immigrant children are offered.

## IMMIGRATION IN THE UNITED STATES

The United States of America has historically been a nation of immigrants, a country with a large foreign-born population. Since the 1920s, the foreign-born percentage of the total population has been on the constant rise (Passel & Fix, 2001). In March 2003, the population in the United States included 33.5 million foreign-born, representing 11.7% of the U.S. population.

Over the past four decades or so, immigrant families in the U.S. were primarily concentrated in six states: CA, NY, TX, FL, NJ, and IL (Fix & Passel, 2003; Hernandez, 2004; Passel & Fix, 2001; Schindley, 2001; Suárez-Orozco, 2001). Prior to 1995, 3 in 4 of the nation's immigrants were found in these states. However, during the late 1990s, many newcomer families dispersed throughout the nation and only 2 in 3 of the nation's immigrants were found in the six traditionally immigrant states by 2000 (Fix & Passel, 2003). States experiencing the largest proportional increases in immigrant populations are located principally across the middle of the country, including many from Rocky Mountain, Midwest, and Southeastern states. Arkansas and North Carolina experienced the largest proportional proliferation of immigrant families from 1990 to 2000, each over 300% (Hernandez, 2004).

Along with the national dispersal of immigrant families during the 1990s, the U.S. underwent an increase in the number of newcomer families who were undocumented (Fix & Passel, 2003). Fix and Passel estimated that the flow of undocumented immigrants to the U.S. more than doubled between the early and late 1990s. It was estimated that in March 2000, 26% (8.5 million) of immigrants in the U.S. were undocumented and that 1.1 million of these were school age (5-19) children (Fix & Passel, 2003). Being undocumented can exacerbate levels of acculturative stress within multiple levels of the environment.

The current wave of immigration to the U.S. is mostly of Hispanic origins. As the total foreign-born population continues to proportionally increase compared to the total U.S. population, the Hispanic share of the foreign-born has dramatically increased compared to European-origin and Asian-origin Americans (see Table 1). This especially has had an impact on the demographic profile of the k-12 student population in the country (see Table 2). From 1900 to 1910, 2% of children of immigrant families—first and second generation children who have at least one foreign-born parent—were from Latin America compared to 62% in 2000 (not including children of Puerto Rican parents). In 1990, 60% of all Hispanic children in the U.S. were from immigrant families (Pong, Hao,

TABLE 1. European, Hispanic, and Asian Immigrants with U.S. Total and Foreign-Born Population: 1970-2003 (in Thousands)

Year	U.S. Total	U.S. Foreign-Born Populations*			
		U.S. Foreign-Born	Hispanics	Asians	Europeans
2003	290,809	33,500	17,856	8,375	4,590
		(11.7%)	(53.3%)	(25.0%)	(13.7)
2002	288,400	32,500	16,965	8,288	4,550
		(11.5%)	(52.2%)	(25.5%)	(14.0%)
2000	281,421	28,379	14,477	7,246	4,255
		(10.1%)	(51.0%)	(25.5%)	(15.3%)
1990	248,791	19,767	8,407	4,979	4,350
		(7.9%)	(42.5%)	(25.1%)	(22.0%)
1980	226,546	14,079	4,372	2,539	5,149
		(6.2%)	(31.0%)	(18.0%)	(36.6%)
1970	203,210	9,619	1,803	2,489	5,740
		(4.7%)	(18.7%)	(25.9%)	(59.6%)

\* Percentages of the U.S. total foreign-born population

Sources: Gibson, C., & Lennon, E. (1999). *Historical Census Statistics on the Foreign-born Population of the United States*. U.S. Census Bureau, Population Division, Washington, D.C.: U.S. Government Printing Office; Larsen, L. (2004). *The foreign-born population in the United States: 2003*. Current Population Reports, P20-551, U.S. Census Bureau, Washington, D.C.: U.S. Government Printing Office; U.S. Census Bureau (2000). *Current Population Survey: Statistical Abstract of the United States, 2000*. Ethnic and Hispanic Statistics Branch, Population Division, U.S. Census Bureau, Washington D.C.: U.S. Government Printing Office.

& Gardner, 2002). The prevailing presence of Hispanics within the population of immigrant children is not likely to shift within the near future given that one-third of the Hispanic population under 18 years old, Latin American immigration rates remain very high and are gradually escalating, and birth rates among Hispanics are high compared to other racial and ethnic groups (Pérez, 2004).

Increases of children in Hispanic immigrant families are largely due to the influx of newcomers from Mexico, which in 2000 constituted 39% of all children in immigrant families. In this same year, no other country of origin accounted for more than 4% of the population of children from immigrant families though more than one hundred countries are represented by children of immigrants in the U.S. (Hernández, 2004). Currently, over 5.1 million children in the U.S. are children of undocumented or documented Mexican immigrants (Fix & Passel, 2003; Hernández, 2004; Shields & Behrman, 2004). Indeed, México provides the largest source of legal and illegal immigration in the U.S. (Fix, Zimmerman, & Passel, 2001). It is thus critical to understand salient attributes of the Mexican immigrant population that may prove rel-

TABLE 2. Immigrant and Native Children Enrolled in K-12 Schooling in US: 1970-2000 (in Thousands)

Year	K-12 Enrollment		Children of Native Parents	Total K-12 Enrollment	Percentage of Immigrant Enrollment in Total K-12 Population
	Children of Immigrants*				
	Foreign-born (1st generation)	U.S.-Born (2nd generation)			
1970	770 (24.8%)	2,334 (75.2%)	45,676	48,780	6.4%
1980	1,506 (32.2%)	3,169 (67.8%)	41,621	46,296	10.1%
1990	1,817 (31.6%)	3,926 (68.4%)	35,523	41,266	13.9%
1995	2,307 (29.2%)	5,590 (70.8%)	41,451	49,348	16.0%
2000	2,700 (25.7%)	7,800 (74.3%)	44,200	54,700	20.1%

\*Percentages of total children of immigrant population

Sources: Fix, M., & Passel, J. (2003). *U.S. immigration: Trends and implications for schools*. Washington DC: The Urban Institute. Van Hook, J., & Fix, M. (2000). *A Profile of the Immigrant Student Population*. In J. R. DeVelasco, M. Fix and T. Clewell (Eds.), *Overlooked and underserved: Immigrant children in U.S. secondary schools*. Washington D.C.: The Urban Institute Press.

evant to development of psychological well-being. How do Mexican immigrant families and children fare in terms of psychological well-being, and how can the role of immigration and acculturation be explained in terms of the theoretical framework presented in this paper? Given low levels of parental education attainment, and other risk factors (e.g., more likely to live in crowded housing, be well below the official poverty level, live in linguistically isolated homes, and to not be covered by health insurance) within Mexican immigrant families (Hernandez, 2004), it is important to assess mental health outcomes and contributing environmental processes within this population.

At the same time, certain strengths within immigrant groups are also important to consider. Studies have found that immigrant families compared to U.S. native-born families, possess, in general, numerous strengths relevant to mental health outcomes. Shields and Behrman (2004) made the following observation,

Immigrant families generally come to America with many strengths, including healthy, intact families, strong work ethic and aspirations, and for many, a cohesive community of fellow immigrants from the same country of origin. These strengths can help to insulate children of immigrants from various negative influences in American society (pp. 4-5)

Children of immigrant families are more likely than children of U.S.-born parents to live in a two-parent household (Fix, Zimmerman, & Passel, 2001). Compared to U.S.-born children; children of immigrants have lower infant mortality rates, are reported to experience fewer health problems, and are less likely to engage in risky behaviors such as substance abuse, early sexual intercourse, and delinquent or violent activity, lower dropout rate (Shields & Behrman, 2004). In a study comparing parental involvement of immigrant compared to native-born families, Pong, Hao and Gardner (2002) found that parents of immigrant students were more likely to be involved in social and academic aspects of their children's lives.

### **PSYCHOLOGICAL WELL-BEING OF MEXICAN IMMIGRANTS IN THE U.S.**

As the largest immigrant group in the U.S., much discussion and debate regarding the impact of immigration on psychological development for Mexican Americans has emerged. Various interpretations have been presented to explain a finding that continues to emerge from epidemiological studies comparing lifetime psychopathological prevalence rates of Mexican-born immigrants to U.S.-born Mexican Americans. Such prevalence studies evaluate the percentage of populations affected with a range of mental health conditions at a given time. Findings from these studies appear to contradict the notion that immigrants have low mental health due to acculturative stress. That is, studies show that Mexican-born immigrants have better mental health profiles than do U.S.-born Mexican-Americans (Escarce, Morales, & Rumbaut, 2006; Escobar, Nervi, & Gara, 2000; Grant et al., 2004; Vega et al., 1998). Following are findings from studies which have compared Mexican-born immigrants to U.S.-born populations on a variety of mental health outcomes. These findings are discussed in terms of four competing hypotheses, and in the context of the presented theoretical model, which accounts for resistance afforded by levels of the environment, leading to positive psychological well-being.

Burnam et al. (1987) were among the first to analyze lifetime prevalence rates of mental health disorders in acculturating Mexican Americans. In this study, Burnam et al. extracted a representative household survey sample of 3,132 Mexican-Americans and non-Hispanic whites residing in the city of Los Angeles. Interviews were conducted in Spanish or English to assess DSM-III diagnoses, as well as three levels of ac-

culturation, operationalized by primary language-use and ethnic identity. Subsequently, examiners evaluated the effect of acculturation on the prevalence of mental disorders after controlling for the effects of sex, age, and marital status. Using regression analyses, they found that the prevalence rates for alcohol abuse and dependence, drug abuse and dependence, phobia, and antisocial personality increased significantly in parallel with the level of acculturation, where those more acculturated demonstrated higher levels of pathology. To assess whether the acculturation effect was simply an artifact of place of birth, lifetime prevalence rates of psychiatric disorders among the Mexican-born cohort were compared to the lifetime prevalence rates for U.S.-born Mexican Americans and non-Hispanic whites. These findings showed that Mexican-born immigrants had the lowest prevalence rates, and U.S.-born had the highest.

Over a decade later, another study by Vega et al. (1998) found similar results to the Burnam et al. study, but was also limited to a geographically localized sample, this time in Fresno, California. Vega et al. conducted a prevalence study of major psychiatric disorders in a stratified random sample of over 3,000 adults living in Fresno County. Unlike the previous study, researchers in this study employed the Composite International Diagnostic Interview (CIDI; a measure developed by the World Health Organization for large-scale international psychiatric epidemiological research) to assess mental health diagnoses. A Spanish version was also made available. It was found that the lifetime prevalence rate of "any psychiatric disorder" (including affective disorders, anxiety disorders, substance abuse and dependence, and anti-social personality disorder) was twice as high in the U.S.-born sample as in the Mexican-born sample. Rates of substance abuse and/or dependence were seven times as high in U.S.-born women as in Mexican-born immigrant women, and more than twice as high in U.S.-born men as in Mexican-born men. Antisocial personality disorder was also more prevalent in U.S.-born men. Data were then compared to data collected from a field survey in Mexican City to determine differences by national residency. Results indicated that Mexican-born immigrants' outcomes closely resembled those of their counterparts in Mexico City; both immigrant and Mexico City participants had substantially lower prevalence rates than the U.S.-born cohort. In sum, Vega et al. found that place of birth had a more profound impact on the prevalence of mental health disorders than did age, gender, or socioeconomic status.

Finally, a national study compared foreign-born and U.S.-born Mexican Americans and non-Hispanic whites on lifetime prevalence rates of

DSM-IV Axis I psychiatric disorders (Grant et al., 2004). Using data from the 2001-2002 National Epidemiological Survey face-to-face personal interviews were conducted with 43,093 participants in the continental U.S., the District of Columbia, Alaska, and Hawaii. This study supported the conclusion that foreign-born Mexican Americans have lower rates of mental health problems than their U.S.-born counterparts. Authors found that foreign-born Mexican Americans and foreign-born non-Hispanic whites were at lower risk of DSM-IV substance use and mood and anxiety disorders compared with U.S.-born samples. Overall, the non-Hispanic whites' rates of any psychiatric disorder (51.2%) was nearly twice that for Mexican Americans (36.7%)—the rate for U.S.-born (47.6% and 52.5%) was much greater than for the foreign-born groups (28.5% and 32.3%). Prevalence of any alcohol-use disorder, any mood disorder, and any anxiety disorder among U.S.-born Mexican Americans and non-Hispanic whites also was nearly twice as large as the corresponding foreign-born rates.

Some national data have recently been published on mental health outcomes of Mexican immigrant children compared to other racial/ethnic subpopulations in the U.S. (Crosnoe, 2005). Comparing Mexican immigrant children to other Latino/a, African American, Asian American, and White kindergartners on teachers' reports of child mental health (i.e., how often teachers observed signs of anxiety, loneliness, low self-esteem, and sadness), Crosnoe found that children from Mexican immigrant families had slightly better mental health than their white peers. Additional analyses revealed that their reported mental health was slightly better than that of African American and other Latino/a children and similar to that of Asian Americans. Thus, while Mexican immigrant children were found to be overrepresented in schools with a variety of problematic characteristics, these same children, on average, demonstrated higher levels of mental health than their peers. Additional study is needed to determine differences among Mexican-American children by immigrant generation status and how acculturation and intergenerational parent practices influence socio-emotional and behavioral problems.

While the literature suggests that children of Mexican descent have higher levels of depression (Joiner, Perez, Wagner, Berenson, & Marquina, 2001; Roberts, Roberts, & Chen, 1997) and lower levels of conduct problems (McLoyd & Smith, 2002) compared with Euro-American children, differences within this population by immigration status and the role of acculturation are yet unclear. A few studies have examined the parental practices of Mexican Americans, examining the effect these have on child psychopathological outcomes, and the role of

acculturative stress, but some inconsistencies have arisen from the results (Dumka, Roosa, & Jackson, 1997; Florsheim, Tolan, & Gorman-Smith, 1996; Gonzales, Pitts, Hill, & Roosa, 2000; Hill, Bush, & Roosa, 2003; Roosa, Tein, Groppenbacher, Michaels, & Dumka, 1993). Further research is needed to assess prevalence of psychopathological outcomes Mexican-American children across levels of acculturation to decipher the general mental health status of this student population, by immigrant status. *Proyecto La Familia*, with funding from the National Institute of Mental Health (NIMH), involves interviews with 750 Mexican-American families in the Phoenix Metro area to assess various social dimensions and psychological processes for this population (CLAS, 2006). It represents a promising effort to expand our knowledge base on several issues, including the mental health status of Mexican-American children, and the role of acculturation. The theoretical model that follows will be useful to such research endeavors that seek to account for ways in which levels of the environment generate or buffer acculturative stress and, therefore, influence the developmental of psychological outcomes for immigrant populations.

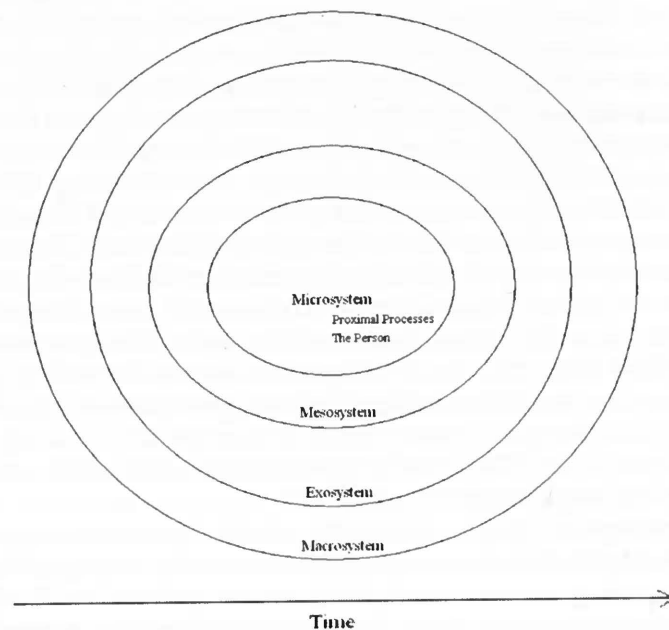
### **ENVIRONMENTAL INFLUENCES ON PSYCHOLOGICAL OUTCOMES**

Rooted in increasingly strong theoretical and empirical support, Bronfenbrenner's bioecological model of human development posits that environmental forces interact with physiological attributes to shape outcomes in individual behavior, psychology, and pathology (Bronfenbrenner, 1974; Bronfenbrenner, 1986; Bronfenbrenner & Evans, 2000; Bronfenbrenner & Morris, 1998). Emphasizing the role of the environment, critical properties in this developmental model include proximal processes, the person, environmental contexts, and time. The proximal processes occur within the microsystem and consist of daily and immediately available tasks that directly shape development, including, for example, peer play, problem solving, athletic activities, and feeding (Miller, 2002, p. 439). Individual characteristics (the person) refer to bio-psychological factors which interact with environmental attributes over time to either impinge on or support development.

Bronfenbrenner (1989) expands the role of the environmental context on developmental processes and outcomes by distinguishing between interacting environmental levels (from proximal to distal): the microsystem, the mesosystem, the exosystem, and the macrosystem

(see Figure 1). First, being the most proximal, the microsystem consists of face-to-face interactions of persons with the developing individual (Bronfenbrenner, 1989). A child's home, school, and peer group are important microsystems. Second, the mesosystem includes linkages that occur between two or more settings that include the developing person (Bronfenbrenner, 1989). Value systems between school and home (two separate microsystems), for example, interact to shape a child's moral development. Thus, a mesosystem is a system of intermingling microsystems. Third, the exosystem includes linkages occurring between two or more settings, at least one of which does not typically contain the developing person (Bronfenbrenner, 1989). Events in this system influence processes within the child's immediate setting but do not actually include the child. An example of this system may be a parent's workplace, which has the potential to create and build up stress in a parent. Following a stressful day at work, a child's mother and/or father may transfer harmful correlates with stress (e.g., anxiety, depression, pressure) to the home environment, impacting processes in the meso- and

FIGURE 1. Bronfenbrenner's Bioecological Model of Development.



microsystem. The exosystem may include the economic system, the transportation system, local government, mass media, or other societal institutions (Miller, 2002, p. 438). Finally, the most distal of Bronfenbrenner's ecological levels is the macrosystem. This system is commonly known as a society's general or mainstream culture. According to Bronfenbrenner (1989), the macrosystem consists of combining patterns of micro-, meso- and exosystems and are particular to a given culture, subculture, or other broader context. Critical components of this broad ecological level include belief systems, resources, hazards, life styles, opportunity structures, life course options, and patterns of social interaction (Bronfenbrenner, 1989). The macrosystem, therefore, can be referred to as a general cultural blueprint that influences how adults (i.e., parents, teachers, coaches, etc.) in the child's life define goals, risks, values, and ways of raising the next generation (Bronfenbrenner, 1989; Miller, 2002, pp. 438-439). These four levels inevitably interact in complex ways to construct an environment that molds developmental pathways.

An element of Bronfenbrenner's model that underlies the influence of proximal processes, the person, and levels of environmental context is time (Bronfenbrenner & Morris, 1998). Time interacts with each level of the environment to influence development. Elements within and between environmental levels have the potential to interact with proximal processes and physiological characteristics across time to generate developmental pathways that influence psychological outcomes. In the case of children, events that interrupt processes within the microsystem may induce parental stress, deprivation, and neglect. Because immigrant children and families often arrive to the U.S. with different, often conflicting, expectations and experiences in environmental levels, stresses induced by cultural differences between their native and the receiving environment may be detrimental to their mental health. The process of transferring from one's native environment to another and adapting to new rules, expectations, and ways of living in the new environment is called "acculturation." Barlow, Taylor and Lambert (2000) define acculturation as "the process of adapting to a new culture as a result of changes in cultural attitudes, values, and behaviors that come from being in contact with two or more distinct cultures." Acculturative change can cause complex disruptions in the proximal (e.g., changes in personal interaction patterns, changes in activity structure) and distal (e.g., changes of values, goals, opportunities) environments contribute to these events, which are likely to induce psychopathological outcomes. Thus, it is important to consider not only

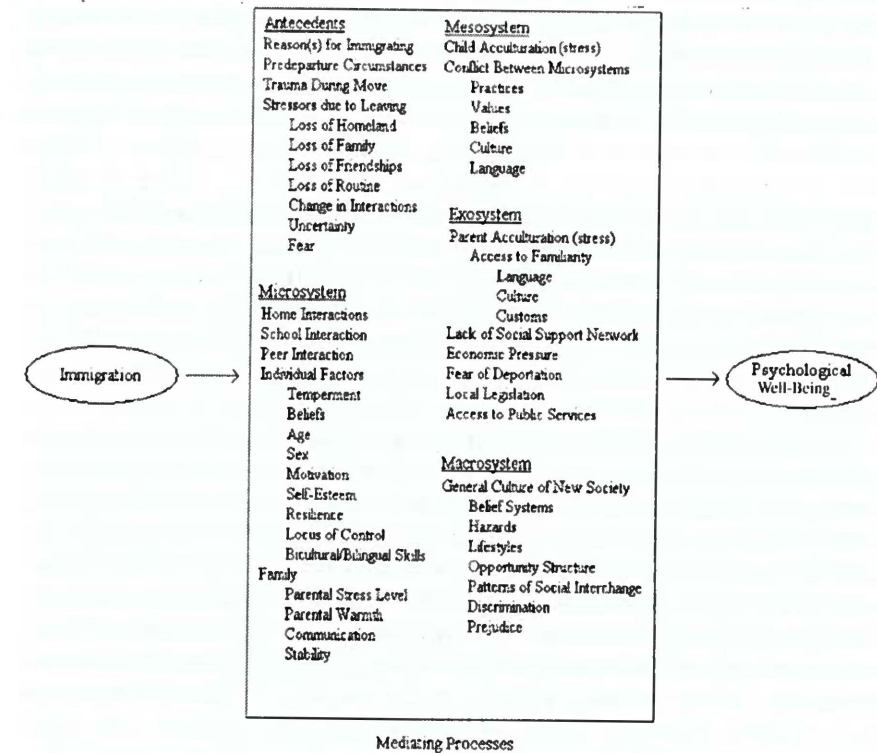
how and whether the proximal environment impacts the development of psychopathology (referred to as "dysfunction" by Bronfenbrenner and Morris, 1998), but also how and whether distal ecological influences interact with proximal mechanisms to form mental health problems.

The bioecological model of development is particularly relevant when evaluating the impacts of immigration on psychological well-being. The quality and continuity of proximal processes within the home and school, for example, shape how a child views him or herself. Differences in proximal processes between home and mainstream society (often confronted in the school), in turn, may produce aberrant behaviors and psychopathological symptoms. Indeed, substantial evidence exists to confirm the overall negative effects of the acculturation on mental health status (Searle & Ward, 1990; Stonefeinstein & Ward, 1990; Ward & Kennedy, 1994; Miranda & Unhoefler, 1998).

### APPLYING BRONFENBRENNER TO IMMIGRATION AND PSYCHOLOGICAL WELL-BEING

García-Coll and Magnuson's (1997) chapter entitled "The Psychological Experience of Immigration" provides rich detail into the interacting psychological, developmental, and socio-cultural processes involved in migrating from one country, with its unique set of cultural norms, to another. It synthesizes theory and research to discuss critically factors that induce or limit stress throughout the process of migration to and adaptation in a new community, culture, language, and, many times, rules that govern daily living. This chapter presents the immigration experience as a developmental process in which children juggle cultural and linguistic differences between home and the society, and discusses ways in which the process of the immigrant experience affects psychological development. The chapter, however, does not present an underlying theoretical model that accounts for acculturation processes, resilience, and how multiple levels of the environment mediate the impact of immigration on psychological well-being. Based on Bronfenbrenner's framework, this model is presented in Figure 2. Factors that mediate the psychological well-being of immigrants are presented in terms of their particular environmental level. Mediating factors and processes should be conceived of as interactive, push-pull forces that place an immigrant at varying levels of psychological well-being. It is assumed that immigrants who find opportunities within these environments to maintain familiar ways of living and

FIGURE 2. Model of Multilevel Factors that Mediate Effect the of Immigration on Psychological Well-Being.



rules that govern interactions (i.e., enculturation) will demonstrate higher levels of psychological well-being than those who do not have access to such environments. Consistent with Bronfenbrenner's view, mediating processes within environmental levels are not mutually exclusive—they influence one another in complicated ways to create ecological circumstances in which an immigrant ranges from vulnerable to resistance (depending on levels of acculturation) to develop a psychopathological disorder, which tend to be manifested as behavior and/or identity disorders in immigrant children (Aronowitz, 1984).

The effect(s) of the immigrant experience on psychological development is(are) mediated by the context in which they arrive (antecedents), as well as multiple levels of the environment to which they arrive. Some immigrants are susceptible and others resistant to developing mental

health problems attributable to leaving their homeland and their transition into a new country and culture. Antecedents include stressors that exist regardless of the difficulties imposed and/or comforts made available in the receiving society—the new home. For example, the reason(s) a family or individual decide to immigrate is(are) crucial. Some leave homes for economic reasons, while others leave for political purposes; many refugees, for example, have fled their conflicted East African homelands to escape civil warfare and ethnic cleansing. Many of these have been granted asylum in European nations (e.g., Great Britain). Surely the distress these groups suffer due to their traumatic migratory transition is different than for groups who leave home for economic reasons (e.g., Mexicans who migrate to the U.S.). Indeed, those who flee for political purposes are often at risk for developing post-traumatic stress disorder (Leslie, 1993; Miller & Rasco, 2004; Rothe et al., 2002). This is due to the nature of their pre-departure experiences (Rumbaut, 1991).

Inherent in the process of immigrating—regardless of why one leaves or the level of acceptance in the new society/home—are feelings of loss. Immigrant children and adults often deal with a loss of their homeland, family members, friends, routine, daily interactions, and, as a result, experience uncertainty which often leads to fear. Feelings of loss, however, often can be diminished by positive emotions in cases in which the immigrant experience serves to reunite families. The extent to which parents recognize and manage stress induced by this sense of loss unavoidably influences their child's ability to cope. Rutter (1983) notes that children typically adjust and deal with loss quicker and more effectively than adults.

The second mediating force that predicts psychological development due to immigration is the microsystem: the first of Bronfenbrenner's levels. Proximal processes that occur within the home, school, and peer associations all have the potential to put the child on a trajectory that leads to pathology. This is the case for all children—individual factors and the general family milieu interact with the child's immediate environment to impact the quality of early and subsequent development. The microsystem of immigrant children is only unique, therefore, in the context of the mesosystem: the third mediating process. That is, stress tied to discontinuities between school and home, for example, may induce mental health problems. More specifically, immigrant children find that familiar practices, values, beliefs, and linguistic forms may not be validated or considered useful outside of the immigrant home. Referring to this struggle, Cropley (1983) wrote that "the crucial problem is

being simultaneously exposed to two sets of norms—those of the homeland and those of the receiving society [. . .] One set of socializing influences [. . .] attempts to pass on to the children the norms of the motherland, while another set of socializing influences transmits the norms of the receiving community" (pp. 110-111). Interestingly, an individual component that covaries with the stressful nature of this struggle is age. García-Coll and Magnuson (1997) expound upon this idea:

The relation between age and speed and ease of acculturation is in most cases curvilinear rather than linear. During the infancy, toddler and preschool years, the rate of acculturation is actually more a function of the family's acculturation rate and attitude toward the new culture than the child's actual potential for acculturation. There is no question that children from very early on, because of their potential for learning and actual drive for mastery, are able to acculturate faster than adults. However, we have to consider the context for learning before school entry, which is primarily influenced by the caregivers. Young children first learn and absorb their concepts of ethnic labels, attitudes, and behaviors from the adult caretakers. Thus, we might expect that the acculturation rate might be slower before school, daycare, or preschool entry, faster after entry into any one of these settings (if the settings demand acculturation), and then slower again after the formative years. (p. 129)

The fourth mediating force is the exosystem. At this broader ecological level, processes that influence the child's environment occur outside his or her presence. Namely, parental disquiet due to their own acculturation and corollary stressors influence how well their child adapts. Indeed, children are sensitive and react to their parents' stress levels. In addition, a parent's anxiety impacts their ability to extend availability, warmth, care, and support (Athey & Ahearn, 1991). Stress associated with acculturation is heightened when parents lack strong social and cultural support, confront economic pressures, fear deportation, and have limited access to public services (e.g., health, welfare).

Finally, the last and most distal environmental level that mediates the impact of immigration on psychological well-being is the macrosystem. As previously mentioned, this system forms the general cultural blueprint in which large societies function. It consists of norms, perspectives, expectations, and ambitions that the general society shares in



common. In the context of immigration and acculturation, stress is theoretically aroused at the macrosystem level when discontinuities exist between the former and new cultural definitions of success, social exchange, admiration life styles, opportunity structures, and life course options. Discrimination and prejudice toward immigrant groups also enhances stress induced at this level—it tends to create what García-Coll and Magnuson (1997) call “cultural mistrust.”

### SUMMARY AND CONCLUSION

Hispanics in the United States are the largest and fastest growing ethnic minority group. This is principally driven by high birth and immigration rates among this population; the largest immigrant group continues to be newcomer families from Mexico. Usually migrating to improve economic circumstances, this group, on average, suffers from the corollaries of poverty and low educational attainment. However, research evidence suggests that these negative effects are buffered slightly by healthier than average mental health outcomes. Significant evidence in localized adult samples and, more recently, in nationally representative studies suggest that Mexican-born immigrants demonstrate a substantially more desirable mental health profile (i.e., lower prevalence of substance abuse and dependence, phobias, affective disorders, anxiety disorders, mood disorders, and anti-personality disorders) than do several U.S.-born populations. And one study shows from a national sample of American kindergartners that Mexican immigrant children demonstrate higher levels of mental health than their white and African American peers. There are at least four competing explanations for these findings. First, some advocate the “selection” hypothesis, which proposes that individuals with above average mental health are more likely to immigrate to the U.S. than those with poor mental health—and that this explains the difference. However, findings from Vega et al. (1998) refute this hypothesis. Namely, they found that Mexican immigrants’ outcomes closely resembled those of their Mexican-born counterparts who resided in Mexico City—in other words, Mexican immigrants and a random sample of residents in Mexico City had substantially lower prevalence rates of psychopathology than did the U.S.-born cohort.

Second, some posit that lower levels of self-reported psychopathology in Mexican-born participants are due to cultural differences in perspectives and definitions of mental disorder. While the concept of

incongruent cultural conceptions of psychopathology has some merit, this hypothesis was thoroughly considered when developing test instruments used in the aforementioned analyses comparing prevalence rates. That is, the Diagnostic Interview Schedule (DIS) and the CIDI were strategically developed by cultural psychologists to be used with diverse, international populations who speak multiple languages.

Vega and Kolody (1998) offer a third explanation for differences in psychopathology between Mexican- and U.S.-born Mexican Americans. They suggest that discrepancies may be due to the differential level of expectations. That is, Vega and Kolody conjecture that Mexican immigrants may have a lower set of expectations and income attainment aspirations than do U.S.-born Mexican Americans, making them less likely to “become demoralized when income and achievement do not come” (Escobar, Nervi, & Gara, 2000). This hypothesis appears to be consistent with psychological theory that links depression and anxiety with differences between idealized expectations for oneself and actual accomplishments (Higgins, Klein, & Strauman, 1985).

Finally, a fourth hypothesis, not necessarily incompatible with the third, states that the mental health disparities between Mexican- and U.S.-born groups are due to slowly evolving acculturation processes, and that the negative effects of acculturation are a function of time. Consistent with the theoretical framework presented in this paper, this hypothesis posits that environmental “affordances” (Gibson & Pick, 2000) allow Mexican immigrant children and families to preserve recognizable values and goals, and to maintain familiar ways of living and engaging in personal interactions and activities which lead to higher levels of psychological well-being-mental health. The greater amount of culturally compatible affordances within and between micro-, meso-, exo-, and macrosystems predicts lower levels of acculturation and lower than expected prevalence of mental health disorders.

Several studies demonstrate that acculturation has a deleterious effect on mental health for Mexican and other immigrants (Burnam et al., 1987; Scribner, 1996; Vega et al., 1998). This assertion is now supported by a substantial body of research literature. Empirical questions, therefore, should move beyond assessing whether acculturation affects mental health and begin to address ways in which ecological levels (such as parent-child interactions, teacher-child interactions, peer play, classroom processes, school processes, community processes, and larger cultural processes) influence acculturation and, therefore, mental health for immigrant populations. Moreover, it is also recommended that researchers evaluate ways in which positive mental health and other positive demographic features

(such as two-parent homes, lower divorce rates [Escobar, Nervi, & Gara, 2000], lower infant mortality rates [Escarce, Morales, & Rumbaut, 2000], better physical functioning and stress coping mechanisms [Farley et al., 2005] among Mexican immigrants) can be leveraged to develop favorable educational and socioeconomic outcomes. These studies will continue to elaborate on understandings and benefits of enculturation (Gonzales et al., 2003).

The thesis throughout this paper has been that by incorporating a multilevel ecological model of development, we are better situated to understand how acculturative processes influence the mental health status of immigrant populations. Future studies of mental health based on ecological frameworks will certainly implicate policy and practice recommendations. Some have already begun with this enterprise. García-Coll and Magnuson (1997), for example, advocate for sustained biculturalism and bilingualism to sustain healthy psychological well-being for immigrant populations. According to them, an immigrant child whose native language and familiar culture are sustained by his or her environment are more likely to develop strong mental health throughout development. Future work is needed to assess how this can be done at each ecological level and which, if any, bears measurable effects on mental health over time. These findings would certainly have implications for school policies and practices (García, Jensen, & Cuéllar, 2006).

To date, most of the survey data available to explore the impact of immigration on psychological development only considers lifetime prevalence rates. There continues to be a shortage of data available on children. It is recommended that large sample studies continue to evaluate the development of psychological outcomes for first generation (i.e., foreign-born child), second generation (i.e., U.S.-born child with at least one foreign-born parent), and third (plus) generation (children and parents are U.S.-born) children over time (using longitudinal data). Instruments of acculturation, language ability, and cultural orientation with strong psychometric properties should continue to be developed and used in such studies. In addition to academic outcomes, researchers in education should include mental health outcomes in their analyses of school processes as children's socio-emotional well-being is linked to school success. A general, thorough, and empirical consideration of the influence of culture on psychological well-being will prove immensely valuable in this regard (García-Coll, Akerman, & Cicchetti, 2000). And the model presented in this paper should serve as a useful, orienting tool.

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## Foreign Aid and Illegal Immigration: Comment

Nava Kahana

**ABSTRACT.** Gaytán-Fregoso and Lahiri (2000) claim that foreign aid may increase the level of illegal immigration. This comment reconsiders their perverse findings under endogenous as well as exogenous income repatriation. Furthermore, modifying Gaytán-Fregoso and Lahiri's model, in which aid is allotted in a lump-sum fashion, it is suggested that the actual amount of foreign aid should depend on the source country's performance, i.e., on the number of illegal immigrants, since such a policy will further reduce the number of illegal immigrants.

**KEYWORDS.** Illegal immigration, income repatriation, foreign aid

### INTRODUCTION

Myers and Papageorgiou (2000), Kahana and Lecker (2005) and Dula, Kahana and Lecker (2006), suggest that rich countries should give international transfers to source countries in order to reduce the immigration pressure along the border. Gaytán-Fregoso and Lahiri (2000) demonstrate, on the contrary, that aid has no effect on illegal immigration under endogenous income repatriation when the immigrants' preferences and those of their family members are the same, and may even increase illegal immigration if the preferences are heterogeneous or if income repatriation is exogenous and the total amount of aid is small.

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