

PARENTING STRESS AND PROGRAM SUPPORT ACCEPTANCE
AMONG MEXICAN AMERICAN HEAD START MOTHERS

by

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DEDICATION

This study is dedicated to Head Start parents, past, present and future. Over the past decade, as a researcher and later as a Head Start director, I have been inspired by the dedication of so many of these mothers and fathers who courageously seek out educational opportunities for themselves and their young children, in spite of daunting economic, language, educational, health, and other challenges. They share in common a desire to give their children the positive school experiences that, in many cases, they lacked themselves. In contributing their time and energy to local Head Start programs across the United States, they develop talents and leadership skills that they never knew they had, and they go on to contribute to their communities and advocate for their children for years to come. They deserve the best research-based education and support programs that our communities can offer them.

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ABSTRACT

This study examined conditions under which low income mothers engage in voluntary supportive relationships with community-based early childhood programs. Parenting stress and support processes were examined in a population of low-income Mexican American Head Start mothers. A new construct, *program support acceptance*, describes mothers' appraisal of the program as a potential source of parenting support. Research questions related to (a) the relationship between Time 1 (fall) parenting stress and mid-year program support acceptance, (b) the relationship between mid-year program support acceptance and Time 2 (spring) parenting stress, and (c) the contribution of program support acceptance to longitudinal change in parenting stress. The study also considered contextual variables (acculturation, maternal education, stressful life events, partner status, and extended household) as predictors of parenting stress and program support acceptance, and potential moderation of parenting stress and support linkages by acculturation. Finally, the study considered the theoretical issue of whether parenting stress serves to motivate or inhibit support-seeking (reflected in program support acceptance) as a coping behavior. The guiding theoretical framework for the study was based on Abidin's parenting stress model (1983, 1992), and Lazarus and Folkman's general model of stress, appraisal and coping (1984), as well as family support literature based in ecological systems theory.

Mean levels of parenting stress declined significantly from Time 1 to Time 2 for mothers in the Head Start program. The contextual variables did not significantly predict Time 1 parenting stress, and marginally predicted program support acceptance. Higher Time 1 parenting stress scores significantly predicted lower levels of mid-year program support acceptance. Higher program support acceptance scores at mid-year significantly predicted lower Time 2 parenting stress in bivariate analysis, but dropped to non-significance after controlling for Time 1 parenting stress. Acculturation did not moderate linkages between parenting stress and program support acceptance. However, several relationships were significant for immigrant generation mothers which were not significant for later generation mothers. In the immigrant group, being partnered predicted higher program support acceptance, and program support acceptance contributed significantly to lower Time 2 parenting stress. Higher maternal education level was associated with lower Time 2 parenting stress.

CHAPTER 1 INTRODUCTION AND RATIONALE

This study was designed to examine conditions under which low-income mothers choose to engage themselves in voluntary supportive relationships with community-based early childhood programs. Considerable research has focused on parental involvement and well-being as mediators of a variety of child outcomes. However, this study takes a step back to focus on earlier stages in that process: understanding predictors of voluntary program engagement, and examining changes in parenting stress in the course of a year's participation in an early childhood program with a family support component. Further, the study was intended to shed light on factors that may moderate those relationships in an ethnic minority immigrant population. Head Start, as a multi-generational early childhood program with a long history of promoting voluntary supportive relationships with low income parents, provided an ideal setting for such explorations.

Parenting support, as conceptualized in community-based family support programs, is not a formal or quantifiable service, such as an hour of counseling or a package of diapers. Rather, it is an informally-derived sense of belonging and empowerment which provides a parent with the confidence to function more effectively in the parenting role (Dunst, Trivette, Boyd, & Brookfield, 1994; Weiss & Halpern, 1991; Zigler & Freedman, 1987). In the context of multi-generation family support programs, especially those whose primary purpose is early childhood education, it is critical to

recognize the voluntary nature of the parent's use of potentially supportive program resources.

The conditions under which parents choose to involve themselves in voluntary supportive relationships with early childhood programs are not well understood, and yet a better understanding of these conditions is important to designing effective programs. Assuming that parents do benefit in their parenting role from the support offered by such programs, they will only benefit if they avail themselves of the resources, and they will only do that if they perceive that it is both helpful and feasible to do so.

The present study, based on an ecological understanding of parenting stress and support processes in community-based early childhood programs, was designed to expand current knowledge in this field, with special reference to how basic stress and support processes may function in extended households and in a low-income immigrant population in the United States. This knowledge is critically needed to inform policy, program planning, and professional training efforts in the area of family support and prevention.

Why is research needed on parenting stress and support in the context of community-based early childhood programs? First, a substantial and concerning body of research indicates that highly stressed and isolated parents perceive their children more negatively (independent of actual child behavior), and are more likely to use ineffective or even abusive parenting practices to manage behavior (Mash & Johnson, 1990; Webster-Stratton, 1990, Whipple & Webster-Stratton, 1991; Telleen, et. al., 1989; Brody

& Forehand, 1986). While historically the rationale for including parent components in early childhood intervention programs was to enhance the *child's* developmental outcomes (Zigler & Hall, 2000; Zigler & Freedman, 1987; Cochran & Brassard, 1979; Cochran, 1988; Bronfenbrenner, 1987), the effects of program-based support on *parent* outcomes, especially those related to parental stress, are potentially of equal importance.

Second, despite the intuitive appeal of informal community-based family support programs (Bronfenbrenner, 1987; Moroney, 1987; Garbarino, 1983), some parents seem either unable or unwilling to make effective use of informal parenting support even when it is readily available, and we have limited knowledge of the factors that influence the acceptability or sufficiency of community-based supports for these parents. Basic social connectedness is a commodity vital to the functioning of all families, but some analysts believe it is becoming increasingly difficult for vulnerable, low-income families to maintain these ties (Putnam, 2000; Nelson, 2000; Roschelle, 1997; J. F. Kennedy School of Government, 2001). Families raising young children in the U.S. may be more isolated than ever from their traditional informal sources of support. Combined with ongoing funding cuts to social “safety-net” services of all kinds, this leaves children and families vulnerable, and may represent a potentially serious threat to our collective social capital.

Third, a number of questions remain about possible effects of household configuration on parenting stress and the utilization of informal program support by parents. Existing research presents a mixed picture. We know that family and social networks can be sources of stress as well as support (Bronfenbrenner, 1987; Wellman,

1981; Eckenrode & Gore, 1981; Belle, 1987; Bassuk, Mickelson, Bissell & Perloff, 2002). Structural aspects of extended households might be expected either to facilitate a parent's interaction with community-based programs, or to impose practical constraints on their ability to do so. For example, the presence of other young children in the home seems to be a barrier to parent involvement in preschool early intervention programs like Head Start (Parker, Baker, Piotrkowski, Young, Peay, & Kessler-Sklar, 1997). The presence of other adults in the home could potentially either be supportive (facilitating involvement by providing an alternate source of care for these children), or it could contribute to a general level of disorganization in the household that would inhibit parent program engagement.

Who those adults are, and the specific roles they play in the family, may also make a difference. There is evidence that specific individuals in a parent's household or social network (spouses, grandparents, friends, and other kin) provide different kinds and degrees of support in the parenting role. The support offered by spouses and grandmothers in particular appears to be more salient than that provided by other individuals (Levitt, Weber, & Clark, 1986; Cochran, Lerner, Riley, Gunnarsson, & Henderson, 1990; Bassuk et al., 2002). The role that unmarried live-in partners may play in parenting, or in supporting the parenting role of low-income mothers, is less clear in the literature, and bears investigation.

Finally, there is reason to believe that these household and social network effects may vary with ethnicity and, in immigrant populations, with acculturation in terms of

generational status in the new country (MacPhee, Fritz, & Miller-Heyl, 1996; Zambrana, Silva-Palacios, & Powell, 1992). Ethnicity and length of residence, in turn, have been associated with different patterns of family and household structure (Zambrana, 1995; Booth, Crouter & Landale, 1997; Buriel & DeMent, 1997; Golding & Baezconde-Garbanati, 1990). Thus, extended households, whether as a cultural factor or simply as a structural constraint, may be a particularly salient issue within some ethnic and immigrant populations. Mexican American families are the fastest growing minority group in the United States, making up a growing proportion of participants in early childhood intervention programs in many communities (Zigler & Hall, 2000; U.S. Census, 2002; Zambrana, 1995; Booth, Crouter & Landale, 1997). It is not yet clear to what extent emerging parent and family support models are generalizable to this population.

To promote sound, research-based policy and programming in the area of parent support, we need good theoretical models for understanding the processes by which parents decide to make use of potentially supportive resources. Models of parenting from the mid-1980s provide the theoretical foundation for an ecological understanding of parenting processes (Belsky, Robins, & Gamble, 1984; Belsky, 1984). Theoretical developments in the 1990s emphasized parenting stress, and parental beliefs and attributions (Abidin, 1992; Darling & Steinberg, 1992; Grusec & Kuczynski, 1997). A logical next step in an ecological theory of parenting is to integrate it with emerging work on community-based family support (Dunst, Trivette, & Deal, 1994; Weiss & Halpern, 1991; Kagan, Powell, Weissbourd, & Zigler, 1987; Peisher, Sewell, & Kirk, 2001).

Current school-based conceptualizations of parental involvement do not fully capture the parenting support aspects of the relationship that may exist between a parent and her child's preschool program. The present study proposes a construct called *program support acceptance*, which is designed to describe that relationship. *Program support acceptance* is believed to be a factor in program effects on parental stress, perhaps moderated by such factors as acculturation (generational status). Using the classic Lazarus and Folkman (1984) model of stress, appraisal and coping as a guiding framework, the present study examines factors that may predict a parent's appraisal of her child's preschool early intervention program as a potential resource for coping with parenting stress. To the extent that this construct is found useful, future studies will be better able to conceptualize a stressed parent's acceptance and use of program-based parenting support as a coping resource.

Finally, the study also begins to examine a long-standing theoretical question: Is stress primarily a barrier to parental involvement, or can moderate levels of parental stress actually provide motivation to seek out program-based parenting support? Factors associated with acceptance and use of such support may be incorporated into the design of programs to enhance their accessibility and usefulness to highly stressed parents.

CHAPTER 2 REVIEW OF LITERATURE

Overview

The following discussion is organized into six parts. The first provides a brief *introduction to community-based family support programs* in the United States, which considers the role of parenting support in those programs, and the integration of family support practices into early childhood intervention programs such as Head Start.

The second section briefly reviews family support terminology, examines literature related to social support and parent program engagement, and introduces the *program support acceptance* construct. Program support acceptance is viewed as a resource or strategy for coping with parental stress. The voluntary nature of program support acceptance is highlighted.

The third section discusses *theoretical issues* related to stress, support, coping, and parenting. The Lazarus and Folkman (1984) general model of stress, appraisal and coping, and Abidin's (1992, 1990, 1978) parenting stress model, are discussed as guiding theoretical frameworks for the study. Competing evidence about the role of parenting stress as either a motivator of support-seeking coping, or as a barrier to it, is explored.

The fourth section focuses on *contextual antecedents of parenting stress and support*. Antecedents of parenting stress and program support acceptance are discussed in light of relevant theoretical literature on the stress and coping processes. These factors are explored as potential predictors of parenting stress and support linkages, and available

empirical studies are reviewed.

The fifth section of the chapter addresses the same issues of parenting stress, support, and contextual antecedents from the *perspective of low-income Mexican American families* who may be involved in early childhood programs with a family support component. The design of the present study focuses on examination of within-group differences in a Mexican American population, according to generational status, several household structure variables, and other contextual variables. An adaptation of the Lazarus and Folkman model by Slavin, Rainer, McCreary and Gowda (1991) addresses stress and coping processes in ethnic minority populations, and provides a framework for this discussion.

Following this, the sixth section considers the potential *moderating role of acculturation* within this Mexican American immigrant population.

Finally, several heuristic models are proposed for examining proposed linkages between parenting stress and program support acceptance in this population, and the research questions posed in the study are summarized.

Introduction to Community-Based Family Support Programs

Contemporary family support programs in the United States have their roots in the late 1880s, when large cities in the northeast and midwest experienced an influx of impoverished European immigrants. One response was the emergence of community-based settlement houses, such as Jane Addams' Hull House in Chicago. Well-educated

and idealistic young settlement workers literally took up residence in poor immigrant neighborhoods, with the intent not only to provide services, but to share the lives and experiences of their clientele, and empower them to help themselves. They offered a range of life skills and adult education programs, which often included parent education classes for adults who had become isolated from their traditional sources of child-rearing advice as a result of immigration.

In the 1960s, during Lyndon Johnson's War on Poverty, there was renewed interest in grassroots "self-help" and empowerment programs for disadvantaged groups. These included Project Head Start, a compensatory preschool system which was unique at that time in its emphasis on an active role for its low-income parent participants. Contemporary community-based family support programs emerged starting in the late 1970s. By the late 1980s and early 1990s, they took many forms, including information and referral services, support groups, neighborhood drop-in centers, respite care, structured parent education classes, home visiting services, and a variety of early intervention and child care programs (Weiss & Halpern, 1991; Weissbourd, 1987; Peisher, Sewell, & Kirk, 2001). While services were sometimes targeted to specific groups, such as single parents or adolescent mothers, the family support philosophy has generally assumed that all parents could benefit from such support.

Ecological and contextual theories of child development, which emerged around the same time period, also emphasized the important role of parents in early childhood education and intervention (Bronfenbrenner, 1977, 1979; Lerner, 1995; Dunst, Trivette,

& Deal, 1994; Zigler & Hall, 2000, Zigler & Styfco, 1993; Collins, 1993). This further supported the growth of multi-generational programs. Today, parent support services are an integral part of many traditionally child-focused settings such as preschools and early intervention programs (Weiss & Halpern, 1990; Kagan, Powell, Weissbourd, & Zigler, 1987). Many have been designed to systematically create opportunities for informal social network building among parents (Cochran, Larner, Riley, Gunnarsson, & Henderson, 1990; Weiss & Halpern, 1991). They attempt to alleviate parenting stress by supplementing the support that parents can access within their immediate households or personal networks (Weiss & Halpern, 1990; Kagan, Powell, Weissbourd, & Zigler, 1987; Garbarino, 1983). As with family support programs in general, parent-focused support services in early childhood programs take many forms, including home visiting (Klass, 1996; Behrman, 1993; Olds, 1988) and formal parenting classes (Wandersman, 1987; Laosa, 1983), as well as more informal, peer-oriented supports such as drop-in centers and self-help groups (Telleen, Herzog, & Kilbane, 1989; Pizzo, 1987; Weiss, 1987).

Family support practices can be incorporated into a variety of existing institutions and family services, for families of all ages and income levels. However, they were embraced most enthusiastically by programs serving young children, especially early intervention programs for at-risk children (Larner, 1995; Dunst, Trivette, & Deal, 1994; Zigler & Styfco, 1993; Collins, 1993). For example, under the IDEA (Individuals with Disabilities Education Act), federally funded programs for handicapped children are required by law (P.L. 99-457, 1990; P.L. 105-17, 1997) to develop Individual Family

Service Plans that involve parents as active partners in providing services for infants and young children.

Head Start as a community-based family support program. Head Start is a federally-funded early intervention program that has requirements for involving parents in meaningful ways in the child's educational program (*Head Start Performance Standards*, 1998, 1996). Although it was established in 1965 as a compensatory preschool program for disadvantaged children between the ages of 3 and 5, Head Start's federal mandate has always included extensive parent involvement and family service components (Replogle, 1995; Lerner, 1995; Collins, 1993; Zigler & Styfco, 1993; Piotrkowski, Collins, Knitzer, & Robinson, 1994). The parent component in Head Start programs has historically focused on issues like family literacy, parent involvement in program governance, and encouraging parents to volunteer in the classroom (Sissel, 2000). However, Head Start programs also provide a range of formal and informal opportunities for parents to expand their potential sources of support around parenting issues (Cochran, 1990; Weiss & Halpern, 1990; Telleen, Herzog, & Kilbane, 1989; Weissbourd, 1987; Bronfenbrenner, 1987). In fact, Head Start has sometimes been described as a prototype for the community-based family support program (Zigler & Freedman, 1987).

Parent participation in Head Start takes a variety of forms, some more formal than others. In all Head Start programs, parents are automatically members of a Parent Committee at their child's center, with monthly parent-run meetings. They also have the opportunity to serve in policy-making roles as elected representatives on a program-wide

Policy Council. Policy Councils have significant power to approve or disapprove program policy decisions, including budgets and the hiring and firing of Head Start staff. In addition, because local Head Start programs can receive credit toward local matching fund requirements by tracking volunteer services, parents are strongly encouraged to volunteer in their child's classroom (*Head Start Performance Standards*, 1996, 1998).

Other forms of program participation for Head Start parents include several required home visits and parent-teacher conferences during the school year, as well as telephone calls from teachers, developing Family Partnership Agreements with their family service workers, participating in periodic parent workshops and social events at the center, and simply talking informally with staff and fellow parents as they drop off or pick up their children on a daily basis, or meet the child at the bus stop (Larner, 1995; Zigler & Styfco, 1993; Parker, Piotrkowski, & Peay, 1987). These activities are the primary program contacts for the majority of parents. Such contacts all constitute informal parent support as defined here, since they tend to promote a sense of belonging in parents who engage in them, and encourage the expansion of informal social networks around parenting concerns (Weiss & Halpern, 1990; Zigler & Freedman, 1987).

Several additional forms of parent program involvement common to Head Start fall less clearly into the category of parent support. For example, as many as a third of Head Start staff nation-wide in 1992 were former Head Start parents (*Head Start Performance Standards*, 1996, 1998; Larner, 1995). In local programs, internal career paths exist by which a parent may move from volunteer to paraprofessional employee,

with the possibility of earning a CDA (Child Development Associate) teaching credential. At the other end of the spectrum of parental functioning, Head Start family service workers intervene on an individual basis with severely distressed parents, providing one-on-one casework services. Head Start programs are also required to provide or contract for mental health consultation, and may refer families to more formal mental health and social services when this is warranted.

Summary and implications for study. Parent involvement activities in Head Start vary in intensity and in their direct attention to parenting issues, but all provide some opportunity for parents to interact on an informal basis with other adults, whether they are other parents with similar life situations, teachers who know their child and are knowledgeable about child development, or family support workers who assist with their individual family needs. As such, the Head Start program provides an ideal setting for investigation of questions relating to parenting stress and support processes in low income families with young children. One aim of the present study is to examine whether voluntary utilization of formal and informal program-based parenting support resources by parents of children in an early childhood intervention program such as Head Start attenuates subsequent parenting stress.

Program Support Acceptance

Reviewing family support terminology. Before proceeding further, it may be helpful to define some commonly used, interrelated, and sometimes overlapping

terminology. Terms commonly used among family service practitioners and in applied research literature for the kinds of programs described above include *community-based family support and education* (Weiss & Halpern, 1991), *family support* (Weissbourd, 1987; Dunst & Trivette, 1994), or simply *parent support* (common among community-based professionals). However, some respected authorities (Zigler & Hall, 2000) have chosen to define *family support program* as an intervention consisting only of a parent intervention component, as distinct from *early intervention program*, designating programs that focus their services directly on children. In still other contexts, *family support* denotes limited, concrete, instrumental support services, such as welfare benefits or child support payments, and does not include social support elements at all.

Therefore, it is important to clarify that the current study conceptualizes a type of family support or parent support which is offered *in the context of an early intervention program* (essentially a two-generation program model), and includes a large measure of social and emotional support for parents *in their parenting role*. Instrumental types of support may or may not be part of the program model.

The concept of parent support as used here also overlaps with *parent involvement*, a term popular in recent years in the education and child care literature (Zigler & Styfco, 1993; Lerner, 1995). However, it is sufficiently distinct that using the *parent involvement* label in this context could be confusing. School-based conceptualizations of parent involvement tend to emphasize formalized activities, and emphasize the teaching rather than the social, emotional, or nurturing aspects of the parenting role. This formal,

academic approach to parent involvement becomes increasingly prevalent in the elementary school years, and in fact appears to represent a major shift in the way parents and institutions relate to each other after the preschool years. Studies of the transition from preschool to kindergarten have documented a shift from frequent, informal parent-teacher contact to more formal types of parent involvement centering around scheduled conferences and exchanged notes (Rimm-Kaufman & Pianta, 1999). The National Center for Education Statistics, for example, reports on parental school involvement in terms of attendance at school meetings, parent-teacher conferences, school events, and volunteering (U.S. Department of Education, 2001).

As vital as these forms of parent involvement may be in supporting a child's satisfactory academic progress through the elementary and high school years, they are not designed to represent a potential source of parent support for stressed low-income parents, and are not particularly likely to promote that outcome. However, no existing term entirely captures the notion of a parent voluntarily choosing to avail herself of potentially supportive resources. Hence the need to define a term that builds on the social psychology of social support, and the parent's subjective inclination or disinclination to take advantage of parenting support resources.

Developing an understanding of parent social support and program engagement.

Discussions of social support and support acceptance are rooted in social psychology. Gottlieb (1981) distinguished three levels of analysis in conceptualizing social support: people's integration into the larger community, their day-to-day social networks of kin

and friends, and their access to intimate relationships such as those found within one's household from close family members. All three levels have relevance to the potential utilization of community-based programs by parents for support in their parenting role. Acceptance of parenting support is also closely related to the concept of *perceived social support* (Sarason, Sarason, & Pierce, 1992). Emphasizing the subjective nature of social support, Sarason et al. defined perceived social support as: (a) a feeling of being cared for, (b) the belief that one is loved, esteemed and valued, and (c) the sense of belonging to a reciprocal network. According to these authors (Sarason, Sarason, & Pierce, 1994), perceived social support is a cognitive adaptation that individuals make as a function of a *situational context* (an event, and the real or perceived resources available), an *intrapersonal context* (cognitive models or attachment styles, which are more or less stable patterns of expectations of oneself and of relationships in general), and an *interpersonal context* (a history of more or less supportive interactions with particular individuals over time).

Barnes and Duck (1994) emphasize the "ordinariness" of many social support mechanisms. As obvious as it may seem, they argue, it is important to explicitly recognize the role of daily interactions. The quality of everyday, informal communications, over time, appears to provide the context and continuity that leads individuals to regard a relationship as a "safe haven" or a source of support when needed. This is as likely to be true of a parent's interaction with staff of an early childhood intervention program as it is of interactions with others in their social support network.

Burleson's concept of *comforting messages* builds on this notion, and provides another step toward a conceptualization of mechanisms of parent support in community-based programs (Burleson, 1994). While the verbal or nonverbal social interactions he describes as comforting messages have the immediate effect of reducing emotional distress in the recipient, Burleson advises researchers to look beyond the immediate instrumental effect of such messages. Can they also help the recipient in the long term to develop more effective coping strategies for managing distress, or have immediate relational and identity effects on how the recipient feels toward the messenger and herself? Do they have long term relational effects on whether or not the recipient pursues a voluntary relationship (such as friendship or mentorship) with the messenger?

Increasingly, practitioners and program evaluators in the family support field recognize that simply offering a program is not enough, and have begun to recognize the importance of noting and measuring feelings of inclination or disinclination to interact with the program, which are also referred to as *engagement* (Peisher, Sewell & Kirk, 2001). Engagement is viewed as an initial short-term indicator that may be predictive of more intermediate or long-term program outcomes. Since an underlying premise of family support programs is that the programs can serve as a sort of surrogate family, augmenting the social support available from the parent's personal and family support network, it is relevant to ask what factors may incline a parent who is experiencing parenting stress to voluntarily engage with the program, and avail him or herself of its potentially supportive resources.

If the recipient is a highly-stressed mother interacting with her child's preschool or early intervention program, and she consistently receives messages in these interactions that she perceives as "comforting" or supportive or welcoming (Burleson, 1994), she might be inclined over time to choose to interact more frequently with the program, in effect regulating the "dosage" of her own exposure to the potentially supportive resources of the program (which may include teachers, other staff, and frequently other parents, as well as formal instruction or services). Even a parent who initially feels too alienated or overwhelmed to be actively involved in her child's preschool program may well find that spending time at the program, seeking out supportive staff members, or developing bonds with other parents, have all gradually become part of her repertoire for coping with the stress or isolation of her parenting role.

Defining program support acceptance. Empirical investigation of program-based parenting support requires some measure or indicator. In light of the preceding, the present study proposes a new construct intended to capture elements of engagement, comforting messages, and perceived social support, in the context of community-based family support programs. A suggested concept that might incorporate these elements is *acceptance of informal program-based parent support*, or simply *program support acceptance*.

Program support acceptance construct is defined as *the perceived availability, and consequent voluntary utilization by parents, of informal social support (including "comforting messages") from staff or peers in a community-based program setting*,

which may alleviate emotional distress and/or enhance confidence in ability to function in the parenting role.

Summary and implications for present study. The present study was designed in part to examine the utility of the *program support acceptance* construct for research and practical purposes, and to examine some of the conditions under which parents choose to avail themselves of the parent support resources that are potentially available to them through their child's early intervention program.

Theoretical Framework: Stress, Support and Coping

Of the many theoretical models of stress and support in the literature, two seem particularly useful in providing the necessary framework for considering issues of stress and support acceptance among low-income ethnic minority parents. One is Lazarus and Folkman's general model of stress and coping (1984). The second is Abidin's parenting stress model (1986, 1990). These models are summarized below.

Lazarus & Folkman model of stress, appraisal and coping. Lazarus & Folkman (1984) describe a model of stress and coping in which a person's experience of an event as stressful, and his or her reactions to the event, are mediated by a series of cognitive appraisals about the event and the availability of resources to deal with it. The potential environmental stressor may be a major life event, a minor event, or even a series of minor "daily hassles" that make up a chronic life circumstance. The first step in the cognitive process is a *primary appraisal* of whether the event is relevant to the

individual's interests at all, and if so, whether it is benign, positive, or stressful. If the event is relevant and stressful, the primary appraisal process considers whether it constitutes *harm/loss* (damage has already occurred), *threat* (harm or loss is anticipated), or *challenge* (there is a perceived potential for harm, but also for gain if the event is successfully managed). An appraisal of harm/loss or challenge would produce a state of arousal, and likely emotional distress. Once a threat or challenge has been identified, a *secondary appraisal* takes place in which the individual considers the available options and resources for dealing with the threat, and the likelihood that they will be successful. According to Lazarus and Folkman, the psychological and emotional experience of stress results from the balance and interplay between these two kinds of appraisal: what is at stake (producing a state of arousal), and what resources are perceived to be available for coping (material, emotional, social, or cognitive).

The Lazarus and Folkman model has proved to be a fruitful one for research, largely because of the flexibility inherent in the two parts of the appraisal process. A wide variety of internal emotional and external situational factors may determine how an individual will assess the meaning of the potential threat (primary appraisal) or the availability of resources (secondary appraisal). Thus the model lends itself to adaptations for particular populations and contexts, including parents, immigrants, and ethnic or cultural minority groups.

Abidin's parenting stress model. A second organizing theoretical framework for this study is provided by Richard Abidin's extensive work on conceptualizing and

measuring stress processes in the parenting role. The full parenting stress model (1992, 1990, 1978) posits that dysfunctional parenting is a function of the total stress the parent experiences due to parent characteristics; child characteristics, and situational variables. In the original model (Abidin, 1978, 1986), three *parent characteristics* were proposed: *depression* (influencing the parent's emotional and sometimes physical availability to the child), *sense of competence in the parenting role* (the extent to which the parent feels overwhelmed by his or her responsibilities), and *parental attachment* (the parent's intrinsic investment in the parenting role, and motivation to fulfil it). The attachment variable is based on Bowlby's concept of internal working models of relationships, and is assumed to be related to the parent's own developmental history and caregiving experiences (Bretherton & Waters, 1985). On the basis of these experiences, the parent constructs a "working model" of him or herself in the role of parent.

Potentially stress-inducing *child characteristics* in the model include those *temperament* variables (Thomas & Chess, 1981) which influence how difficult the child is to manage. Two other child characteristics are seen as more interactive variables: the *child's acceptability to the parent* (how closely the child matches the parent's "idealized or hoped-for child"), and the degree to which *interactions with the child are reinforcing to the parent* (that is, the child expresses pleasure or affection, responds to comforting, acts on the parent's requests, etc.).

Finally, *situational variables* contributing to parenting stress in the model include the *parents' relationship with each other* (emotional and physical support provided by the

other parent, and conflict in the relationship associated with parenting), *social support available to the parent* (degree of social isolation experienced by the parent), *parent's physical health* (its impact on the ability to meet the demands of parenting), and *restriction caused by the parenting role* (resentment or sense of loss due to parent's perception of negative impact on personal freedom or other life roles).

In a later, simplified version of the model, based on factor analysis of the 120 item Parenting Stress Index (1986), Abidin reduced the number of major factors to three. *Parental distress* incorporates parental depression, as well as situational factors such as role restriction, social isolation, and relationship with spouse or partner. *Dysfunctional parent-child interactions* include the child's acceptability to the parent, the extent to which the child reinforces the parent, and parental attachment, all relating to the degree of satisfaction derived by the parent from interaction with the child. The third factor is *perception of child difficulty*, which includes aspects of temperament related to the child's adaptability, demandingness, dominant mood, and distractibility or activity level (as perceived by the parent). These factors correspond to the three subscales of the Parenting Stress Index-SF (1990a), used in the present study as the measure of parenting stress.

Integration of models. In more recent exploratory discussions, Abidin considered an integration of the parenting stress model with Lazarus and Folkman, as well as with general ecological models of parenting (Belsky et al., 1984). In a largely exploratory discussion of an integrated model (Abidin, 1992; personal communication 2001), Abidin proposed a new element, emphasizing parental belief and motivational systems. In this

model, initial parenting stress is conceptualized as a *motivational variable*. Drawing on Lazarus and Folkman (1984), initial parenting stress is seen as the result of the parent's *primary appraisal* that a threat is posed by potential stressors, in the context of their relevance to the parental role. Based on attachment theory, parents are thought to develop an internal working model of themselves in the role of parent, as an outgrowth of their own developmental history. The working model includes a set of beliefs about “self-as-parent” that becomes the mediator or cognitive filter through which potential threats to that role are appraised. The appraisal of the threat posed by an event determines the level of parenting stress experienced. In a process analogous to Lazarus and Folkman’s model of stress and coping, Abidin proposed that parenting stress, considered as a motivating variable (*primary appraisal*), prompts the parent to assess and mobilize available contextual resources (*secondary appraisal*) in support of his or her parenting role, which in turn influences subjective parenting stress at a later time. This, of course, suggests that the relationship between parenting stress and support-seeking may be a curvilinear one.

Linear vs. non-linear relationships in stress, support and coping. Abidin is not the only researcher to suggest the possibility of a non-linear relationship between stress and coping or support-seeking behavior. One body of empirical and theoretical literature on stress and support suggests that a minimal level of stress or *environmental press* serves as necessary motivation for individuals to engage in coping behaviors (such as seeking out potential resources and sources of support in their social networks). In this view, mobilization of coping strategies, which can include seeking social support, is stimulated

by the appraisal (a) that there is some stressor that constitutes a threat or challenge, and (b) that it is both necessary and feasible to call upon or expand one's available resources to meet the challenge (Lazarus & Folkman, 1984; Cochran, 1990; Garbarino, 1983).

Successful experiences in dealing with moderate levels of stress are thought to have an enhancing or "steeling" effect on future coping efforts (Garmezy & Rutter, 1983). On the other hand, excessive levels of cumulative stress are believed to overwhelm the emotional and instrumental resources of most individuals, thus inhibiting the effective use even of supports which are readily available (Lazarus & Folkman, 1984; Wilson & Gottman, 1996; Hetherington & Blechman, 1996; Abidin, 2001, personal communication).

As an example of an empirical study that tends to support this view, Telleen (1990) reported that in one family support program, the mothers who most consistently used the program for support on parenting issues were those who had sufficient supportive resources in their own personal social networks to enable them to get to the center on a regular basis, but nevertheless perceived a need for greater support on parenting issues than they were receiving from these personal networks outside of the program. In another example, a study of divorced mothers, Hetherington (1989) reported that under conditions of low stress, social support had little effect on mothers' interactions with their children, and did not differentially affect their relationships with temperamentally easy or difficult children. At the opposite extreme, when mothers were multiply stressed, social supports were also ineffective, apparently because the mothers were simply too overwhelmed to utilize them even when they were available. Under

conditions of moderate stress, however, supportive resources appeared to be utilized, and had a moderating effect on mothers' negative responses to temperamentally difficult children. Graphically, this would suggest an inverted U-shaped relationship between stress and coping efforts, including utilization of program-based social support (see Figure 1).

An alternate and equally prominent view in the literature is that stress simply inhibits support-seeking in a linear fashion, functioning primarily as a barrier. One manifestation of parenting stress may be parental depression. Validation studies of the short form of the Parenting Stress Index indicated that the Parental Distress subscale is highly correlated with the Depression subscale of the full-length PSI, which in turn is correlated with the Beck Depression Index (Abidin, 1995). Parker, Piotrkowski, & Peay (1987) reported that maternal depression was associated with low levels of involvement in Head Start parent activities, even though higher levels of participation were associated with fewer psychological symptoms and greater life satisfaction at the end of the year. While the correlational nature of the study made it impossible to determine the direction of causality, it appeared that for some mothers, initial depression might be a barrier to taking advantage of the potentially supportive resources in the program.

Powell (1988) also reported that highly stressed mothers in a family support program did not engage as readily in parenting support groups as less stressed mothers. Highly stressed mothers needed up to six months longer to develop active engagement and participation in the support groups. Another influential body of stress research,

which focuses on stress as physiological arousal in response to an environmental threat or noxious stimulus, suggests similar conclusions. In this research, excessive stress or physiological arousal appears to interfere with an individual's ability to evaluate and carry out effective coping strategies (which can include seeking and utilizing social support), perhaps by interfering with attentional processes (Wilson & Gottman, 1996; Hetherington & Blechman, 1996). This would be graphically represented as a negative linear relationship (see Figure 2).

Summary and implications for present study. It appears that the role of parenting stress as a motivational variable has not been directly tested in an empirical study. In an empirical test, such a construct would imply a curvilinear relationship, graphically represented as an inverted U, between stress and coping efforts or support acceptance behaviors. The alternative view, that increasing stress functions primarily as a barrier to coping behaviors (including seeking social support), would be represented empirically by a negative linear relationship. Increasing stress would correspond to decreasing support-seeking behavior. The literature appears to offer some support for both positions, and a second purpose of this study was to test for such a relationship on a small scale in one specific population.

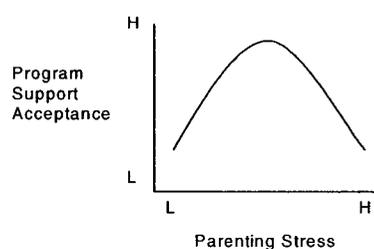


Figure 1. Curvilinear Relationship Between Parenting Stress and Program Support Acceptance

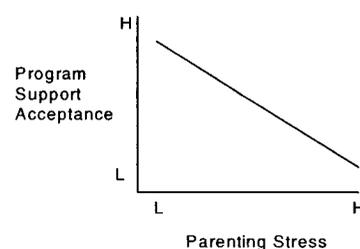


Figure 2. Negative Linear Relationship Between Parenting Stress and Program Support Acceptance

Contextual Antecedents of Parenting Stress and Support

In addition to considering general theoretical linkages between parenting stress and support acceptance, the present study also sought to examine the role of several contextual antecedents of both initial parenting stress and program support acceptance among low-income Mexican American parents who were involved in an early childhood program with a family support component. The situational or contextual variables under consideration in the present study include acculturation, maternal education, stressful life events, partner status, and extended households. While this is by no means an exhaustive list of influences on parenting stress and support processes, these contextual variables

were thought to have the potential to influence the initial level of parenting stress of parents participating in a family support program, and were also thought to have a potential to influence program support acceptance (see Figure 3).

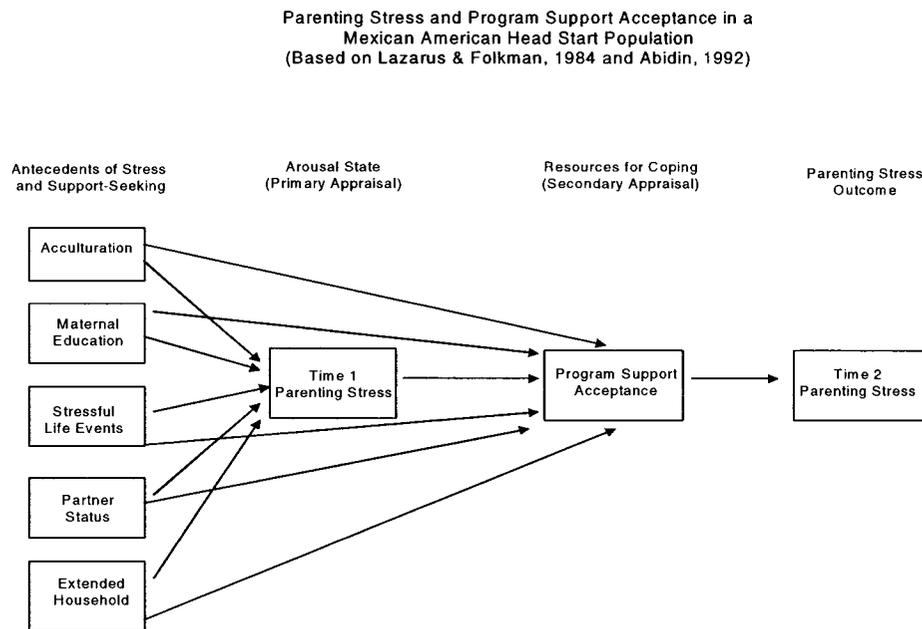


Figure 3. General heuristic model (Overview)

Acculturation. Acculturation is the process by which immigrants adapt to the culture, language and values of their adopted country. While acculturation is defined and measured in many ways, for purposes of this study it is particularly tied to ways in which household structure typically changes from the immigrant generation (those born in Mexico) through subsequent generations. Demographic studies indicate that immigrant

generation Mexican American adults are more likely to be married with a spouse present, to have larger households, and to have fewer contacts with relatives outside of the household, as compared to later generation (U.S.-born) Mexican Americans or to non-Hispanic Caucasian Americans (Zambrana, 1995; Booth, Crouter, & Landale, 1997; Buriel & DeMent, 1997; Golding & Baezconde-Garbanati, 1990). While Mexican American families are subject to the same trends as the rest of the U.S. population toward more single-parent households in recent decades, census data suggest that Mexican American women have lower rates of marital disruption and higher rates of fertility when compared to either other Hispanic groups or to non-Hispanic white women. When single, it is more likely because they have never married than because of divorce (Ortiz, 1995).

Studies cited by Buriel & DeMent (1997) indicate that extended households including both relatives and non-relatives are a common pattern for Mexican American families in the first ten years after immigration. As time passes, household patterns become more similar to 2nd and 3rd generation immigrant families, though there is a tendency for extended family members to form new households nearby in the surrounding community. As the immediate household becomes less extended, the social network outside of the home is expanded, so that the social support of extended kin and friends is potentially maintained or expanded (S. Blank, 1993, as cited in Buriel & DeMent, 1997).

Vega (1995) reports that extended households in Latino immigrant families may also be related to legal status. In studies he reviewed, illegal immigrant households were most likely to be extended *laterally*, meaning that the additional adults present were

siblings or cousins of the same generation as the parent. Legal immigrant households were more likely to be *vertically* as well as laterally extended, meaning that they included adults of an older generation, such as the mother, father, aunts, or uncles of the parent or householder. However, because information on the legal immigration status of study participants is not usually available to researchers, the implications of this observation remain speculative.

Given these complexities of acculturation, one might reasonably expect certain relationships between household structure and parenting stress and support processes to be both predicted and moderated by acculturation in a Mexican American population. However, the likely implications are not always clear. For example, an interesting report from some studies is that less-aculturated immigrant (non-U.S. born) Mexican American mothers may actually be *lower* in family stress and have more harmonious interactions with their children and spouses than more acculturated, U.S.-born mothers, despite the obvious external stresses and disruptions associated with immigration (McClintock & Moore, 1992, as cited in Buriel & DeMent, 1997). In immigrant families in general, census data suggests that there is a progression toward more single parenthood and welfare receipt from the 1st to the 3rd generation of immigrants (Rumbaut, 1997). This could amount to a slight advantage for the immigrant generation in certain kinds of social capital, such as cohesiveness within the immediate family. However, there are contrary reports of unusually high levels of parenting stress among mothers in some other Hispanic immigrant populations (Solis, 1991; Borrero, 1993). Thus, while differences in

parenting stress processes according to acculturation seem plausible, the likely direction of the differences is unclear.

Maternal education is a contextual variable that was included in the present model on theoretical grounds, because of studies suggesting a potential for maternal education to be associated with the outcomes of interest for this study (parenting stress and program support acceptance). Some studies have reported associations between maternal education and parent-child interactions, with lower education levels in mothers associated with more negative perceptions of their children and more negative, less sensitive parenting behaviors (Siantz de Leon & Smith, 1994; Laosa, 1980; Allie, 1987; Cousins, Power, & Olvera-Ezzell, 1993). Because a mother's low educational status can easily be confounded with variables such as low income or acculturation, it was important to account for this factor in considering proposed linkages.

Stressful life events and the concept of cumulative risk. It seems intuitive that negative life events, as environmental stressors constituting harm or loss, would predict initial parenting stress, and perhaps also support-seeking behavior or support acceptance. However, parenting stress research using negative life events has required some refocusing in recent years, as life events rating scales have proved to be disappointing predictors for both child and parent outcomes (Pianta & Egeland, 1990; Pianta, Egeland, & Sroufe, 1990). There are several possible reasons for this unexpected lack of association. It may be that events considered highly stressful by some are experienced as neutral or only moderately stressful by others (Johnson, 1986), or it may be that

apparently similar events result in differing degrees of lasting disruption to close interpersonal relationships (Pianta & Egeland, 1990). Also, while the Lazarus and Folkman model (1984) emphasizes the individual's secondary appraisal of available resources, most life events rating scales focus on the event itself, and fail to take into account real or perceived resources for dealing with the threat or stressor event.

On the other hand, a growing "cumulative risk" literature suggests that the cumulative effect of exposure to multiple stressors, particularly chronic ones, may be more significant than the effect of any particular stressful situation or event (Evans & English, 2002). Not surprisingly, studies show that low-income families are significantly more likely to experience exposure to multiple and chronic stressors than are middle- or upper-income families (Ceballo & McLoyd, 2002; Moore & Vandivere, 2000; Werner & Smith, 1982). In one recent study, low-income families were likely to be exposed to three or more categories of stressors (violence, family separation, family turmoil, housing problems, noise, and crowding), while middle-income families were more typically exposed to zero to two stressors (Evans & English, 2002). The implication for the present study is that, while it would be premature to eliminate stressful life events altogether from predictive models related to parenting stress and support, they may not function in straightforward ways as predictors.

Partner status and extended household. In the family sociology literature, most studies of parents' personal social networks deliberately exclude members of the immediate household, focusing instead on dimensions of kinship and friendship

relationships which may provide differing kinds of supportive resources for parents (Cochran, Lerner, Riley, Gunnarsson, & Henderson, 1990, Acock & Hurlbert, 1990; Wellman, 1981). Structural dimensions of social networks such as size, density, diversity, stability, and proportions of kin to non-kin are thought to affect the potential capacity of networks to provide support.

While acknowledging the importance of these more traditional forms of social network analysis, the present study took a somewhat different approach to examining social support in parenting. The concern here was to examine factors *within* the immediate household structure that might either directly influence parenting stress level, or motivate and enable the primary caregiving parent to seek and utilize external community-based resources for support in parenting. Household structure variables of particular interest in this study included *partner status* (whether the mother is either married or cohabiting with a partner), and whether there is an *extended household* that includes adults other than the mother and partner (whether relatives or non-relatives) who assist to some extent in caregiving.

The parent support literature assigns importance to the supportive presence of *specific individuals* in the household, particularly marital partners and maternal grandmothers. Clearly, not all marriages are supportive. Any particular marital relationship may be conflictual, or at least inconsistently supportive. Nevertheless, studies do consistently show that for mothers in two-parent households, the spouse is the most important source of support in the parenting role, followed by the mother's own

mother (Levitt, Weber, & Clark, 1986; Cochran, et al., 1990; Holtzman & Gilbert, 1986; *FACES*, 2001). Friends and other relatives, while listed as important network members by many mothers, rank below husbands and grandmothers as providers of both emotional support and child care assistance (Levitt, Weber, & Clark, 1986). Few studies specifically address the role played by unmarried live-in partners, who may or may not be biological fathers, and it is unclear whether these unmarried partners function like spouses in terms of parenting and caregiving roles in the household.

Roschelle (1997) defined household extendedness as the presence of *any* non-relative, or relatives other than the spouse or children of the target adult. In the present study, the concern was with the presence of persons in the household who might be supportive of the mother in her parenting role. Potential sources of caregiving assistance might include a grandmother, an adult child living at home, or other related or non-related adults. Because of this, an *extended household* was somewhat more stringently defined as one that includes *one or more potential care-giving adults (aged 18 or older), other than the mother and her spouse or partner, who reside in the household.*

Extended households were of interest in this study for two reasons. First, social network studies, as well as ecological theory (Bronfenbrenner, 1987), suggest that having additional caregiving adults in the household (two parents, or another adult caregiver who can potentially provide either emotional or instrumental support for the mother) may be a resource that would enable a mother to be more actively engaged in her child's preschool program if she so chooses. Second, as indicated earlier, the literature on acculturation and

household structure suggests that particularly in the first decade after immigration, immigrant families may be more likely to live in extended households.

Linkages between personal network support and parenting stress. It seems self-evident that there should be a relationship between stress and social support, and that the best source of social support may be one's intimate personal network. The social support literature claims significant health-protective or "stress-buffering" effects when social support is provided to people considered to be at high risk for physical or mental health problems (Gottlieb, 1981). Thus, it is reasonable to expect that higher levels of social support from family members and higher levels of program support acceptance would predict lower parenting stress levels.

However, not all close or intimate ties are consistently supportive, voluntary, or reciprocal (Wellman, 1981). Depending on the context, the same individual in one's primary network (eg., a spouse or a parent or a friend) may at different times be both a source of support and a source of stress (Eckenrode and Gore, 1981). This may be particularly true for low income women. Belle (1987) highlighted the two-edged nature of social network involvement for this group, reporting that women are more likely than men both to give and to receive network support in their roles as mothers, wives, sisters, and friends, and neighbors. While this may give women the advantage of being more easily able to mobilize social support when needed, women may also be more pressed with demands to provide support to others in the network. Belle suggests that, unfortunately, women with the fewest resources, such as those in immigrant or low-

income communities, may also be the most inequitably burdened with providing support to children and needy friends or relatives. This additional strain may contribute to depression or a sense of demoralization.

Social support is consistently associated in the literature with more nurturing and consistent parenting, and more positive perceptions of children, while social isolation and lack of social support are associated with child abuse and neglect. However, the mitigating effects of social support on parenting behavior, an important parent outcome, are also less clear under the conditions frequently faced by low-income parents. A recent study of parenting in poor, dangerous neighborhoods found that the usual positive effects of instrumental and emotional social support on parenting behaviors (ie., more nurturing behavior and less reliance on punishment) were significantly moderated and attenuated by stressful neighborhood conditions (Ceballo & McLoyd, 2002). The ability of mothers to utilize available emotional or instrumental support to enhance their parenting was limited under conditions of severe environmental or neighborhood stress.

The ambiguous nature of close social network ties for low-income mothers was further highlighted in another recent study of the role of kin and non-kin support in the mental health of female heads of households living in homeless shelters (Bassuk, Mickelson, Bissell, & Perloff, 2002). In this unmatched case-control study of a very low-income population (single mothers in a homeless shelter, compared to single mothers who were AFDC recipients), women reported that they were more likely to receive instrumental support from partners and family, and more likely to receive emotional

support from friends and professionals. However, *conflict* with both kin and non-kin was a stronger predictor of their mental health status (depression, anxiety, distress, and hostility) than was either the social or the emotional support received from these sources. Conflict with siblings was more predictive of negative mental health (hostility) than was conflict with mothers. The only significant predictor of better mental health was instrumental support from professionals. Thus, it appears that conflicted family relationships severely attenuated any positive effects of kin or non-kin social support in these very low-income mothers.

Contextual antecedents and barriers to program support acceptance. As the studies above suggest, an important issue for applied research is not so much whether a community-based program is offering some quantifiable amount of support, and whether that amount of support is sufficient, but determining what factors enable a particular parent, at a particular point in time, to make use of the potentially supportive resources that are available. Because the actual type and frequency of a parent's involvement in most community-based early childhood programs is largely under the parent's control, it is important to consider antecedent factors that may facilitate or discourage program support acceptance.

Who uses program-based parent support resources, and what are some of the factors that inhibit or encourage effective use of the resources? As noted above, Telleen (1990) reported that the mothers who most consistently used one family support program for support on parenting issues were not depressed, and attended the center regularly.

Hetherington (1989) reported that divorced mothers of temperamentally difficult children made the most effective use of supportive resources under conditions of moderate stress.

Studies suggest that a variety of factors may predict the relationship between parental stress and support-seeking in a population of Head Start parents (Parker, Baker, Piotrkowski, Young, Peay, & Kessler-Sklar, 1997; Chalkley & Leik, 1995). In one urban sample of Latino and African American Head Start mothers, mothers identified having a baby or toddler in the home, lack of child care, having a child with a health problem, and working during the day as the major barriers to their participation in Head Start parent activities. Further data analysis showed that depression, marriage, moving, and having more people in the home were additional factors which were statistically correlated with lower participation or utilization in this sample (Parker, Baker, Piotrkowski, Young, Peay, & Kessler-Sklar, 1997). Initial depression appeared to be a barrier to taking advantage of potentially supportive programmatic resources, while higher levels of participation were associated with fewer psychological symptoms and greater life satisfaction at the end of the year.

Another study focused on psychological barriers to program use and acceptance by parents in an Early Head Start program (Robinson, Korfmacher, Green, Song, Soden, & Emde, 2002). Early Head Start is an extension of the Head Start program which serves low-income, high risk infants and toddlers and their families, and generally relies more heavily on home visiting than does the typical Head Start program for preschool-aged children. The authors of this three year study found that, consistent with Belsky, Robins,

& Gamble (1984), several psychological characteristics of mothers (including initial depression, experience of domestic violence, sense of personal mastery, attitudes about relationships, and stress levels) were predictive of lower or more superficial levels of program engagement.

Summary and implications for present study. The studies by Parker and colleagues, and by Robinson et al., suggest that higher initial levels of *parenting stress* would predict lower levels of *program support acceptance*. However, as noted above, other bodies of research might predict different outcomes. Similarly, the work of Parker et al. (1997) suggests that larger extended households would predict lower levels of program support acceptance, while Telleen's work (1990) suggests that larger personal networks, including extended households, might predict higher levels of support acceptance. One goal of the present study was to examine these ambiguous findings about antecedents and barriers to program support acceptance.

Program-based support and stress in Head Start participants. A critical finding of recent studies of parent outcomes in Head Start is that those parents who participate actively in Head Start in either "learner" roles (such as volunteering in the classroom or attending parenting classes) or in "decision-maker" roles (such as serving on the Policy Council) report less depression and greater feelings of well-being and mastery at the end of the school year (Parker, Piotrkowski, & Peay, 1987).

This conclusion is supported by the interim report of the Head Start *Family and Child Experiences Survey* (FACES, 2001), a longitudinal study of the performance of

Head Start programs using a nationally representative sample of over 3,000 families. Regarding the Head Start program objective of “strengthening families as the primary nurturers of their children,” *FACES* reported that in 1998, 27% of primary caregivers in Head Start rated the program as “helpful” and 67% as “very helpful” as a source of support in raising their child. In this regard, Head Start ranked somewhat higher than relatives, and considerably higher than friends, other parents, co-workers, religious or social groups, professional helpers, or child care center staff.

Parent participation and satisfaction was also significantly related to teacher certification and in-service training levels, suggesting that working effectively with parents is a learned skill. Interestingly, parents with lower levels of education were more likely to report satisfaction with the program, but greater participation was reported among parents with more education. Other correlates of greater participation were not being employed, having been involved in Head Start for a longer time, and being ethnically White as opposed to Hispanic or African American. Nationwide, most parents reported some level of participation in the program, and there was a small but statistically significant increase in sense of confidence or mastery in their lives over the course of the Head Start school year. Slight declines in measured levels of depression were reported, but were not statistically significant (*FACES*, 2001).

Summary and implications for present study. This body of research highlights the ambiguous nature of family and network social supports, and raises a number of questions related to *program support acceptance*. For example, do extended household

or partner status predict higher or lower levels of *parenting stress*? Do they facilitate or hinder *program support acceptance*? Can higher levels of *program support acceptance* help to mitigate the effects of lack of familial support for mothers of young children?

The assumptions underlying family support programming suggest that, in terms of ecological theory, staff and other participants in a community-based early childhood program may serve as “third party” support in relation to families raising young children (Bronfenbrenner, 1987). If this is the case, we might expect higher levels of program support acceptance to be associated with lower levels of parenting stress by the end of a program year. It is also noteworthy that the *FACES* (2001) study found maternal education to be related in contradictory ways to parents’ program satisfaction and program participation in Head Start. The present study will examine these factors as possible predictors of stress and support within a Head Start population.

Parenting Stress and Support in Low-Income Mexican American Families

Issues of poverty and ethnicity in parenting, stress, appraisal, and coping. Ethnic minority families in the U.S. are often simultaneously dealing with problems of low socioeconomic status as well as issues of culture and ethnicity. As a result, culture and economic status are frequently confounded in the literature on family relationships and parenting across sub-cultural groups (Hernandez, 1997), leading to inappropriate generalizations about ethnic minority families. Therefore, it is important that research with this population avoid confounding these issues. The present study employed a

sample of low-income Mexican American mothers, both recent immigrants and those from more-acculturated second and third generation families, providing the opportunity to expand on within-group differences in this population.

For example, parenting requires a high investment of time and energy on the part of all parents, and families of any culture or ethnicity that are dealing with the stressors of poverty, neighborhood crime, or marital conflict may simply not have that time and energy on a consistent basis (Baumrind, 1994). Several studies of parenting in Mexican-American families conclude that reported differences in parenting behaviors and parent-child interaction styles, which are sometimes attributed to ethnicity or culture, are actually attributable to other factors such as maternal education or acculturation. Siantz de Leon and Smith (1994), for example, reported negative parent-child relationships and negative maternal perceptions of their young children in a population of Mexican American migrant farm worker families. Because most of the mothers also had very low levels of education and very low incomes, however, the authors were unable to disentangle these influences from cultural influences in relation to parenting difficulties. Laosa (1980) reported that Mexican American mothers used more negative and directive teaching styles with their preschool children compared to average European American mothers, but when compared to other European American mothers with the same level of education, these differences disappeared. Allie (1987) looked at education level, income, generation, and language, and found that more acculturated (3rd generation) English-speaking Mexican American mothers with more education and higher income tended to

have more positive child-rearing attitudes and to encourage more independence in their preschoolers. However, at least one study of low-income immigrant mothers (Cousins, Power, & Olvera-Ezzell, 1993) found that the more acculturated mothers used *more* negative parenting practices rather than less, suggesting that perhaps these groups acculturated differentially, adopting the dominant parenting values of their immediate communities (lower socioeconomic status European Americans in Cousins et al., and more educated middle-class European Americans in the Allie sample).

In general, studies indicate that with increasing time in the new country, the family and household structure of immigrant families comes to more closely resemble dominant-culture families of similar levels of education and income (Buriel & DeMent, 1997). In particular, the availability and roles played by spouses, grandparents, and live-in partners appear to shift over time. Program participation among immigrant mothers may be tied to immediate structural household factors such as partner status, or the presence of other adults in the home who can assist with child care or otherwise facilitate or hinder her participation in the child's program.

Contrary to some widely-held conceptions of the role of support networks in low-income and minority families, higher levels of education and income have been reported as predicting more social support and contact with extended family members among Mexican American immigrants (Griffith & Villavicencio, 1985). It is commonly believed that extended family serves to significantly mitigate the negative aspects of poverty, by providing a ready source of instrumental and emotional support for family members

(Wilson & Tolson, 1990; Roschelle, 1997). However, other reports in the literature suggest that low income generally hinders efforts to maintain ties with kin and friends outside of the immediate household (Cochran, et al., 1990; Roschelle, 1997). Social networks require maintenance, and maintaining social ties with friends or extended family outside of the immediate household requires the expenditure of time and money, whether for shared meals, exchanging gifts, telephone calls, or travel to reunions. This maintenance work may be difficult to sustain for low income families whose resources are stretched (Roschelle, 1997; Wilson & Tolson, 1990).

Stress and coping processes in ethnic minority families. As described earlier, Lazarus & Folkman (1984) described a general model of stress and coping in which a person's experience of an event as stressful, and his or her reactions to the event, are mediated by a series of cognitive appraisals about the event and the availability of resources to deal with it. Slavin, Rainer, McCreary, & Gowda (1991), extending the Lazarus and Folkman model, suggest that cultural factors can affect the experience of minority groups at each stage in the stress and coping process. First, factors related to culture or ethnicity may affect the types and frequencies of potentially stressful events that are experienced. Events related to discrimination or low socioeconomic status can be expected to occur more frequently in the lives of members of minority groups than for members of culturally or ethnically mainstream groups. Second, cultural definitions may affect the primary appraisal of the degree of threat posed by an event. A child behavior that would be considered normative in mainstream U.S. culture might be appraised as a

threat to parental authority in some immigrant groups, for example. Third, secondary appraisals of the resources available to counteract the threat may be influenced by cultural realities or expectations. For example, language barriers or past experiences of discrimination may discourage use of particular community resources. Fourth, ethnic group membership may affect the acceptability of particular coping strategies. In some traditional ethnic communities, it may be considered shameful to go outside the family or religious community for assistance, or to admit to mental health problems, whereas somatic disorders are acceptable manifestations of stress. Traditional gender role definitions may also dictate different coping strategies for men and women.

While the Slavin et al. model is not exclusive to immigrant populations, it is easy to see its applicability to a Mexican American population, and to envision differences in experience that would be related to generational status or acculturation level. Both the exposure to stimulus experiences, and the primary and secondary appraisal of threat and available resources, might well differ from the immigrant generation to later generations.

Summary and implications for present study. The theoretical model of Slavin et al. (1991) suggests several ways that ethnicity could affect stress and coping (or support-seeking) processes in a population of low income Mexican American Head Start parents, especially in terms of appraisals of stressors and potential resources for coping. In addition, several empirical studies indicate that the variables of maternal education and acculturation, especially in terms of generational status, may differentiate among parents within this population (Laosa, 1980; Siantz de Leon & Smith, 1994; Allie, 1987; Cousins,

et al., 1993). The present study will examine the role of these variables.

Parenting stress in low-income families. As noted in the earlier discussion of stressful life events, poverty and low socioeconomic status in themselves increase the likelihood that parents will experience stressful life circumstances. Recent studies continue to show that low-income families in the U.S. are significantly more likely to be exposed to multiple and chronic stressors than are middle- or upper-income families. Evans & English (2002) reported that low-income families in their sample were typically exposed to three or more categories of major stressors (violence, family separation, family turmoil, housing problems, noise, and crowding), while middle-income families were more typically exposed to zero to two stressors in the same period of time.

Similarly, using a six point index of family stress, the National Survey of American Families (NSAF) found that half of all children in families with income below the Federal Poverty Level in the U.S. in 1997 lived in stressful family environments. In contrast, only one child in 20 living in a family with income of three or more times the Federal Poverty Level was living in a stressful family environment. The family stress index included not being able to pay housing or utility bills, having two or more persons in a bedroom, running out of food before the end of the month, worrying about access to health care, a parent having a serious physical health, learning or mental health condition, and a child having a serious physical health, learning or mental health condition (Moore & Vandivere, 2000).

Summary and implications for present study. Based on the studies cited above, it is reasonable to conclude that as a group, the families who meet the income eligibility standards of the Head Start program are exposed to relatively high levels of family stressors, which might be expected to translate into high levels of parenting stress. The present study offers an opportunity to explore the acceptability of non-familial parenting support to low income Mexican American mothers when it is available free of charge and in a neighborhood-based setting, as is the case for Head Start programs. To what extent can personnel associated with the early childhood program, including program staff and other parents, become accepted as surrogate family or “third party” parenting support for these mothers?

Parenting stress in Mexican American households. Several empirical studies have reported generally high levels of parenting stress in populations of Hispanic immigrant parents. Solis reported that in a sample of Spanish-speaking parents from pediatric clinics in New York City, less acculturated mothers experienced more depression, less attachment to their children, and felt less competent as parents as compared to more acculturated mothers. More acculturated mothers were more similar to European American mothers. There were no significant differences among Hispanic mothers across different socioeconomic strata. The respondents were primarily from Puerto Rico, the Dominican Republic, the United States, and Ecuador (Solis, 1991; Solis & Abidin, 1991; Abidin, 1995).

A study of Central American immigrant mothers of young children in

Washington, DC reported extremely elevated levels of parenting stress (Borrero, 1993). Given that the mothers in Borrero's sample were primarily undocumented refugees who had fled to the U.S. due to extreme political and economic instability in Central America in the 1980's, the results are not surprising. Most were monolingual speakers of Spanish, of low socioeconomic status, and had little or no formal education. These mothers also reported that they had access to few coping resources other than natural supports such as family and neighbors, due in part to their tenuous legal status as immigrants.

Two studies examining aspects of parenting stress specifically in Mexican American populations suggested that Mexican American parents as a group may report less parenting stress than some other Hispanic immigrant groups. A study of U.S.-born and Mexico-born mothers in the Los Angeles area found that the immigrant (Mexico-born) mothers expressed greater confidence in their parenting ability prior to the birth of their child, although they reported more practical child-rearing concerns after the birth (Zambrana, Silva-Palacios, & Powell, 1992). The differences were thought to be related both to cultural expectations (that is, immigrant generation mothers considered giving birth and parenting as natural events with clearly defined role expectations, and therefore did not regard parenting as a potentially stressful experience), and to availability of support after delivery (that is, immigrant generation mothers had access to less support after the birth of their children because important resources such as extended family were left behind in Mexico, and therefore experienced parenting as more challenging than expected). Another study of low-income U.S.-born and non-U.S.-born Mexican

American mothers and European American mothers failed to show unusually high levels of parenting stress among the Mexican American mothers by the end of a Head Start program year, as measured by the Parenting Stress Index (Sewell & Taylor, 1996).

Summary and implications for present study. While the *FACES* (2001) study cited earlier suggested that ethnicity is likely to be related to *program support acceptance*, it is less clear from the literature what relationships can be expected between ethnicity and *parenting stress*, particularly in a Mexican American population. Looking beyond ethnicity to acculturation, although several studies of Spanish-speaking immigrant generation mothers have reported higher than average levels of parenting stress, some studies specific to Mexican American mothers have not reported this result. The present study will examine these issues in more detail within a Mexican American population that includes both immigrant generation and later generation mothers.

Potential Moderating Role of Acculturation

Studies described above suggest that acculturation could moderate processes of parenting stress and support in this population of low-income Mexican American Head Start mothers. That is, parenting stress and program support acceptance may have different patterns of relationships among recent immigrant mothers than among more acculturated later generation mothers. At the same time, the literature also suggests that any effects of acculturation could be complex. While different patterns of relationships might be expected in the two populations, it is far less clear what those patterns may be.

The present study considers ways that acculturation may impact on key linkages between parenting stress and support acceptance.

The Slavin et al. (1991) adaptation of the Lazarus and Folkman (1984) model provides one framework for speculation on how moderation by acculturation might operate. Both rates of exposure to stimulus experiences, and the primary and secondary appraisals of the threats posed and the resources available, might well differ from the immigrant generation to later generations. Both immigrant and non-immigrant generation Mexican American Head Start parents would be expected to experience relatively high incidence of stimulus events, based on their low income levels and their minority status (Slavin et al., 1991; Evans & English, 2002). In addition, the immigrant generation parents might experience more stressful stimulus events related to language barriers, lack of familiarity with U.S. institutions, and the immigration experience itself, while later generation parents might experience additional, and perhaps chronic, stressors related to their higher rates of marital disruption and single parenting (Ortiz, 1995; U.S. Census Bureau, 2002). Thus the primary appraisal of threat of harm/loss, as reflected in high parenting stress scores, could be elevated in both groups.

However, the secondary appraisal of resources available for coping, and the salience of that appraisal, may differ for the two groups. Because of language barriers and restricted social networks, the immigrant generation Head Start mothers might perhaps turn more readily to their child's preschool program and its staff, as one of a small number of community resources they know to be available and accessible. Having

already established some kind of relationship with program staff, who would have made efforts during the enrollment process to accommodate their language needs and to welcome the child and family, immigrant mothers might perceive this staff as a source of further support when needed (Taylor, Machida, & Sewell, 1998). Thus, higher levels of prior *parenting stress* in the immigrant group could predict higher levels of *program support acceptance*.

On the other hand, later generation mothers, being more aware of the existence of other resources in the community (such as social services or mental health agencies), might view the preschool program as just one of many community resources, and as one that is primarily for the child rather than for the parent. As suggested in other studies (Sewell & Taylor, 1996), the more acculturated mothers might also have broader social networks of family and friends who are appraised as more appropriate sources of support around adult issues. Thus, higher levels of parenting stress in the non-immigrant group might not be associated with higher levels of program support acceptance in relation to the Head Start program, and in fact might function more as a barrier to participation. The *secondary appraisal* of the community-based preschool program as an appropriate coping resource could simply be less salient in this group, relative to the *primary appraisal* of harm/loss (in this case, parenting stress).

Similarly, the relationship between *program support acceptance* and later *parenting stress* might differ between the two groups. If the supportive resources available through Head Start are less salient to the more acculturated mothers, their

primary appraisal of the stressfulness of events might have a more dominant effect on their relationship with the program than their secondary appraisal of the program as a resource. Thus, a weaker relationship might be expected between program support acceptance and later parenting stress for the more acculturated non-immigrant generation mothers. On the other hand, because of secondary appraisals by immigrant generation mothers that the resources available through the program are both valuable and accessible, greater program support acceptance in this group might predict lower parenting stress over time.

Summary

The preceding literature review suggests that prior *parenting stress*, viewed as an arousal state, may be an important determinant of how a low-income Mexican American mother engages with her child's preschool early education program and utilizes its potentially supportive aspects to support her parenting (Parker et al., 1997). The parenting stress levels that these mothers bring with them when they enroll a child in an early education program are likely to be relatively high.

While it is beyond the scope of the present study to account for all sources of initial parenting stress, it is possible to identify some factors such as *maternal education*, recent *stressful life events*, and household structure factors such as *partner status* *extended household* (the presence of other non-parental caregiving adults), which might contribute to higher parenting stress levels. In an immigrant population, demands of

acculturation could also be a source of initial parenting stress. The review considered the role of the same set of variables as antecedents to *program support acceptance*.

Also discussed in this review were theoretical questions about the nature of the relationship between *parenting stress* and *program support acceptance*. Does parenting stress serve as a motivator for the mother to seek out and avail herself of available program-based supports, or is elevated stress simply a barrier to taking advantage of potentially supportive resources? A direct empirical test of this question could shed some light on an important theoretical issue, and suggest directions for further research.

Several studies suggest that involvement of mothers in programs such as Head Start, even though the primary purpose of the program is preparing the child for school, can have measurable benefits for the mother's well-being. If a mother can overcome barriers to program participation, one might expect her acceptance and utilization of program-based supports through the year (*program support acceptance*) to be related to her level of *parenting stress* by the end of the year.

Finally, the study examines whether these processes operate differently in recent immigrant families than they do in later generation immigrant families, which would indicate that acculturation is a moderator of these processes. Such a finding would have implications for the generalizability of basic community-based family support models.

Questions and Hypotheses for Present Study

The overall purpose of the present study was to examine factors associated with low income mothers' decisions to involve themselves in voluntary supportive relationships with community-based early childhood programs (i.e., *program support acceptance*), and the relationship between *parenting stress* and *program support acceptance*. Further, the study examined how parenting stress and support-seeking processes operate in an ethnic minority immigrant population, specifically a population of Mexican American Head Start mothers. Described below are the specific questions and hypotheses addressed in the study.

The present study is a secondary analysis of data from a larger study, which imposed some restrictions on the data available. Because Time 1 data on *parenting stress* were only available for English-speaking participants, questions related to *Time 1 parenting stress* are posed only for the English speaking sample. Other questions are posed for the full sample of English-speaking and Spanish-speaking participants.

Parenting Stress and Program Support Acceptance in a Mexican American Head Start Population

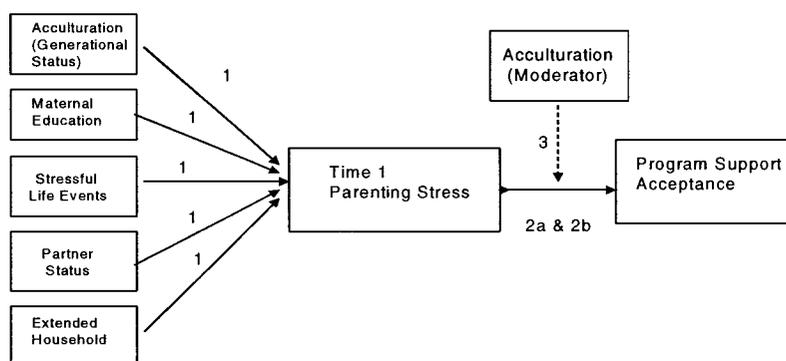


Figure 4. Time 1 parenting stress: Antecedents and relationship to program support acceptance (English-speaking sample, $n = 55$)

Time 1 Parenting Stress: Antecedents and Relationship to Program Support Acceptance

Because Time 1 *parenting stress* data were available only for the English-speaking Mexican American mothers, questions 1, 2a and 2b, and 3 refer only to that subsample. See Figure 4 for a summary of the conceptual linkages addressed by these questions.

Question 1. To what extent do acculturation (represented by generational status), maternal education (represented by high school graduation/GED), stressful life events (as determined by a Life Events checklist), partner status (being married or having a live-in partner), and extended household (presence of a grandmother and/or other care-giving adult, other than a partner or spouse, in the household) contribute to Time 1 parenting stress?

Hypothesis 1. The set of variables, entered as a block in a regression equation, will contribute significantly to the prediction of *Time 1 parenting stress*. In addition, the variables will make significant individual contributions to *Time 1 parenting stress*. Specifically, being of the *immigrant generation* (born in Mexico), and having recent experience of more *stressful life events*, will both predict higher levels of *Time 1 parenting stress*. Higher level of *maternal education*, and being *partnered*, will predict lower levels of *Time 1 parenting stress*. There is not sufficient basis for predicting whether living in an *extended household* will be positively or negatively related to *Time 1 parenting stress*.

Rationale. The parenting stress model (Abidin, 1990) posits that *parenting stress* is multiply determined. Two variables, *acculturation* and *stressful life events*, are likely to predict increased *parenting stress*. A few studies (McClintock & Moore, 1992, as cited in Buriel & DeMent, 1997) have suggested that less acculturated Mexican American mothers may be lower in family-related stress than more acculturated Mexican American

mothers. However, other studies (Solis, 1991; Borrero, 1993) suggest the opposite. On balance, this study expects that lower *acculturation* (being of the immigrant generation) would generally predict higher *parenting stress* because immigration is associated with disruptions of many kinds, including loss of key members of one's former social support network (Slavin, et al., 1991). Experience of more *stressful life events* in the past year, including such losses and disruptions, would predict higher levels of *parenting stress*, because situational stress is associated with *parenting stress* in the Parenting Stress model (Abidin).

On the other hand, two variables, *maternal education* and *partner status*, are likely to predict lower levels of *parenting stress*. Higher levels of *maternal education* are generally associated with more sensitive and positive parenting (Siantz de Leon & Smith, 1994; Laosa, 1980; Allie, 1987; Cousins, Power, & Olvera-Ezzell, 1993), which should be associated in turn with lower *parenting stress*. Many studies suggest that, despite evidence that marital relationships are not always supportive, support from a spouse is the most salient form of social support for most parents (Levitt, Weber, & Clark, 1986; Cochran, Lerner, Riley, Gunnarsson, & Henderson, 1990; Bassuk et al., 2002). Thus, being *partnered* is expected to predict lower *parenting stress*.

Finally, it is not clear from the literature whether *extended household* in itself will predict in a consistent direction. Larger extended households (those including adults other than the partner or spouse) might provide more potential sources of support for the mother, or they might simply create additional stressful demands for her.

Question 2a. Is there a linear relationship between Time 1 parenting stress and mid-year program support acceptance?

Hypothesis 2a. There will be a significant negative linear relationship between *Time 1 parenting stress* and *mid-year program support acceptance* among the English-speaking Mexican American mothers.

Rationale. A number of studies have found that stress generally functions as a barrier to support-seeking (Parker et al., 1987; Powell, 1988; Wilson & Gottman, 1996; Hetherington & Blechman, 1996). Several studies also indicate more specifically that high levels of parental stress can inhibit participation in community-based programs (Parker et al., 1987; Powell, 1988). This implies a negative linear relationship between *Time 1 parenting stress* and *mid-year program support acceptance*, with increasing stress corresponding to decreasing support-seeking or support acceptance.

Question 2b. Is there a curvilinear relationship between Time 1 parenting stress and mid-year program support acceptance?

Hypothesis 2b. There will not be a significant curvilinear relationship between *Time 1 parenting stress* and *mid-year program support acceptance*.

Rationale. There is some support in both the theoretical and empirical literature for predicting a curvilinear relationship between *Time 1 parenting stress* and *mid-year program support acceptance*. Abidin (1992) suggests on theoretical grounds, and others on empirical grounds (Cochran, 1990; Hetherington, 1989; Telleen, 1990), that some minimal level of stress or “environmental press” is needed to motivate support-seeking as

a coping behavior. Viewing *program support acceptance* as a support-seeking behavior, this would imply a quadratic curvilinear relationship (an inverted U), with the initial rise reflecting the minimal level of stress needed to motivate support-seeking, and the drop-off reflecting effects of excessive stress. However, the weight of empirical studies conducted with similar populations in community-based programs (Parker et al., 1987; Powell, 1988) suggests that the negative linear relationship is more likely in this sample.

Question 3. Does acculturation moderate the link between Time 1 parenting stress and program support acceptance?

Rationale. Slavin, Rainer, McCreary, & Gowda (1991) suggest that cultural and ethnic factors (including acculturation and immigration-related experiences) can affect the primary and secondary appraisal processes of stress and coping (Lazarus & Folkman, 1984). Immigrant generation and later generation parents may assess both the level of threat and the availability of coping resources differently. These appraisals would be reflected in the Time 1 *parenting stress* score (a primary appraisal of threat), and in the *program support acceptance* score (a secondary appraisal that the community-based program is a potential resource for coping). Differences between the two groups in the relative salience of the primary appraisal phase and the secondary appraisal phase could lead to different patterns of relationship between Time 1 *parenting stress* and *program support acceptance*, which would indicate a moderating role for acculturation. However, the nature and direction of these differences is highly speculative, and testing of specific hypotheses does not seem warranted. To that extent, this is an exploratory analysis.

Parenting Stress and Program Support Acceptance in a Mexican American Head Start Population

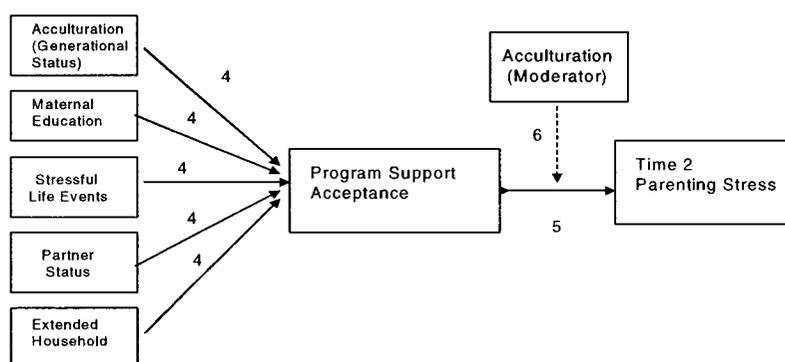


Figure 5. Mid-year program support acceptance: Antecedents and relationship to Time 2 parenting stress (English and Spanish-speaking sample, $n = 120$)

Mid-Year Program Support Acceptance: Antecedents and Relationship to Time 2 Parenting Stress

Questions 4, 5, and 6 refer to the full sample of English-speaking and Spanish-speaking Mexican American mothers. The *Time 1 parenting stress* variable was not used in these analyses, as that data was not available for Spanish-speaking participants. See Figure 5 for illustration of the linkages addressed in this set of questions.

Question 4. Do acculturation, maternal education, stressful life events, partner status, and extended household account for significant variance in mid-year program support acceptance?

Hypothesis 4. The set of variables, entered as a block in a regression equation, will contribute significantly to the prediction of mid-year *program support acceptance*. In addition, the variables will make significant individual contributions to mid-year *program support acceptance*. No prediction is made as to the direction of relationship between *acculturation* (indicated by generational status) and mid-year *program support acceptance*. Higher levels of *maternal education* will predict higher levels of mid-year *program support acceptance*. Higher numbers of *stressful life events* will predict lower mid-year *program support acceptance*. Being *partnered* will predict higher levels of mid-year *program support acceptance*. No prediction is made as to the direction of the relationship between *extended household* and mid-year *program support acceptance*.

Rationale. There is not a strong basis for predicting whether *acculturation* will be related in a positive or negative direction to mid-year *program support acceptance*.

While immigrant generation mothers might be expected to be more receptive to program-based parenting support because they believe they have fewer other social support resources outside of the immediate household, there may also be cultural or other barriers to making use of non-familial resources (Slavin et al., 1991).

The basis for predicting the direction of the relationship between *maternal education* and mid-year *program support acceptance* is somewhat ambiguous. Head Start parents with lower levels of education are more likely to report *satisfaction* with their child's Head Start program, but those with higher levels of education have higher levels of actual *participation* in the program (FACES, 2001). The construct of *program*

support acceptance has elements of both satisfaction and participation, but is not identical to either. However, in a voluntary program, some level of program acceptance can be viewed as a prerequisite to participation, suggesting that more education will be associated with greater *program support acceptance*.

Experience of more *stressful life events* in the past year is expected to predict lower mid-year *program support acceptance* because stress in general tends to function as a barrier to support-seeking (Parker et al., 1987; Powell, 1988; Wilson & Gottman, 1996; Hetherington & Blechman, 1996), and to participation in community-based programs (Parker et al., 1987; Powell, 1988).

The expectation that having a spouse or live-in partner (*partner status*) will predict higher mid-year *program support acceptance* is based on studies indicating that spouses are particularly salient as sources of parenting support (Levitt, Weber, & Clark, 1986; Holtzman & Gilbert, 1986; *FACES*, 2001). Their presence in the household may facilitate the mother's participation in her child's program, either by providing child care for other children, or by providing encouragement.

On the other hand, there is not sufficient basis for predicting whether an *extended household* in itself (apart from a spouse or live-in partner) will predict mid-year *program support acceptance*. Some researchers (Parker, Baker, Piotrkowski, Young, Peay, & Kessler-Sklar, 1997) identify having more people in the home as a barrier to the mother's participation in Head Start, perhaps because crowded conditions or competing demands introduce a degree of chaos into the household that makes program participation more

difficult. Family members can be sources of stress as well as support (Belle, 1987; Eckenrode & Gore, 1981; Bassuk, Mickelson, Bissell & Perloff, 2002). Others suggest that having additional adults in the home, particularly grandmothers, may facilitate program participation by providing child care for other children (Levitt, Weber, & Clark, 1986; Holtzman & Gilbert, 1986; *FACES*, 2001). While parent participation is not synonymous with program support acceptance, parent participation in a voluntary program implies some degree of acceptance of the program.

Question 5. Does prior program support acceptance predict Time 2 parenting stress, and remain significant after accounting for the contribution of acculturation, maternal education, stressful life events, partner status, and extended household?

Hypothesis 5. Higher levels of program support acceptance at mid-year will predict lower levels of Time 2 parenting stress. It is unclear whether the relationship will remain significant after controlling for contextual antecedents.

Rationale. Program support acceptance is a form of program engagement, and is considered a first step in taking advantage of available program-based social support (Peisher et al., 2001; Burleson, 1994; Barnes & Duck, 1994). The social support literature, in turn, predicts that taking advantage of social support should result in reduced levels of stress (Sarason, et al., 1992; Gottlieb, 1981). While these predictions were originally related to stress and support in general, it is assumed that they are also applicable to parenting stress and parenting support. The relative role of various contextual antecedents is unclear.

Question 6. Does acculturation moderate the link between prior program support acceptance and Time 2 parenting stress?

Rationale. This is an exploratory analysis. As discussed earlier in regard to Question 3, Slavin, Rainer, McCreary, & Gowda (1991) suggest a rationale for anticipating that immigrant generation and later generation Mexican American Head Start mothers may assess both the level of threat and the availability of coping resources differently, in terms of the primary and secondary appraisal processes of the Lazarus & Folkman (1984) model of stress and coping. Differences between the two groups in the relative salience of the primary appraisal phase and the secondary appraisal phase could lead to different patterns of relationship between *program support acceptance* and *Time 2 parenting stress*, which would indicate a moderating role for acculturation. However, the nature and direction of such differences is highly speculative. Nevertheless, for program design purposes, it would be helpful to know whether the relationship between *program support acceptance* and *Time 2 parenting stress* is the same for immigrant and non-immigrant generation mothers.

Change Over Time In Parenting Stress: The Contribution of Program Support Acceptance

Because *Time 1 parenting stress* data were available only for the English-speaking Mexican American mothers, questions 7 and 8 refer only to that sub-sample. Figure 6 illustrates the linkages examined in these questions.

Parenting Stress and Program Support Acceptance in a
Mexican American Head Start Population

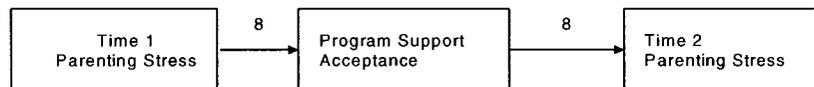


Figure 6. Change over time in parenting stress: Contribution of program support acceptance (English-speaking sample, $n = 48$)

Question 7. Does mean parenting stress level decrease significantly from Time 1 (fall) to Time 2 (spring) for parents participating in a full program year of Head Start?

Hypothesis 7. Mean parenting stress level will decrease significantly from Time 1 to Time 2.

Rationale. Over time, parents are expected to derive resources of social and other support from the program. In fact, parents in the Head Start *FACES* (2001) study did report small but significant increases in confidence and sense of mastery in the course of the school year. The Parenting Stress Model (Abidin, 1990), in turn, implies that parents who are more confident and less socially isolated should report lower *parenting stress*.

Question 8. In the English-speaking sample, does prior program support acceptance predict Time 2 parenting stress, over and above the contribution of Time 1 parenting stress, acculturation, maternal education, stressful life events, partner status, and extended household?

Hypothesis 8. Higher levels of program support acceptance at mid-year will predict lower levels of Time 2 parenting stress, after controlling for Time 1 parenting stress, acculturation, maternal education, stressful life events, partner status, and extended household.

Rationale. As in Question 5, this prediction is based on the expectation that *program support acceptance*, as a form of program engagement, is a first step toward taking advantage of program-based social support (Peisher et al., 2001; Burleson, 1994; Barnes & Duck, 1994). The social support literature, in turn, predicts that taking advantage of social support should result in reduced levels of stress (Sarason, et al., 1992; Gottlieb, 1981). This question differs from Question 5 in that it is limited to the English-speaking sub-sample, and includes the role of initial stress level of the parent (data which was not available for the full sample). Thus, it addresses the potential for within-group differences in the sample.

CHAPTER 3 METHODS

The current study draws on interview data from parents of three, four and five-year-old children who were participants in a larger multi-year study, the University of Arizona Child Resilience Project (CRP). Target children were enrolled in traditional center-based Head Start classrooms in a mid-sized U.S. city near the Mexican border. The Child Resilience Project was a Head Start-University Partnership research grant funded by the federal Administration for Children, Youth, and Families. The Child Resilience Project was conducted over a three year period. The first year consisted of a pilot study, and years two and three involved two waves of data collection (fall and spring) on two separate cohorts of families (one in year two and one in year three). Data collection for the Child Resilience Project included classroom observations and structured interviews with children, and self-administered teacher questionnaires, as well as structured parent/guardian interviews. Families were recruited on a voluntary basis from Head Start classrooms, with the cooperation of teachers who also participated on a voluntary basis.

The current investigation examined parenting stress and support processes in a more homogeneous subgroup of Mexican American parents who were members of the second cohort (1994-95) of the University of Arizona Child Resilience Project, using only parent interview data.

Participants

CRP Study

Recruitment procedures. Recruitment for participants in the Child Resilience Project was voluntary at the classroom and the individual subject levels. Several weeks before the start of the school year, the agency administering the local Head Start program provided an opportunity for the Child Resilience Project staff to meet with Head Start teachers as a group, to explain the project and the level of involvement required from participating classrooms. Consenting teachers and their assistants were asked to assist in recruitment of parents, to complete several self-report questionnaires on their perceptions of their relationship with each participating child and parent, and to allow members of the research team access to their classrooms to interview and observe participating children on a regular basis throughout the school year. They were paid for their participation based on the number of questionnaires completed. Eight lead teachers who had previously participated in the Child Resilience Project agreed to participate, and an additional five were recruited during the summer, resulting in thirteen participating classroom teams in the third year of the project (1994-95). All were experienced Head Start teachers.

Once the thirteen participating classrooms had been identified, the Head Start agency provided a brief bilingual flyer introducing the Child Resilience Project to each entering Head Start family during the intake and enrollment process. During the second week of school, in early September, bilingual teams of CRP research staff arranged to

attend initial day-time parent meetings at each Head Start center to further explain the project, and obtain informed consent from interested parents. Bilingual members of the research team also arranged to be at the Head Start classrooms at drop-off and pick-up times during the first weeks of school, in order to reach additional parents and obtain consents. In some cases, research team members rode the Head Start bus in order to introduce themselves and the project to those parents who did not transport their children to school or attend the parent meetings. This recruitment procedure yielded a sample of 162 participating families.

Subject characteristics of Year 3 CRP cohort. The full sample for the larger study was comprised of 87 non-U.S.-born (1st generation immigrant) Mexican American parents (54%), 57 U.S.-born (2nd generation or later immigrant) Mexican American parents (35%), and 18 European American parents (11 %). All families had a 3 or 4 year old child enrolled in the center-based Head Start program. In that sample, the immigrant (non-U.S.-born) mothers were more likely to be married and to have less than a high school education than either the European American or U.S.-born Mexican American mothers. The U.S.-born Mexican American mothers had more children than either the non-U.S.-born mothers or the European American mothers (Sewell & Taylor, 1996).

Attrition from Time 1 to Time 2 in CRP cohort. The full CRP sample dropped from 162 participants in the fall to 150 in the spring, an attrition rate of 7.4 %. This was considered a good retention rate, based on prior experience with a similar population.

Present Study

Participant selection criteria. Unlike the CRP study, which included comparisons of Mexican American and European American families, the present study sample included only Mexican American respondents who were the biological mothers of the target child. A small number of fathers, foster parents, and custodial grandparents and other relatives were eliminated from the full CRP sample, along with 14 Anglo American parents or guardians, yielding a sample of 120 participants. Using these selection criteria served two purposes: first, by controlling for potential confounding due to ethnicity, gender, SES and generation, it allowed the study to focus on within-group differences in a low-income ethnic minority population. Second, statistical power in a small-to-moderate sized sample was maximized.

Demographic characteristics of present sample. The subset of CRP mothers who identified themselves as Mexican American ($n = 120$) comprised the full present sample. Participants were 50 non-immigrant generation (U.S.-born) and 70 immigrant generation (non-U.S.-born) Mexican American mothers, who participated in a battery of structured interviews in either English or Spanish, during both the fall and spring semesters of a Head Start program year. Descriptive statistics and demographic characteristics of the mothers in the full sample are summarized in Table 1. Longitudinal data on parenting stress were available only for English-speaking respondents, as the Spanish version of the PSI/Short form measure was not available for the Time 1 interviews. Therefore, for

analyses involving Time 1 parenting stress, the sample included only English-speaking respondents. Table 2 summarizes the characteristics of the sample broken down by generational or immigrant status. Table 3 summarizes characteristics of the sample broken down by dominant language of the participants (language in which the parent interviews were conducted, according to the participant's preference). Some analyses utilized only the English-speaking sub-sample because the Spanish language version of the Parenting Stress Index was not available for the Time 1 (fall) data collection .

Since income eligibility requirements for Head Start require that families have incomes at or below 100% of federal poverty level, all participating families could be defined as low-income. Independent samples *t*-tests indicated that the immigrant and non-immigrant groups differed significantly on the following variables: maternal education (high school graduation), marital status, grandmother presence, and number of children in home.

The average age of the respondents overall was 29.26 years ($SD = 5.64$). Since Head Start children are 3, 4 or 5 years old, this indicates that most participants were not adolescent mothers, at least at the birth of the target child. The mean age of target children at the time of the fall parent interview was 4.7 years. Of these, 62 were male (51.7%) and 58 were female (48.3%). The mean number of children reported in each household was 2.82 ($SD=1.05$). Eighty-four percent of respondents had between two and four children under 18 living in the home. That is, virtually all respondents were responsible for at least one dependent child in addition to the target preschool-aged child.

Number of children differed significantly between immigrants and non-immigrants, with the non-immigrant group having more children in the home, $t(118) = 2.00, p < .05$

The majority of mothers (55.8%) were married ($n = 67$), and another 17.5% were cohabiting with a partner ($n = 21$). When the categories were combined, nearly three-quarters (73.3%) of participants were “partnered” or living in two-parent households. An additional 10.8% ($n = 13$) were single/never married, 9.2% ($n = 11$) were divorced, and the remaining mothers were separated (5%) or widowed (1.7%). Immigrant generation mothers were significantly more likely to be married than those who were born in the U.S., $t(118) = -2.23, p < .05$, but the groups did not differ significantly on partner status (defined as having either a spouse or a live-in partner in the household). The groups differed on grandmother presence, with non-immigrant (U.S.-born) mothers significantly more likely to have a grandmother residing in the household, $t(118) = 3.07, p < .01$.

Overall educational achievement level of the mothers in the sample was quite low, even when compared to other Head Start populations nationally (FACES, 2001). The majority of respondents (65%) had less than a high school education, and 15.8% had a 6th grade education or less. On the other hand, a subgroup (15.8%) had completed a bachelors degree or some college. Among non-immigrant generation (U.S.-born) mothers, 28 (56%) were high school graduates, while only 14 (20%) of immigrant-generation mothers were high school graduates. This was a significant difference, $t(118) = 4.36, p < .001$.

Many respondents spoke Spanish as their primary or only language. Fifty-six of

the mothers (47%) elected to be interviewed in Spanish and 64 mothers (53%) elected to be interviewed in English. However, 69 mothers (57%) reported Spanish as the primary or only language spoken in the home, 25 mothers (21%) reported speaking primarily or only English in the home, and 26 (22%) reported that both languages are spoken, indicating varying degrees of bilingualism within the sample. The mean length of time that non-U.S.-born respondents had lived in the U.S. was 9.20 years ($SD = 6.12$).

The mean number of stressful life events experienced by participating mothers in the previous twelve months was 3.47 ($SD = 2.71$), ranging from zero to eleven. This is consistent with other reports that low-income families are typically exposed to three or more categories of environmental stressors, compared to two or fewer for middle-income families (Evans & English, 2002).

Attrition from Time 1 to Time 2 in present sample. Of the initial 120 participants, twelve dropped out of Head Start or were unavailable for interviews by the spring, resulting in a sample of 108 for Time 2 data collection (an attrition rate of 10%). Independent samples *t*-tests showed that participants who dropped out were not significantly different from those who remained in the sample on any study variable. Drop-outs were equally likely to be immigrant generation (born in Mexico) or non-immigrant generation (born in the U.S.).

Table 1. Demographic Characteristics of Mexican American Participants in Full Sample (n = 120)

	<i>N</i>	<i>%/Mean/Median</i>	<i>(SD)</i>
<i>Acculturation-related variables:</i>			
1. Generational status of mother			
Mexican birth (immigrant)	70	58%	
U.S. birth (non-immigrant)	50	42%	
2. Mean years lived in U.S.	119	17.23	(11.06)
3. Language of interviews			
English	64	53%	
Spanish	56	47%	
<i>Contextual variables:</i>			
4. Mother's age (mean)	120	29.26	(5.64)
5. Maternal education (median)	120	10 th - 11 th grade	
6. Mother is high school graduate/GED	42	35%	
7. Stressful life events in past year (mean)	117	3.47	(2.71)
<i>Household structure variables:</i>			
8. Married (lives with spouse)	67	55.8%	
9. Partnered (spouse or live-in partner)	88	73.3%	
10. Number of care-giving adults (mean)	120	1.95	(.62)
11. Grandmother present in household	14	11.7%	
12. Number of children in household (mean)	120	2.82	(1.05)

Table 2. Descriptive and Demographic Characteristics of Participants by Generational Status (n = 120)

	<u>Non-immigrant generation (N=50)</u>			<u>Immigrant generation (N=70)</u>		
	N	% / Mean	(SD)	N	% / Mean	(SD)
<i>Acculturation-related variables:</i>						
1. Mean years lived in U.S.	50	28.30	(5.18)	69	9.2	(6.12)
2. Language of interview						
English	49	98%	–	15	21%	–
Spanish	1	2%	–	55	79%	–
<i>Contextual variables:</i>						
3. Mother's age (median)	50	28	–	70	29	–
4. Mother is high school graduate/GED	28	56%	–	14	20%	–
5. Stressful life events in past year (mean)	48	3.9	(2.83)	69	3.2	(2.60)
<i>Household structure variables:</i>						
6. Married (lives with spouse)	22	44%	–	45	64%	–
7. Partnered (spouse or live-in partner)	33	66%	–	55	79%	–
8. Number of caregiving adults (mean)	70	2	(.69)	50	1.9	(.57)
9. Grandmother present in household	11	22%	–	3	4%	–
10. Number of children in household	50	3	(1.00)	70	2.7	(1.05)
<i>Parenting Stress & Program Support Acceptance:</i>						
11. Time 1 (Fall) parenting stress ^a	45	74.89	(19.81)	12	78.92	(24.73)
12. Time 2 (Spring) parenting stress ^b	44	69.93	(21.61)	64	65.50	(22.08)
13. Program support acceptance	46	3.28	(.50)	67	3.42	(.54)

^a Fall PSI total score (available for English speakers only); n = 45 for Non-Immigrant, n = 12 for Immigrant; normative mean PSI score = 71

^b Spring PSI total score (available for full sample); n = 64 for Immigrant, n = 44 for Non-Immigrant; normative mean PSI score = 71

Table 3. Descriptive and Demographic Characteristics of Participants by Language of Interview (n = 120)

	<i>English interview (N= 64)</i>			<i>Spanish interview (N=56)</i>		
	<i>N</i>	<i>% / Mean</i>	<i>(SD)</i>	<i>N</i>	<i>% / Mean</i>	<i>(SD)</i>
<i>Acculturation-related variables:</i>						
1. Mean years lived in U.S.	64	24.98	(8.23)	55	8.20	(5.82)
2. Generational status of mother						
Mexican birth (immigrant)	15	23.4%	–	55	98.2%	–
U.S. birth (non-immigrant)]	49	76.6%	–	1	1.8%	–
<i>Contextual variables:</i>						
3. Mother’s age (median)	64	28	–	56	29	–
4. Mother is high school graduate/GED	35	54.7%	–	7	12.5%	–
5. Stressful life events in past year (mean)	62	3.87	(2.88)	55	3.02	(2.45)
<i>Household structure variables:</i>						
6. Married (lives with spouse)	31	48.4%	–	36	64.3%	–
7. Partnered (spouse or live-in partner)	42	65.6%	–	46	82.1%	–
8. Number of caregiving adults (mean)	64	1.98	(.77)	56	1.91	(.39)
9. Grandmother present in household	13	20.3%	–	1	1.8%	–
10. Number of children in household	64	2.88	(1.03)	56	2.75	(1.07)
<i>Parenting stress & Program support acceptance:</i>						
11. Time 1 (Fall) parenting stress ^a	57	75.74	(20.77)	0	n.a.	n.a.
12. Time 2 (Spring) parenting stress ^b	57	68.67	(22.44)	51	65.78	(23.53)
13. Program support acceptance	64	3.31	(.48)	56	3.42	(.58)

^a Fall PSI total score (available for English speakers only); n = 45 for Non-immigrant, n = 12 for Immigrant. Normative mean PSI score = 71

^b Spring PSI total score (available for full sample); n = 44 for Non-Immigrant, n = 64 for Immigrant,; normative mean PSI score = 71

Procedure

Interview procedures. All participants, teachers and parents, completed informed consent forms approved by the Human Subjects Review Board (see Appendix C). Forms were available in English and Spanish. Parents were compensated for their participation in the study at the rate of \$10 per interview (one early in the school year, and one near the end of the school year). Because of the anticipated range of educational and literacy levels among parents in this population, all forms and questionnaires were read aloud to the parents by the interviewers. The parent measures were administered in interviews of approximately one hour in length, conducted by trained bilingual parent interviewers. All interviews with mothers and other care-givers were conducted in the language of the respondent's choice (English or Spanish), usually in their homes. In some cases, when requested by the parent and space allowed, parent interviews were conducted at a Head Start classroom site. To maximize subject retention for the longitudinal study, the same interviewer generally conducted both fall and spring parent interviews, and parents were provided with periodic project updates.

Parents provided detailed demographic information regarding household composition, education, employment status, country of birth, years in U.S., ethnicity, and language preferences. They also participated in interviews concerning their participation in Head Start activities and their levels of parenting stress.

Time 1 (Fall) parent data collection for the full study began in September. Time 1 assessments pertinent to the present study included a Life Events Checklist, Abidin's

(1990a) Parenting Stress Index/Short Form (English only), and a Family Profile Form consisting of basic demographic and family history information. Time 2 (Spring) data collection began in March, and interviews were timed to ensure that approximately six months time had elapsed since the first interview. Time 2 parent measures pertinent to the present study included the Life Events Checklist, and the Parenting Stress Index/Short Form (English and Spanish). The assessment of program support acceptance was derived from the Parent Involvement Questionnaire-Parent Form (Taylor), which was administered in separate brief follow-up interviews in December. This assessment was conducted at mid-year, since patterns of parent program involvement could not reasonably be expected to be established by September.

The PSI/Short form was administered to English speakers in the fall ($n = 57$) and to the full sample (Spanish and English) in the spring ($n = 108$). Longitudinal data on parenting stress was available only for English-speaking respondents, as the Spanish version of the PSI/Short form measure was not available for the Time 1 interviews. The English-speaking respondents in the fall included 12 immigrants and 45 non-immigrants.

Recruitment and training of interviewers. Bilingual parent interviewers were recruited for the Child Resilience Project (CRP). Orientation and training for parent interviewers took place approximately three weeks prior to the start of the Head Start school year, and was conducted by the Project Coordinator and the Principal Investigator of the Child Resilience Project. Project staff received a staff handbook, and were oriented as to procedures for scheduling and conducting interviews, confidential and

accurate handling of data, mandated reporting procedures for suspected child abuse or neglect, and professional behavior in the home or the classroom. Specific training for parent interviewers consisted of review of the interview questionnaires (provided in packets for English and Spanish speaking participants), and practice interviews. When recruitment of subjects was completed, identification numbers were assigned to each consenting subject, and packets were prepared with questionnaires in English or Spanish according to the parent's preference. Parent interviewers scheduled interviews with the parents by telephone, and then picked up pre-numbered questionnaire packets prior to the interview. Data packets were turned in to the CRP Project Coordinator, and were checked for completeness and accuracy. Interview, observation and questionnaire data from each cohort of Head Start parents, children and teachers were coded and entered into a database in SPSS format by the staff of the Principal Investigator of the larger CRP study.

Measures

Four parent self-report questionnaires provided measures for the variables of interest in this study: (a) the *Parenting Stress Index/Short Form*; (b) the *Family Profile Form*; (c) the *Parent Involvement Questionnaire-Parent Form*, and (d) the *Life Events Checklist* (see Appendix A). This study was a secondary analysis of data collected for a

larger study, and employed a short-term longitudinal design. Data collection took place in the fall (Time 1) and spring (Time 2) of a Head Start academic year, with a mid-year assessment of one variable, *program support acceptance*. Questionnaires were administered by bilingual parent interviewers in face-to-face interviews of approximately one hour in length, or in follow-up telephone calls, and were available in both English and Spanish, according to the preference of the parent.

Acculturation

All participants in the study were self-identified as Mexican American, or of Mexican origin. The Family Profile questionnaire included several possible indicators for acculturation of the respondents in this sample: (a) *generational status/country of birth* (non-immigrant generation / born in U.S., vs. immigrant generation / born in Mexico), (b) *years lived in the U.S.*, and (c) *language dominance/preference*. The literature on acculturation provides some support for use of each of these as indicators, although each has limitations (Marin & Gamba, 1996; Cuellar, Harris, & Jasso, 1980). Another potential indicator of acculturation is reported cultural values. However, since the present study was a secondary analysis, the available data for the present study did not include direct measures of cultural values.

Initially, an acculturation index was constructed by coding the self-identified Mexican American mothers according to two indicators: language preference (based on the language chosen for administration of their parent interview), and generational status

(based on whether they belonged to the immigrant, non-U.S. born generation or subsequent, U.S.-born generations). This resulted in four categories thought to represent a continuum of acculturation: 1) English interview / U.S. birth, 2) English interview / Mexican birth, 3) Spanish interview / U.S. birth, and 4) Spanish interview / Mexican birth. The resulting acculturation index scores showed limited distribution, with the majority of responses falling into category 1 (English interview / U.S. birth) or category 4 (Spanish interview / Mexican birth). Comparison of the acculturation index scores also showed the index to be highly correlated with the other potential acculturation indicators: *years lived in U.S.* ($r = .86, p < .01$) and *language preference* ($r = .97, p < .01$). Since the acculturation index did not appear to provide significantly more relevant information than the other indicators alone, it was eliminated from further analyses.

Generational status. The simple indicator of *generational status* (U.S. vs. Mexico as country of birth) was adopted for most analyses. This was consistent with the literature on patterns of household structure in immigrant and non-immigrant households (Buriel & Dement, 1997), and was most consistent with the research questions of interest in the current study. Country of birth, as indicated on the Family Profile, was dummy coded to indicate non-immigrant/born in U.S. (0) vs. immigrant/born in Mexico (1).

Years in U.S. A closely related indicator is *years lived in the U.S.* As reported earlier, the literature suggests that household structure and social networks in immigrant households come to more closely resemble patterns in the adopted country after about ten years of residence (Buriel & Dement, 1997). It is also reasonable to expect that English

proficiency increases with length of residence in the adopted country. In other words, length of residence should be highly correlated with language dominance, and with generational status. These assumptions were supported in the present sample by high correlations between *years in U.S.* and *generational status* ($r = -.86, p < .001$), and between *years in U.S.* and *language preference* ($r = -.75, p < .001$). However, due to the way that this indicator was measured and reported, there was concern that the measure of years lived in the U.S. could be confounded with age of the respondent, and the decision was made not to use this variable as the primary indicator of acculturation.

Language preference (language of interview). For purposes of the present study, language preference was indexed by the language chosen for the parent interview (English vs. Spanish). Longitudinal data for the Parenting Stress Index was available only for the English-speaking parents. This variable was dummy coded to indicate English (0) vs. Spanish (1) interviews.

An additional language-based indicator of acculturation was the *language most frequently spoken in the home*, which did not necessarily correspond to the language of the interview. In this sample, while only 56 respondents requested Spanish interviews, 69 reported that Spanish is the primary or only language spoken in the home. Twenty-five mothers reported speaking primarily or only English in the home, while 64 requested English interviews. An additional 26 reported that both languages are spoken at home. The fact that more mothers reported speaking Spanish at home than chose to be interviewed in Spanish suggests that many fully bilingual parents choose to pass on their

culture by communicating with their children and other family members at home in Spanish at least some of the time. Ultimately this information was not utilized as an indicator of parental acculturation for the study, because it was not entirely clear how it interacts with the other indicators of acculturation. However, it provides an interesting glimpse into the home life and acculturation process of families with bilingual parents, as they attempt to bridge two cultures.

Maternal Education

Data on maternal education was obtained from the Family Profile questionnaire, administered at Time 1 (fall of the program year). A number of studies have reported associations between maternal education and parent-child interactions in populations similar to the study sample. In general, lower education levels in mothers are associated with more negative perceptions of their children and more negative, less sensitive parenting behaviors (Siantz de Leon & Smith, 1994; Laosa, 1980; Allie, 1987; Cousins, Power, & Olvera-Ezzell, 1993). Maternal education was included in the present model on theoretical grounds, because these studies suggested a potential for maternal education to affect outcomes of interest for this study (parenting stress and program support acceptance). As part of the Family Profile questionnaire administered in the initial parent interview, respondents reported the highest education level completed (grade or degree), distinguishing high school graduation from GED completion, and vocational or military training programs from college degrees. Responses were coded on

a scale ranging from 1 (6th grade education or less) to 9 (BA degree or higher). For analysis in the present study, the categorical responses were dummy coded to indicate high school graduation / GED completion (1) vs. less than high school education (0).

In bivariate correlations, higher education levels were not significantly correlated with the criterion variables. However, there was a moderately strong and significant correlation ($r = -.37, p < .001$) between maternal education and the mother's generational status, such that immigrant generation mothers had lower levels of education.

Examination of frequencies showed that virtually all of the respondents at the very low end of the scale of educational achievement (less than 6th grade or less than 9th grade) were immigrant generation mothers born in Mexico, where the educational system is structured differently than in the United States.

Stressful Life Events

Recent studies suggest that the cumulative effect of exposure to multiple stressors, particularly chronic ones, is more significant than the effect of any particular stressful situation or event. Families living in poverty are significantly more likely to experience exposure to multiple and chronic stressors than are middle- or upper-income families. One recent study found that low-income families were typically exposed to three or more categories of physical and psychosocial stressors (violence, family separation, family turmoil, housing problems, noise, and crowding), while middle-income families were typically exposed to zero to two stressors (Evans & English, 2002).

In the present study, exposure to difficult or stressful life events in the previous year was measured by a Life Events Checklist, a parent self-report questionnaire administered by parent interviewers during the initial interview in the fall. Respondents indicated whether or not their child or family had experienced each of 32 events in the past twelve months (see Appendix A) . Events included moves, birth of new siblings, being a victim of and/or witnessing family violence, arrest or incarceration of a parent or close family member, death of a parent or close family member, divorce or marriage of a parent, parental depression, parental unemployment or increased financial stress, separation of the child from the family, and serious illness or injury of the child or parent. The mean number of stressful life events reported by participating mothers was 3.47 ($SD = 2.71$), with a range from zero to eleven.

The rate of exposure to stressful life events in the present sample is consistent with the rates reported elsewhere for low-income and minority families (Evans & English, 2002; Slavin et al., 1991; Moore & Vandivere, 2000). This provided assurance that the present sample was representative of other low-income populations in this respect, with a higher rate of exposure to stressful life events than would be expected in a middle class population. The *stressful life events* variable was included in regression analyses as a contextual antecedent to Time 1 parenting stress, and a potential influence on program support acceptance.

Partner Status

Partner status in this context refers to whether the mother has a husband or cohabiting partner present in the household, as a potential source of parenting support. Partner status was determined from a parent self-report questionnaire, the Family Profile form, administered to each respondent during an initial interview near the beginning of the Head Start school year. Categories included married, remarried, live-in partner, single/never married, widowed, separated, and divorced (see Appendix A). Prior to conducting analyses, the *married* and *partner* variables were dummy coded to indicate married (1) / not married (0) and partnered (1) / not partnered (0).

While not all marriages are consistently supportive, the social network literature clearly indicates that for mothers in two-parent households, the spouse is the primary source of social support for parenting. There is no clear consensus in the literature as to whether a cohabiting partner provides the same level or quality of parent support as a spouse (Levitt, Weber & Clark, 1986; Cochran, et al., 1990; Holtzman & Gilbert, 1986). Therefore, both variables were considered in bivariate correlational analyses: *married* (spouse living in household) and *partnered* (spouse or cohabiting partner in household). Preliminary analysis of bivariate correlations in the present sample indicated that being *partnered* (either married or having a live-in partner) was significantly correlated with outcome variables in the full sample, while being *married* was significantly correlated with outcome variables only in the immigrant sample. Therefore, *partner status* was selected as the indicator for regression analyses.

Extended Households

Information on family structure and household composition was obtained from the *Family Profile* questionnaire (Appendix A). Participants listed all persons living in the household, including themselves and the target child (enrolled in Head Start). For each individual listed, they were then asked to list age, relationship of that person to themselves (eg., son or daughter, spouse, live-in partner, parent, sibling), relationship of that person to the target child (eg. parent, step-parent, sibling, grandparent), and whether the individual contributed to household income. For each adult over age 18 listed (including themselves), respondents also indicated whether this person had a parental or care-giving role in relation to the target child. This household roster approach is consistent with recent methodological recommendations for obtaining and describing demographic information in developmental research (Hernandez, 1997).

Extended households were defined as households that include adults (other than the biological mother and her spouse or live-in partner), who might be potential sources of parenting support. These adults could include adult children living at home, grandparents, other relatives, or unrelated adults. Because the literature indicates that grandmothers may play a unique role in providing parenting support to mothers, presence of a grandmother in the household was of particular interest. In the present sample, 14 of 120 respondents (11.7%) reported having a grandmother residing in the household, a proportion which seemed unusually high compared to the general U.S. population. The *extended household* variable was computed as the sum of *grandmother presence*, coded

as grandmother present (1) / no grandmother present (0), and *other caregiving adults* in the home, coded as other caregiving adults present (1)/no other caregiving adults present (0). This yielded a score ranging from 0 - 2.

Parenting Stress

Parenting stress was measured by the Parenting Stress Index/Short Form (Abidin, 1990). The PSI/Short Form is a parent self-report measure with 36 items, using a 5-point Likert response scale. The PSI/Short Form consists of items from the full-length PSI, and includes three 12-item subscales empirically based on a factor analysis of the normative data. The PSI/SF consists of three subscales, each with 12 items: *Parental Distress (PD)*, *Parental-Child Dysfunctional Interaction (P-CDI)*, and *Difficult Child (DC)*. The three subscales are summed to yield a *Total Stress* score.

The *Parental Distress (PD)* subscale of the PSI/Short Form reflects distress related to the parent's perception of his or her psychological state or social circumstances. Items relate to the parent's depression, sense of role restriction due to having a child, social isolation, and the effects of having a child on the relationship with the spouse or partner. Conceptually, the *Parental Distress* scale incorporates both the parent's sense of having adequate contextual social support for the task of parenting, and his or her emotional response to the situation.

The *Difficult Child (DC)* subscale reflects the parent's perception of those aspects of the child's temperament related to ease of management and the child's self-regulatory

capacities. The perceived difficulty of caring for a child has been associated with parenting stress and parental depression (Webster-Stratton, 1988; Abidin, 1995).

Although tapping into aspects of child temperament, this subscale is concerned with the parent's *perception* of the child as difficult or easy to manage, and may or may not reflect an objective outsider's appraisal of the child's temperament.

Finally, the *Parental-Child Dysfunctional Interaction* (P-CDI) subscale reflects whether the parent derives satisfaction from interactions with the child. Content of items on this subscale relates to parental attachment, and the extent to which the child reinforces or is acceptable to the parent.

Total stress scores on the PSI that are above the 85th percentile are considered to indicate clinically significant levels of parenting stress, and have been associated with several types of parental psychopathology, including depression and dysfunctional parenting behavior (Mash, Johnson, & Kovitz, 1983; Webster-Stratton, 1988). Total stress scores at or above the 90th percentile correspond with indicators of high risk for child abuse (LaFreniere & Dumas, 1995). Very low stress scores on the PSI (falling below the 15th percentile criterion score) have also been reported to have clinical significance, indicating that parents are (a) denying the normal stresses associated with parenting and/or attempting to portray an unrealistically positive image of themselves, (b) not invested in the parenting role and so do not experience normative levels of parental concern or stress, or (c) highly competent parents in supportive circumstances, who are in fact experiencing minimal difficulties in the parenting role (Abidin, 1995).

Psychometric data for PSI (normative samples). The Parenting Stress Index is an extensively validated measure (Abidin, 1995). The Short Form of the PSI was empirically derived from the full-length version, and correlation between Total Stress scores on the full length PSI and the PSI/Short Form is reported as .94 (Abidin, 1995). Test-retest reliability over a six-month interval for the PSI/SF reported in a normative sample ($n = 270$) ranged from .68 to .85 for the Total Stress score (36 items) and for the three sub-scales. Alpha reliabilities based on the normative sample ($n = 800$) ranged from .80 to .87 for the three sub-scales.

A Spanish version of the full-length PSI (Solis, 1991; Solis & Abidin, 1991) was tested in a population of Hispanic parents ($n = 223$) recruited from pediatric clinics in New York City. Respondents were from Puerto Rico, the Dominican Republic, the United States, and Ecuador. When compared to the normative sample for the English version of the PSI ($n = 2633$), mean stress scores were found to be somewhat higher for the Hispanic sample on most scales (Solis, 1991; Abidin, 1995). The Spanish PSI was reported to be reliable and valid for use with Hispanic parents, with alpha coefficients comparable to the English version. No independent normative studies specific to Mexican American samples are known to have been reported for the Spanish PSI.

Psychometric data for PSI (present sample). In the present study, the PSI/Short form was administered to English-speaking parents ($n = 57$) at Time 1 in the fall, and to the full sample of Spanish and English-speaking parents ($n = 108$) at Time 2 in the spring. After attrition, longitudinal data on this measure was available for 50 English-

speaking Mexican American mothers. Analysis of scale reliability was conducted in the present study using the spring (Time 2) Parenting Stress Index scores on the full sample of 108 Mexican American Head Start mothers (both English and Spanish-speaking). Scale reliabilities in general were relatively high, and compared favorably to the normative data, with Cronbach's alphas ranging from .87 to .93. When the sample was split by language of the interview, alpha reliabilities in the English-speaking sample (n = 57) ranged from .86 to .91 on the three sub-scales, while alphas in the Spanish-speaking sample (n = 51) were slightly higher, ranging from .88 to .94. For purposes of the present study, the Total Stress score was used. Cronbach's alpha for the Total Stress score in the overall sample (spring PSI) was .94. Total Stress score alpha in the English sample was .93, and in the Spanish sample the Total Stress alpha was .96.

Program Support Acceptance

To measure *program support acceptance* for this study, a scale was developed comprised of nine items from the *Parent Involvement Questionnaire - Parent Form (PIQ-P)*, a questionnaire which was developed for the CRP study (Appendix A). The original ten items comprising the Program Support Acceptance scale were selected from several sub-scales of the Parent Involvement Questionnaire-Parent version.

Conceptually, the items selected for the new scale were intended to tap the frequency and overall quality of informal contacts between mothers and the other adults they encounter through their Head Start involvement, rather than their relationship with a specific

individual (such as the teacher), or their utilization of specific services (such as counseling or parenting classes). The scale was intended to reflect informal support broadly, as the parent's overall sense of belonging and feeling welcome in the setting, such that she might seek out more frequent contact. The conceptualization of the scale overlaps with constructs of social support and teacher relationship quality, including both behavioral aspects (frequency of contact) and perceptual aspects (perceptions of supportiveness of contacts).

The items on the *PSA* scale asked parents to rate, on a four-point Likert-type response scale, questions such as the following: "How often do you go to parent meetings (not including individual appointments with teachers)?"; "How often do you talk with other Head Start parents about program activities or parenting experiences?", and "How often would you say that you have some contact with Head Start teachers or support staff, including dropping off or picking up the child from school, visiting the classroom, attending meetings, home visits by program staff, phone conversations, etc.?" Other items explored agreement with such statements as: "I often go to the Head Start teachers when I need help or advice," and "My interactions with the Head Start teachers make me feel more confident and effective as a parent." *Program support acceptance* is concerned with the parent's perception of support availability and acceptability, rather than objective measurement of her actual frequency of involvement.

Psychometric data for Program Support Acceptance scale. Scale analysis was based on data from the mid-year administration of the Parent Involvement Questionnaire,

which took place in December, or mid-way through the Head Start program year. Scale reliability analysis of the initial ten items resulted in Cronbach's alpha of .78. Deleting one item which had a different response set ("How often would you say that you have some contact with Head Start teachers or support staff, including dropping off or picking up the child from school, visiting the classroom, attending meetings, home visits by program staff, phone conversations, etc.?"") resulted in a nine-item scale with an alpha of .79, which was considered acceptable.

CHAPTER 4 RESULTS

The analyses conducted to address the research questions and their results are summarized below. Demographic characteristics of the full sample were previously described in Chapter 3 (Methods), and summarized in Tables 1, 2 and 3 in that chapter. Results of analyses used to address the research questions are described below in order, and are summarized in Tables 4 through 10.

Preliminary Analyses and Data Reduction

Preliminary analyses included frequencies and descriptive statistics for all study variables, and bivariate correlations for all potential study variables. Independent samples *t*-tests were used to test group differences on demographic and study variables. Demographic characteristics of the full sample were previously reported in Table 1. Descriptive and demographic characteristics according to generational status (non-immigrant vs. immigrant) are reported in Table 2. Characteristics of the sample according to preferred language or language of parent interview are reported in Table 3. Bivariate correlations of all potential study variables, reported in Table 4, were used to guide data reduction. Significant control variables, and those of substantial theoretical interest, were retained for inclusion in subsequent analyses. Means, standard deviations, and correlations are reported separately for the retained variables in Table 5.

Data reduction. As described earlier and noted in Table 4, three potential indicators of acculturation (*generational status*, *years in U.S.*, and *language preference*) were highly inter-correlated. Because *generational status* (being born in the U.S. vs. born in Mexico) was most relevant to the research questions of the present study, the other two variables were dropped from further analyses.

Another set of variables related to household structure. Two marital status variables, *married* and *partnered*, were highly correlated (see Table 4). The *partner status* variable, which included households with a cohabiting partner as well as those with a spouse, was retained for subsequent analyses because it was significantly correlated with other variables in the full sample, while the *married* variable correlated with other variables primarily in the immigrant group. *Grandmother presence*, a special case of extended household, was of particular theoretical interest, but did not correlate with outcome variables of interest in the study. It is included as a component of the *extended household* measure, along with the presence of other non-parental care-giving adults. In bivariate correlations, *grandmother presence* was negatively correlated with being *partnered* ($-0.31, p < .001$), as shown in Table 4. Thus, *grandmother presence* did not necessarily increase the total number of caregiving adults present in the household. Having a grandmother in the household was more prevalent among non-immigrant, U.S.-born respondents (22 %) than among immigrant respondents (4 %), as shown in Table 2.

Bivariate correlations of *number of children in the household* with all other study variables showed significant correlations only with *years in the U.S.* ($r = .19, p < .05$),

indicating that the longer the mother had lived in the U.S., the more children she had) and *generational status* ($r = -.18, p < .05$, indicating that mothers born in Mexico had significantly fewer children than U.S.-born Mexican American mothers). These results are reported in Table 4. Because of the relative homogeneity in the sample and because there were no significant correlations between *number of children* and outcome variables, *number of children in the household* is simply reported as a characteristic of the sample and was not included in subsequent analyses.

Description of sample characteristics. Independent samples *t*-tests indicated that the immigrant and non-immigrant groups differed significantly on the following variables: *years lived U.S.*, $t(117) = 17.90, p < .001$ (non-immigrants had lived longer in the U.S.); *language preference*, $t(118) = -12.57, p < .001$ (non-immigrants were less likely to speak Spanish); *maternal education*, $t(118) = 4.36, p < .001$ (non-immigrants were more likely to be high school graduates); *marital status*, $t(118) = -2.23, p < .05$ (non-immigrants were less likely to be married); *grandmother presence*, $t(118) = 3.07, p < .01$ (non-immigrants were more likely to have a grandmother living in the household); and *number of children*, $t(118) = 2.00, p < .05$ (non-immigrants had more children).

Both the immigrant and non-immigrant groups in the present study reported higher than normative parenting stress levels at the beginning of the school year, as reported in Table 2. The normative mean PSI total score, as reported by Abidin (1995), is 71 ($SD = 15.4$). In contrast, when the sample was split by immigrant vs. non-immigrant respondents, immigrant (Mexico-born) mothers reported a mean initial PSI

score of 78.92 ($SD = 24.73$), while non-immigrant (U.S.-born) mothers reported a mean initial PSI score of 74.89 ($SD = 19.81$). Based on an independent samples t test, the difference between the immigrant and non-immigrant groups was not statistically significant. The mean Time 1 PSI score for the English-speaking Mexican American sample ($n = 57$) was 75.74 ($SD = 20.77$), as reported in Table 3; Time 1 PSI scores were not available for Spanish-speaking sample.

In full sample, the mean Time 2 score was 67.3, compared the normative mean of 71. The mean score at Time 2 for non-immigrant mothers was 69.93 ($SD = 21.61$), and the mean for immigrant mothers was 65.50 ($SD = 22.08$). The between-group difference in Time 2 parenting stress, based on an independent samples t -test, was not significant.

Table 4. Bivariate Correlations for All Potential Study Variables (Pairwise deletion)

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Generational status ^a	–	-.86***	.76***	.14	-.37***	-.14	.20*	.14	-.10	-.27**	-.18*	.08	-.10	.14
2. Years in U.S.		–	-.76***	.20*	.47***	.09	-.22*	-.19*	.03	.24**	.19*	.08	.05	-.13
3. Language of interview ^b			–	.12	-.44***	-.16+	.16+	.19*	-.06	-.29**	-.06	–	-.07	.11
4. Mother's age				–	.11	-.13	.01	-.12	-.18*	-.08	.15+	.09	-.16	.08
5. High school graduation ^c					–	-.01	-.02	.05	.09	.06	-.07	-.12	-.17+	-.13
6. Stressful life events						–	.02	-.02	.24**	.18+	.03	-.17	.03	.01
7. Married ^d							–	.68***	.28**	-.15	-.11	.16	.05	.16+
8. Partnered ^e								–	.35**	-.31***	-.11	.20	-.01	.23*
9. Number of caregiving adults									–	.45***	-.12	.13	.06	-.01
10. Grandmother presence ^f										–	-.01	.01	-.06	-.10
11. Number of children											–	-.16	-.00	.04
12. Time 1 (Fall) Parenting Stress ^g												–	.35*	-.27*
13. Time 2 (Spring) Parenting Stress ^h													–	-.20*
14. Program Support Acceptance														–

^a 0 = born in U.S., 1 = born in Mexico; ^b 0 = English, 1 = Spanish; ^c 0 = not HS graduate/GED, 1 = HS graduate/GED; ^d 0 = not married, 1 = married; ^e 0 = not partnered, 1 = married or live-in partner; ^f 0 = no grandmother present, 1 = grandmother present; ^g Parenting Stress Index total score; ^h Parenting Stress Index total score
 * p < .05; ** p < .01; *** p < .001; + p < .10 (marginal significance)

Table 5. Means, Standard Deviations, and Bivariate Correlations for Retained Study Variables (Pairwise deletion)

<i>Variable</i>	<i>N</i>	<i>M</i>	<i>(SD)</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>
1. Generational status ^a	120	.58	(.50)	–	-.37***	-.14	.14	-.25**	.08	-.10	.14
2. Maternal education (HS grad/GED) ^b	120	.35	(.48)		–	-.01	.05	.11	-.12	-.17+	-.13
3. Stressful life events (past 12 months) ^c	117	3.47	(2.71)			–	-.02	.21*	-.17	.03	.01
4. Partner status (Partnered) ^d	120	.73	(.44)				–	-.27**	.20	-.01	.23*
5. Extended household	120	.21	(.52)					–	.09	-.01	-.20*
6. Time 1 (Fall) Parenting Stress ^e	57	75.74	(20.77)						–	.35*	-.27*
7. Time 2 (Spring) Parenting Stress	108	67.30	(21.90)							–	-.20*
8. Mid-year Program Support Acceptance	113	3.36	(.53)								–

^a 0 = born in U.S., 1 = born in Mexico; ^b 0 = not HS graduate/GED, 1 = HS graduate/GED; ^c number of events ^d 0 = not partnered, 1 = married or live-in partner; ^e Parenting Stress Index total score

* $p < .05$; ** $p < .01$; *** $p < .001$; + $p < .10$ (marginal significance)

Primary Analyses

Following preliminary analyses, proposed links in the conceptual model were analyzed using a series of regression equations to test predictive relationships, as well as interaction (or moderation) effects. Paired *t*-tests were used to compare Time 1 and Time 2 mean *parenting stress* scores in the English-speaking sample. Analysis of the research questions posed by the study proceeded as follows:

Time 1 Parenting Stress: Antecedents and Relationship to Program Support Acceptance

Time 1 parenting stress data were not available for Spanish-speaking Mexican American mothers. Therefore, questions 1-3 refer only to the English-speaking study participants. Question 1 concerns the antecedents of *Time 1 parenting stress*. Questions 2 and 3 address aspects of the relationship between *Time 1 parenting stress* and *program support acceptance*. Results are reported below, and in Tables 6 and 7.

Question 1. To what extent do acculturation (represented by generational status), maternal education (represented by high school graduation/GED), stressful life events (as determined by a Life Events checklist), partner status (being married or having a live-in partner), and extended household (presence of a grandmother or other care-giving adult, other than a partner or spouse, in the household) contribute to Time 1 parenting stress?

The question was analyzed in the English-speaking sample ($n = 55$), using multiple regression with *Time 1 parenting stress* as the criterion. *Acculturation, maternal education, stressful life events, partner status, and extended household* were entered as a block. As reported in Table 6, the model was not significant. The total R^2 for the model was .12, indicating that these antecedent variables, considered as a set, accounted for only 12% of the total variance in *Time 1 parenting stress*. One variable, *partner status*, made a marginally significant independent contribution to *Time 1 parenting stress* ($Beta = .25, p = .08$), such that being partnered was marginally predictive of higher Time 1 parenting stress.

Question 2a. Is there a linear relationship between Time 1 parenting stress and mid-year program support acceptance?

This question was analyzed using bivariate regression to test for a linear relationship between *Time 1 parenting stress* and *mid-year program support acceptance*, with *program support acceptance* as the criterion. As expected, there was a significant negative linear relationship between *Time 1 parenting stress* and *mid-year program support acceptance* ($Beta = -.27, p = .05$), such that higher *parenting stress* predicted lower *program support acceptance*. These results are reported in Table 6.

Question 2b. Is there a curvilinear relationship between Time 1 parenting stress and mid-year program support acceptance?

This question was analyzed using bivariate regression with a quadratic term to test for a curvilinear relationship between *Time 1 parenting stress* and

mid-year *program support acceptance*, with *program support acceptance* as the criterion. The analysis used the curve-fit function of SPSS to create a quadratic term (*Time 1 parenting stress X Time 1 parenting stress*). The quadratic term was not significant, and the data were more consistent with a linear than with a curvilinear relationship between *Time 1 parenting stress* and mid-year *program support acceptance*, as reported in Table 6.

Question 3. Does acculturation moderate the link between Time 1 parenting stress and program support acceptance?

This question was addressed using hierarchical multiple regression in the English-speaking sample, with mid-year *program support acceptance* as the criterion. *Maternal education, stressful life events, partner status, and extended household* were entered as control variables at Step 1. At Step 2, *acculturation (generational status)* and *Time 1 parenting stress* were entered. At Step 3, an interaction term (*acculturation X Time 1 parenting stress*) was entered. Neither the model as a whole nor the interaction variable was significant, indicating that in this sub-sample (which excluded participants whose dominant language was Spanish), *acculturation* did not moderate the link between *Time 1 parenting stress* and *program support acceptance*. The full results are reported in Table 6.

Table 6. Time 1 Parenting Stress: Antecedents and Relationship to Program Support Acceptance (English-speaking sample, n = 55)

1. Multiple regression predicting Time 1 parenting stress

Criterion	Predictors	Beta	F	R ²	Δ R ²
<i>Time 1 parenting stress</i>	Acculturation (generation)	.12			
	Maternal education	-.16			
	Stressful life events	-.20			
	Partner status	.25 +			
	Extended household	.16	$F(5, 49) = 1.37$.12	.12

2. Bivariate regressions testing linear and curvilinear relationships between Time 1 parenting stress and program support acceptance

Criterion	Predictors	Beta	F	R ²	Δ R ²
<i>Program support acceptance (Linear)</i>	Time 1 parenting stress	-.27*	$F(1, 53) = 4.16^*$.07	.07
<i>Program support acceptance (Quadratic)</i>	Time 1 parenting stress Time 1 parenting stress ²	.89 -1.18	$F(2, 51) = 3.41^*$.12	.12

Table 6. Time 1 Parenting Stress: Antecedents and Relationship to Program Support Acceptance (Continued)

3. Hierarchical regressions predicting moderation of link between Time 1 parenting stress and program support acceptance by acculturation

Criterion	Predictors	Beta	F	R ²	Δ R ²
<i>I. Program support acceptance</i>					
Step I	Maternal education	-.14	<i>F</i> (4, 47) = .57	.05	.05
	Stressful life events	-.16			
	Partner status	-.07			
	Extended household	-.10			
Step II	Acculturation (generation)	.82	<i>F</i> (6, 45) = 1.08	.13	.08
	Time 1 parenting stress	-.15			
Step III	Generation X	-.78	<i>F</i> (7, 44) = 1.25	.17	.04
	Time 1 parenting stress				

* $p < .05$; ** $p < .01$; *** $p < .001$; + $p < .10$

Program Support Acceptance: Antecedents and Relationship to Time 2 Parenting Stress

Questions 4, 5, and 6 refer to the full sample of English-dominant and Spanish-dominant Mexican American mothers. Question 4 addresses contextual antecedents of *program support acceptance*. Questions 5 and 6 address aspects of the relationship between *program support acceptance* and *Time 2 parenting stress*. Results for these questions are reported below, and in Tables 7 and 8.

Question 4. Do acculturation (represented by generational status), maternal education (represented by high school graduation/GED), stressful life events (as determined by a Life Events checklist), partner status (being married or having a live-in partner), and extended household (presence of a grandmother or other care-giving adult, other than a partner or spouse, in the household) account for significant variance in mid-year program support acceptance?

This question was addressed using multiple regression, with mid-year *program support acceptance* as the criterion. The variables *acculturation*, *maternal education*, *stressful life events*, *partner status*, and *extended household* were entered as a block. The model as a whole was marginally significant, $F(5,104) = 1.96, p = .09$, as reported in Table 7. One individual variable, *partner status*, also made a marginally significant independent contribution to *program support acceptance* ($Beta = .17, p = .09$). That is, participants who were in a partnered relationship were marginally more likely to report higher levels of *program support acceptance*.

An additional post hoc analysis was conducted comparing samples split by acculturation, with mid-year *program support acceptance* as the criterion. The variables *maternal education, stressful life events, partner status, and extended household* were entered as a block. In the *non-immigrant* (U.S.-born) sample, the model was not significant, and no individual variable made a significant independent contribution. In the *immigrant* (Mexico-born) sample, the model was significant, $F(4, 61) = 3.62, p = .01$. The R^2 was .19, $p = .01$. In the *immigrant* group, the *partner status* variable made a significant independent contribution ($Beta = .32, p = .01$); see Table 7.

Question 5. Does prior program support acceptance predict Time 2 parenting stress, and remain significant after accounting for the contributions of acculturation, maternal education, stressful life events, partner status, and extended household?

A bivariate regression was first conducted using the full sample, with *Time 2 parenting stress* as the criterion. Mid-year *program support acceptance* significantly predicted *Time 2 parenting stress*, $F(1, 101) = 4.28, Beta = -.20, p = .04$, as shown in Table 7.

This was followed by a hierarchical regression, entering the control variables *acculturation, maternal education, stressful life events, partner status, and extended household* at Step 1, and *program support acceptance* at Step 2. In the hierarchical regression, the model as a whole was no longer significant. The R^2 change of .05 for *program support acceptance* continued to be significant, $p = .02$, and the *program support acceptance* variable had a significant independent effect in a negative direction

($Beta = -.24, p = .02$), such that a higher level of program support acceptance was associated with a lower level of parenting stress. Of the control variables, only *maternal education* made a significant independent contribution, in a negative direction ($Beta = -.24, p = .03$), such that having a higher education level or a higher level of program support acceptance predicted a lower level of parenting stress at the end of the year. These results are reported in Table 7.3.

Question 6. Does acculturation moderate the link between prior program support acceptance and Time 2 parenting stress?

This exploratory question was addressed in two stages. First, a hierarchical regression was conducted in the full sample, with *Time 2 parenting stress* as the criterion. The control variables *maternal education*, *stressful life events*, *partner status*, and *extended household* were entered at Step 1. *Acculturation (generational status)* and *program support acceptance* were entered at Step 2. Finally, an interaction term, *acculturation X program support acceptance* was entered at Step 3. While the model as a whole was marginally significant, $F(7,92) = 1.87, p = .08$, the interaction term was not significant. The only individual variable to make a significant independent contribution was *maternal education*, $Beta = -.22, p = .04$. The results are reported in Table 8.

To further explore this relationship, an additional regression analysis was conducted with the sample split by *acculturation* (immigrant and non-immigrant generations). For each of the two split samples, the variables of *maternal education*, *stressful life events*, *partner status*, and *extended household* were entered at Step 1.

Program support acceptance was entered at Step 2. In the *non-immigrant* sample (U.S.-born mothers), the model was not significant. In the *immigrant* sample (Mexico-born mothers), the model was again marginally significant, $F(5,55) = 2.23, p = .07$. In the *immigrant* sample, the *program support acceptance* variable made a significant independent contribution in a negative direction, $Beta = -.38, p = .01$, such that higher program support acceptance was associated with lower Time 2 parenting stress. Results of this analysis are reported in Table 8.

Table 7. Mid-Year Program Support Acceptance: Antecedents and Relationship to Time 2 Parenting Stress (Full sample, n = 110)

1. Multiple regression predicting mid-year program support acceptance

Criterion	Predictors	Beta	F	R ²	Δ R ²
<i>Program support acceptance</i>	Acculturation (generation)	.05	<i>F</i> (5, 104) = 1.96 +	.09	.09 +
	Maternal education	-.11			
	Stressful life events	.04			
	Partner status	.17 +			
	Extended household	-.12			

2. Sample split by acculturation

Criterion	Predictors	Beta	F	R ²	Δ R ²
<i>Program support acceptance</i>	<i>(Non-immigrant sample)</i>				
	Maternal education	-.22	<i>F</i> (4, 39) = .58	.06	.06
	Stressful life events	-.02			
	Partner status	-.05			
	Extended household	-.07			
<i>Program support acceptance</i>	<i>(Immigrant sample)</i>				
	Maternal education	-.03	<i>F</i> (4, 61) = 3.62**	.19	.19**
	Stressful life events	.12			
	Partner status	.32**			
	Extended household	-.21			

Table 7. Mid-Year Program Support Acceptance: Antecedents and Relationship to Time 2 Parenting Stress (Continued)

3. Bivariate and multiple regressions predicting Time 2 parenting stress from program support acceptance

Criterion	Predictors	Beta	F	R ²	Δ R ²
1. Time 2 parenting stress	Program support acceptance	-.20 *	F (1,101) = 4.28 *	.20	.20 *
2. Time 2 parenting stress					
Step 1	Acculturation (generation)	-.15			
	Maternal education	-.24 *			
	Stressful life events	.06			
	Partner status	.07			
	Extended household	-.09	F (5, 94) = 1.04	.05	.05
Step II	Program support acceptance	-.24 *	F (6, 93) = 1.78	.10	.05 *

* $p < .05$; ** $p < .01$; *** $p < .001$; + $p < .10$

Table 8. Hierarchical Regressions Predicting Moderation of Link Between Program Support Acceptance and Time 2 Parenting Stress by Acculturation (English and Spanish-speaking sample, n = 100)

1. Full sample with interaction term

Criterion	Predictors	Beta	F	R ²	Δ R ²
<i>Time 2 parenting stress</i>					
Step I	Maternal education	-.22 *	F (4, 95) = .68	.03	.03
	Stressful life events	.07			
	Partner status	.10			
	Extended household	-.09			
Step II	Acculturation (generation)	.79	F (6, 93) = 1.78	.10	.08 *
	Program support acceptance	-.04			
Step III	Generation X	-1.01	F (7, 92) = 1.87 +	.12	.02
	Program support acceptance				

Table 8. Hierarchical regressions predicting moderation of link between Program Support Acceptance and Time 2 Parenting Stress by Acculturation (Continued)

2. Sample split by acculturation

Criterion	Predictors	Beta	F	R ²	Δ R ²
<i>Time 2 parenting stress</i>	<i>(Non-immigrant sample)</i>				
Step 1	Maternal education	-.18			
	Stressful life events	-.05			
	Partner status	.08			
	Extended household	-.13	<i>F</i> (4, 34) = .62	.07	.07
Step 2	Program support acceptance	-.03	<i>F</i> (5, 33) = .49	.07	.07
<i>Time 2 parenting stress</i>	<i>(Immigrant sample)</i>				
Step 1	Maternal education	-.21			
	Stressful life events	.15			
	Partner status	.12			
	Extended household	-.07	<i>F</i> (4, 56) = .83	.06	.06
Step 2	Program support acceptance	-.38 **	<i>F</i> (5, 55) = 2.23 +	.17	.11 **

* $p < .05$; ** $p < .01$; *** $p < .001$; + $p < .10$

Change Over Time In Parenting Stress: The Contribution of Program Support

Acceptance

Analyses of change over time in *parenting stress* in the present study included only the English-dominant participants, as data on *Time 1 parenting stress* were not available for the Spanish-dominant mothers. Question 7 considers change in parenting stress from Time 1 (fall) to Time 2 (spring) in the sample of English-dominant Mexican American participants. Question 8 considers the contribution of *program support acceptance* to *Time 2 parenting stress* after controlling for antecedent variables, including *Time 1 parenting stress* level. Results for Questions 7 and 8 are described below and in Table 9.

Question 7. Does mean parenting stress level decrease significantly from Time 1 (fall) to Time 2 (spring) for parents participating in a full program year of Head Start?

This question was answered for English-speaking respondents who remained in the Head Start program for the full program year ($n = 50$). Comparison of mean *Time 1 (fall) parenting stress* scores to mean *Time 2 (spring) parenting stress* scores using paired samples *t*-tests confirmed that the overall mean level of *parenting stress* did in fact decrease significantly for participants over the course of the Head Start program year. Mean *parenting stress* scores dropped from 76.16 to 67.86, $t(49) = 2.48, p = .02$.

Question 8. Does prior program support acceptance predict Time 2 parenting stress, over and above the contribution of Time 1 parenting stress, acculturation, maternal education, stressful life events, partner status, and extended household?

This question was addressed using hierarchical multiple regression, with *Time 2 parenting stress* as the criterion. At Step 1, *Time 1 parenting stress* was entered. The variables *generational status, maternal education, stressful life events, partner status, and extended household* were entered at Step 2. *Program support acceptance* was entered at Step 3. Only the first step, with *Time 1 parenting stress*, was marginally significant, $F(1, 44) = 3.05, p = .09$. When the other variables were entered, the model dropped to non-significance. Among English-dominant participants, *program support acceptance* failed to predict *Time 2 parenting stress*, over and above the contribution of *Time 1 parenting stress, acculturation, maternal education, stressful life events, partner status, or extended household* (see Table 9).

Table 9. Hierarchical Regression Predicting Time 2 Parenting Stress (English-speaking sample, n = 46)

Criterion	Predictors	Beta	F	R ²	Δ R ²
<i>Time 2 parenting stress</i>					
Step 1	Time 1 parenting stress	.25 +	F (1, 44) = 3.05 +	.07	.07 +
Step 2	Generation status Maternal education Stressful life events Partner status Extended household	-.09 -.14 .01 -.01 -.07	F (6, 39) = .67	.09	.03
Step 3	Program support acceptance	.02	F (7, 38) = .56	.09	.00

*p < .05; **p < .01; ***p < .001; + p < .10

Treatment of Missing Data

In the present study, two sources of missing data posed significant challenges for the desired analyses, and required different solutions. The first was attrition from the study (individual respondents interviewed in the fall who moved, dropped out of Head Start, or were otherwise not available for follow up interviews in the spring). Overall attrition for the cohort was 10 %, a rate that is not unusual or unexpected in a longitudinal study, and was lower than the predicted attrition rate of 15% for the Child Resilience Project as a whole. While those respondents who dropped out differed somewhat from the remainder of the sample on a few variables (*grandmother presence* and *maternal education*), they did not differ systematically or significantly on key variables such as *generational status*, *language dominance*, *partner status*, or *initial parenting stress*. Therefore, this data was considered to be MAR (Missing At Random).

A second, and more troubling, source of missing data affected only the *parenting stress* variable. As noted earlier, delays in obtaining copyright permission to use the Spanish version of the Parenting Stress Index/Short Form meant that the Spanish measure was not available for use in the Time 1 (fall) data collection. As a result, longitudinal data on parenting stress was available only for the English-dominant respondents. While the English-dominant sample included both immigrant (n = 12) and non-immigrant (n = 45) respondents, it is reasonable to assume that the non-immigrant mothers in this subgroup (generally second and third generation Mexican American women), as well as those immigrant mothers who chose to be interviewed in English, were more acculturated

as a group than the Spanish-speaking respondents who were not interviewed on this measure at Time 1. Therefore, the data for *Time 1 parenting stress* was clearly MNAR (Missing Not At Random). Since there is no commonly accepted statistical procedure for handling missing data which avoids systematic bias in analyzing data that is MNAR (Kline, 1998; Shafer & Graham, 2002), it was necessary to limit analysis of change in parenting stress to English-dominant respondents.

Unfortunately, this subgroup of respondents was also affected by general attrition, further reducing the size of the sample available for longitudinal analysis from 57 (the number of cases with *Time 1 parenting stress* data), to 48 (the number of cases with both *Time 1 parenting stress* and *Time 2 parenting stress* data), producing a significant additional loss of statistical power (Cohen, 1992).

In an effort to maximize the available information from each respondent in preliminary analyses in SPSS, bivariate correlations of all study variables were conducted using both pairwise and listwise deletion of variables, and results were compared. Since the two methods of case deletion produced very similar overall patterns of relationships, only those intercorrelations based on pairwise deletion are reported (see Tables 4 and 5).

While case deletion is the simplest and most common method of handling missing data, and is frequently the most effective approach, particularly when a small proportion of cases are missing, the loss of statistical power can be very problematic when larger portions of a sample are lost. Further, and perhaps more concerning, Schafer and Graham (2002) have demonstrated that case deletion, whether pairwise or listwise, can itself be a

source of bias. Except in situations of MCAR (Missing Completely At Random), the parameters of the set of complete cases for which all data is available are likely to be unrepresentative of the population. Since the assumptions of MCAR are very stringent, and are not often met in social science investigations, deleting cases that do not have complete data at all points can result in misleading results and excessive Type II error.

Substitution of the mean, another popular method of handling missing values, has the advantage of preserving cases and preventing loss of statistical power. However, mean substitution also has limitations in that information about the distributions and variances of the missing variables is lost. Therefore, several other probabilistic methods of handling missing data have recently been developed, which more effectively preserve available information about the distribution and parameters of the data. Multiple imputation (MI) is a currently recommended method which uses Bayesian methods and available information about the covariances of other variables in the model to arrive at less biased substitute values (Schafer & Graham, 2002).

In the present study, while no statistical method appeared to be appropriate for handling the loss of *Time 1 parenting stress* data for Spanish-dominant respondents, MI appeared to be a plausible approach to the smaller loss of cases through subject attrition. Thus, an additional set of analyses were conducted on an ad hoc basis, to explore the potential role of missing data in the present study.

The longitudinal analyses were first conducted on the English-dominant portion of the sample, using regression procedures in SPSS, with standard listwise deletion. The

resulting sample was further reduced by additional cases which were missing the *program support acceptance* data.

Then, the MIANALYZE module of SAS was used to create 100 new data sets from the English-speaking portion of the sample, with imputed values based on parameters of all available study variables: *maternal education, language, partner status, generational status, grandmother presence, household extendedness, number of children, program support acceptance, stressful life events, years in U.S., Time 1 parenting stress, and Time 2 parenting stress*. Boundaries were set for the *parenting stress* values (Time 1 and Time 2) at zero and 150, to avoid inclusion of negative values or those which exceeded the maximum observed scores. The resulting augmented data sets using imputed data for missing values included 64 cases.

In the first longitudinal equation, multiple regression analysis predicting *Time 2 parenting stress* by *program support acceptance, Time 1 parenting stress, partner status, and maternal education* was performed on each of the 100 imputed data sets, and results were averaged. In the second set of analyses, hierarchical regression analysis predicting *Time 2 parenting stress* from *program support acceptance* (Step 1) and from *Time 1 parenting stress, maternal education, and partner status* (Step 2) was performed on each of the 100 imputed data sets. The results were also averaged.

Finally, results of the analyses based on the augmented data sets were compared with results based on the analyses based on the original data set with listwise deletion. This procedure served two purposes: (a) it provided a test of whether additional predictor

variables would prove significant in the longitudinal analyses with the enhanced statistical power of the augmented sample, and (b) it provided a test of the reliability or stability of results from the initial analyses. Analyses using of the augmented sample did not produce results that differed significantly from results based on the original data set. The results are reported below in Table 10.

**Table 10. Analyses Using Imputed Data Sets (English speakers only):
Multiple Regressions for Prediction of Time 2 Parenting Stress by Program Support Acceptance and Time 1 Parenting Stress**

Criterion	Predictors	Regression coefficients		Relative increase in variance
		Unstandardized ^a parameter estimate	95% Confidence limits	
1. Program support acceptance	Time 1 parenting stress	-0.005 + (.003)	-0.0119 0.0008	.309
2. Program support acceptance	Time 1 parenting stress	-0.006 + (.003)	-0.0126 0.0004	.283
	Partner status	.0372 (.131)	-0.2213 0.2957	+ .066
	Maternal education	-.1486 (.126)	-.3946 .0973	+.088
3. Time 2 parenting stress	Program support acceptance	1.810 (5.87)	-9.703 13.324	.134
	Time 1 parenting stress	0.318 * (.142)	.0389 .5981	+ .206
	Partner status	1.520 (5.73)	-9.710 12.75	+ .102
	Maternal education	-6.196 (5.56)	-17.094 4.701	+ .142

^a Values in parentheses are standard errors; * $p < .05$; ** $p < .01$; *** $p < .001$; + $p < .10$ (Based on average of 100 imputed data sets)

CHAPTER 5 DISCUSSION

Summary and Conclusions

This study examined several key theoretical linkages related to parenting stress and support processes, in a population of low-income Mexican American mothers with children in a community-based early education program. The study was concerned with (a) the relationship between initial parenting stress and mid-year program support acceptance, (b) the relationship between mid-year program support acceptance and year-end parenting stress, and (c) the contribution of program support acceptance to change over time in parenting stress. The research also sought a better understanding of contextual variables that might impact both parenting stress and program support acceptance in this population, and especially the potential role of acculturation as a predictor or moderator of key relationships. There was reason to believe that the participants belonged to a highly stressed population, relative to middle class parents, and that there could be within-group differences based on acculturation and other factors.

The guiding theoretical framework was based on Abidin's parenting stress model (1983, 1992) and Lazarus and Folkman's general model of stress, appraisal and coping (1984), as well as a body of family support literature based in ecological systems theory

Time 1 Parenting Stress: Antecedents and Relationship to Program Support Acceptance

Antecedents of Time 1 parenting stress. Contrary to expectations, none of the contextual antecedent variables included in the study accounted for significant amounts of

variance in the parenting stress levels of English-speaking mothers at the beginning of the program year. Together, *acculturation*, *maternal education*, recent experience of *stressful life events*, *partner status*, and *extended household* accounted for only 12% of the variance in Time 1 parenting stress in participating mothers. Only one of the contextual variables, partner status, made a marginally significant independent contribution to parenting stress.

While perhaps counterintuitive, these results are consistent with Abidin's parenting stress model. Abidin's model indicates that parenting stress is multiply determined by a range of parent characteristics (including relatively subjective psychological qualities), child characteristics, and situational variables. The antecedent variables used in the present study were primarily situational variables, which are important, but constitute only one component of parenting stress in the model.

The parenting stress measure did provide some indication of the mother's perceptions of her child's temperamental characteristics. However, data on maternal characteristics, such as developmental history, mental health status, belief systems, and personality factors, were not available. Yet, results of analyses suggest that as much as 88% of the variance in initial parenting stress was related to such factors, or others not included in the model.

Unfortunately, data on Time 1 parenting stress were not available for the Spanish-speaking mothers, who were likely the least-acculturated members of the sample. While unavoidable, this was a limitation of the study. Slavin et al. (1991), in their adaptation of

the general model of stress, appraisal and coping, made a convincing case that ethnic minority groups, immigrants, and those who are further from the cultural mainstream, may experience different stressful events or different frequencies of events, and may appraise both the events and the resources available for coping with them differently. In an immigrant population, lack of proficiency in English is certainly a factor that could influence a parent's ability to access supportive resources in the community. Had measures of initial stress been available for this population, research questions could have addressed the role of these factors in more depth.

Relationship of Time 1 parenting stress to program support acceptance. In this study, a regression analysis testing for a curvilinear relationship between Time 1 parenting stress and program support acceptance was not significant, while the linear relationship between initial parenting stress and mid-year program support acceptance was significant in a negative direction. That is, higher initial levels of parenting stress predicted lower levels of program support acceptance at mid-year.

A key theoretical question in this study was the role of parenting stress in either motivating or inhibiting program support acceptance as a coping behavior. Several researchers and theorists have suggested that some minimal level of stress serves as a necessary stimulus for support-seeking, which is a coping behavior (Cochran, 1990; Abidin, 1992). The hypothesis that some level of parenting stress is needed to motivate utilization of program-based parent support resources implies a curvilinear relationship between parenting stress and program support acceptance.

Others believe that increasing stress serves mainly to inhibit performance, including adaptive coping behaviors such as seeking out social network support (Hetherington & Blechman, 1996; Janis, 1993). This would imply a negative linear relationship between parenting stress and program support acceptance. In this sample, the data were more consistent with the linear relationship. However, the linear relationship was modest, and only a small percentage of the variance in the model was accounted for by these variables (for the linear model, $R^2 = .07$, or 7% of variance). Clearly, many factors other than prior parenting stress had an impact on the program engagement or *program support acceptance* of mothers in the study.

There is reason to believe that low-income immigrant parents, as a group, are more highly stressed than their middle-class counterparts, probably well above any minimal level needed to motivate utilization of support resources. Nevertheless, results of this study did lend support to the idea that, at least in this population, elevated parenting stress served as a barrier to program engagement rather than as a motivator to seek out support.

Moderation of the relationship. Results did not support the idea that acculturation would moderate the relationship between Time 1 parenting stress and program support acceptance in this sample. Again, it must be noted that this analysis was based only on the sub-sample of mothers who requested English-language parent interviews (that is, participants who were either fully bilingual, or later generation women who spoke English as their primary language). While there were immigrant generation mothers

(born in Mexico) in this English-dominant sub-sample, it is reasonable to assume that as a group, the English-dominant mothers were more acculturated than those whose dominant language was Spanish. Had Time 1 parenting stress data been available for the Spanish-dominant participants, it is possible that acculturation would have emerged as a significant moderating factor. However, the results of analyses conducted in the available sample did not support such a conclusion, suggesting that the basic relationship between initial parenting stress and program support acceptance is similar across the two groups (Baron & Kenny, 1986).

Program Support Acceptance: Antecedents and Relationship to Time 2 Parenting Stress

Antecedents of program support acceptance. The set of contextual variables used in the study proved to be somewhat better predictors of program support acceptance than of Time 1 parenting stress, making a marginally significant contribution, and accounting for 9% of the variance in program support acceptance at mid-year. The stronger relationship of the contextual variables to program support acceptance, as compared to Time 1 parenting stress, may be due to the expanded sample, which included both English and Spanish-dominant participants, and provided greater statistical power to detect effects. In a subsequent analysis comparing samples split by generational status, it was clear that the significant effects were almost exclusively in the less acculturated immigrant generation group, in which the contextual variables accounted for 19% of variance in program support acceptance.

The only contextual variable to make an independent contribution to program support acceptance was *partner status*. Being in a partnered relationship (having a spouse or live-in partner in the household) was marginally predictive of higher program support acceptance in the full sample. On the other hand, living in an extended household (having adults other than the mother and spouse/partner in the home) did not contribute to increased program support acceptance.

Together, these results tend to support the hypothesis that spouses are especially salient sources of parenting support, and that they facilitate the mother's participation in the community-based early childhood program. It was not possible to determine from this data whether facilitation takes the form of instrumental help, such as providing child care for other children in the home, or whether it consists of some other form of encouragement of the mother's involvement.

Relationship of program support acceptance to Time 2 parenting stress. In a bivariate regression, as expected, higher levels of program support acceptance at mid-year significantly predicted lower parenting stress at the end of the program year. Although the variance accounted for was small (about 4%), this tends to support a basic premise underlying community-based early education programs that include family support components in their program models.

However, when acculturation (generational status), maternal education, stressful life events, partner status, and extended household were controlled, the model dropped below significance. Program support acceptance continued to make a significant

independent contribution, as did maternal education, with higher levels of education contributing to lower Time 2 parenting stress. While the basic relationship between program support acceptance and Time 2 parenting stress was in the expected direction, it was a weak relationship. This analysis reinforces the earlier conclusion that parenting stress (whether at the beginning of program involvement or at the end) is multiply determined, and that the factors examined in the present study represent a very limited portion of total variance.

Moderating role of acculturation. In designing the study, it was not immediately clear whether acculturation could be expected to play a moderating role in the relationship between program support acceptance and Time 2 parenting stress, although the model proposed by Slavin, Rainer, McCreary, & Gowda (1991) strongly suggested that it might. Therefore, this was considered an exploratory analysis. A regression analysis that included an interaction term did not support a conclusion of moderation by acculturation. The only significant variable in this marginally significant model was maternal education.

Because of other indicators of differences between the two groups, this procedure was followed by a split-sample analysis, with the sample split according to generational status (immigrant-generation and non-immigrant generations). Interestingly, the model was not significant for the more acculturated non-immigrant sample, but was marginally significant for the immigrant sample, with program support acceptance making a significant independent contribution to decreasing Time 2 parenting stress for this group.

The whole model, including program support acceptance, accounted for only 7% of variance in the non-immigrant sample, but 17% of variance in the immigrant sample.

The results did not support a conclusion that the link between program support acceptance and Time 2 parenting stress was moderated by acculturation in this sample. However, there were some group differences between the recent immigrant group and the more acculturated later generation Mexican American mothers. Future studies might explore the role of maternal education in accounting for these differences.

Change Over Time in Parenting Stress and Contribution of Program Support Acceptance

Decline in parenting stress from Time 1 to Time 2. The finding that mean parenting stress levels declined significantly from the beginning of the program year to the end of the program year is an extremely important and welcome one for community-based early education programs such as Head Start. It is especially noteworthy given that this resulted from relatively informal, unstructured forms of interaction with the program over the course of the year, with a curriculum that is primarily designed around child outcomes, not parent outcomes. It is noteworthy that the Head Start mothers in this study were not necessarily participating in parenting classes, intensive counseling, or any other structured or systematic intervention designed specifically to reduce high levels of parenting stress. They were simply participating in their child's preschool program, where they were welcomed to attend parent meetings, visit the classroom, and interact informally with staff and other parents in the course of the year. Yet both English-

speaking and Spanish-speaking parents in the sample had started the year with mean parenting stress levels above the norm, and both groups saw their parenting stress levels decrease significantly, to levels at or below the norm.

Contribution of program support acceptance to change in parenting stress. The place of the *program support acceptance* construct in parenting stress and program-based support processes was ambiguous in this study, probably reflecting the inherent complexity of those processes. Mean parenting stress decreased over the course of the program year for mothers who remained engaged in the Head Start program, and greater *program support acceptance* at mid-year was associated with lower *Time 2 parenting stress* in the full sample, in bivariate regression analysis. These are precisely the relationships one would hope to see in a two-generation community-based early childhood program.

However, this relationship was not found when the English-speaking group was considered alone, and it was completely obscured in longitudinal analyses when *Time 1 parenting stress* was introduced. Thus, program support acceptance was no longer a major contributor to the change over time in parenting stress, at least in the English-speaking sample, after controlling for effects of Time 1 parenting stress and several contextual variables. Missing data for Spanish-speaking mothers did not permit conducting this analysis in the full sample, or in samples split by generation or language, and it is possible that the effects of program support acceptance would have been stronger in the less acculturated group. However, ad hoc analysis using a data set augmented by a

multiple imputation procedure produced the same results.

Based on reports by other authors, however, these are perhaps not surprising findings (Powell, 1988; Cochran, 1988, 1989; Belsky et al., 1984; Robinson et al., 2002). Program support acceptance is a construct closely related to what others have called perceived support, program engagement, and “comforting messages.” It represents a kind of precursor to making use of specific supportive services, but it is not in itself an intervention. Program support acceptance is probably best viewed as a necessary but not sufficient factor enabling a parent to benefit from the supportive resources of a program.

Other research suggests that the intrapersonal psychological resources and the interpersonal relationship skills required to participate actively in community-based programs, particularly in group formats, can be quite advanced. Some highly stressed mothers may require a considerable period of trust-building, observing, and engaging in one-on-one relationships with staff before they are able to participate fully in parent support services at higher levels (Powell, 1988; Zigler & Weiss, 1985).

Role of Acculturation in Parenting Stress and Support Processes

The present study did not support the expectation that acculturation would play a moderating role in relation to parenting stress and support processes. Nevertheless, in those analyses that allowed for the sample to be split by generational status or language, there were some striking differences in results. Several effects examined in the study were stronger among the less acculturated mothers (immigrant generation), and

sometimes the only significant relationships were found in this group.

Several factors potentially enter into explaining this difference in effects, and bear closer investigation in future research. For example, the immigrant generation mothers (born in Mexico) were more likely to be married or partnered than their second- or third-generation counterparts, and so were somewhat more likely in Bronfenbrenner's terms to have a *third party* in the household who could facilitate their participation in the child's preschool program (1987). This could account for the significant relationship found between partner status and program support acceptance for the immigrant group, but not for the non-immigrant group.

Still, since the majority of mothers in both groups were partnered, it is not clear whether this difference in predictive effect represents a cultural value, in which it is the husband's role to actively encourage and support the wife's involvement in the school, or whether other factors are at work. Earlier studies have suggested that, with the loss of other traditional social network supports due to immigration, first generation immigrant parents may turn to the staff of the child's preschool program more readily as a source of parent support. Later generation parents, having more access to extended social network supports outside of the program, may feel less need to use the program staff for this purpose (Sewell & Taylor, 1996).

Other lines of research speculate about a more psychological approach to differences attributed to acculturation, suggesting that psychological characteristics of low-income immigrant-generation parents may differ from those of more acculturated

second- and third-generation parents who live in low-income communities. In this view, relatively stable aspects of the mother's mental health status and psychological resources would influence her ability or inclination to meaningfully engage with a community-based program for support (Robinson, et al., 2002; Powell, 1988; Cochran, 1988; Belsky, Robins & Gamble, 1984).

In support of this view, the literature suggests that families acculturate toward the dominant patterns and values of their adopted communities (Cousins, Power, & Olvera-Ezzell, 1993; Buriel & DeMent, 1997; Allie, 1987), and may actually suffer a loss in personal psychological resources over time if those adopted communities happen to be chronically under-resourced, highly-stressed neighborhood environments. In this study, patterns of support acceptance in the non-immigrant group of Mexican American mother resembled patterns described among stressed Anglo American mothers in other urban areas (Cochran, 1988; Powell, 1988). The particular developmental niche experienced by these second and third generation mothers, if characterized by long-term poverty or family conflict, could be conducive to depression and the development of internal working models that lack trust in supportive personal relationships.

While more recent immigrant families may be equally stressed by immediate conditions of poverty, the challenges of parenting young children, and the loss of previous social networks, mothers in these first-generation immigrant households may as a group be more responsive to the immediate, structural aspects of their situation, such as having a partner in the home to assist with child care or otherwise facilitate her participation in

the child's program (Buriel & DeMent, 1997).

Role of Maternal Education in Parenting Stress and Support Processes

In this sample, the role of maternal education was interesting and somewhat difficult to disentangle. In some analyses, high school graduation or GED completion emerged as a significant predictor of lower Time 2 parenting stress, along with partner status and program support acceptance. We may speculate that mother's education level stands in for a variety of constructs, such as self-confidence, socioeconomic status, verbal and cognitive skills, patience, impulse control, or ability to delay gratification. The association of higher educational achievement with lower parenting stress at the end of the year may simply indicate greater stability or more economic security among the more highly-educated mothers.

However, in this sample, maternal education was also highly correlated with acculturation. The immigrant generation, Mexico-born mothers frequently had extremely low levels of education by U.S. standards, reflecting the Mexican education system in which the 6th grade level may still be considered one of the normal "stopping points" for women. In contrast, among U.S.-born women, ending one's education after the 6th grade would be highly unusual, and dropping out of high school without obtaining a GED is often associated with school failure, or early pregnancy and childbearing. This is an important variable to explore in future studies.

Role of Stressful Life Events in Parenting Stress and Support Processes

Experience of more stressful life events in the last year was not a significant predictor of either parenting stress or program support acceptance, contrary to some expectations. However, this finding is consistent with the cumulative risk literature, which focuses on the accumulation of stressors rather than discrete events (Evans & English, 2002). It also suggests, consistent with the parenting stress model, that parenting stress is determined by many factors other than external events, including maternal and child characteristics, and the relationship with the spouse or partner. Lazarus and Folkman (1984) would suggest that the parent's primary appraisal of the threat, and secondary appraisal of the resources available, may not be reflected in the kind of life events checklist typically used in research. While it is important to include such measures in studies of parenting stress, they may serve primarily to verify that the sample is representative of similar low-income populations.

Role of Partner Status in Parenting Stress and Support Processes

In the full sample and the immigrant-generation sample, having a partner was predictive of higher levels of program support acceptance. This effect was not found in the more acculturated non-immigrant-generation sample. Close examination of the households of the two groups shows that nearly three quarters of all respondents had some type of live-in partner, whether legally married or not. However, in immigrant households in this study, nearly two-thirds of mothers were married with a spouse

present, while in non-immigrant households, fewer than half of respondents were legally married.

It is possible that there are differences in the quantity or quality of caregiving support provided by married partners (more common in the immigrant group) as compared to live-in unmarried partners (more common in the non-immigrant group), which would account for differences in the effects of having a partner for mothers in the two groups. Differences in the duration or commitment level of the two kinds of partnership, for example, might have implications for the kinds of parenting support provided.

It is also possible that there are cultural values or role expectations within the less acculturated families that would lead partners or spouses to facilitate the mother's active participation in the child's school program. It could not be determined from this data whether facilitation takes the form of instrumental help, such as providing child care for other children in the home, or whether it consists of some other type of encouragement of the mother's involvement, nor was it clear why this effect was found in the immigrant generation, but not the later generations.

Role of Extended Households in Parenting Stress and Support Processes

Living in an extended household was not a significant predictor of parenting stress or program support acceptance in this study. However, it was possible to look at the extent to which household structures of the low-income Mexican American families in

this sample mirrored those described in the literature, which may be of interest due to the rapid growth of this population in many parts of the United States. From 1990 to 2000, census data indicate that persons of Hispanic or Latino origin moved from 9% to 12.5% of the population, slightly surpassing Black or African American residents to become the largest minority group living in the U.S. (U.S. Census Bureau, 2002).

Consistent with the reported demographic research, longer time lived in the U.S. in the present sample was associated with fewer marriages and more live-in partner or single parent family situations. In other words, in this sample, over time and across generations, the household and marriage patterns of immigrants did come to more closely resemble dominant U.S. patterns.

This sample differed from expectations in that extended households were no more common in the immigrant group than in the non-immigrant group. In fact, contrary to expectations (Vega, 1995), vertically extended households (those extended across generations) were actually more common among the non-immigrant families than among immigrant-generation respondent families. While inspection of household rosters revealed some lateral extensions in immigrant-generation households (the presence of persons of the same generation as the parent), as well as a variety of other non-parental caregiving adults, such as children over 18 living at home, the frequencies of these other relationships were too small to justify conclusions or generalizations. Grandmothers were more often present in non-immigrant generation households than in immigrant generation households, and grandmothers were unlikely to be present in the household if

there was a spouse or live-in partner. Mothers in the study typically had either a partner or a grandmother available in the household for parent support, but not usually both.

Implications

Theoretical Implications

Overall, results of this study tend to support the conceptual formulations described in Chapter 2. Both the literature and the results of this study suggest that in a population of low-income parents of young children, initial levels of parenting stress are relatively high, probably high enough in many cases to serve as a significant barrier to the mother's utilization of the potentially supportive aspects of her child's preschool early education or intervention program (Parker et al., 1997). As predicted, in this study, the mother's initial level of parenting stress appeared to negatively influence her ability to meaningfully engage with a community-based program, Head Start, for support.

The third party principle. It was expected that the presence of other potential caregiving adults in the home (indicated by *partner status* and *extended household*) would predict the mother's program support acceptance. This study found that partner status and acculturation were related to the mother's voluntary use of program-based parent support, but there was not support for the prediction that living in an extended household in itself, apart from partner status, facilitated program support acceptance. In later theoretical work, which underlies the design of many contemporary family support programs, Bronfenbrenner attached great importance to the notion of the *third party* in

supporting parents. The *third party* is described as “another adult...who assists, encourages, spells off, gives status to, and expresses admiration and affection for, the person caring for and engaging in joint activity with the child” (Bronfenbrenner, 1991, p.4). While ideally this party is a spouse or partner, Bronfenbrenner believed that other adults living in the home, as well as friends, relatives, neighbors, or even staff of community-based programs, could serve as functional equivalents. Family support interventions are at least implicitly designed to provide such substitutes, either through staff relationships, or by encouraging networking among parents.

Unfortunately, this study was unable to demonstrate that other caregiving adults in the household were effective as functional equivalents of a spouse or partner for mothers, either in facilitating the mother’s program engagement or in reducing her level of parenting stress. It appears that, as suggested by some social network researchers (Levitt, Weber, & Clark, 1986; Bassuk, et al., 2002), all third parties may not be equal. This is a subject that calls for further theoretical development, since the stakes can be very high for children and parents. There is a need to understand the qualities of effective third party parent support, the circumstances under which it is effective, and how to design interventions which replicate such support as much as possible when it does not occur naturally. In addition, researchers and program planners need to pay attention to the possibility that these processes will operate differently in different populations.

Stress and support processes. One of the unresolved questions in the literature of stress and support is the role of stress in either motivating or inhibiting adaptive or

support-seeking behavior. Some researchers and theorists suggest that some minimal level of stress (Cochran, 1990; Abidin, 1992), serves as a necessary stimulus for support-seeking behavior. Others suggest that increasing stress serves as an inhibitor or barrier to performance, including effective coping behaviors such as seeking out social network support (Hetherington & Blechman, 1996; Janis, 1993). The Lazarus and Folkman (1984) model of stress and coping may accommodate both kinds of processes in the primary and secondary appraisal stages, as both processes may occur under different circumstances. The present study certainly does not conclusively resolve the larger theoretical issue. However, results of this study do lend support to the idea that parental stress, at least at the levels found in this low-income population, can inhibit program support acceptance as a form of coping behavior. In the present study, parental stress functioned as a barrier to program support acceptance, not as a motivator.

Research Implications

Study of within-group contrasts. Bronfenbrenner believed that ecologically-based developmental research studies should, whenever possible, include at least two contrasting macrosystems (1989). This study seems to support the value of that prescription. Many research and evaluation studies have been conducted of parenting, stress and social support in low-income families, and some have contrasted processes and outcomes of one ethnic group to another. However, relatively few studies have focused on with-in group differences in a particular ethnic minority community. The value of this

study may ultimately lie in a better understanding of within-group differences in a specific ethnic minority immigrant community, and in raising awareness of differing developmental macrosystems that can exist within such a community.

In particular, this study highlighted significant differences in parenting stress and support-seeking processes within a community of low-income Mexican American mothers. Predictors of program support acceptance and Time 2 parenting stress differed for first generation, non-U.S.-born mothers and later-generation, U.S.-born Mexican American mothers, even though the two groups were fairly homogeneous in many features such as age, number of children, income level, geographic location, and experience of stressful life events.

These results, highlighting within-group contrasts, may serve to discourage over-generalization and stereotypical assumptions about ethnic minority groups. It is also hoped that one effect will be to focus attention on the “fit” between the individual mother and her environment. While some developmental and family support processes are universal and generalizable, it is important from both a theoretical and a practical standpoint to recognize the unique aspects of each situation.

Methodology. An ultimate goal of applied research in this area is to reach a better understanding of causal mechanisms, which will in turn allow for the design of more effective interventions. In recent methodological work of particular relevance in ecologically-based research, Shrouts and Bolger describe a form of partial causal mediation called *moderated mediation*, in which there is complete mediation in one

group, and no mediation in a second group (Shrouts & Bolger, 2002). While causal and mediational effects were not examined in this study, it would be helpful to design future studies so that these kinds of effects can be analyzed, using a variety of macrosystem contrasts. This implies ensuring that longitudinal data is available for as many variables as possible. One note of caution, however, is that effects of social support on stress, particularly those related to informal parent support over the course of a school year, can generally be considered distal rather than proximal causal effects. Because distal effects are more likely to be affected by competing or random causes, or transmitted through longer causal chains, effects are likely to be smaller and more difficult to detect than more proximal causal effects.

Applied Implications

Head Start is a multi-generational early childhood program with a long history of promoting voluntary supportive relationships to empower parents. Head Start programs offer a range of informal and formal opportunities for parental support and empowerment in the context of an early childhood program. The present study lends support to the idea that the ordinary ways that parents engage themselves with program staff over the course of a year in Head Start are related to reduced parenting stress. It lends qualified support to the conclusion of Faith Parker and her colleagues that Head Start may be conceived of as "an institution that is supportive to the extent that parents utilize it" (Parker, Piotrkowski, & Peay, 1987).

An underlying assumption of two-generation early childhood programs such as Head Start is that parent support, offered in the context of a comprehensive program, may reduce levels of parental stress, and thereby improve parental well-being. The present study does not permit conclusions about causality. Nevertheless, any significant reduction in parenting stress has important implications, especially since the “intervention” may be as simple as making the parent feeling comfortable, welcome, and understood in daily interactions with teachers and other program staff. Since excessive parenting stress can result in child abuse at the worst, and less-than-sensitive parent-child interactions at best, encouraging strong relationships with parents should be an important component of any program for at-risk children. This feature should not be overlooked or short-changed in Head Start reauthorization, or in the design of state and local-level early childhood education programs.

At the same time, it is disheartening to confirm what many practitioners have long suspected: the most highly stressed parents, the very parents who need the program’s support the most, may be the least likely to engage and benefit. While greater program engagement (which we have called *program support acceptance*) is correlated with a decline in Time 2 parenting stress, any effect of program support acceptance on Time 2 parenting stress was completely washed out in regression analyses by the effects of initial level of parenting stress, at least in the most acculturated group of mothers.

Continuum of services. The results of this study suggest a number of practical recommendations, some of which will come as no surprise to community-based

practitioners. One is that program-based parent support should be viewed as a continuum (Zigler and Weiss,1985). In *unilateral* parent/program relationships, parents are viewed by the program as passive recipients of professional expertise. This is the model of one-on-one casework services, which may be employed as part of home visiting programs. In *bilateral* relationships, parents are viewed as partners to the professionals; this is the traditional model of many educational institutions, often based around parent-teacher conferences, with parents occasionally serving as observers or volunteers in the program setting. In *multilateral* parent-program relationships, parents are viewed as both recipients of support, and providers of support to others, often through peer support groups and informal mutual helping relationships.

While bilateral and multilateral modes of parent-program relationship are considered the most desirable end points for multi-generational early childhood programs and other community-based family support programs, the present study suggests that these may not be realistic starting points. Some of the parents who need the support the most, whether because of high levels of initial stress or because of other personality or mental health issues, will not initially be able to take advantage of program-based support at those levels. It is important for programs to be designed with some flexibility, because some parents will need a period of more intensive one-on-one outreach before they can take the initial step of engaging with the program staff, much less with their peers.

Policy implications. Flexibility is important at the policy level, as well as at the local program level. This study has documented group declines in parenting stress in the

course of a Head Start program year. The presumed mechanism is simply informal participation in their child's early childhood program in the course of a school year, even without necessarily participating in parenting classes, therapy, or other specific, targeted intervention services. Unfortunately, the study also provides some support for the idea that some highly stressed parents may not be able to make effective use of this informal program support without some individualized assistance. Programs need to have the resources and flexibility to tailor their support services to the needs of the family.

Training implications. Staff who work in multi-generational early childhood programs need to understand the fragile nature of program engagement for highly-stressed parents. It is not surprising that the Head Start *FACES* (2001) study reported that parent participation and satisfaction was significantly related to teacher certification and in-service training levels. The natural inclination of program staff is to view those parents who are challenging, miss appointments, don't respond to phone calls, and fail to attend parent meetings, as "difficult" or uncaring. Inexperienced teachers, office staff, bus drivers, and even paraprofessional family services staff who do not have clinical training or specific knowledge of parenting psychology, may not intuitively understand that dealing with parents requires as much persistence, patience, and awareness of individual differences as dealing with children.

The study shows that parenting stress can be a barrier to program support acceptance, or effective engagement with their child's preschool program staff. Engaging with highly stressed parents at a level where they can connect with the program is a

learned skill, and it is reasonable to expect that line staff may need specific training, as well as access to clinical consultation. The apparent simplicity and “ordinariness” (Barnes & Duck, 1994) of the welcoming early childhood center and the “comforting message” is deceptive. In fact, a significant level of maturity and sophistication on the part of staff is required to operationalize such an environment.

As early childhood programs come under increasing pressure to be “school-like”, with more emphasis on academic achievement and less on comprehensive services to families, there is a real danger that programs will become less nurturing and welcoming environments for parents, as well as for young children (Rimm-Kaufman & Pianta, 1999). This has important implications for the continuum of child abuse prevention services. Policy makers should invest in strong relationships with parents as a component of programs for children, and the importance of this goal should not be overlooked or short-changed in the design of federal, state and local-level early childhood education programs.

Limitations

Design, Validity and Generalizability

A significant limitation of the design of the present study was lack of data on initial maternal characteristics for the non-English-speaking mothers. This limited the ability of the study to explore in greater depth some of the more intriguing effects that emerged. Availability of longitudinal data on parenting stress for the full sample, rather

than just the presumably more acculturated English speakers, would have allowed closer examination of the actual causes and processes of change in stress from the beginning to the end of the school year. While it is possible that differences according to acculturation (generational status) would have carried over into longitudinal analyses had the full sample been available, with more significant effects in the immigrant group, it was not possible to verify this assumption. The number of immigrants vs. non-immigrants in the English-speaking sample was too small to allow for meaningful analysis.

Recent methodological work on mediational analysis (Shrout & Bolger, 2002) highlights issues of proximal versus distal mediation processes. Effects of social support on stress, particularly those related to informal parent support over the course of a school year, certainly fall into the category of more distal causal effects. Because distal effects are more likely to be affected by competing causes, affected by random causes, or transmitted through longer causal chains, the effects are likely to be smaller and more difficult to detect than more proximal causal effects. Of particular relevance in ecologically-based research, Shrouts and Bolger describe a form of partial causal mediation called *moderated mediation*, in which there is complete mediation in one group, and no mediation in a second group (Shrouts & Bolger, 2002). Given the patterns found in this study (no moderation, but evidence of mean differences between groups), it would have been helpful to be able to explore this possibility in the present sample. However, that was not possible since longitudinal data was available only for one group.

Analyses and Statistical Power

Cohen (1992) indicates that sample sizes required for a multiple regression with two independent variables to show significant effects (power = .80) would be 30 cases for large effects, 67 cases for medium effects, and 481 cases for small effects. This is a concern in ecological studies, which tend to be concerned with multiple variables, and with predicting relatively distal effects. Using listwise deletion of cases with missing values, the longitudinal regression analysis for the present study had only 48 available cases, which provided sufficient power to demonstrate large effects, but not to reliably demonstrate small-to-medium effects.

Use of a newer missing-data technique, multiple imputation or MI, was of value because of the ability to increase the number of cases in the augmented data set ($n = 64$), and thereby increase the statistical power of the analysis to detect significant effects in the longitudinal sample. While researchers generally hope that increasing the sample size will reduce Type II error and increase the likelihood of detecting significant effects of variables, in this case, the effect of averaging the 100 imputed augmented data sets actually led to a more conservative interpretation of the data in the longitudinal analysis. In this instance, use of multiple imputation prevented reporting a marginal effect from one analysis which was not in fact a stable finding.

Measurement Issues

The main measurement limitations of this study were issues common to secondary analyses. The Child Resilience Project was a comprehensive study, and provided an unusually rich range of information on parents, children, and teachers, but it was not originally designed as a study of parenting processes. Fortunately, two key measures did allow meaningful analysis of some parenting stress and support processes. The Parenting Stress Index is a widely-used measure, which has strong psychometric properties and addresses several theoretically-important dimensions of parental well-being. Collection of longitudinal data on that measure for the full sample was planned, but was not possible due to logistical problems beyond the control of the researchers. Availability of this data would have strengthened the study, and increased generalizability of the results. A second strong parent measure available in the CRP, the Parent Involvement Questionnaire, included items that lent themselves to development of a Program Support Acceptance scale with reasonable scale reliability.

However, measures of some additional maternal characteristics might have shed further light on certain parenting stress and support processes. Some measure of parental belief systems (both in general and as related to acculturation) could have strengthened the theoretical conclusions of the study, and a measure of parenting behaviors would have allowed exploration of some of the more distal causal linkages between program support acceptance, changes in parenting stress, and changes in parenting behavior. Finally, some more qualitative data on parent personality variables might possibly have shed some light

on group differences between the immigrant and non-immigrant mothers, and the different patterns of relationships among variables in the two groups.

Future Directions

While moderation by acculturation was not demonstrated, certain significant group differences in the study raise provocative questions. Differences were not related to ethnic or cultural group membership; this was a study of within-group differences, not a comparison across ethnic or cultural groups. All of the mothers in the study sample were low income mothers of Mexican heritage, and lived within a limited geographic area. Yet in Bronfenbrenner's ecological terms, generational status appeared to define different macrosystem experiences or "niches" for these mothers. Such within-group differential effects are certainly not unprecedented in the family support literature. As early as 1979, Cochran and Brassard described differing processes of network support among married and unmarried African American mothers, as well as married and unmarried Caucasian mothers, in the Family Matters project.

One question for future research involves understanding what changes occur from the first generation to subsequent generations of Mexican American immigrants, which would account for different outcomes. What accounts for the greater impact of household structure factors (partner status) and program relationship factors (program support acceptance) among the mothers born in Mexico? How can family support programs be responsive to these apparently different needs?

Clearly, one part of the answer to these questions includes identifying other determinants of parenting stress and program support acceptance in this population. While this study had access to a relatively broad and rich range of variables, the predictors at hand accounted for only a maximum of 12% of total variance in parenting stress. Such constructs are multiply determined, and ecological theories of parenting would suggest that a portion of the remaining 88% of variance may reside in what we have loosely referred to as maternal characteristics: the mother's developmental history, current mental health status, or longer-term personality factors and psychological resources (Belsky et al., 1984).

While widely-used parenting stress measures such as the PSI correlate with measures of depression, a wide range of other initial measures of mental health status could also be helpful. Robinson and colleagues (2002) found that both the level and quality of program engagement over time in an Early Head Start program was related measures of the mother's initial depression, experience of domestic violence, sense of personal mastery, attitudes about relationships, and stress levels.

One note of caution is that these are relatively intrusive measures, and there are practical limits to the amount of personal and psychological information that program participants are willing to share early in their relationship with a program. This is particularly true if the program is informal, voluntary, and perceived as being primarily for the benefit of the child. Such measures may never be a routine part of intake procedures for Head Start or other community-based early childhood or family support

programs. Nevertheless, for research purposes, it would be desirable to find ways to incorporate such measures judiciously into studies with sufficiently large samples to provide insight into program support processes.

It would also be instructive to further investigate the nature of relationships within the household. Having documented that having a live-in partner is related to higher levels of program support acceptance, particularly in the immigrant generation families, it would be helpful to have a better qualitative understanding of how mothers see these relationships as facilitating their involvement and utilization of the supportive resources of the child's Head Start program. Do first-generation Mexican American fathers see it as their role to facilitate the mother's program participation to a greater extent than later generation fathers? At a microsystem level, do these domestic partners, whether husbands or boyfriends, participate directly in caregiving activities at home, or do they support the mother in more indirect ways? And finally, how do these community-based supportive relationships impact the interactions that take place at the microsystem level, both in the mother-child dyad, and in the mother-partner relationship?

APPENDIX A. MEASURES

**UNIVERSITY OF ARIZONA CHILD RESILIENCE PROJECT
Family Profile**

CHILD ID _____ CHILD'S BIRTHDATE _____ CHILD'S SEX _____ TODAY'S DATE _____

INTERVIEWER _____ PROJECT SITE : UA CA

RESPONDENT (person interviewed): MOTHER FATHER OTHER (Specify relationship to child) _____

1. Does this child live with you? _____ If no, who does he/she live with? _____
2. If you are not biological parent, please give age of biological mother _____ & father _____
3. Who takes care of this child most of the time? _____
4. Who has the most contact with this child's Head Start teacher and school? _____
5. Is this a single parent household? Yes _____ No _____
- 5a. If yes, is there a biological parent not in the household who is still active in this child's life? (Specify: _____)
6. Please list all of the people who live in child's household (including yourself):
LIST ADULTS FIRST, THEN CHILDREN

<u>Relationship to Child</u> (i.e., sister, uncle, stepfather)	<u>Relationship to Respondent</u> (i.e., husband, live-in partner)	<u>Age</u> (18 + is adult)	<u>Contributes to Household Income?</u> (Yes or No)
---	---	-------------------------------	--

- a.
- b.
- c.
- d.
- e.
- f.
- g.
- h.
- i.

I. Family Profile Questionnaire

Family Profile

2

7. For all adults (18 or over) living in household (including yourself), please list:
USE LETTER (a, b, c, etc.) THAT CORRESPONDS TO ITEM #6

	<u>Marital Status*</u> (See below)	<u>Highest education level**</u> (grade/degree completed)	<u>Does he/she have parental role?</u> (Helps care for child)	<u>Is he/she employed?</u> (Yes / No; FT, PT, or seasonal)***	<u>If Yes, what type?</u> (occupation or employer)
a.					
b.					
c.					
d.					
e.					

- 7a. If there are biological parents not living in the household, please list the same information (even if <18 years):

	<u>Marital Status*</u> (See below)	<u>Highest education level**</u> (grade/degree completed)	<u>Does he/she have parental role?</u> (Helps care for child)	<u>Is he/she employed?</u> (Yes / No; FT, PT or seasonal)***	<u>If Yes, what type?</u> (occupation or employer)

Mo:

Fa:

CHOICE CATEGORIES FOR #7 AND #7A (IF APPLICABLE):

*Marital status: married, remarried, live-in partner (specify length of relationship), single/never married, widowed, separated, divorced

** Educational level refers to highest grade or degree completed; distinguish high school graduate vs. GED; attended some college vs. AA or BA degree; specify other training such as vocational training programs, military.

*** Employment Status: If employed, note fulltime, parttime, seasonal. If not employed, specify homemaker, disabled, in school, etc.

8. Does anyone in the household receive any of the following family income supports? (Check all applicable)

AFDC Food Stamps WIC SSI Other (specify) _____

Family Profile

ETHNIC BACKGROUND INFORMATION:

(Items 9 - 11 refer to biological parents if available; if completing for adoptive or other parents, please specify):

9. a. Child's Birthplace _____ b. Years in US (if born elsewhere) _____
(City, State, Country)
10. a. Biological Mother's Birthplace _____ b. Years in US (if born elsewhere) _____
(City, State, Country)
11. a. Biological Father's Birthplace _____ b. Years in US (if born elsewhere) _____
(City, State, Country)
12. If Respondent is not biological parent:
a. Respondent's Birthplace _____ b. Years in US (if born elsewhere) _____
(City, State, Country)
13. What language does this child use most often at home? _____
14. What languages do parents and other members of the household use most often at home?
Father _____ Mother _____ Other Children _____
Others (specify) _____
15. Ethnic Identification:
Child _____ Biological Mother _____ Biological Father _____

INTERVIEWER COMMENTS:

Record below any issues/concerns/comments relevant to the interview. Use back of form if additional space needed.

II. Life Events Checklist

UNIVERSITY OF ARIZONA CHILD RESILIENCE PROJECT Life Events Checklist

CHILD ID: _____ Date: _____

Caregiver: Father Mother Other _____
(circle one) (Specify)

Site: UA GSUC (circle one) Teacher ID: _____

Interviewer: _____

Instructions: Below is a list of events that sometimes happen to children, such as the family moving or a parent starting a new job. Please indicate whether your preschool child has experienced any of the following events during the past twelve / six months. Circle yes or no for each statement.

- | | | | |
|-----|--|-----|----|
| 1. | The family moved to a new house or apartment. | Yes | No |
| 2. | A new brother or sister was born. | Yes | No |
| 3. | The child was a victim of violence. | Yes | No |
| 4. | The child's brother or sister got into serious trouble. | Yes | No |
| 5. | The child's parent died. | Yes | No |
| 6. | The child's mother began working. | Yes | No |
| 7. | The child's brother or sister had a serious illness or injury requiring hospitalization. | Yes | No |
| 8. | A parent got married to a step-parent. | Yes | No |
| 9. | Another adult was added to the family. | Yes | No |
| 10. | The child's parents got divorced. | Yes | No |
| 11. | The child changed schools. | Yes | No |
| 12. | The child had a serious illness or injury requiring hospitalization. | Yes | No |
| 13. | The child's parents were separated. | Yes | No |
| 14. | The child's parents argued more. | Yes | No |
| 15. | The child's parents argued less. | Yes | No |
| 16. | The child's father changed jobs and had to spend more time away from home. | Yes | No |
| 17. | The child's parent had a serious illness or injury requiring hospitalization. | Yes | No |
| 18. | The child found out he/she was adopted. | Yes | No |
| 19. | A family member was a victim of violence. | Yes | No |
| 20. | The child's close friend died. | Yes | No |
| 21. | The child was separated from the family for 2 weeks or more. | Yes | No |
| 22. | The child's brother or sister died. | Yes | No |
| 23. | A parent was arrested or in serious trouble with the law. | Yes | No |
| 24. | The child's parents had more money. | Yes | No |
| 25. | The child's grandparent died. | Yes | No |
| 26. | The child's brother or sister left home. | Yes | No |
| 27. | The child developed a visible deformity. | Yes | No |
| 28. | The child's parents had less money. | Yes | No |
| 28. | A parent lost his/her job. | Yes | No |
| 30. | A parent became involved in counseling or therapy. | Yes | No |
| 31. | A parents' mood or feeling about life became worse or much worse. | Yes | No |
| 32. | A parents' mood or feeling about life became better or much better. | Yes | No |

III. Program Support Acceptance Index
(derived from *Parent Involvement Questionnaire, Parent Form*)

1. How often do you go to parent meetings (not including individual appointments with teachers)? [Item # PIQP02]

Often (4) Sometimes (3) Rarely (2) Never (1)

2. How often do you talk with other Head Start parents about program activities or parenting experiences? [Item #PIQP06]

Often (4) Sometimes (3) Rarely (2) Never (1)

3. How often does someone from the Head Start staff invite you to attend parent meetings? [Item #PIQP09]

Often (4) Sometimes (3) Rarely (2) Never (1)

4. How often does someone from the Head Start staff give you information about child development and/or ways to improve your parenting? [Item #PIQP12]

Often (4) Sometimes (3) Rarely (2) Never (1)

5. I often go to the Head Start teachers when I need help or advice. [Item #PIQP14]

Strongly agree (4) Somewhat agree (3) Somewhat disagree (2) Strongly disagree (1)

6. My interactions with the Head Start teachers make me feel more confident and effective as a parent. [Item #PIQP16]

Strongly agree (4) Somewhat agree (3) Somewhat disagree (2) Strongly disagree (1)

7. I am able to talk freely and openly with the Head Start teachers about my feelings and experiences. [Item #PIQP18]

Strongly agree (4) Somewhat agree (3) Somewhat disagree (2) Strongly disagree (1)

8. The Head Start teachers understand and support what I am trying to do as a parent. [Item #PIQP21]

Strongly agree (4) Somewhat agree (3) Somewhat disagree (2) Strongly disagree (1)

9. I have benefitted greatly from my relationship with the Head Start teachers. [Item #PIQP22]

Strongly agree (4) Somewhat agree (3) Somewhat disagree (2) Strongly disagree (1)

APPENDIX B. HUMAN SUBJECTS APPROVAL

(Original approval letter for University of Arizona Child Resilience Project, 1992-1995)

Human Subject Committee

THE UNIVERSITY OF
ARIZONA
HEALTH SCIENCES CENTER1690 N. Warren (Bldg. 526B)
Tucson, Arizona 85724
(602) 626-6721 or 626-7575

August 24, 1992

Angela R. Taylor, Ph.D.
Department of Family & Consumer Resources
210 FCR Building
Main CampusRE: HSC A92.98 THE INFLUENCE OF CLASSROOM SOCIAL SUPPORT ON SCHOOL
ADJUSTMENT AND SOCIAL COMPETENCE IN HEAD START CHILDREN

Dear Dr. Taylor:

We received your above referenced research proposal. The procedures to be followed in this study pose no more than minimal risk to participating subjects. Regulations issued by the U.S. Department of Health and Human Services [45 CFR Part 46.110(b)] authorize approval of this type project through the expedited review procedures, with the condition(s) that subjects' anonymity be maintained. Although full Committee review is not required, a brief summary of the project procedures is submitted to the Committee for their endorsement and/or comment, if any, after administrative approval is granted. This project is approved effective 24 August 1992 for a period of one year.

The Human Subjects Committee (Institutional Review Board) of the University of Arizona has a current assurance of compliance, number M-1233, which is on file with the Department of Health and Human Services and covers this activity.

Approval is granted with the understanding that no further changes or additions will be made either to the procedures followed or to the consent form(s) used (copies of which we have on file) without the knowledge and approval of the Human Subjects Committee and your College or Departmental Review Committee. Any research related physical or psychological harm to any subject must also be reported to each committee.

A university policy requires that all signed subject consent forms be kept in a permanent file in an area designated for that purpose by the Department Head or comparable authority. This will assure their accessibility in the event that university officials require the information and the principal investigator is unavailable for some reason.

Sincerely yours,


William F. Denny, M.D.
Chairman
Human Subjects CommitteeWFD:rs
cc: Departmental/College Review Committee

APPENDIX C. CONSENT FORMS



Child-Parent Centers, Inc.

Administering Head Start in Southeastern Arizona

602 EAST 22nd STREET
TUCSON, ARIZONA 85713-1799
(602) 882-0100 FAX (602) 882-0782

Dear Parent:

We have agreed to participate in a research project being conducted by Dr. Angela Taylor from the University of Arizona. The purpose of the project is to find out how parents, teachers, and classmates help Head Start children to succeed in school. This information will help us to understand how we can better help the children get ready for kindergarten and how we can improve our services to Head Start families.

The project involves the following activities:

- 1) A researcher would ask you some questions about your child's behavior at home, your family background and important recent events in your family life, your opinions about parenting, and how you feel about your involvement with the Head Start program. This interview takes about one hour and would be done in the fall and again in the spring. You would be paid \$10 for each interview.
- 2) A researcher would conduct a brief evaluation of your child's vocabulary knowledge, and would talk to your child about ways you and the Head Start teachers help the child learn, your child's classroom friendships, and how your child feels about him(her)self. These activities would be completed in two or three 20-minute interviews in the fall and again in the spring.
- 3) A researcher would watch your child's activities in the Head Start classroom and during outdoor play for about 20 minutes during the fall and again in the spring.
- 4) Your child's teachers would give us information about your child's behavior at school, how your child gets along with the teaching staff, and your involvement in the Head Start program.
- 5) We would allow the research team to get information from our Head Start records on your child's school progress and about your family background, job, and education history.

All the information will be held in confidence, and no names will be used in any reports. Participation is voluntary, and you and your child are free to withdraw from the project at any time.

We hope that you will support this project by signing the attached consent form. If you have any questions about the project, please contact your child's teacher. Thank you for your continued support.

Sincerely,

Maggie Malloy
Maggie Malloy
Head Start Director

Angela R. Taylor
Angela R. Taylor, Ph.D.
Project Director

Child-Parent Centers, Inc.

Administering Head Start in Southeastern Arizona



602 EAST 21st STREET
TUCSON, ARIZONA 85713-1799
(602) 882-0100 FAX (602) 882-0782

Querido Padre:

Hemos decidido participar en un proyecto de investigación dirigido por la Doctora Angela Taylor de la Universidad de Arizona. El propósito del proyecto es averiguar como los padres, maestros, y los mismos alumnos ayudan a los niños de Head Start a tener éxito en la escuela. Creemos que esta información nos ayudará a entender mejor como podemos preparar los niños para el kínder, y como podríamos mejorar los servicios que damos a las familias de Head Start.

El proyecto incluiría las siguientes actividades:

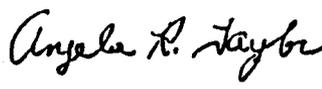
- 1) Un investigador les haría algunas preguntas sobre el comportamiento de su niño/a en su casa, sus antecedentes familiares, acontecimientos recientes en su vida, sus opiniones sobre lo que significa ser padre, y como se sienten sobre su participación en Head Start. La entrevista tomará alrededor de una hora en completarse, y se hará primero durante el otoño y otra vez durante la primavera. Recibirían diez dolares por cada entrevista.
- 2) Un investigador dirigirá una evaluación breve sobre el conocimiento vocabulario de su niño/a, hablaría con su niño/a sobre como Ud. y las maestras de Head Start le ayudan a aprender, las amistades de la escuela de su niño/a, y tambien como se siente sobre si mismo/a. Estas actividades se llevarán a cabo en dos sesiones de 20 minutos durante el otoño y de nuevo durante la primavera.
- 3) Durante el otoño y tambien en la primavera, un investigador observará las actividades de su niño/a en la clase y durante el tiempo de recreo que tomara alrededor de 20 minutos.
- 4) La maestra/o de su niño/a nos daría información sobre el comportamiento de su niño/a en la escuela, como se lleva con las maestras, y sobre la participación de usted en el programa.
- 5) Nosotros dejaremos el grupo de investigadores que obtengan información de nuestros registros de Head Start sobre el progreso escolar de su niño/a y sobre sus antecedentes familiares, su trabajo y sus antecedentes educativos.

Toda la información será confidencial, y no se usarán nombres en ninguno de los reportes. Su participación es voluntario. Usted y su niño/a pueden retirarse del proyecto en cualquier momento.

Esperamos que apoyen este proyecto firmando el formulario de consentimiento adjunto a esta carta. Si tienen preguntas sobre el proyecto, favor de comunicarse con la maestra/o de su niño/a. Gracias por su apoyo.

Sinceramente,


Maggie Malloy
Head Start Director


Angela R. Taylor, Ph.D.
Project Director

**UNIVERSIDAD DE ARIZONA
PROYECTO ADAPTABILIDAD DEL NIÑO
FORMULARIO DE CONSENTIMIENTO DE PADRES**

ME HAN PEDIDO QUE LEA EL SIGUIENTE MATERIAL PARA ASEGURAR QUE ESTE INFORMADO SOBRE LA NATURALEZA DE ESTA INVESTIGACIÓN Y COMO MI NIÑO/A Y YO PARTICIPAREMOS EN ELLA EN CASO DE QUE DECIDIMOS HACERLO. FIRMANDO ESTE FORMULARIO INDICARÁ QUE HE SIDO INFORMADO Y QUE DOY MI CONSENTIMIENTO. REGULACIONES FEDERALES REQUIEREN CONSENTIMIENTO ESCRITO ANTES DE PARTICIPAR EN ESTA INVESTIGACIÓN PARA QUE YO ENTIENDA LA NATURALEZA Y LOS RIESGOS DE PARTICIPACIÓN, Y ASÍ PODER DECIDIR SI PARTICIPAR O NO PARTICIPAR EN UNA MANERA LIBRE Y INFORMADO.

Me están pidiendo que participe voluntariamente en el Proyecto Adaptabilidad del Niño de la Universidad de Arizona dirigido por la Doctora Angela R. Taylor. El propósito de este proyecto es averiguar como los padres, maestros, y los mismos alumnos de la Head Start ayudan a los niños a prepararse para el kínder. Entiendo que me entrevistarán durante el otoño y la primavera acerca del comportamiento de mi niño/a, antecedentes familiares, acontecimientos familiares, mi opinión sobre lo que significa ser padre, y sobre mi participación en el programa Head Start. Recibiré 10 dolares por cada entrevista. También entiendo que la información sobre mi antecedentes familiares, mi trabajo y educación, y el progreso escolar de mi niño/a será obtenido de los registros del programa Head Start.

Doy permiso para _____ (nombre del niño/a) que asista al centro _____ de la Head Start para que participe en el mismo proyecto. Entiendo que mi niño/a será observado durante las actividades en la clase de Head Start, y participará en de dos a tres entrevistas individuales acerca de como los padres y maestros ayudan a mi niño/a aprender, las amistades de la clase de mi niño/a, y como se siente sobre sí mismo. El vocabulario de mi niño/a también será evaluado.

ANTES DE DAR MI CONSENTIMIENTO Y FIRMAR EL FORMULARIO ME EXPLICARON LOS METODOS, INCONVENIENCIAS, RIESGOS Y BENEFICIOS, Y CONTESTARON MIS PREGUNTAS. ENTIENDO QUE EN CUALQUIER MOMENTO PUEDO HACER PREGUNTAS, Y QUE MI NIÑO/A Y YO PODEMOS RETIRARNOS DEL PROYECTO SIN CAUSAR MALOS SENTIMIENTOS O AFECTARNOS DE CUALQUIER MANERA. MI PARTICIPACIÓN EN ESTE PROYECTO PUEDE SER TERMINADA POR EL INVESTIGADOR O FIADOR POR MOTIVOS QUE ME EXPLICARÁN. ME HARÁN DISPONIBLE LA INFORMACIÓN NUEVA DESCUBIERTA DURANTE EL TRANCURSO DE ESTE ESTUDIO QUE PODRÍA AFECTAR MI DECISION DE CONTINUAR EN EL PROYECTO DE INVESTIGACIÓN. ENTIENDO QUE ESTE FORMULARIO DE CONSENTIMIENTO ESTARÁ ARCHIVADO EN UN LUGAR DESIGNADO POR EL INVESTIGADOR PRINCIPAL, LA DOCTORA ANGELA TAYLOR, U OTROS REPRESENTANTES AUTORIZADOS DE LA ESCUELA DE RECURSOS DE FAMILIA Y CONSUMIDORES. ENTIENDO QUE FIRMANDO ESTE FORMULARIO NO CEDO NINGUNO DE MIS DERECHOS LEGALES. ME DARÁN UNA COPIA FIRMADA DE ESTE FORMULARIO DE CONSENTIMIENTO.

Nombre (Empresa) _____ (Firma) _____ Fecha _____

Dirección _____

Telefono (Casa) _____ (Trabajo/mensaje/otro) _____

No tengo telefono—comuniquese conmigo por _____

Yo prefiero la entrevista en: Casa _____ Head Start _____ (si permite espacio)

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