



The Role of Socioeconomic and Sociocultural Factors in Language-Minority Children's Development

An Ecological Research View

A decorative graphic consisting of a thin horizontal line that is interrupted by a thick, olive-green rectangular block. A thin, light grey curved line starts from the left side of the horizontal line, arches upwards and to the right, passing over the green block, and then curves downwards to the right.

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Overview

The purpose of this article is to critically review contemporary literature on external or contextual factors influencing language-minority children's development. My contribution is to bring together literature from separate modules, stemming from researchers within: (1) a developmental psychology perspective, with traditional methodological paradigms that fail to represent the cultural and linguistic backgrounds of language-minority children studied; and (2) an ethnic minority perspective, with alternative qualitative measures and methodological procedures that tap the cultural and linguistic diversity of language-minority students (see Gonzalez and Yawkey, 1993; Gonzalez, Brusca-Vega, and Yawkey, 1997, for further discussion of the ethnic research perspective). More specifically, my objective is to bring together these two separate modules of research by presenting a state-of-the-art theoretical paradigm. This model is supported by contemporary research literature and endorses an ecological and multidimensional view of language-minority children's development.

Research evidence of the two most important factors that have been demonstrated to significantly influence language-minority children's development is critically examined. The socioeconomic status (SES) of language-minority children's families is the first factor. In contemporary literature, SES encompasses much more than parental income, which has been traditionally considered as an exclusive index. SES has been expanded to include the study of the educational level of parents, the degree of literacy of parents, parental occupation, and even to give attention to neighborhood quality and community resources. There is an emphasis on a critical review of the literature that specifically examines the effect of low SES on minority children's achievement level and future economic productivity during adulthood.

The influence of sociocultural factors on language-minority children's development is the second significant factor analyzed. Contemporary studies consider the home and family structure as an omnibus variable representing numerous subvariables (e.g., number of siblings, birth order, child-rearing practices, value and belief systems held by parents, immigration status of parents, family mobility, and parents' number of years of U.S. residence). Since there are numerous subvariables represented in modern literature studying sociocultural factors, we will emphasize the effect of the language used at home by parents and siblings on language-minority children's development and achievement.

Thus, three sections are included in this article. The first presents an overarching multidimensional model for understanding the importance of an ecological perspective to the study of development in language-minority children. This section provides a context for both the second section on SES factors and for the third section on sociocultural factors influencing development in language-minority children. The article concludes by presenting some remarks regarding the state-of-the-art research conducted on language-minority children's development from an ecological and multidimensional framework. Included are some recommendations for much-needed research to broaden

our current understanding of the interacting effect of SES and sociocultural and other mediating factors (e.g., biological, psychological) on language-minority children's development.

Multidimensional Model for Understanding Minority Children's Development

Contemporary researchers endorse developmental and ecological models that take into consideration multidimensional variables stemming from the interaction of internal and external factors. This approach results in more complex research methods and strategies that allow researchers to study: (1) higher-level thinking and problem-solving processes and (2) developmental trends with more elaborated control for contextual factors and individual differences (through the combination of longitudinal and cross-sectional strategies resulting in sequential studies). For instance, Garcia Coll (1990) proposed that the transaction between the organisms or psychological variables present within the child and the contextual system is very dynamic. More specifically she highlighted the interaction of at-risk biological factors (e.g., prematurity), at-risk social factors (e.g., low SES), and cultural factors (e.g., minority values and beliefs, child-rearing techniques, caretakers' behaviors, parents' perceptions, and developmental goals).

In addition, this transaction between biological, social, and cultural factors (representing interactions between internal and external factors) may create effective, or ineffective, home environments for minority children to become resilient or at risk of developing learning problems. Trying to shed light on the particular interactions resulting in resilient or at-risk situations for language-minority students, Masten and Coatsworth (1998) conducted a data-based study, and concluded that:

Children who have good internal and external resources tend to get off to a good start in school...[whereas] [c]hildren who enter school with few resources, cognitive difficulties, and self-regulatory problems often have academic problems, and get into trouble with teachers, and are at risk for disengaging from normative school and peer contexts. (p. 216)

This contemporary view of the interaction between internal factors, representing biological and psychological domains, and external factors, representing SES and sociocultural domains that affect minority children's development, is related to the developmental principles of range of reaction and canalization. As discussed previously by Gonzalez and Yawkey (1993), these two principles are very useful for explaining the dynamic interaction among SES, sociocultural, psychological, and biological factors influencing language-minority children's development. More specifically, the principle of range of reaction proposes that there is flexibility and plasticity within biological factors so that the child is born with a *potential* to develop and learn (*genotype* or genetic endowment), rather than

having already acquired skills and abilities. The complementary principle of canalization states that the particular external environment in which the child lives, such as home and family setting and school culture, will provide a positive or negative degree of stimulation for the child's genetic *potential*. The resulting degree of actualization of this *potential* is influenced by the *interacting* effect of inseparable internal *and* external factors canalizing the child's genetic endowment. Then, ecological or external factors are important mediating processes that canalize or actualize the genetic predisposition of children into skills, abilities, and adaptive strategies, which result in resilience. This achievement is called developmental competence.

In relation to the interacting effect of external factors on internal *potential*, Hill and Sandfort (1995) concluded, after reviewing social science research across disciplines, that "...low family income compromises children's physical growth, cognitive development and socioemotional functioning. Low family income decreases the achievement of children when they are in school and puts them at heightened risk of dropping out of school early" (p. 91). The researchers developed a conceptual model of how poverty affects children's development across their life span, finding a causal pathway linking conditions of parental family or external events with childhood poverty to adult capabilities and performance (e.g., earnings, wage rate, work hours, and family income). That is, as shown by Hill and Sandfort, "...poverty exerts its effects through a process involving a chain of causal linkages" (p. 93).

In addition, this causal model also identifies confounding factors (often measured by social science research studies) that have an effect on developmental outcomes, education, and adulthood abilities and accomplishments. These factors are defined by Hill and Sandfort as "circumstances that can confound estimates of the effects of childhood poverty" (p. 101). They encompass parents' characteristics, such as low parental education, single-parent family, parental marital disruption, race, and parental unemployment; and duration of poverty (i.e., persistent versus transitory poverty). Hill and Sandfort also noted the existence of many other confounding factors often not measured by social sciences studies, such as parental characteristics in relation to academic and social skills, and parenting skills in relation to health behaviors in child caring (e.g., whether they fix nutritious meals and whether they seek medical advice during early signs of health problems in their child, etc.).

Thus, contemporary research studies are presenting cumulative evidence for the importance of studying the interaction between: the (1) internal child's characteristics across developmental domains (i.e., biological, physical, psychological—cognitive, social, and emotional), and (2) the external factors present in the school and family environments (i.e., socioeconomic and sociocultural such as the parents' educational level and occupation, family structure, and the language used at home).

Methodological Variations Across Disciplines

Aside from the need to conduct multidimensional studies, taking into consideration the powerful effect of external factors on language-minority children's internal potential, there is also a critical need for using valid and reliable methodological procedures for representing the social, cultural, and linguistic characteristics of this population. The most common problem in this area is that studies stem from different disciplines and rarely present an interdisciplinary approach. Therefore, available studies represent a very diverse set of theoretical paradigms and philosophies, and consequently a wide variety of research methodologies have been used. This methodological variation across disciplines, and its attendant problems, has been noted by several researchers (see Gonzalez, 2002; Messick, 1995; Moss, 1992). For instance, Hill and Sandfort (1995) noted the methodological problems present when comparing research findings conducted with language-minority children across disciplines:

Compiling evidence across a number of disciplines presents challenges...[since they] tend to differ not only in their theoretical paradigms and acceptable measures but also in their analytical approaches. These differences included variation not only in statistical estimation techniques but also in their general approach to drawing samples and employing control variables (p. 98).

Studies representing the ethnic research paradigm tend to include more valid and reliable methodologies, such as alternative assessments that represent the culture and language of minority children and their families. Within this paradigm, more powerful and robust results are obtained when combining standardized and qualitative assessments for data collection, and when using complementary statistical and qualitative models for data analysis. For instance, I have used qualitative measures for the methodological control of cultural and linguistic factors (see Gonzalez, 1994, 1995; Gonzalez, Bauerle, and Felix-Holt, 1996; Gonzalez and Oviedo, 2000; Gonzalez, Oviedo, and O'Brien de Ramirez, 2000). However, there is still a scarcity of these alternative models when studying language-minority children.

As listed above, most social sciences studies try to control for some important confounding factors, such as parental characteristics and duration of poverty. However, they do not take into account control biases introduced by traditional standardized measures, such as IQ tests that do not account for the effect of culture and language on language-minority children's development. Even if the studies use regression analysis for controlling confounding factors (by including them as additional predictors), methodological problems with standardized tests introduce biases and make results invalid for language-minority populations, when compared with mainstream groups.

Moreover, as noted by McLoyd (1998), studies that use regression models for controlling some parental demographic characteristics "...overstate the true effect of income because of the mutual association that parental income and child outcomes

share with unmeasured parental characteristics” (p. 190). This problem is especially acute for language-minority children, since parental characteristics and SES family levels are also associated with cultural and linguistic factors, which are left unmeasured in most studies.

As demonstrated by Gonzalez (Gonzalez and Oviedo, 2000), when developmental, cultural, and linguistic factors are controlled for by valid alternative measures, Hispanic, bilingual, low-SES children perform at higher cognitive developmental levels than mainstream, middle- to high-SES, monolingual counterparts. Moreover, when using one-way ANOVA and multiple linear regression models, Gonzalez found SES to be a more significant predictor of cognitive development than cultural or linguistic factors for Hispanic, bilingual, low-SES children. It is important to note that cognitive development was measured with alternative instruments (particularly verbal and nonverbal concept formation, the Qualitative Use of English and Spanish Tasks [QUEST]; see Gonzalez, 1991, 1994, 1995, for a description of QUEST).

Furthermore, developmental outcomes such as cognitive development are difficult to measure validly using standardized tests (for an extended discussion of this topic, see Clark and Gonzalez, 1998; Gonzalez, 1996; Gonzalez and Clark, 1999; Gonzalez et al., 1997; Gonzalez and Yawkey, 1993). Biases and lack of construct and content validity are especially problematic when assessing minority and language-minority, young, low-SES children. Developmental factors compound the effect of cultural, linguistic, and SES factors on language-minority children’s performance in traditional standardized tests (see Gonzalez and Oviedo, 2000; Gonzalez et al., 2000). As stated by Hill and Sandfort (1995), “...different aspects of cognitive ability appear to develop at different rates during childhood...[and]...many of the standard indicators of cognitive ability are age-specific” (p. 103). That is, when conducting longitudinal studies, researchers face the challenge of measuring development over a period of time. Alternative assessments are useful tools because they can be adapted to be flexible and sensitive to measure developmental changes over time in language-minority children.

Another problem is that most studies use only one measure of cognitive abilities and development—typically an IQ traditional, standardized test such as the Wechsler Scales or the Stanford Binet test. Instead, a battery of assessments would be needed that also includes other developmental areas besides cognition (emotional and affective processes), as well as different informants (parents, teachers, and peers). Besides measures of IQ, studies of ecological factors influencing cognitive development should also focus on the assessment of potential for learning processes, rather than on learning outcomes measured by IQ tests (see Gonzalez, 1996, for an extended discussion of this topic). Furthermore, the effects of poverty on cognitive development can also be measured by academic performance outcomes, such as using qualitative assessments of mathematics and reading abilities during the early elementary grades.

By using measures of cognitive development that represent valid cultural and linguistic factors, the specific qualitative differences of how culture, language, age, and low SES affect cognitive processes can be uncovered (see Gonzalez and Oviedo, 2000; Gonzalez et al., 2000). However, most studies still use more simplistic and surface-level methodologies, showing that poor language-minority children scored lower on IQ standardized tests when compared with minority and/or majority children from middle and upper-middle income families. Instead of actual differences in the cognitive developmental outcomes of language-minority low-SES children, these studies do show methodological problems with their measures. The presence of uncontrolled and confounding factors in these measures, stemming from cultural and linguistic domains, makes results invalid for the population of language-minority, low-SES children.

The situation is even worse when studying socioemotional development in minority children from low-SES backgrounds due to an even more acute scarcity of developmental studies conducted within a wide range of social science disciplines. The effect of poverty on children's impaired socioemotional development is mediated by parental behaviors impacted by economic stress in the family. For instance, Elder, Conger, Foster, and Ardel (1992) found that "economic stress increases parental stress, which in turn causes depression in children" (cited in Hill and Sandfort, 1995, p. 105). McLoyd and Wilson (1990) showed that "economic hardship increases maternal psychological distress, which in turn interferes with their abilities to nurture their children" (cited in Hill and Sandfort, 1995, p. 105). Moreover, as noted by Hill and Sandfort, these studies provide "evidence that poverty contributes to behavior problems, dependency and feelings of unhappiness and anxiety" (p. 106).

Another factor affecting the accuracy of insight into the cognitive developmental performance of young children is the instrument's sensitivity to tap individual differences, and to allow the evaluator to measure and value cultural and linguistic diversity. Alternative assessments can be adapted to represent, and validly and reliably measure, the cultural and linguistic factors affecting language-minority children's development. For instance, QUEST allows the evaluator to use the first and second languages of the minority child as a simultaneous methodology for administration and response. This procedure results in the use of *code switching* (use of both Spanish and English within the same sentence) and *code mixing* (use of Spanish and English in consecutive independent sentences) by both the evaluator providing instructions as well as the minority child providing verbal responses. This alternative language of administration and language of response methodology has proven to be a significant predictor of Hispanic low-SES children, making possible the methodological control of cultural and linguistic confounding factors (Gonzalez et al., 1996, 2000). Moreover, the use of alternative instruments sensitive to individual differences can also assist in accurately assessing individual changes when using longitudinal or sequential designs. The accurate measure of individual differences is particularly important in language-minority children because they are associated with cultural and linguistic diversity and developmental factors.

Thus, as discussed in this section, a multidimensional perspective needs to be taken into consideration when studying language-minority students. The wide variation of disciplines, with their researchers attempting to study the development of language-minority students, introduces a similarly wide variety of methodologies. Different disciplines endorse a variety of theoretical paradigms and philosophies while using a diverse set of measures and data analysis procedures. When conducting research with language-minority students, another problem is the presence of confounding factors in relation to the control and/or measure of ecological variables such as SES, language, and culture. Currently, problems still exist with the validity and reliability of standardized tests of cognitive, linguistic, social, and emotional development, which do not represent cultural and linguistic variables and SES factors and do not tap individual differences and developmental changes present in this population. In the following section, we review more closely the role of SES factors on language-minority children's development and test performance.

The Role of Socioeconomic Status on Hispanic Children's Development

As discussed above, the need for assuming an ecological view when studying language-minority students is especially highlighted by the fact that most of them come from a low-SES background. As defined by McLoyd (1998), "Unlike poverty status, SES signifies an individual's, a family's, or a group's ranking on a hierarchy according to its access to or control over some combination of valued commodities such as wealth, power, and social status" (p. 188). Many parental characteristics, such as occupation, educational level, prestige, power, and lifestyle, denote numerous mediating factors associated with SES, which significantly affect children's development and academic achievement. It is important to note that these environmental factors interact with other mediating individual factors, such as age, gender, race, and ethnicity. And for this reason, research findings obtained when studying majority populations cannot be generalized to minority groups.

Recent demographic data also support the urgent need to study the effect of low SES on language-minority children's development. Then, studies showing poor-quality and good-quality cultural family factors related to SES will be discussed, in relation to the family structure and the parent-child relationship. Special emphasis will be given to the interaction of the characteristics of the parents' and children's personalities, and to the impact of low-SES background on the children's academic and economic productivity. This section closes with a discussion of the need for conducting research on the interaction of low SES and developmental variables for the specific case of culturally and linguistically diverse young children.

Demographic Data Supporting the Need to Study the Effect of SES on Development in Language-Minority Children

The development of research studies focusing on SES factors affecting language-minority children's development is especially related to alarming demographic data observed during the decade of the 1990s. Smeeding (1992) reported that 20.4 percent of children under age 18 live below U.S. poverty levels, versus only 9.3 percent in Canada, 9 percent in Australia, 7.4 percent in the United Kingdom, 4.5 percent in France, 3.8 percent in Holland, 2.8 percent in Germany, and 1.6 percent in Sweden. Based on demographic statistics from the U.S. Bureau of the Census (1996), as of 1994, 22 percent of American children lived in families with cash incomes below the poverty threshold. In addition, as reported by Bronfenbrenner, McClelland, Wethington, Moen, and Ceci (1996; cited in McLoyd, 1998), the level of poverty has also increased, with 47 percent of poor families living with incomes 50 percent below the poverty threshold in 1993 (in comparison to 32 percent in 1975). Moreover, as noted by the Bronfenbrenner study, poverty tends to occur more often during early childhood, affecting most children before they reach age 6, primarily because of the higher likelihood of having younger parents with lower wages.

Minority children also are at a higher risk of being below the poverty level, in comparison to mainstream children (for a more extended review of education statistical data for language-minority students, see Gonzalez, 2001). As noted by McLoyd (1998), "African American and Puerto Rican children are more likely than non-Latino white children to experience persistent poverty and, if they are poor, to live in areas of concentrated poverty" (p. 186). The rise in the number of minority children has also increased the proportion of children living below the poverty level. As reported by the U.S. Bureau of the Census (1994), by 1992, one in three American children under the age of five was an ethnic minority (66 percent non-Latino whites, 15 percent African Americans, 14 percent Latinos, 4 percent Asians or Pacific Islanders, and 1 percent American Indians). For language-minority children, living in high-poverty communities presents major disadvantages, such as poor quality of public services, exposure to negative or even life-threatening environmental stress—street violence, homelessness, illegal drugs, etc.

Contemporary studies have analyzed distinct aspects of poverty characteristics, such as duration, depth, and age at onset of poverty, and found them to be significant factors in a child's development. For instance, Garrett, Ng'andu, and Ferron (1994) found that the proportion of the child's life lived in poverty, and whether or not the child was born into poverty, had a statistical significant effect on the quality of the home environment. They concluded that the effect of poverty on the quality of children's home environments is complex, with an interacting pattern of many mediating variables (e.g., quality of family environment, poverty, and maternal and child's characteristics). As they stated, "The greatest responsiveness in the quality of the home environment occurred among the poorest households, those in which children experienced initial disadvantage or the greatest persistence of poverty" (p. 342).

Thus, demographic data support the need to study the interacting effect of low SES and developmental factors affecting language-minority children. Research findings have demonstrated the particular importance of conducting an in-depth analysis of the characteristics of poverty, including: (1) age of poverty impact, (2) duration of poverty, (3) degree of economic disadvantage in comparison to the U.S. poverty level, and (4) mediating factors present in the family and cultural environments (i.e., quality of the parent-child relationship, family structure, cultural child rearing practices, parents' occupation and educational levels, number of siblings, cultural beliefs and values, etc.). These latter mediating factors are examined below.

Parental Characteristics Affecting Low-SES Language-Minority Children's Development

Currently, researchers have put forth ecological and developmental models of the dynamic interplay of the child's experiences and the internal child's factors. For instance, Bradley, Whiteside, and Mundfrom (1994) studied premature, low-birth weight, low-SES children in a three-year longitudinal study. Their findings showed that stress present in the external environment increased the risk of these children to present developmental problems, increasing their susceptibility to risk and reducing their resiliency. The most important ecological variables were shown to be the parental characteristics. The Bradley study noted:

There is evidence that the impact of poverty is not consistent across all sociocultural groups. Other cultural, language, demographic, and psychological factors interact with SES to help determine the pattern of parenting...[and more importantly]...the quality of the home environment is not uniform across families living in poverty (p. 347).

More specifically, the Bradley study noted the presence of mediating factors such as "...the caregiving context that may serve as protective mechanisms..." (p. 359), which may provide low-SES children with adequate sustenance, stimulation, support, and structure. They concluded by stating the need "...to determine particular relations among risk and protective mechanisms in different sociocultural groups living in poverty" (p. 359).

It follows that the parents' SES strongly affects their behaviors and child-rearing practices, through some mediating variables such as parental educational levels and occupational attainments, as well as home language use in relation to academic or literacy activities stimulated at home. For instance, Duncan, Brooks-Gunn, and Kato (1994) studied cognitive development by comparing the performance of infants and toddlers (0 to 3 years of age) from minority (Hispanic and African American) and majority backgrounds. They found that two major mediating factors, that is, the psychological effects of poverty on parents' characteristics and the provision of educational resources to children, had a negative impact on the children's cognitive development (measured by IQ tests—*Weschler Preschool and Primary Scale of Intelligence* [WPPSI]; Wechsler 1967).

These two factors also were found to predict the presence of behavioral problems (measured by behavioral problem checklists).

More specifically, Duncan et al. (1994) showed that the detrimental psychological effects of poverty on maternal characteristics are related to female headship of households and to the inability to develop coping strategies for adapting to the at-risk conditions of poverty. The Duncan study also demonstrated that the presence of poverty can negatively affect the mental health of parents, leading to such problems as clinical depression. Moreover, they found that the low-SES background of parents negatively affected their ability to provide educational resources for their children (a second mediating factor). These educational resources were related to: (1) the learning and stimulation environment at home (i.e., the amount and quality of time parents spend with their children, the emotional health of parents, the level of stimulation, the physical environment at home, and the affection and warmth provided in the parent-child relationship); (2) the low-income neighborhoods in which low-SES families lived (related to the quality of public schools, community resources such as parks and recreation facilities, police protection, peer influences such as role models and parental monitoring); and (3) the duration, degree, and timing of poverty (with cumulative effects of poverty).

That is, as reported in the Duncan study "...children in persistently poor families have 9.1 point lower IQs...[and] there were highly significant detrimental effects of being poor both early [during either 12 or 24 months] and late [during either 36 or 48 months]" (p. 307). In addition, the neighborhood level of economic deprivation can be interactive with family poverty, and can have a detrimental effect on the child's cognitive development (Duncan et al., 1994). Thus, the Duncan study exemplifies the importance of understanding external family-structure factors that mediate the negative effect of low SES on young children's development. Moreover, the detrimental effects of poverty can endure over a length of time, and can even impair productivity during adulthood through limiting the full potential of poor minority children—ultimately hindering their educational attainment (Hill and Sandfort, 1995). So, several mediating characteristics within the family environment (e.g., the quality of the parental characteristics) interact with other factors in the community environment in which poor, young language-minority children live and develop.

Cultural Factors Related to SES: Poor Quality of Family Structure and the Parent-Child Relationship

In addition, the parents' SES is also related to the number of years of residency in the United States, and therefore to whether they are immigrants or first, second, third, or higher generation in the United States. The level of acculturation can interact with the presence of poverty, which in turn influences parental stress levels. Levels of cultural adaptation will determine whether or not minority parents are able to access mainstream resources and become full-fledged participants within the mainstream society. For

instance, Wang (1993) studied Hispanic (first- and second-generation Caribbean families—Cuban, Puerto Rican, or Costa Rican), African American, and Anglo second-grade children from low-SES and middle-class backgrounds, living in Orlando, Florida. Wang found that cultural familial factors related to SES were better predictors of the child's metacognitive developmental skills than the child's ethnicity. The cultural family factors identified by Wang were family structure, such as family size, child's birth order, parents' marital status, parental divorce and separation, and language spoken at home; and parent-child interactions, such as whether parents assisted in their child's homework.

More specifically, Wang found that "SES supersedes ethnicity as a predictor for a child's metacognitive development" (p. 87). Wang defined and measured metacognitive development as a social construction that stimulates the development of learning strategies and executive processes to monitor and guide performance in cognitive tasks during early childhood. He concluded that "...the same pattern of SES effects was apparent for all three ethnic groups. That is, children from higher-SES families (regardless of ethnicity) had higher overall metacognitive scores than children from lower-SES families" (p. 87). Similar findings were also reported by Walker et al. (1994), who showed that differences between Hispanic and African American children from low-SES backgrounds were attributable to their SES-related factors (sociocultural contexts such as the home, community, and school environments), rather than to their minority or cultural backgrounds.

Even household characteristics related to small family size can enable parents to develop higher-quality home environments and have a more positive influence on their children's development (Blake, 1989; Zuravin, 1988, cited in Garrett et al., 1994). This leads to the idea that household characteristics, such as the family composition in terms of number of siblings and the presence of mother/father companion and other adults, can significantly impact the child's development outcome. For instance, Garrett et al. (1994) found a very high correlation between the adult-child ratio and the number of siblings. They also found all maternal characteristics, such as age, ethnicity [white, Hispanic, or African American], educational level, academic ability in terms of IQ, and self-esteem, to be significantly associated with the quality of the home environment.

Poverty can also have a negative effect on the quality of the family structure and the parent-child relationship. According to Takeuchi, Williams, and Adair (1991, cited in Garrett et al., 1994), poverty can indirectly affect parents' behavior, resulting in marital conflict, psychological distress, clinical depression, loss of self-esteem and feelings of mastery, and withdrawal from friends and family. The higher incidence of single mothers among minority children is also associated with high-risk factors and stress for children's development, primarily because mothers are overworked due to multiple demands and limited time and energy (Garfinkel and McLanahan, 1986, cited in Garrett et al., 1994).

Moreover, the child's characteristics can also interact with the parents' ability to create a higher- or lower-quality family environment and parent-child relationship. For instance,

the temperament fit between the parents and the child, or the challenges imposed by taking care of a premature or low birth weight child, can significantly impact the quality of the parent-child relationship. For instance, the Garrett study found some of the child's characteristics (e.g., being male is negatively associated, and being older has a positive relationship) to have a significant effect on the quality of the home environments of poor Hispanic, African American, and white families.

Hence, the issue of the complexity of at-risk factors affecting poor children's developmental outcomes, and whether or not they are able to cope with environmental stress needs to be studied further. As discussed throughout this article, there is an urgent need to maintain a multidimensional approach to research. For instance, Masten and Coatsworth (1998) have emphasized the need to study the interacting effect of recurrent or changing child's characteristics and ecological factors on resilience. Examples of recurrent child's characteristics that need to be studied are temperament and personality traits, unique individual needs, and self-regulation of attention, emotion, and behaviors. Examples of changing child's characteristics that need to be studied are developmental stages, interests, attitudes, perceptions, and values and belief systems. Examples of ecological factors open for research are the quality of parent-child relationships, and the effect of mentors and other educational opportunities for success.

Therefore, there is still a major task ahead for researchers who study language-minority children's development: to discover the interacting effect of SES factors and internal potential that may result in resilient or vulnerable conditions. More specifically, researchers need to uncover the different transitional or recurrent risks affecting language-minority children, and the protective mechanisms at different ages and points in development. That is, well-adapted parents or any other committed and effective adults who are present can function as scaffolds to provide opportunities, protective mechanisms, and emotional support for children exposed to at-risk ecological factors (such as poverty) to develop resilience. Masten and Coatsworth (1998) highlighted the importance of providing at-risk children with a protective ecological environment, especially during infancy and early childhood because "there is no such a thing as an invulnerable child" (p. 216). They acknowledged that conducting experimental research for implementing change in the dynamic developmental and ecological factors influencing adaptive and resilient process is challenging, especially because of the complex role of culture on language-minority children's development.

In summary, poverty can be a high-risk factor for the development of language-minority children, and it could have a negative impact when significant mediating processes (e.g., the quality of the relationship between parents and child) that facilitate successful adaptation are damaged. The availability of committed, involved, nurturing, and competent parents is crucial and provides powerful adaptive systems that can protect the language-minority child's development.

Cultural Factors Related to SES: Good Quality of Family Structure and the Parent-Child Relationship

The presence of poverty does not mean that the cultural background of parents and children is necessarily diminished. As discussed above, in many instances the low-SES background does affect the quality of the family structure and the parent-child relationship. However, a number of minority parents are able to develop successful coping strategies and mechanisms, which help them to become resilient and to offer a good-quality, nurturing family environment for their children. These resilient parents instill minority cultural values and goals (which are preserved within a bicultural identity) in their children and maintain high educational aspirations for them. Minority low-SES parents can stimulate successfully the development of their children by nurturing their social and emotional development within a well-structured family environment.

Furthermore, according to Garrett et al. (1994), low-SES parents have the capability to react constructively to financial constraints, and to be able to function as positive mediators for their children to become resilient to ecological at-risk conditions. For instance, the mother's resourcefulness to get social services and to preserve her physical and mental health will have a tremendous impact on the child's biomedical, cognitive, emotional, and social development (McBarnette, 1988; Dorris, 1989, cited in Garrett et al., 1994). That is, the mother's ability to secure prenatal care and adequate nutrition and to avoid substance abuse or other external risks during pregnancy is a key factor in her children's development. Similarly, the father's behavior will also have an important impact on the child's overall development, especially in terms of the father's ability to maintain mental health in the presence of stress factors (e.g., unemployment or economic hardship). That is, the father's avoidance of social isolation can also result in the avoidance of an abusive or neglectful parent-child relationship (Elder, Caspi, and Van Nguyen, 1986, cited in Garrett et al., 1994).

In summary, research findings show that even though parents may be poor and have low levels of formal education, they can provide a stable and well-structured environment for their children. These resilient parents illustrate strong moral values for their children and stimulate them to develop ethnic pride, helping to promote normal, advanced, or even gifted developmental levels in their children (see Clark and Gonzalez, 1998; Gonzalez and Clark, 1999).

Impact of Low SES on Language-Minority Children's Academic and Economic Productivity

Even though some language-minority children and their families can cope with the stress of poverty and become resilient, the vast majority become at risk of academic underachievement. Childhood poverty negatively impacts academic achievement, school

performance, placement, and years of completed education. Low family income tends to be positively related to poor academic achievement (see Alwin and Thornton, 1984; Patterson, Kupersmidt, and Vaden, 1990; all cited in Hill and Sandfort, 1995), especially during early childhood and with cumulative effects spreading throughout adolescence and adulthood (particularly when poverty spans a long period of time). As reported by Corcoran, Gordon, Laren, and Solon (1992, cited in Hill and Sandfort, 1995), "Increasing the proportion of childhood years a male spends in poverty reduces his adulthood earnings, family income, and family income/needs by 50 percent and decreases his adulthood wages and work hours by 25–30 percent" (p. 118).

Moreover, younger children are at a higher risk for stronger negative effects of poverty on their academic achievement, with poverty negatively affecting mediating factors present in their family environment (e.g., parental characteristics). Some studies even show some higher likelihood of poor children to be at risk for special education placement (see Chaikind and Corman, 1991; cited in Hill and Sandfort, 1995), especially when other biological at-risk conditions (e.g., low birth weight) were also present. In addition, there is evidence of a positive relationship between family income and years of school completion in young children (see Duncan, 1993; Hill and Duncan, 1987; Kennedy, Jung, and Orlando, 1986; all cited in Hill and Sandfort, 1995). Even when studies control for other mediating or potentially confounding factors, such as race and parental educational levels, and neighborhood conditions, this positive relationship remains.

In addition, school characteristics and teachers' behaviors also influence low-SES children's achievement. More specifically, teachers' attitudes, school values, and school and classroom climate are significant factors influencing low-SES children's achievement, especially when they are from minority backgrounds (see McLoyd, 1998, for a review of contemporary research on this topic). Moreover, according to Alexander, Entwisle, and Thompson (1987, cited in McLoyd, 1998), kindergarten and first-grade teachers were found to have lower achievement expectations for low-SES students. Teachers' expectations were based on their noncognitive negative perceptions of the low-SES children's speech and dress patterns (using these misleading clues as behavioral signs of lack of cognitive maturity). Then, as reported by Alexander et al., these negative attitudes in teachers translate into less positive attention, fewer learning opportunities, and less reinforcement of instances of good performance. These negative perceptions, expectations, and attitudes are more likely to be present in middle-class teachers, who are more prone to hold racial and social class biases, stemming from their unfamiliarity with poor and minority students' language and culture.

Furthermore, quality of education is also another mediating factor present in the extrafamilial environment that can significantly affect achievement levels in poor children. As reported by McLoyd (1998), the Head Start program has shown the power of early childhood high-quality stimulation, resulting in superior academic readiness skills during

preschool and primary grades. However, these cognitive and academic skills may be lost by the third or fourth grade if high-quality school programs are discontinued. Thus, as concluded by McLoyd, "...although preschool intervention offers some protection from the negative effects of poverty, over the long run, it does not bestow levels of cognitive and academic competence comparable to those seen among nonpoor children in the general population" (p. 195).

There are still few studies that control for confounding cultural and linguistic factors that interact with poverty and that use valid measures for minority groups. As stated by Hill and Sandfort (1995), the studies using mostly traditional and single measures show that "...childhood poverty is an important impediment to the physical growth, cognitive development, and socioemotional development of children" (p. 106). It is also important to understand what aspects of poverty processes, and their accompanying mediating factors affecting the family and neighborhood-community structure, determine similar or different effects on the developmental opportunities of mainstream and language-minority children. As concluded by Hill and Sandfort, "...low parental income substantially increases the risk of dropping out of high school, delaying completion of high school, delaying college entry and completion, and overall receiving fewer total years of completed education" (p. 112).

There is a need for studies that broaden our understanding of the interacting effects of poverty and other mediating factors (e.g., biological, psychological, and family and community structures) on the achievement and cognitive and socioemotional development of language-minority children. Developmental *processes* influenced by cultural and linguistic factors (e.g., bilingualism, knowledge acquisition, problem-solving ability, cultural thinking style, social style of interpersonal relations, cultural value and belief systems, bicultural identity, self-esteem, and self-concept) need to be studied further within a multidimensional and ecological paradigm by ethnic researchers.

The Role of Sociocultural Factors on Hispanic Children's Development

Sociocultural factors exert their influence within a family structure in which parents mediate their children's behaviors for their adaptation to the wider social system. Examples of sociocultural factors are belief and value systems, attitudes, acculturation levels, socialization goals and practices for modeling behaviors, communication styles, language use at home, interpersonal relations and experiences, and problem-solving and stress-coping strategies. In order to adapt successfully to the U.S. public school system, language-minority parents and their children have to develop sociocultural strategies for balancing the continuities and discontinuities present between the minority family structure and the mainstream school cultures.

As defined by DeVoss (1982), adaptive strategies are observable behaviors occurring within a particular sociocultural setting that are appropriate within the patterns and perceptions of the social group. Harrison et al. (1990) proposed an interrelation between the family environments provided by ethnic minority parents, socialization goals, adaptive strategies, and child behavioral outcomes. They argued that minority families would present different patterns of adaptive strategies, which would be related to their higher risk of coming from a lower-SES background. They presented some examples of adaptive strategies, such as the presence of an extended family, biculturalism, and ancestral worldview. Moreover, the Harrison study suggested, "These adaptive strategies foster the child-rearing goals of positive orientation to the ethnic group and socialization for interdependence, which in turn enhance the developmental outcomes of cognitive flexibility and sensitivity to discontinuities among ethnic minority children" (p. 347).

As mentioned in the section on the SES effects on language-minority children's development, the significant effect of sociocultural factors found by some previous studies needs to be considered. For instance, Walker et al. (1994) found a cumulative effect of the sociocultural contexts of home, community, and school (influenced by SES) to be linked to the presence of at-risk factors in academic achievement levels in language-minority children. Most significantly, they found that Hispanic and African American, low-SES children's performance in reading and spelling standardized tests and in verbal ability tests (in receptive and spoken language measured by home observations and standardized vocabulary tests) was lower in comparison to minority and majority middle-SES children's performance. The findings of their four-year longitudinal study indicated that the quantity and quality of interactions between the child and his or her parents and teachers, related to the stimulation resources available, was very important in the early language learning experiences of minority low-SES children. They noted, "Children from lower SES families continued to demonstrate lower performance on language and reading-related achievement across grades in the elementary school. This performance was surprisingly stable, suggesting lower trajectories across time" (p. 617).

Even though the language and achievement measures used by Walker et al. seem to have been sensitive to SES factors, especially the standardized measures that may have been biased against the Hispanic and African American minority groups. That is, showing differences among different SES groups in their performance in standardized measures does not reveal the underlying effect of sociocultural processes on their cognitive and linguistic performance. Moreover, due to lack of construct and content validity of language and academic achievement standardized tests, these instruments may be tapping different abilities in different minority groups. For instance, these standardized tests may be measuring degree of acculturation instead of cognitive ability in language-minority children. For further discussion of this topic, see Gonzalez, 1996; Gonzalez et al., 1997; Gonzalez and Yawkey, 1993.

Furthermore, Garcia Coll (1990) proposed that one of the most important sources of influence on the developmental process in minority children is the particular set of cultural belief and value systems held by adult caregivers. For instance, she mentioned the presence of extended and dependent families within the Hispanic culture who foster children to develop interpersonal dependency in attachment and separation processes. She considered these ideologies to be related to the cultural hierarchy of the priorities held by the minority parents, which lead to alternative developmental pathways in their children. She found that among minority low-SES parents, the top developmental priority became survival and physical health, followed by stimulating their children to develop behavioral capacities for economic self-maintenance and other minority cultural values (i.e., traditional ideologies such as strong familism and collectivism). She stated that "...minority mothers might not only have different developmental goals for their infants but might...perceive, react, and behave very differently to their infants' cues, behaviors, and demands" (p. 272). Thus, as Garcia Coll emphasized, there is a need to understand the underlying processes that cause at-risk minority infants to display developmental problems, as well as to understand the underlying or mediating factors creating buffering effects of poverty resulting in resilient children.

As noted by Ogbu (1982), parents have cultural knowledge of the socialization goals for their children, in relation to what verbal and nonverbal behaviors may work for interacting with societal institutions and systems. According to him, the family ecology of ethnic minorities suffers from ethnic stratification of relative fixed membership, which is based on an underclass or a lower ethnic stratification status. He uses the term *castelike minorities* for these underclass ethnic groups, such as low-SES Hispanics who suffer from oppression, discrimination, and racism as a standard for judging social position and rewards. Thus, the family ecology shows beliefs about the meaning of being poor, as well as being a member of an ethnic minority group, and indicates which behaviors and attitudes are appropriate for adapting to their challenges.

Ethnic minorities also suffer from negative stereotypes and attributions as well as from a controversial deficit explanation when compared with the standards of mainstream populations. In fact, the different family and social ecology surrounding ethnic minority children (in comparison to mainstream children) would result in different developmental patterns that would in actuality be adaptive strategies for their different (but not deviant or inferior) social reality. It is in fact the presence of mediating factors within the family ecology (e.g., quality of the parent-child relationships, role models and mentors, mental health of parents—as discussed in the previous section) that plays the role of protective factors against at-risk external environments. This mechanism of family protection may result in resilient outcomes in some low-SES ethnic-minority families and their children. As noted by McLoyd (1998):

Parenting that is strict and highly directive (i.e., well-defined house rules, clear sanctions for breaking rules, close supervision), combined with higher levels of warmth, helps poor, inner-city children resist forces in their extrafamilial environments that in ordinary circumstances contribute to low levels of achievement (p. 194).

As stated by Harrison et al. (1990), similarities exist within the cultural adaptation mechanisms present among ethnic-minority families, including Hispanics, African Americans, American Indian/Alaskan Natives, and Asian/Pacific Americans. These similarities result from their need to develop adaptive strategies for gaining access to benefits provided by European American cultural and social institutions (e.g., education, medical care, political and legal services, employment, etc.). According to the Harrison study, among Hispanic families one of the most important sociocultural adaptive strategies is the presence of extended family members as a problem-solving and stress-coping system in order to face daily normal and crisis situations. For instance, extended family members can help with tangible resources such as income, childcare, and household maintenance; and also with nontangible resources such as emotional support through interpersonal relations of attachment and affiliation.

In fact, strong familism within the Hispanic culture includes “strong feelings of identification, loyalty, and solidarity with the parents and the extended family” (p. 352). The Hispanic sense of family and community also includes nonrelatives within the extended family, such as “compadres” (godparents) as well as close friends, with whom frequent contact and reciprocal interpersonal relations of strong familism are cultivated throughout the years. As reported by Sabogal et al. (1987), the preferred language used at home was associated to the level of acculturation of Hispanic familism, specifically in relation to their familial obligations and family referents. However, they found that their perception of family support remained constant regardless of language used at home. And so it can be seen that cooperation, obligation, sharing, and a social/psychological dependence are some of the socialization goals and value systems modeled and transmitted to Hispanic children by their extended family members and parents. These common ethnic minority values are in sharp contrast to the mainstream cultural values of competition, autonomy, individualism, and self-reliance.

Moreover, the use of older siblings as “surrogate parents” is also quite common among the sociocultural adaptive strategies of Hispanic families in order to allow low-SES mothers to work outside the home at least part-time. Another adaptive sociocultural strategy is the presence of alternative family arrangements so that adults can share the breadwinner role. Thus, many times Hispanic families go through a “physical or material transition” (as coined by Harrison et al., 1990) in order to acquire the mainstream language and adapt to the educational and occupational demands of the mainstream society (resulting in loss of the minority language).

In conclusion, “cultural transition” (as coined by Harrison et al.) is the most difficult sociocultural process of adaptation faced by Hispanic families. Most commonly, the

traditional values will still remain mostly intact within the private family interaction patterns, but a duality of bicultural adaptation will have to be developed for acculturating successfully to the mainstream society. Thus, instead of complete assimilation, it seems that Hispanic families value the integration of bicultural experiences.

The Role of Home Language on Hispanic Children's Development

Several authors (see Delgado Gaitan, 1994; Ogbu, 1982; Suarez-Orozco, 1989) have presented continuity and discontinuity theories as an explanation for the degree of cultural adaptation of language-minority parents and children to the U.S. public school system, which in turn impacts the developmental level of the children. In fact, the degree of acculturation of language-minority families and their children is reflected in their home language use, their daily cultural practices, and the particular values socially communicated verbally and nonverbally by parents to their children. That is, the particular language used at home helps parents to socialize their children, serving as a major tool to transmit implicitly cultural values to children. In fact, Shatz (1991) asserted that "language is a powerful tool of parenting...Not only do parents use language to tell their children directly what is acceptable social behavior, but their language also includes indirect information about social values" (p. 139). Shatz also considered that language reflects practices of social interactions among individuals as well as in relation to social institutions. Thus, the way in which language is used at home also reflects different cultural ways of socializing children, which Shatz called "communicative modes" or styles, related to cultural content transmitted such as social values. Moreover, Ochs and Schieffelin (1984) concluded that the way language was used by adults carries implicit information about how to function within a particular social system.

The differences in degrees of acculturation between different generation Hispanic families are also present in the different patterns of home language use. In the case of Hispanic immigrant parents, the primary use of English by children for communicating with siblings at home has an impact on family structure and quality of communication with parents. Children of Hispanic immigrant parents tend to speak Spanish to their parents at home, but prefer to use English when communicating with their peers. In contrast, first-generation Hispanic parents participating in the Delgado Gaitan (1994) study spoke English as their primary language, and Spanish was spoken only with relatives who were monolingual Spanish (typically a previous immigrant generation such as grandparents). As Delgado Gaitan observes, "not only had English become the first language in one generation but Spanish language loss was significant in most cases..." (p. 79).

Interestingly, even though language loss occurs only after one generation, the traditional Hispanic values survive across intergenerational socialization practices even when using

English, but only in relation to the context of interpersonal family relations. As a result, some similarities and differences between first-generation and immigrant parents occur, especially in relation to the dual cultural identity model presented by first-generation Hispanic parents who also model cultural values for succeeding in the mainstream school culture. Thus, Hispanic children can be exposed to a monolingual English environment at home, but still develop a bicultural identity that allows them to adapt to social environments with diverse value systems.

As mentioned above, the language used at home by parents may also communicate cultural values and belief systems in relation to educational goals and developmental expectations for their children. For instance, Delgado Gaitan conducted some ethnographic interviews of Hispanic immigrant parents with low educational levels, and discovered some “cultural myths” held in relation to language development in infants. She stated, “Parents agreed that although children received facile attention as infants, verbal communication with babies was ‘silly’ because they believed that children could not understand them until later—after they began to talk” (p. 75). Despite this finding, she also pinpointed that “[t]he more educated ... immigrant parents...verbally engaged their children very early. They said that they had learned that talking with children in early years was important to develop language skills” (p. 75).

Delgado Gaitan also provided immigrant and first-generation Hispanic parents the opportunity to participate in a parent/community organization. Even before their participation in the parent program, these parents engaged infants in conversations and gave preschoolers verbal instructions or explanations of activities. The parents also provided their children with some stimulation for critical thinking skills in relation to academic activities, but not for social interpersonal relations in which conflict with traditional Hispanic values could occur. For example, a child's willingness to express his or her opinions and ideas would not be penalized, but would be encouraged by first-generation Hispanic parents within the context of an academic activity. That is, a parent helping his or her child with homework would extend the child's questions and would probe his or her observations about academic related content. In contrast, a child's willingness to participate in an adult conversation with family members would not be seen as an example of assertiveness, valued from a mainstream cultural perspective. This socially unacceptable behavior from the Hispanic cultural perspective of family interactions would result in a parent's request for the child to show “respect” towards his or her elders and not to “interrupt” the conversation.

So, cultural exposure to the mainstream American society has resulted in Spanish language loss, however, the maintenance of cultural values is still present in first-generation Hispanic parents and their second-generation children. With two different criteria in relation to the mainstream academic context and the more traditional sociocultural view of interactions still present within the minority family, it is interesting

to note that there is a duality for the retention of values. Hence, even though language loss occurs more rapidly, cultural values tend to survive in the duality of the bicultural experiences that the mainstream school culture and minority family contexts offer to monolingual English-speaking Hispanic children. Thus, Hispanic children may have retained cultural values and beliefs of the minority culture and still be proficient monolingual, as well as bicultural, English speakers. As Delgado Gaitan explained, "Possibly the parents' own acculturation experiences have made them incorporate a sense of reality and the need to accommodate both values in a way that allows them to fit both worlds: family and society" (p. 81).

Thus, in every culture and at every SES level, every parent tends to have the ultimate goal of socializing their children to adapt to the cultural values present in their social reality. Then, for a minority child to be successful in the school mainstream culture, he or she needs to internalize assertiveness, acquire independence as a thinker, and develop inquiry and critical thinking skills. The dissonance of these mainstream values with the minority Hispanic culture would be accommodated by parents in their socialization efforts because they had to develop social knowledge about the cultural discontinuities between the mainstream school and minority family contexts. That is, parents would present to their children the need to adapt their behaviors and implicit value systems in order to meet the different social realities of the contrasting contexts in which they live. As a result, Hispanic children were socialized to become *bicultural* in order to be successful in meeting the needs of culturally discontinuous social environments in which they were expected to be successful. As stated by Delgado Gaitan, "The tacit expectation on the part of the parents is that both can and should coexist and do not necessarily detract from one another" (p. 82).

Delgado Gaitan reported by that, in comparison, before participating in the parent program, immigrant Hispanic parents with low educational levels just allowed their children to observe daily activities (e.g., eating, preparing meals, etc.) without the involvement of any verbal communication. The lower level of education of these immigrant parents, especially of the mothers, was reported by Delgado Gaitan to have an impact on how language was modeled and taught at home to the children. Immigrant parents fear the change of family values, and feel a tension about the degree of acculturation experienced by their children as they get older and the displacement of their Hispanic traditional values. This fear and tension was not present within the first-generation Hispanic parents who had resolved this tension by developing a bicultural identity in themselves and their children. As Delgado Gaitan concluded, the most important difference between first-generation and immigrant parents was the presence, or absence correspondingly, of social and cultural knowledge of the mainstream school system. Only the first-generation parents were able to guide their children into a successful mainstream school culture adaptation, as mentors or mediators, to bridge their minority and mainstream experiences into a meaningful bicultural identity.

Even though Delgado Gaitan found some differences when comparing first-generation and immigrant Hispanic parents, she also observed continuity in the set of traditional cultural values still used to socialize their children. Most important, all the parents wanted their children to become successful in their academic activities in the mainstream school culture, and they were willing to make accommodations in their degree of acculturation in order to socialize their children to adapt to their bicultural experiences. What she found to be critical was to present to parents the opportunity to make their own personal decisions about the acculturation degree that they were willing to acquire. Only then were parents able to negotiate the discontinuities allowed to still maintain their ethnic minority identity and pride, which led them into feeling powerful and legitimized (instead of alienated and isolated from access to the mainstream society).

It is interesting to note that language per se (i.e., their bilingual or minority language ability) is not used solely by parents to socialize their children, but rather that the *cultural* styles or modes of communication, and appropriate or valued nonverbal behaviors, are the tools that transcend into *biculturalism*. For instance, Schatz (1991) found that specific pragmatic patterns of social language used by Korean, German, and American parents were more important than general linguistic similarities between their languages for affecting the specific patterns of language acquisition in their children. More specifically, she found that parental language style reflected cultural values transmitted to toddlers, such as the specific selection of model verb system transmitting values. As an example, the selection of a verb such as *must* connotes a semantic and pragmatic meaning of *obligation*, versus *may*, which connotes *possibility*. German mothers used more verbs connoting obligation and necessity than did American mothers, and this pattern of use was already reflected in the vocabularies of their toddlers, conveying implicitly to these German and American children different underlying social values. Schatz concluded by stating that “even societies that share a common language can use it in ways that may result in different outcomes for child development” (p. 151). Thus, as she pointed out:

Differences in cultural values can be carried not only by differences in the specific forms of two languages, but also by parental lexical choices and by the relative frequency of the forms and meaning expressed...[within] societies [that] differ in cultural beliefs about socialization (p. 149).

In conclusion, the more traditional view of considering language as the only tool for the transmission of cultural values to children (see Ochs and Schieffelin, 1984) is too simplistic. There is a need to consider that even monolingual English first-generation parents can transmit the duality of traditional Hispanic values as well as mainstream cultural values, even though they are using English only as a communication and socialization tool. Then, we can think of minority or diverse ways of using English, such as tinting the mainstream language with minority communication styles and minority nonverbal modes of communication. For instance, the use of *code mixing* and *code switching*

and culturally appropriate Hispanic nonverbal behaviors may tint the English language used at home by parents with a “coat of cultural values.” In reality, mainstream English and mainstream culture are not modeled by parents within the family environment. Instead a new minority bicultural identity is created in which children learn how to appropriately behave within a minority family with a specific degree of acculturation.

In contrast to the discontinuity and disadvantaged view, there is the advantage position that Hispanic families trying to integrate two cultural systems also stimulate in their children a greater cognitive and social flexibility. Their bicultural children can, as a result, adapt to the discontinuities of home and school cultures, since they can successfully accomplish situational problem-solving processes. Finally, as discussed in this section, to the extent that ethnicity and sociocultural adaptive strategies are independent from SES variables, the effect of poverty on language-minority children's development and achievement should be studied within the context of the mediating factors present in the family and school environments.

Implications for Language-Minority Students' Access to Higher Education

Based on the critical literature review discussed throughout this paper, there is a need to understand the powerful influence of ecological factors on language-minority students' access to higher education. This literature supports the view that there is a need for research that will increase our understanding of ecological factors negatively impacting dropout rates in language-minority students at every level in the U.S. public school system (from preschool to elementary, middle, and high school). There is a need to produce ecological research, from an ethnic minority perspective, for documenting how schools can separate cultural and linguistic differences from underachievement, developmental delays, and learning problems. There is a need to increase our understanding that language-minority students are put at risk of dropping out because of schooling and/or family factors that fail to nurture their developmental and achievement potential. The ecological systems can positively or negatively mediate the impact of poverty and sociocultural factors on language-minority students' development and achievement.

In order to reduce dropout rates among language-minority students and increase their potential for resiliency, research trends indicate the need to increase positive mediating factors present in school and family environments. There needs to be more research on the effect of high-quality educational programs that appropriately respond to cultural and linguistic diversity and are integrated to alternative assessments. These high-quality educational programs will also integrate school, family, and community ecological systems by infusing respect for cultural and linguistic diversity among educators, and by providing parents and community leaders with appropriate communication channels.

The creation of a reciprocal adaptation process in the most important environments—family, school, and community—in which language-minority students develop can provide opportunities for them to adapt and integrate the cultural and linguistic diversity they experience at home and in their minority communities with their educational needs at school.

Moreover, we need to further study the powerful effect of high-quality educational programs on language-minority students' achievement. Such programs nurture students' potential for developing critical-thinking and problem-solving abilities across content areas. The opportunity created by high-quality instruction to achieve high standards of learning and developing can positively mediate poverty and sociocultural factors affecting language-minority students. The ultimate goals of studying the effect of high-quality instruction on language-minority students' learning and development are: (1) to create a pool of qualified minority applicants who are better prepared to access higher education, (2) to reduce the risk of dropping out of school, and (3) to provide a genuine educational opportunity to achieve national high academic standards for *all* students.

Therefore, we need further research on how language-minority students learn and on how the integration of schooling, family, and community experiences can increase their resiliency and learning and their developmental and achievement levels. By increasing our theoretical and educationally applied understanding of this problem of national importance, we can generate valuable and cost-effective conceptual and applied recommendations. For instance, this research avenue can result in the creation of: (1) a profile of at-risk and resilient characteristics of language-minority students and schooling factors, (2) recommendations for screening and assessments for college entrance examinations, and (3) a set of recommendations for preparing students for college (which ultimately will have a positive impact on college retention rates).

Conclusions

After critically examining contemporary literature on the effect of SES and sociocultural factors on the development and achievement of language-minority children, some concluding remarks can be posed. First, contemporary research endorses an ecological and multidimensional framework that encompasses an interaction of internal mediating factors (biological, psychological—cognitive, social, emotional) and external mediating factors (SES and sociocultural variables, such as family, cultural, and school environments).

Second, this state-of-the-art theoretical and philosophical framework can serve as a context for opening new lines of research with the purpose of broadening our present understanding, and uncovering new developmental patterns and unique culturally and linguistically diverse characteristics of the effect of SES and sociocultural factors on the achievement and development of language-minority children.

Third, these new lines of research need to be directed to the particular ways in which sociocultural factors act as mediators of the effect of low SES on the developmental and achievement levels attained by young language-minority children. In addition, there is also a need to understand the cumulative interacting patterns among mediating factors, and how poverty can be scaffolded by the presence of a good-quality family or school environment, resulting in language-minority children developing resilience for at-risk conditions. For instance, there is a need to further study the interaction between the parents' and the child's personality characteristics and its effect on the quality of the parent-child relationship—and ultimately on the language-minority children's developmental and achievement levels.

Moreover, there is need to study the distinct aspects of poverty characteristics, such as initial disadvantage and depth of poverty. As noted in this article, income has been demonstrated to be just the tip of the iceberg in the complexity of the SES omnibus variable. The particular quality of the family and school environment encompasses multiple cultural characteristics. Among the most important significant variables uncovered by contemporary research are: (1) degree of family cultural adaptation, such as value and belief systems, attitudes, socialization goals, patterns of cultural adaptive strategies, and home language use; (2) family structure characteristics, such as number of siblings, (3) parents' characteristics, such as degree of literacy and education, occupation, degree of acculturation, and physical and mental health of parents; and (4) quality of neighborhood and community resources, such as availability of mentors (teachers, extended family members, peers, siblings, etc.) and social services, such as federal or state programs for provision of health care and nutritious food, etc.

Fourth, there is need to develop ecological and multidimensional research studies on the recurrent or changing child's developmental characteristics affecting resilience to at-risk conditions for developmental or achievement problems. Researchers still need to look for the different transitional or recurrent risks affecting language-minority children, and the characteristics and effects of protective mechanisms at different ages and points in development. There is still a need to uncover the specific protective mechanisms that function as scaffolds or mediators for at-risk children to become resilient. The challenge is increased by a scarcity of studies that control for confounding cultural and linguistic factors on these protective mechanisms. There is a need for studies that broaden our understanding of the interacting effects of poverty with other mediating factors (biological, psychological, and family and community structure) on cognitive and socioemotional *developmental processes* in language-minority children. For instance, ethnic research should be conducted on problem-solving processes, giftedness, creativity, bilingualism, biculturalism, ethnic identity, self-esteem, self-concept, social and cultural interpersonal and communication styles, thinking styles, knowledge acquisition, and so forth.

Fifth, we need to create opportunities for educational success for language-minority students, so that we increase the qualified pool for entering higher education, and also increase their retention rates once admission is gained. Additional research on ways to reduce the dropout rate of language-minority students is key for enabling them to attain college degrees and enter middle-class professional America. We need to generate more research on how to integrate national high academic standards for *all* students with high-quality education that meets the cultural and linguistic needs of minority students.

Moreover, we need to discover ways of successfully integrating language-minority students' real-life experiences in their school, family, and community environments. With further research, we can generate high-quality educational programs delivered by caring mentors and advocates at school, which will provide language-minority students with opportunities to actualize their potential for developing and achieving at high levels. By carrying out ethnic research we can uncover the bicultural identities of language-minority students and open communication channels with their families and communities in order to increase their adaptation and integration to the school system. The goal is not to acculturate language-minority students to assimilate into the status quo of mainstream school culture. Instead, it is to initiate a process of reciprocal adaptation across school, family, and community environments in order to facilitate language-minority students to engage in an accommodation process of integrating of their bicultural identities. Thus, the key to success for the educational experience of language-minority students is to integrate and increase the quality of mediating schooling, family, and community factors.

Sixth, it seems important to conduct studies in this new line of research for developing new methodologies and procedures. The creation of these new research tools will generate valid and reliable instruments for exploring the sociocultural factors (including linguistic diversity) that act as mediating variables on the effect of poverty on the development and achievement of language-minority children. Thus, these alternative measures need to accurately represent the diverse social, cultural, and linguistic characteristics of this population, while at the same time being sensitive to tap individual differences and developmental changes present in young language-minority children. At present, there are two contradictory paradigms in contemporary literature: (1) the traditional methodological paradigm, practiced primarily by developmental psychologists; and (2) the ethnic-minority perspective, which endorses alternative qualitative measures and procedures that tap the cultural and linguistic diversity of minority children. Thus, given the multidisciplinary backgrounds of researchers attempting to study language-minority children, the application of multiple theoretical paradigms and philosophies has resulted in a diverse set of measures and data analysis procedures.

In conclusion, this critical literature review attests for some degree of progress achieved by contemporary ethnic researchers. When studying the effect of low SES on the development and educational achievement of language-minority children, we have been

able to uncover the presence of some mediating factors. New lines of research, however, still need to be explored in order to understand how these mediating factors, stemming from sociocultural variables, interact with at-risk external factors and internal characteristics of language-minority children. Finally, new methodologies need to be generated for measuring the effect of poverty and cultural and linguistic diversity on developmental processes and achievement levels attained by language-minority children. There is a bright and broad future for ethnic researchers who want to pursue these challenging tasks.

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