DISSERTATION

A LONGITUDINAL STUDY OF SOCIAL SUPPORT AND EDUCATIONAL ATTAINMENT OF MEXICAN AMERICAN AND WHITE NON-HISPANIC ADOLESCENT MOTHERS

Submitted by

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WE HEREBY RECOMMEND THAT THE DISSERTATION PREPARED UNDER OUR SUPERVISION BY RENEE ANDRADE WOODALL ENTITLED A LONGITUDINAL STUDY OF SOCIAL SUPPORT AND EDUCATIONAL ATTAINMENT OF MEXICAN AMERICAN AND WHITE NON-HISPANIC ADOLESCENT MOTHERS BE ACCEPTED AS FULFILLING IN PART REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY.

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ABSTRACT OF DISSERTATION

A LONGITUDINAL STUDY OF SOCIAL SUPPORT AND EDUCATIONAL ATTAINMENT OF MEXICAN AMERICAN AND WHITE NON-HISPANIC ADOLESCENT MOTHERS

This study assessed social support and educational attainment of pregnant and parenting adolescent females. Pregnant Mexican American (*n* = 42) and White non-Hispanic (*n* = 12) adolescents completed the Hispanic Dropout Survey (Chavez and Oetting, 1986). Social support from parents and friends were analyzed at Time 1, when the adolescents were pregnant, and at Time 2, when most adolescents were parenting. Educational outcomes were measured at Time 2. Results were compared to non-pregnant Mexican American (*n* = 480) and White non-Hispanic (*n* = 268) adolescents who completed the same measure. Participants who had been pregnant at Time 1 reported less perceived support from parents and friends or a special person at Time 2 than females who were not pregnant at Time 1. Mexican American females perceived less support from friends or a special person than White non-Hispanic females at Time 2. Adolescent mothers were just as likely to be currently enrolled in high school, to have graduated from high school, to have a G.E.D., and to have attended post-secondary schools as other adolescent females. Results were discussed with

regard to helping adolescent mothers feel supported and be successful in pursuing an education.

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CHAPTER I

Introduction

Each year, almost one million teenage women become pregnant (Alan Guttmacher Institute, 1999), and nearly half of those (468, 900) give birth (National Center for Health Statistics, 2002). Currently, more than 800,000 women ages 15-19 are mothers (United States Census Bureau, 1999). One in ten young women in the United States will become mothers by the time they are twenty years old (United States Census Bureau, 1999). Approximately 30-35% of all adolescent mothers have a repeat pregnancy within two years after their first delivery (East and Felice, 1996). Although the overall U.S. teenage pregnancy rate declined 17% between 1990 and 1996 (Alan Guttmacher Institute, 1999), 13% of all births are to teenagers (Ventura, 1997), and 78% of teen pregnancies are unplanned (Henshaw, 1998). This is a problem with serious emotional, economic, and social consequences.

Adolescence can be a difficult time for many young people. Teenagers are working to establish their identities and are searching for independence (Nielsen, 1996). Clearly, becoming a new parent can extraordinarily complicate this developmental stage. The transition to parenthood is a major life event characterized by stressful transitions in personal and interpersonal roles (Miller & Sollie, 1986). Those adolescents who become parents and keep their children

need to negotiate the developmental changes of adolescence while simultaneously adjusting to the early and new role of parent. Ketterlinus, Lamb, and Nitz (1991) propose adolescent parents may face "double-doses" of stress as they encounter the responsibilities and consequences of parenthood as well as the pressures associated with normative developmental transitions.

Adolescent mothers may experience a variety of specific stressors that differ from those of their male counterparts. They will likely experience financial difficulties, as women who give birth during adolescence complete fewer years of schooling and hold less prestigious jobs, which can contribute to lower socioeconomic status (Mott & Marsiglio, 1985). They may find it too overwhelming to continue pursuing their education while caring for a child. Their new status as parents may make it difficult to maintain peer relationships. Bolton (1980) argues that many stressors adolescent mothers face result from a forced and abrupt transition to parental roles, truncating education and perhaps precluding the successful resolution of adolescent developmental tasks such as identity formation. Some pregnant adolescents marry, but this too may bring abrupt strain. The rapid assumption of marital responsibilities in addition to those stressors associated with parenthood may have similarly disruptive effects on the resolution of adolescent developmental tasks (Teti & Lamb, 1989). The research literature has shown social support to be helpful to adolescent mothers by providing support that serves to buffer stress during a demanding time.

Social Support

One hypothesis for protection against the adverse effects of negative life events is the "buffering hypothesis" of social support. According to this hypothesis, protective benefits of social support occur under high levels of stress when individuals cannot typically manage on their own (Wills, 1985). Wills distinguishes between different types of social support: esteem support, which increases feelings of self-esteem; informational support, which involves providing necessary information (i.e. parenting classes); instrumental support, which means providing assistance with instrumental tasks (i.e. physical care of the baby); and social companionship, which involves various kinds of social activities. Providing social support may help protect adolescent mothers from the negative effects of early pregnancy. This social support can be provided by different people through a variety of venues.

Many researchers have focused on the importance of support from the adolescent mother's family. Cosey and Bechtel (2001) found unmarried African American teenage mothers chose family members more frequently than non-family members for their social support, indicating a reliance on family members for the bulk of their support. Davis, Rhodes, and Hamilton-Leaks (1997) found African American pregnant and parenting adolescents who received less parental support reported higher levels of depression. Support by both of the adolescent mothers' parents combined was associated with lower levels of depression. The authors proposed that due to the close relationship between the psychological

well-being of young mothers and the emotional well-being of their children, parental support seemed to be an important resource.

Stevenson, Maton, and Teti (1999) found the reciprocal exchange of support between parents and teens was correlated with increased mastery and life satisfaction as well as decreased depression and anxiety. Adolescents who gave and received support fared better than those who just gave or received support and those who had low support. The authors proposed that support to and from parents indicates interdependent, balanced family relationships, which have been associated with increased well-being.

Some research has specifically addressed the role of the adolescent's mother, or the baby's grandmother, in providing support. Davis et al. (1997) found African American pregnant and parenting adolescents received significantly more emotional support, tangible assistance, cognitive guidance, positive feedback, and socializing support from their mothers than from their fathers. Another study of African American adolescent mothers revealed that the parenting adolescent's own mother was the most frequently identified provider and source of support, followed by friends and then siblings (Nitz, Ketterlinus, & Brandt, 1995). Similarly, Davis (2002) found African American adolescent mothers received significantly more support from mothers than from peers. The baby's grandmother appears to be a main source of many types of support for adolescent mothers, playing an important role in buffering the young mother from the negative effects of early childbearing.

Siblings, although given less attention in the research literature, can be a source of support for adolescent mothers. Gee, Nicholson, Osborne, and Rhodes (2003) reported over half of adolescent mothers in their study identified at least one sibling as a source of support, usually older sisters. The authors reported older sisters provided the most support compared to other siblings, including emotional, financial, and instrumental support. In addition, strain in relationships with older siblings was associated with increased psychological distress for adolescent mothers. The presence of older siblings in the social network was associated with decreased depressive symptoms and anxiety.

Another source of support, particularly esteem and social companionship support, appears to come from peers. Richardson, Barbour, and Bubenzer (1995) found friends provided moderate levels of support and were perceived by adolescent mothers as more emotionally supportive than family members. Peers were perceived as interfering less than family members, so were seen as a more supportive component than the family in the informal social networks of adolescent mothers. Turner, Grindstaff, and Phillips (1990) found that support from friends was correlated with less depressive symptomatology in adolescent mothers. Friends seem to play an important role in the social context of adolescent parenthood. Parenting stress seems to be buffered by the esteem support provided by friends. However, the effects of this support may vary across ethnic groups. One study showed peer support was positively related to well-being for African American youth but not for White non-Hispanic youth (Maton et al., 1996).

Peer support groups have been found to be beneficial to some teenage mothers (de la Rey & Parekh, 1996). One community-based peer group provided teenage mothers with a forum to share common experiences and receive social support. The adolescent mothers talked about concerns such as coping with the dual roles of student and mother. They shared a sense of loss of social relationships with peers and reported a sense of social isolation. The participants reported feeling empowered by the opportunity to share common concerns and get emotional support from peers.

Some studies have shown support from the baby's father to be helpful. Chen, Teleen, and Chen (1995) found that for African American multiparous adolescents enrolled in school, the baby's father was the primary provider of support in all areas except offering advice about pregnancy. However, Nitz et al. (1995) found the baby's father was clearly the most consistent source of conflict for adolescent mothers, with less than half of the mothers in the study saying they would go to their baby's father for support. Despite these disparate findings, support from the baby's father has been found to significantly enhance adjustment to parenting for adolescent mothers. Samuels, Stockdale, and Crase (1994) found adolescent mother's self-esteem was positively related to social support, particularly contact with the baby's father. Mothers with higher self-esteem perceived their babies as less bothersome. The authors suggest a supportive environment leads to higher self-esteem and better adjustment to parenthood for adolescent mothers. They argue the baby's father plays a particularly important role in the mother's adjustment to parenthood.

Gee and Rhodes (2003) found adolescent mothers perceived their relationships with their children's biological fathers to be less supportive and less problematic over time. Father support was not found to be correlated with the psychological adjustment of the mothers, however father absence was positively associated with depressive symptoms and anxiety. An interesting finding from this study showed the baby's maternal grandmother served as a buffer against the psychological effects of strain in the relationship of adolescent mothers and their children's fathers. When maternal grandmother support was high, adolescent mothers reported the same amount of depressive symptoms and anxiety regardless of the amount of father strain.

Instrumental and informational support from the community may be helpful in reducing stress and improving outcomes. Solomon and Liefeld (1998) found adolescent mothers who received home visits, parenting classes, school advocacy, and case management services were more likely to delay subsequent pregnancy and stay enrolled in or complete school. However, support from the community did not contribute to the adolescent mother's sense of well-being in a study in which the mothers said they felt "looked down on" for being a young mother (Kissman & Shapiro, 1990). Chen et al. (1995) found pregnant African American students did perceive support from the community, but at much lower levels compared to their family, the baby's father, and friends.

A source of community support that seems to be helpful in supporting adolescent mothers is school-based programs. An evaluation of a school-based program for adolescent parents in an urban setting found participant mothers had

better school attendance and graduation rates than non-participants (Crean, Hightower, & Allan, 2001). In addition, the mothers who participated in the program were deemed to be at lower overall risk than were non-participants based on five problem areas: retention, attendance, core subjects, suspension from school, and achievement testing. The program offered free on-site childcare, parenting classes, and referral to other social service agencies.

The availability of social support to teenage mothers does not seem to be the only factor to consider in examining the buffering hypothesis. Kissman and Shapiro (1990) believe the adolescent mother's capacity to utilize available support depends on her ability to focus on the problem and problem-solve. They propose that before an adolescent can utilize available support, she must first be able to recognize and define her need for assistance, which requires fairly sophisticated problem solving skills.

Myors, Johnson, and Langdon (2001) found that pregnant adolescents used an emotion-focused, optimistic coping style most frequently and found this style to be the most effective for these young women. They used coping approaches like "thought about the good things in life" and "told myself not to worry because everything would work out fine." This coping approach is consistent with Elkind's (1978) proposal that adolescents are in the developmental stage where they assume that undesirable life-events will not happen to them and avoid focusing on negative outcomes.

The adolescents in this same study used a problem-focused, confrontive coping style less frequently but with perceived success. These adolescents

would use strategies such as "tried to handle things one step at a time" and "thought out different ways to handle the situation." Myors et al. (1995) proposed pregnant adolescents could benefit from learning more problem-focused coping strategies, such as "set up a plan of action" to help with managing the care of a new baby. This problem-focused coping approach could help the adolescents believe they are able to change and improve their life situations rather than trying to evade their current circumstances. The adolescents may then be more open to utilizing available social support.

Social Support: Hispanic/Mexican American Adolescent Mothers

There are currently 37.4 million Hispanics in the United States accounting for 13.3% of the total population. Two-thirds (66.9%) of those are Mexican American (United States Census Bureau, 2003). Mexican Americans are the largest as well as the fastest growing Hispanic group in the United States, with their population numbers increasing by 52.9 percent from 1990 to 2000 (United States Census Bureau, 2001). Unlike the adolescent pregnancy rates for other groups, the National Center for Health Statistics Report (1997) indicated that birth rates for Mexican American teenagers rose 7% for adolescents 15 to 19 years of age during the early 1990s. In addition, the total fertility rate for Hispanic women was higher than the national average, with Mexican American women having the highest rate of all Hispanic groups (National Center for Health Statistics, 2002). In 2000, one of every four Hispanic mothers did not receive timely prenatal care (National Center for Health Statistics, 2002). The rate of Mexican American adolescent pregnancy is rising, while the overall rate of

adolescent pregnancy is falling. Little research has focused on the issue of pregnancy among Mexican American adolescents given the increasing fertility rates and growing population.

It is important to note the different cultural issues related to pregnancy and parenting for Hispanic women. The role of motherhood has high social value in Hispanic culture (Dore & Dumois, 1990). Becoming a mother may be a way for Hispanic adolescents to transition into adulthood in an acceptable manner within the culture. Informal fostering of children within the extended family is acceptable, which offers additional sources of support to single parent families. According to Ortiz and Vasquez (1987), young Hispanic women who become pregnant before marriage are seldom ostracized. Instead, the pregnant teenager is usually assured of a home for herself and her child. These cultural attitudes may contribute to Hispanic adolescents being more likely to become pregnant.

A phenomenological study of eight Mexican American women who were adolescent mothers revealed marriage was viewed as a cultural imperative by the parents of the adolescents, however the respondents decided to become single parents (Grant, 1999). In addition, neither the parents of the adolescents nor the adolescents believed abortion or adoption was an appropriate response to pregnancy. The respondents reported a perceived withdrawal of support from immediate family upon discovering the pregnancy and a lack of emotional or financial support from the father of the baby. These women recalled feeling prejudice and stereotyping from some social service agencies and the community. They felt these agencies were not sensitive to their needs.

Ultimately, the respondents in this study felt the pregnancy was a positive experience, motivating them to improve their lives and become stronger, wiser, and more independent.

Family structure seems to be an important variable for Mexican American adolescent mothers. After adjusting for socioeconomic status, Schaffer and Wagner (1996) found Mexican American single mothers had a larger group of relatives living in close geographical proximity than did White non-Hispanic single mothers. Mexican American single mothers reported a larger social support network with a smaller, more cohesive group of friends in that network than White non-Hispanic single mothers.

Schaffer and Wagner (1996) found generational differences for the proportion of kin in the network and the size of the friend network. First generation Mexican American women had the lowest proportion of kin in their support networks, the second generation had the highest proportion, and later generations were in between. First generation women had the highest number of friends in their network and the second generation had the lowest. The authors explained first generation women had fewer relatives available in the geographic area so relied more on friends for support. The second generation women had the opposite pattern and relied more on family members. The authors suggested a bicultural adaptation pattern for third generation Mexican American women in which kin were not eliminated from the support network but friends were added.

An exploratory study of low socioeconomic status English-speaking and Spanish-speaking Mexican American adolescent mothers in Los Angeles had a

number of interesting findings (Becerra & de Anda, 1984). The authors found the Spanish-speaking Mexican American adolescent parents were substantially more likely to be married than their English-speaking counterparts. None of the White non-Hispanic adolescents in this study were married. The authors suggest the traditional norm of marriage if the female becomes pregnant is more strongly adhered to among less acculturated Mexican Americans, while more acculturated adolescents are more likely to move toward single parenthood.

In the same study, the majority of adolescents indicated their own mothers were their major source of support in every respect. The Spanish-speaking Mexican American adolescent mothers reported this less often than the English-speaking adolescent mothers, perhaps due to geographic distance because their own mothers were living in Mexico. However, 80% of Spanish-speaking adolescents said their mothers were the individuals most likely to listen to their personal concerns. These adolescents endorsed minimal communication with and support from their fathers. The Mexican American adolescents tended to have fewer friends than the White non-Hispanic adolescent mothers.

Additional studies have focused on Mexican American adolescent mothers' relationships with the baby's father and with peers. De Anda, Becerra, and Fielder (1990) found Mexican American adolescent mothers reported more stable relationships with the father of the baby than did White non-Hispanic adolescent mothers. Pregnancy and the birth of a child appeared to have weakened and reduced peer relationships for the majority of White non-Hispanic and Hispanic adolescents in a study by de Anda and Becerra (1984), as

measured by frequency of peer contact. In this study, peers seemed to offer little instrumental support in terms of childcare, but did appear to offer some emotional support to pregnant adolescents. The opinions of female friends ranked lowest in importance among those in the support network, perhaps reflecting the diminished importance of peers for these adolescents.

Osborne and Rhodes (2001) examined African American and Latina pregnant and parenting adolescents. They found 17.7 percent of the participants had been sexually victimized, most often in the form of unwanted sexual intercourse. Victims reported the same level of social support but seemed to derive less benefit from this support than did non-victims. Victims benefited from social support when they faced low stress, but social support did not protect these women from depression or anxiety at moderate or high levels of stress. Non-victims did not seem to benefit from social support at low levels of stress, but social support seemed to buffer non-victims from depression and/or anxiety when they faced moderate or high levels of stress. These results did not indicate there was a deficiency in the availability of social support for victims, however, the authors posit victims may be less able to benefit from social support and may be more negatively affected by negative life events than non-victims.

Education

Often, adolescent pregnancy and childbearing is associated with dropping out of high school and low educational attainment (Upchurch, 1993). Lower educational attainment can be an antecedent to pregnancy or a consequence of pregnancy (Scott-Jones, 1991). Luker (1996) stated one in three teenage

mothers do not complete high school. However, the Alan Guttmacher Institute (1994) reported 7 in 10 teen mothers in the United States complete high school eventually, but they are less likely to go on to college than women who delay childbearing. Because of lower educational attainment, along with marital instability and poverty, adolescent mothers have lower incomes as adults and are more likely to be on welfare than women who delay childbirth (Moore et al., 1993).

Using data from the National Longitudinal Survey of Youth, Upchurch (1993) found the majority of adolescent mothers did graduate from high school. Adolescent mothers who did graduate from high school were similar to women who graduated and delayed childbearing, except they were less likely to pursue post-secondary education. Adolescent mothers who completed regular high school were significantly more likely to attend college than women who graduated by completing a GED program. Upchurch found women from the most disadvantaged backgrounds were the most likely to drop out of school and/or to become teen mothers. The author argued adolescent childbearing may be a strategy to achieve adult status for women from more disadvantaged backgrounds and with weaker school performance.

A recent study found 69.7% of pregnant adolescents were enrolled in school or had already graduated (Stevenson, Maton, & Teti, 1998). The authors reported dropouts had lower family incomes than graduates or those currently in school, which highlighted the effect socioeconomic status may have on educational attainment. Mastery was positively correlated with school

importance, while social support did not correlate with school importance or dropout status. Adolescent mothers who had been doing well in school and had high educational aspirations when their first child was born were much more likely to be economically successful later (Furstenberg, Jr., Brooks-Gunn, & Morgan, 1981). Most pregnant adolescents (76.7%) perceived finishing high school as very important and recognized the importance of education and remaining in school.

Education: Hispanic/ Mexican American Adolescent Mothers

As stated previously, women's positive identities as mothers are strong in traditional Hispanic cultures (De Leon, 1996; Garcia-Coll, Escobar, Cebollero, & Valcarcel, 1989). This positive valuing of motherhood may reduce social pressure to pursue school or work and child care goals simultaneously. Dore and Dumois (1990) explained the role of mother is valued by the culture as an end in itself, so Hispanic teenage mothers have less cultural support for career achievement. They argued after young Hispanic women have achieved motherhood and experienced the approval it brings, it is more difficult for them to consider additional goals. Upchurch (1993) found Hispanics were more likely to drop out and have a baby shortly thereafter than were African American or White non-Hispanic adolescents. Among adolescent mothers under the age of 18, the majority of African American and White non-Hispanic students graduated, while only one third of Hispanic women graduated. However, in de Anda, Becerra, and Fielder's (1990) study of pregnant and parenting female adolescents, they found

the vast majority of Mexican American and White non-Hispanic participants were currently attending school.

Way and Leadbeater (1999) assessed the effects of material and emotional support from family on educational attainment for a sample of African American and Puerto Rican adolescent mothers. They found 52 percent of the women had graduated from high school or received their General Equivalency Degree (G.E.D.) six years postpartum. Nearly half of the women who had graduated high school went on to complete at least one year of college. This study found adolescent mothers were more likely to earn more education if they were not as far behind academically before the pregnancy, were older at first pregnancy, and had fewer depressive symptoms. Those who were most behind in school before the pregnancy were more likely to be Hispanic. This same study found that high educational achievers felt capable of taking on and successfully meeting new challenges. They were confident, independent, and determined to accomplish their goals. In contrast, low educational achievers sounded much less self-assured and were more likely to give up easily.

Surprisingly, this study indicated higher emotional support from family and living with the baby's grandmother during the first year postpartum predicted lower educational attainment for these adolescent mothers six years later. The authors attributed this finding to some families withdrawing support from their daughters when they decided to have babies because the families wanted the adolescents to pursue an education rather than have children. By being unsupportive of their daughters' decisions to have babies, these parents were

being indirectly supportive of their daughters' educations and may have contributed to their decisions to continue in school. Adolescent mothers who received a great deal of family support and lived with the baby's grandmother may not have felt the same urgency to pursue an education.

Becerra & de Anda (1984) found pregnancy to be a major disruption to the adolescent's formal education. Almost half of the English-speaking Mexican American adolescents in the study were continuing their educations, which was roughly equivalent to the number of white adolescents continuing in school. However, only 10% of Spanish-speaking Mexican American adolescent mothers were continuing in school and roughly the same amount were high school graduates, as opposed to half of the English-speaking Mexican American mothers who were high school graduates. The perceived role of Spanish-speaking mothers often seemed to consist of the idea of being wife and mother and keeping house instead of working outside the home. The English-speaking mothers were more likely to see themselves as working full time outside of the home.

Another study of African American and Puerto Rican adolescent mothers found that school performance prior to delivery was the strongest predictor of delayed grade-placement at almost three years after delivery (Leadbeater, 1996). The author argues the educational success of minority group adolescent mothers depends on the attention given to decreasing school failure in adolescent females before they become parents. Mothers who were in school or graduated reported fewer repeat pregnancies and a greater rate of seeking postsecondary

education than mothers in the dropout group. Mothers who returned to school reported more family support, fewer depressive symptoms, fewer stressful life events, and stronger career commitments than did mothers from the dropout group.

Risk Factors

Certain factors may place all adolescent females at higher risk for pregnancy. Adolescent pregnancy occurs in every segment of society, but it is much more prevalent among adolescents living in poverty (Alan Guttmacher Institute, 1994). Adolescent pregnancy and childbearing are associated with several problems and risk factors, including lack of parental support and supervision, coming from non-intact families, sexual abuse, drug and alcohol use, delinquency, low educational performance and expectations, and low expectations for the future (Upchurch, 1993; Zabin and Hayward, 1993). Research has documented that teenage mothers are more likely to drop out of high school, be more socially isolated, develop inadequate job skills, have high unemployment rates, have increased health risks, and have a higher probability for divorce (Furstenberg, Brooks-Gunn, & Chase-Lansdale, 1989). Hoffman, Foster, and Furstenberg, Jr. (1993) found that after accounting for family background, adolescent mothers were still less likely to graduate high school and more likely to have lower socioeconomic status. Adolescents who become mothers before the age of 18 and come from disadvantaged family backgrounds seem to be at higher risk for negative outcomes (Upchurch, 1993).

Aneshensel, Fielder, and Becerra (1989) found Mexican American female adolescents were more likely than White non-Hispanic adolescents to have a baby, despite a lower rate of sexual intercourse and a similar pregnancy rate. This difference was accounted for by a lower rate of contraceptive use and lower abortion rates among the Mexican American females. Durant, Seymore, Pendergrast, and Beckman (1990) found Mexican and Central/South American females were more likely to use effective birth control than Puerto Rican, Cuban, and other Hispanic participants. By not using effective contraception, young women place themselves at higher risk for pregnancy.

An ethnographic study of Mexican American and White non-Hispanic pregnant adolescents and adolescent mothers found that over half of the young women had lost a parent through death or divorce (de Anda, Becerra, and Fielder, 1990). The Mexican American adolescents reported early menarche and little, belated, or no sexual education information communicated to them by their parents. Most of the Mexican American adolescents were involved in long term relationships, had "gone around" between one and two years before initiating sexual relations, and had only one sexual partner. The White non-Hispanic adolescents initiated sexual relations earlier in relationships and were more sexually experienced and active with a greater number of sexual partners than Mexican American respondents.

Child Outcome

The poorer educational, occupational, and marital outcomes associated with early childbearing may negatively affect the development of the children

born to adolescent parents (Teti & Lamb, 1989). Adolescent mothers have been found to be just as warm but less verbal, less sensitive, and less responsive to their infants than older mothers (Culp, Appelbaum, Osofsky, & Levy, 1988). Carter, Osofsky, and Hann (1991) argue infants of adolescent mothers are at higher risk for a number of psychosocial problems associated with poor mother-infant interaction, including abuse and neglect. They found improvements in mother-infant interaction by employing a therapeutic technique called "speaking for the baby" in which another person verbally articulates the needs of the infant so the mother can learn to respond to the infant's cues. Mothers would respond more often and more quickly to her baby when the baby could "speak" to her through another person.

A study of social competence in first grade children of low-income, adolescent mothers, found children with higher social skills and fewer problem behaviors were more likely to have received higher quality parenting, to have higher academic skills, and to be living in neighborhoods with less poverty (Bates, Luster, & Vandenbelt, 2003). Children with higher academic skills were less likely to have moved schools. Academic skills at the beginning of the first grade were predictive of social skills and problem behaviors at the end of the first grade. The authors argue these findings underscore the importance of early childhood education programs and quality childcare for children from homes that may not offer as much stimulation to help develop academic competence.

Compared to children of older mothers, Levine, Pollack, and Comfort (2001) found children of adolescent mothers were more likely to score poorly on

tests of academic skill, to be retained in school, to initiate early sexual activity, and to display problem behaviors such as truancy and fighting. Although the authors argue that controlling for a wide range of background factors and maternal characteristics explains the difference in academic outcomes, they concede that early childbearing is related to lower children's test scores because of its linkage to a larger family size. The differences in behavioral problems and initiation of early sexual activity remained after controlling for background factors and maternal characteristics. Children of younger mothers fared worse than did children of older teen mothers. Highlighting the importance of social support for children of adolescent mothers, Dubow and Luster (1990) found that if children were receiving higher levels of emotional support at home they were less likely to be experiencing problem behaviors.

Furstenberg, Jr., Brooks-Gunn, and Morgan (1981) found preschool age children of adolescent mothers were at some academic disadvantage, performing at a lower level than children of older mothers. At the 17-year follow-up, the authors found "massive school failure" (p. 148) among the children of adolescent mothers, with half of these children already repeating at least one grade. The majority of these children reported they were C or D students. They found behavioral differences as well, with a significant amount of children reporting disciplinary problems at school including skipping school or getting in a fight. 44% of parents reported their children had been suspended or expelled in the past five years. Overall, children of adolescent mothers experienced greater problems than children of older mothers. The authors summarized that

adolescents whose mothers were teenage parents are at very high risk of having problems in school. However, not all studies agree that children of adolescent mothers have negative outcomes. A recent study of urban, African American adolescents (Zimmerman et al., 2001) found the mother's age at birth was unrelated to adolescents' psychosocial outcomes, which included problem behaviors, psychological well-being, social support, school variables, and sexual behaviors.

Children of adolescent mothers may benefit from social support the mother receives. A study of English teenage mothers found adolescent mothers to be more responsive to their babies' needs when they were receiving family social support (Crockenberg, 1988). Crockenberg posits that when a new mother has support from her family, she may feel her own needs are being met and may therefore be more open to responding to her baby's needs. For adolescent mothers, who have been found to be less responsive to their babies' needs than older mothers (Culp et al., 1988), family support could not only help the adolescent mothers but their children as well. Another study found adolescent expectant mothers living in poverty were at higher risk of abusing their children when there was a lack of perceived support by the father of the baby (Zelenko, Huffman, Lock, Kennedy, & Steiner, 2001). Turner et al. (1990) found infants of adolescents fared better, as measured by birth weight, when the mother had more family support.

Coley and Chase-Landsdale (1998) summarized the results of research on the outcome of children of adolescent mothers by stating child functioning

appears to worsen over time. The authors say few differences between children of adolescent mothers and older mothers appear during infancy. However, delays in cognitive development and behavior problems become evident in preschool and continue into the school years. In adolescence, the children of teenage mothers have higher rates of delinquency, incarceration for male adolescents, grade failure, early sexual activity, and pregnancy than their peers with older mothers.

Summary and Hypotheses

Social support may serve as a buffer for the stress inherent in adolescent pregnancy and parenting. Support from the adolescent mothers' family of origin, including mother, father, and siblings, can be beneficial to both the adolescent and her child. Peers, the baby's biological father, and the community can provide needed esteem, informational, instrumental, and social companionship support. This support can help to buffer the adolescent mother from the negative effects of early pregnancy, perhaps allowing her to continue her education and build a better future for herself and for her child. Adolescent mothers typically have had lower educational attainment than other adolescents, however recent studies show the numbers of adolescent mothers pursuing their educations may be increasing. Social support may play a role in the success of adolescent mothers in school.

The experiences of Mexican American adolescent mothers may diverge from White non-Hispanic adolescent mothers due to different cultural perspectives. Mexican American teenage mothers may embrace cultural

attitudes of motherhood that do not encourage pursuing formal education and a career but instead focus on marriage and working in the home. These teenage mothers may experience more family support and less peer support than White non-Hispanic adolescent mothers. There may be generational differences based on how acculturated the Mexican American adolescent is to American society.

With Mexican American adolescent pregnancy rates rising, more research with this population is needed. This study focused on adolescents who were pregnant at the time of the first data collection to assess their social support and educational progress three to four years later, when the vast majority of these women were adolescent mothers. Specifically, this study looked at parental support and friend or special person support to see if pregnant and non-pregnant Mexican American and White non-Hispanic females differed in perceived social support. Then, educational outcomes were measured to determine how these young women were progressing in the educational system three to four years after identifying they were pregnant. Educational outcomes measured included current enrollment in high school, graduation from high school, obtaining a G.E.D., and attending a post-secondary school.

It was expected that both Mexican American and White non-Hispanic adolescents who were pregnant at Time 1 would feel less supported by their parents and friends than those who were not pregnant at Time 1. Mexican American adolescents were expected to feel more support from their parents and less from their friends than White non-Hispanic adolescents. It was expected there would be a lower current high school enrollment rate, high school

graduation rate, G.E.D. completion rate, and secondary school enrollment rate for pregnant than for non-pregnant participants. Fewer Mexican American adolescent mothers were expected to be currently enrolled in high school, to have graduated from high school or earned a G.E.D., and to have attended post-secondary schools than White non-Hispanic mothers. Because the attitude an adolescent mother has toward her own education may transfer to her attitudes about the importance of education for her child(ren), adolescent mothers were expected to feel it would be less important for their children to graduate from high school and attend college than adolescent females who were not parenting.

CHAPTER II

Method

Participants

The subset of participants used in this study was selected from a larger sample. In the larger sample, youth who had stopped attending school (dropouts) and youth still enrolled in school were surveyed from three school districts in the southwestern region of the United States. For the first portion of the study (Time 1), participants were selected from an urban population (400,000), a mid-sized community (90,000), and a small community (30,000). For the follow-up study (Time 2), the small community was dropped due to budgetary constraints.

Due to differential return at follow-up, dropouts were initially oversampled by 20%. The remainder of the sample consisted of one-third youth who had dropped out of school, one-third academically at-risk youth, and one-third youth serving as a general comparison or control group. The youth in the dropout group had dropped out of school, meaning they were 7^{th} - 12^{th} graders with a school-reported period of truancy lasting one month or longer who did not contact the school following this time period. The youth in the academically at-risk group were matched to dropouts on age, gender, ethnicity, grade level, school, and grades. These students were still in school but had serious academic problems.

The youth in the general comparison group were a random sample of students who matched dropouts on gender, age, ethnicity, grade level, and school.

Occasionally, a participant would decide not to participate in or be deleted from the project (e.g., due to incomplete responding) after the participant's matched cohort had been surveyed. In these cases, incomplete matches were retained in the sample only if the dropout remained in the cohort. Otherwise, incomplete matches were deleted. Participants received $10-25 for completion of the survey with higher amounts reflecting greater travel and difficulty in arranging for the survey.

2,409 participants completed both initial (Time 1) and follow-up (Time 2) surveys. The subset of participants used for this study included Mexican American and White non-Hispanic females who completed Time 1 and Time 2 data and indicated whether or not they were currently pregnant at Time 1 (N = 802). This group of participants included 522 Mexican American females and 280 White non-Hispanic females averaging 16.51 years old at Time 1 and 20.59 years old at Time 2. Forty-two Mexican American and 12 White non-Hispanic participants indicated they were expecting a baby at the time of the initial data collection. The women who indicated they were pregnant constituted 8.05% of the Mexican American females and 4.29% of the White non-Hispanic females surveyed.

Instrument

The Hispanic Dropout Survey (Chavez and Oetting, 1986) was employed in this study. The survey included self-report questions assessing a variety of

psychosocial characteristics and took approximately one and one-half hours to complete. Nearly all surveys were completed in English with less than 1% completed in Spanish. Survey items gathered demographic information and assessed perceived social support, educational outcomes, and attitudes about the importance of education for participants' children. Specific items from the Hispanic Dropout Survey were analyzed to acquire the appropriate information pertaining to each topic of interest. Individuals were asked to indicate the perceived support they received from parents, friends, or some other person (Appendix 1). These items were grouped into two factors, parental support and friend/special person support. Educational outcome was assessed by asking participants to indicate if they were currently enrolled in high school, had graduated high school, obtained a G.E.D., and/or attended a post-secondary institution (Appendix 2). Gender, age, income, status as an adolescent mother, and other relevant demographic information were based on self-report. Ethnicity, grades, and academic status (see Procedure) were determined from school records.

Procedure

Dropouts were defined by school staff as students in grades 7-12 who had not attended school for at least 30 days, had not transferred to another school, and had not contacted the school system about re-admission (Morrow, 1986). Each month, a random sample of dropouts was drawn from all available dropouts. At-risk students were drawn from the same school, grade, gender, ethnicity, and age as the dropout and were matched as closely as possible to the

dropout on grade point average. Grade matches were not always possible because many dropouts had grade point averages close to zero. Thus, at-risk students were still in school but generally were in poor academic standing. Control students were randomly selected from a group of students who matched the dropout for school, grade, gender, ethnicity, and age. Control students were generally in good academic standing. Socioeconomic status was assumed to remain constant across groups, as there was no busing in any of the school districts. Ethnicity was first based on ethnicity status in school records. If a student failed to self-identify as a member of that ethnic group on the survey, that student was replaced in the sampling frame.

Local professionals, who were fluent in English and Spanish, first contacted potential participants. After the project was described, potential participants were asked if they wished to be involved. If they expressed interest and were 18 years of age or older, they completed consent forms. If they were under 18 years of age, their parents were contacted, the project was fully explained to their parents, and written parental consent was obtained. Only then was written consent of those participants under 18 years of age obtained. These procedures led to low rates of refusal, as only 4-6% of the dropout group and 5-8% of the student groups had either parent or adolescent refusal.

Following informed consent, arrangements were made for survey administration. Students completed the survey in a secure room at school during school hours. Dropouts either completed the survey in the same room at school or at another public building such as a library. The at-risk and control group

students completed the surveys within two or three weeks of the dropout to which they were yoked, or matched. The survey administrator gave participants the surveys and answered general questions, but did not see participant responses. When the survey was complete, the participant put it in a large envelope and sealed it personally. Based on the participant's choice, the survey was mailed to the research office either by the survey administrator or by the participant. These steps assured confidentiality, as the administrator did not have access to the completed survey. Accuracy and reliability of data were assured, as surveys were subjected to 40 computer checks for inconsistency or exaggeration (e.g., endorsing a fake drug, claiming daily use of three or four drugs). Only 2% of initial surveys failed either review and were not replaced.

Three years after the first assessment, follow-up began. Follow-up contact was first attempted through the address given at the first assessment. If this failed, staff contacted three people (e.g., parents, relatives, good friends) whom the participant indicated at the time of informed consent would always know the participant's location. If these efforts failed, public record such as phone books, motor vehicle records, etc., were checked to locate an address. Once the individual was contacted and gave his/her consent, survey administration proceeded parallel to the first administration.

CHAPTER III

Results

Social Support

A factor analysis was conducted to establish the factor structure for perceived social support. The factor analysis resulted in a factor structure for parental support consisting of four items and a factor structure for friend/special person support consisting of nine items (Tables 1 and 2). The friend/special person support factor explained 30.5% of the variance and the parental family support factor explained 12.14% of the variance.

Table 1

Parental Support Factor Structure Items	Correlation
Do you get the emotional help and support you need from your parents?	.591
Do you feel that you can talk about your problems with your parents?	.623
Are your parents willing to help you make decisions?	.594
Are you close to your parents?	.695
	M = .626

Table 2

Friend/Special Person Support Factor Structure Items	Correlation
Do you feel there is a special person who is around when you are in need?	.792
Do you feel there is a special person with whom you can share your joys and sorrows?	.787
Do you feel there is a special person who is a real source of comfort for you?	.761
Do you feel there is a special person in your life who cares about your feelings?	.759
Do your friends care about you?	.636
Do your friends really try to help you?	.599
Can you count on your friends when things go wrong?	.663
Do you have friends with whom you can share your joys and sorrows?	.760
Do you feel you can talk about your problems with your friends?	.742
	M = .722

Factor scores were computed for parental support at Time 1 (current α = .856) and Time 2 (current α =.915) as well as friend/special person support at Time 1 (current α = .896) and Time 2 (current α =.938). These factor scores were used to compare the groups, pregnant and non-pregnant Mexican

American and White non-Hispanic females, on perceived social support (Tables 3 and 4).

Table 3

Mean Scores for Perceived Social Support at Time 1

Pregnancy Status	Ethnicity	Parental Support		
		M	SD	N
Yes	Mexican American	5.73	2.49	11
	White non-Hispanic	5.33	1.53	3
No	Mexican American	7.20	3.05	94
	White non-Hispanic	6.73	2.28	61

Pregnancy Status	Ethnicity	Friend/Special Person Support		
		M	SD	N
Yes	Mexican American	14.33	4.90	9
	White non-Hispanic	10.67	2.89	3
No	Mexican American	14.30	5.31	84
	White non-Hispanic	13.38	4.60	55

Note. A higher mean is interpreted as less perceived social support.

Table 4

Mean Scores for Perceived Social Support at Time 2

Pregnancy Status	Ethnicity	Parental Support		
		M	SD	N
Yes	Mexican American	8.26	4.47	39
	White non-Hispanic	6.75	2.22	12
No	Mexican American	6.80	3.37	469
	White non-Hispanic	6.38	2.94	264

Pregnancy Status	Ethnicity	Friend/Special Person Support		
		M	SD	N
Yes	Mexican American	16.96	5.44	27
	White non-Hispanic	12.30	4.03	10
No	Mexican American	13.28	5.27	356
	White non-Hispanic	12.49	5.18	230

Note. A higher mean is interpreted as less perceived social support.

To determine if Mexican American and White non-Hispanic females who were pregnant or not pregnant at Time 1 differed in perceived social support, 2 x 2 (Pregnancy Status x Ethnicity) ANOVAs were performed on the parental and friend/special person factors at Times 1 and 2. A 2 x 2 (Pregnancy Status x Ethnicity) ANOVA using Time 1 data showed no significant effect for perceived

parental support for pregnancy status, ethnicity, or the interaction. No significant effect was found for perceived friend/special person support for pregnancy status, ethnicity, or the interaction.

A 2 x 2 (Pregnancy Status x Ethnicity) ANOVA using Time 2 data for perceived parental support showed no significant effect for pregnancy status, ethnicity, or the interaction. A small ethnicity effect was revealed for perceived friend/special person support, $F(1, 619) = 7.54$, $p < .01$, $\eta^2 = 0.01$, with Mexican American females reporting significantly less perceived friend/special person support than White non-Hispanic females (Table 4). There was no significant effect for perceived friend/special person support for pregnancy status. There was a trend toward significance for the interaction, $F(1, 619) = 3.80$, $p = 0.052$, $\eta^2 = 0.01$, with pregnant Mexican American women perceiving less friend/special person support than pregnant White non-Hispanic women (Table 4).

Due to the low number of pregnant White non-Hispanic females in this study, a series of one-way ANOVAs collapsing ethnicity and examining pregnancy status were also conducted. No significant effect was found using Time 1 data for perceived parental support or friend/special person support for pregnancy status regardless of ethnicity. A significant effect was revealed using Time 2 data for perceived parental support, $F(1, 782) = 6.94$, $p<.01$, as females who were pregnant at Time 1 felt significantly less support from parents at Time 2 than did females who were not pregnant at Time 1 (Ms = 7.9 and 6.65). A significant effect was found using Time 2 data for perceived friend/special person support, $F(1, 621) = 9.41$, $p<.01$, with females who were pregnant at Time 1

reporting significantly less perceived support from friends or a special person at Time 2 than females who were not pregnant at Time 1 (*M*s = 15.7 and 12.97).

ANOVAs using Time 1 data looking only at Mexican American females and pregnancy status did not show a significant effect for parental or friend/special person support, $F(1, 103) = 2.37$, and $F(1, 91) = 0.00$. A significant effect was found using Time 2 data for perceived parental support, $F(1, 506) = 6.37$, $p<.05$, as Mexican American females who were pregnant at Time 1 felt significantly less support from parents at Time 2 than did Mexican American females who were not pregnant at Time 1 (*M*s = 8.26 and 6.8). A significant effect was found using Time 2 data for perceived friend/special person support, $F(1, 381) = 12.20$, $p<.01$, with Mexican American females who were pregnant at Time 1 reporting significantly less perceived support from friends or a special person at Time 2 than Mexican American females who were not pregnant at Time 1 (*M*s = 16.96 and 13.28).

Educational Outcome

To determine if pregnant and non-pregnant Mexican American and White non-Hispanic females differed in educational attainment, a series of χ^2 analyses were performed on specific survey items related to educational progress. There were no significant differences found for pregnant and non-pregnant Mexican American and White non-Hispanic females for current enrollment in high school, graduating from high school, not graduating from high school, or obtaining a G.E.D. No significant differences were found for attending a vocational school, a community college, or a college/university.

Attitude Toward Education of Children

To determine if the attitudes of the participants differed in their educational aspirations for their children, 2 x 2 (Pregnancy Status x Ethnicity) ANOVAs were performed on two questions asking about the importance of their children graduating from high school and attending college. No significant effect was found for graduating from high school for pregnancy status, ethnicity, or the interaction. No significant effect was found for the importance of their children attending college for ethnicity or the interaction. However, there was a trend for women who were pregnant at Time 1 to feel it would be more important for their children to go to college than for women who were not pregnant at Time 1, $F(1, 785) = 3.60$, $p = .058$, $\eta^2 = 0.01$.

Demographic Variables

In order to further examine the social support and educational progress of young women who were pregnant at Time 1 three to four years later, several variables were compared for all groups at Time 1 and Time 2 to gain information about the participants related to social support and educational outcome.

Time 1

At Time 1, Mexican American females who indicated they were currently pregnant averaged 17.05 years old (N = 42, SD = .962). Over fifty percent (52.38%) of these women were classified as dropped out of school, 30.95% as at-risk, and 16.67% as control participants in this study. Almost twenty-nine percent (28.6%) of these participants indicated having children, with 19% specifying one child, and two women (4.8%) indicating they had two children.

The majority of participants (73.8%) indicated they were currently single, 19% said they were living in a committed relationship, and two (4.8%) were married. Of those who specified, 21.4% indicated they were living with their parents, three (7.1%) were living with a boyfriend, two (4.8%) were living with their husbands, and one (2.4%) was living with a friend. Almost seventeen percent (16.7%) of participants in this group indicated they were married to or living with the baby's other biological parent.

The White non-Hispanic females who indicated they were pregnant averaged 16.75 years old (N = 12, SD = .866) at Time 1. Two-thirds (66.67%) of these women were classified as dropped out of school, 25% as at-risk, and 8.33% as control participants in this study. None of these women indicated having any other children. Two-thirds (66.7%) of these adolescents reported being currently single, while the remaining participants (33.33%) said they were living in a committed relationship. Of those who specified, three (25%) were living with other relatives, two (16.7%) indicated they were living with their parents, and two (16.7%) with a boyfriend. Two participants (16.7%) reported being married to or living with their baby's other biological parent.

Mexican American non-pregnant females averaged 16.48 years old (N = 479, SD = 1.12) at Time 1. Twenty-nine percent (29.17%) of these women were classified as dropped out of school, 34.17% as at-risk, and 36.67% as control participants in this study. Almost seven percent (6.7%) of these young women had children, most (93.5%) having one child. The vast majority (96.9%) said they were currently single, with 2.3% living in a committed relationship and less than

one percent married or divorced. Of those who specified, 17.5% of these participants said they were living with their parents, 2.3% with a boyfriend or spouse, 1.3% with other relatives, and less than one percent living with a friend, roommates, or in some other living arrangement.

White non-Hispanic non-pregnant females averaged 16.47 years of age (N = 265, SD = .980) at Time 1. Over thirty percent (31.34%) of these women were classified as dropped out, 26.87% as at-risk, and 41.79% as control participants in this study. Seven young women (2.6%) acknowledged having one child. The vast majority of participants (98.9%) said they were single, with 1.1% living in a committed relationship. Of those who specified, 22.4% said they were currently living with their parents, 1.9% with other relatives, and 1.1% living with a boyfriend or friend.

Time 2

The mean age of participants in the pregnant Mexican American group at Time 2 was 20.9 years old (N = 42, SD = 1.41). Over thirty-five percent (35.7%) of the participants indicated they were married, 31% were single, 28.6% were living with someone in a committed relationship, and 2.4% were divorced. Ninety percent (90.5%) acknowledged having one or more children, with 38.1% having one child, 31% having two children, and 21.5% having three or four children. Nine participants (21.4%) reported currently expecting a baby, with one-third of those currently pregnant either married to or living with the baby's other biological parent. One-third (33.3%) of the participants were currently living with their parents, 28.6% with a spouse, 26.2% with a boyfriend, 9.5% with other relatives,

4.8% with in-laws, 4.8% with a friend, 4.8% alone, and 2.4% with a roommate. 7.1% said they lived in "other" arrangements. It is important to note that there was a higher percentage of responses for current living arrangements at Time 2 than at Time 1, although the reason for this difference is unknown. The percentages for current living arrangements at Time 2 may add up to more than 100%, as this item asked participants to mark all that applied to them.

The mean age of the pregnant White non-Hispanic group at Time 2 was 20.92 years old (N = 12, SD = 1.31). Over forty-one percent (41.7%) indicated they were married, 25% were single, 25% were living in a committed relationship, and 8.3% were divorced. Seventy-five percent acknowledged having one or more children, with 41.7% having one child, 16.7% having two children, and 16.7% having three children. One participant indicated she was currently expecting a baby and stated she was not married to or living with the baby's biological parent. Fifty percent of the participants in this group were living with a spouse, 25% with their parents, 16.7% with a boyfriend, 8.3% with in-laws, 8.3% alone, and 8.3% with a friend.

The mean age of non-pregnant Mexican American females at Time 2 was 20.58 years old (N = 479, SD = 1.62). Almost sixty percent (59%) indicated they were single, 23.5% living with someone in a committed relationship, 14.2% married, and 1.7% divorced. Forty-five percent (45.6%) acknowledged having one or more children, with 33.1% having one child, 10% having two children, and 1.9% having three or four children. Almost nineteen percent (18.6%) indicated they were currently expecting a baby, with 51.7% of those pregnant stating they

were either married to or living with the baby's biological father. Over one-half (51.5%) acknowledged living with their parents, 22.3% with a boyfriend, 12.3% with a spouse, 7.1% with a roommate, 5.6% with a friend, 5% with other relatives, 4.2% alone, and 1.3% with in-laws. Almost four percent (3.8%) indicated living in some "other" arrangement and one young woman said she had no place to live.

The mean age of non-pregnant White non-Hispanic participants at Time 2 was 20.53 years old (N = 264, SD = 1.53). Over sixty percent (60.4%) of the participants indicated they were single, 20.5% were married, 15.7% were living in a committed relationship, and 2.2% were divorced. Twenty-eight percent acknowledged having one or more children, with 21.6% having one child and 5.6% having two children. Two participants (0.7%) reported having four children. Almost fourteen percent (13.8%) said they were currently expecting a baby, with 54.1% of those pregnant saying they were married to or living with the baby's biological father. Almost thirty-nine percent (38.8%) reported living with their parents, 22.4% with a roommate, 19.4% with a spouse, 14.2% with a boyfriend, 10.8% with a friend, 7.5% alone, 5.6% with other relatives, and 1.1% with in-laws. Almost two percent (1.9%) indicated they lived in some "other" arrangement and one young woman indicated she had no place to live.

Additional demographic information was examined in order to provide further information about the educational and economic status of the participants at the time of the follow-up study. At Time 2, 38% of Mexican American females who were pregnant at Time 1 indicated they were currently enrolled in high

school, 46.3% had graduated from high school, and 14.6% had earned a G.E.D. (it is possible that a student could fit in more than one category). Four students (9.5%) acknowledged returning to high school after dropping out. Nineteen percent (19.1%) of participants indicated they had attended a vocational school, 21.4% had attended community college, and four participants (9.5%) had attended college/university.

The mean income of the 42.8% of Mexican American participants pregnant at Time 1 who indicated they had a paying job at Time 2 was $151-200 per week. One-third (33.3%) acknowledged receiving money from their families. Over twenty-three percent (23.8%) indicated their families of origin received food stamps and 54.8% of the participants indicated they themselves received welfare, AFDC, or food stamps, meaning they had an income level at or below the federal poverty guidelines. Of the women who specified, 26.2% indicated their children were provided with health insurance through Medicaid. One participant said her child was insured through her work, another indicated her child was insured through a private insurance company, and one participant indicated her child had no health insurance coverage.

At Time 2, 41.7% of the White non-Hispanic participants pregnant at Time 1 were currently enrolled in high school, 50% had graduated from high school, and 16.7% had earned a G.E.D. Two participants (16.7%) acknowledged returning to high school after dropping out. Two participants (16.7%) had attended vocational school, 58.3% had attended community college, and two of the women (16.7%) had attended college/university.

The mean income of the 75% of White non-Hispanic participants pregnant at Time 1 who indicated having an income at Time 2 was $101-150 per week. Over forty percent (41.7%) of participants acknowledged receiving money from their families. One participant indicated her family received food stamps and 41.7% of participants said they themselves received welfare, AFDC, or food stamps. Of the women who specified, 33.3% indicated their children had health insurance through Medicaid.

At Time 2, 44.5% of Mexican American females who were not pregnant at Time 1 were currently enrolled in high school, 64.3% had graduated from high school, and 7.4% had earned a G.E.D. Over six percent (6.5%) of participants in this group reported they returned to high school after dropping out. Fifteen percent (15.4%) indicated having attended vocational school, 28% had attended community college, and 18.4% had attended college/university.

The mean income of the 63.9% of Mexican American participants not pregnant at Time 1 who reported an income at Time 2 was $151-200 per week. Thirty-six percent (36.3%) acknowledged receiving money from their families. Ten percent 10.2% indicated their families received food stamps, and 34.7% acknowledged receiving welfare, AFDC, or food stamps themselves. Eleven percent (11.7%) reported having a child insured through Medicaid, 6.1% insured their children through work, 1.5% through a private company, and 1.5% did not have insurance for their children.

At Time 2, 40% of White non-Hispanic females who were not pregnant at Time 1 were currently enrolled in high school, 69.8% had graduated from high

school, and 16.7% had earned a G.E.D. Almost five percent (4.9%) indicated they had returned to high school after dropping out. Almost fourteen percent (13.6%) indicated having attended a vocational school, 32.3% had attended community college, and 37.7% had attended college/university.

The mean income for the 64.5% of White non-Hispanic females not pregnant at Time 1 who indicated they had a job at Time 2 was $151-200 per week. More than one-third (34%) said they received money from their families. Three percent indicated their families received food stamps and 27.5% acknowledged receiving welfare, AFDC, or food stamps themselves. Six percent indicated they had a child insured through Medicaid, 2.6% insured their children through work, and 1.1% did not have health insurance for their children.

CHAPTER IV

Discussion

The hypothesis that both pregnant Mexican American and White non-Hispanic adolescents who were pregnant at Time 1 would feel less supported by their parents and friends or special person than those who were not pregnant at Time 1 was partially supported. Although there were no differences for pregnancy status when participants were separated by ethnicity, some differences became evident when ethnicity was collapsed to compensate for the low number of White non-Hispanic pregnant participants. Because of the low number of White non-Hispanic pregnant adolescents in the study, caution should be exercised when generalizing these findings to this group. However, results indicated Mexican American and White non-Hispanic females who were pregnant at Time 1, so presumably parenting at Time 2, felt less supported by their parents and friends or special person at Time 2 than did females who were not pregnant at Time 1. When looking only at Mexican American females, there were no differences in perceived social support at Time 1. However, at Time 2, parenting Mexican American adolescents felt less supported by both parents and friends than did Mexican American women who were not pregnant at Time 1. It appears that, regardless of ethnicity, parenting adolescents perceived less support from parents and friends than did non-parenting adolescents.

When the adolescents in this study became pregnant, there was no difference in perceived social support from adolescents who were not pregnant. However, after they had a child for a few years, parenting adolescents perceived less support from both parents and friends than did adolescents who were not parenting. This perception of less social support may be due to parenting adolescents having a greater need for support from their parents and friends as they raise a child. They may not perceive as much support because their need for support is greater due to the added demands and stress of child-rearing (Ketterlinus et al., 1991). Another explanation may be that parents of adolescent mothers are less supportive, as they may disagree with their child's decision to have a baby (Way & Leadbeater, 1999).

If they are willing, perhaps incorporating the adolescents' parents into professional support services in some systematic way would help these young women feel more supported. If family members are already supporting the parenting adolescents as much as they can, maybe other sources of social support, such as friends, partners, or community support, need to be increased in order to better support adolescent mothers. It may be important to consider first teaching adolescent mothers appropriate problem-solving techniques (Kissman & Shapiro, 1990) and coping styles (Myors et al., 2001) so they can more fully utilize available social support.

The results provided partial support for the hypothesis that Mexican American adolescents would feel more support from their parents and less from their friends than White non-Hispanic adolescents. There were no differences

found for Mexican American and White non-Hispanic adolescents for perceived parental support. However, Mexican American adolescents felt less support from friends or a special person than did White non-Hispanic adolescents at Time 2. In addition, there was a trend at Time 2 toward pregnant Mexican American women perceiving less friend/special person support than pregnant White non-Hispanic women.

These findings may point to a need to build up peer support for parenting Mexican American adolescent females. Decreased perceived support from friends has been found in other studies (de Anda & Becerra, 1984, de la Rey & Parekh, 1996) and may be due to adolescents who are parenting having less in common with and less free time than adolescents who are not parenting, resulting in decreased peer contact and the loss of social relationships. This may also be due to more acceptance by family members of teenage pregnancy in Mexican American families than in White non-Hispanic families (Ortiz & Vasquez, 1987), leading to greater involvement by Mexican American extended families in helping to raise a child born to a teenage mother. Because they may have a larger group of relatives living in close geographical proximity (Schaffer & Wagner, 1996) who accept the adolescent's decision to have a baby, Mexican American adolescents may not depend on peers for support and may not foster peer relationships to the same degree as White non-Hispanic adolescent mothers.

De la Rey and Parekh (1996) found adolescent mothers reported a sense of social isolation and a loss of peer relationships. The adolescent mothers in

the study benefited from meeting with peers and sharing common concerns. If Mexican American adolescents who are parenting do feel socially isolated and would like stronger peer relationships, it may be helpful to build up peer support for parenting Mexican American adolescents. Perhaps this could be accomplished by providing opportunities for these mothers to meet with other mothers or peers who are willing to provide emotional and esteem support.

The results for educational outcome are interesting due to the lack of significant findings between pregnant and non-pregnant Mexican American and White non-Hispanic young women. The groups did not significantly differ on rates for current enrollment in high school, graduating from high school, obtaining a G.E.D., planning to earn a G.E.D., returning to high school, or attending a post-secondary school. Based on previous research (Upchurch, 1993; Luker, 1996), it was expected that adolescents pregnant at Time 1 would have lower percentages in all categories, with Mexican American adolescent mothers expected to be lower than White non-Hispanic mothers. However, it seems that the adolescents who became pregnant continued to pursue their educations, both high school and post-secondary, at a rate similar to their female peers.

When this study commenced, a larger percentage of pregnant adolescents (52.33% Mexican American and 66.67% White non-Hispanic) were categorized as dropouts at Time 1 than those who were not pregnant (29.17% Mexican American and 31.34% White non-Hispanic). The at-risk students were more equally divided among the four groups, but there were more control students who were in the non-pregnant groups (36.67% Mexican American and

41.79% White non-Hispanic) than the pregnant groups (16.67% Mexican American and 8.33% White non-Hispanic). At Time 2, depending on the group, 38-45% of participants were enrolled in high school, 45-70% had graduated from high school, and 7-17% had earned a G.E.D. At the post-secondary level, 13-19% had attended a vocational school, 21-58% had attended community college, and 10-18% had attended college/university. Although the percentage of dropouts was higher in the pregnant groups and control participants were higher in the non-pregnant groups at Time 1, there was no difference between groups for pursuing an education at Time 2. It appears women in the pregnant group, even those categorized as dropouts at Time 1, were able to return to school and progress at a comparable level to other adolescents. This finding seems remarkable in that these adolescents found a way to continue pursuing an education after being behind academically and having a baby.

The numbers of adolescents in the pregnant groups who were pursuing a high school education were higher than expected but paralleled the results of Stevenson et al.'s (1998) study. Despite previous research showing adolescent mothers were less likely to pursue post-secondary education (Alan Guttmacher Institute, 1994), this study showed adolescent mothers were just as likely to be enrolled in post-secondary schools as other adolescent females. These results suggested adolescent mothers were continuing to work toward a higher education, which would hopefully provide more career opportunities and higher income potential for these women and their children (Stevenson et al., 1998).

The hypothesis that adolescent mothers would feel it was less important for their children to graduate from high school or attend college was not supported. The groups did not differ in their views on the importance of their children graduating from high school. However, there was a trend for women who had been pregnant at Time 1 to place more importance on their children going to college than for women who were not pregnant at Time 1. This trend may be due to more parenting women seeing the benefits of post-secondary education in their own lives.

When integrating these results with the existing literature, there are some limitations of this study that are important to address. The dependent variable in this study was perceived social support, not actual social support. The participants gave subjective responses on self-report measures about the level of support they were getting from family and friends in their lives. As is true with any self-report instrument, it is possible that participants may not have accurately reported the level of social support they were receiving. In addition, the questions about the support of a special person in the participant's life did not specify what position that special person held in the participant's life. If the special person were a family member, then there could have been overlap between the parent and friend/special person support factors.

Due to the way in which the social support data was grouped into factors, a significant number of participants' responses could not be used due to missing data. If a participant did not answer every item included in a factor, none of the participant's responses on that factor at that time of data collection could be

included. This led to a smaller number of participants included than was expected, particularly at Time 1. It is unclear why fewer participants completed all of the Time 1 social support items than Time 2 items, but the smaller number of completed surveys could have affected the results of this study. Caution should be exercised when interpreting analyses that had a significant amount of missing data. In addition, it appears that more Mexican American women pregnant at Time 1 acknowledged having a child at Time 2 than did White non-Hispanic women pregnant at Time 1 (91% and 75%, respectively). This difference may have affected the results of this study, as not all of the women who were identified as pregnant at Time 1 were parenting when data was collected at Time 2.

A potential confound in this study involved participants who may have been already parenting at Time 1 or who may have gotten pregnant in between Time 1 and Time 2. This study grouped those who were pregnant and were not pregnant at Time 1 into different categories. However, there was a small percentage of participants in the non-pregnant group (6.7% Mexican American, 2.6% White non-Hispanic) who already had one or more children. At Time 2, these numbers were higher, with 45.6% of Mexican American and 28% of White non-Hispanic participants in the non-pregnant group acknowledging having one or more children, indicating a number of women became pregnant and had a baby in the three to four years between data collections. Because there were adolescents who were parenting in all four groups at Time 2, the groups were not as clearly divided as had been expected.

Another potential confound involved a pregnancy retrieval program the school district in the urban area had implemented. This program included day care provided in schools for children of students as well as parenting classes for adolescent parents. This program resulted in a higher retention rate for pregnant and parenting adolescent females than in other districts that did not implement this program. While this program seemed to be helpful to pregnant and parenting students, and thus a move in the right direction, it may have affected the results of this study.

Despite these limitations, the results from this study contributed to further understanding Mexican American and White non-Hispanic pregnant and parenting adolescents in relation to social support and educational attainment. The demographic data collected during this study provided some interesting additional information about the participants. The majority of adolescents in all groups described themselves as single at Time 1, with a higher percentage of non-pregnant adolescents reporting being single (96.9% Mexican American and 98.9% White non-Hispanic) than pregnant adolescents (73.8% Mexican American and 66.7% White non-Hispanic). More pregnant adolescents said they were either married or living in a committed relationship (23.8% Mexican American and 33.3% White non-Hispanic) than did non-pregnant adolescents (2.3% Mexican American and 1.1% White non-Hispanic), although only a small percentage (16.7%) of pregnant adolescents were married to or living with the baby's other biological parent at Time 1. Over a quarter (28.6%) of Mexican American adolescents pregnant at Time 1 already had one or two children,

whereas none of the pregnant White non-Hispanic adolescents had other children.

At Time 2, Mexican American and White non-Hispanic adolescents in the pregnant group again had the highest percentage of participants who were married or living in a committed relationship (64.3% and 66.7%) compared to Mexican American and White non-Hispanic adolescents in the non-pregnant group (37.7% and 36.2%). More participants in the non-pregnant groups (59% Mexican American and 60% White non-Hispanic) identified themselves as single than did participants in the pregnant groups (31% Mexican American and 25% White non-Hispanic). The larger percentages of pregnant and parenting adolescents who identified themselves as married or living in a committed relationship suggest these women may derive some support from a partner, even if the partner is not the baby's biological father.

Socioeconomic data was compiled at Time 2 in order to better understand the circumstances of adolescent mothers and their children. Mexican American adolescents in the pregnant group had the lowest employment rate (42.8%) and White non-Hispanic adolescents in the pregnant group had the highest employment rate (75%), with Mexican American and White non-Hispanic adolescents in the non-pregnant group in between (63.9% and 64.5%). All groups earned an average of $151-200 per week except the pregnant White non-Hispanic group, who earned an average of $101-150 per week. Given these income levels, it would be expected many adolescent mothers would need financial assistance.

A higher percentage of Mexican American adolescents in both the pregnant and non-pregnant groups (23.8% and 10.2%) acknowledged their families of origin received food stamps than did White non-Hispanics in the pregnant and non-pregnant groups (8.33% and 3%). A larger percentage of adolescents in the pregnant group (54.8% Mexican American and 41.7% White non-Hispanic) acknowledged receiving financial assistance from public agencies than did adolescents in the non-pregnant group (34.7% Mexican American and 27.5% White non-Hispanic). White non-Hispanic adolescents in the pregnant group received the most financial assistance from their families (41.7%) and Mexican American adolescents in the pregnant group received the least (33.3%).

It seems that more Mexican American adolescents were growing up in families with lower socioeconomic status than were White non-Hispanic adolescents. In addition, White non-Hispanic parenting adolescents received the most financial help from their families and had the highest rate of employment of any group. In contrast, Mexican American parenting adolescents had the lowest rate of employment and received the least amount of financial help from their families of any group. These results underscore the importance of looking at Mexican American pregnant and parenting adolescents independently of other ethnicities to help assess their individual needs. This group may need more financial assistance than other groups or more support to continue their educations and improve their financial situations. Not surprisingly, adolescents in the pregnant groups received more financial assistance from public agencies

than did adolescents in the non-pregnant groups, probably due to the increased needs of providing for one or more children.

There are several areas addressed in this study that could be focused on in future research. It would be helpful to know the reasons for the decrease in perceived social support over time for parenting adolescents. In doing this, it would be beneficial to incorporate objective measures of social support rather than relying solely on self-report measures in order to obtain a less biased measure of actual support. Although beyond the scope of this study, it would be interesting to examine the degree to which adolescent mothers derive support from a spouse or partner. Future research could further evaluate the effectiveness of the pregnancy program implemented in one of the school districts used in this study (or similar programs) to learn more about how this type of community social support helps pregnant and parenting adolescents progress in school.

In addition, it would be interesting to further study the attitudes of adolescent mothers regarding the importance of education for their children. Because it is a finding that differs from previous research, it would be worthwhile to try and replicate the results regarding equivalent rates of post-secondary attendance for parenting and non-parenting adolescents. Finally, future research could examine the factors that helped the parenting adolescents initially in the dropout category to pursue their educations three years later. It would be helpful to know more about what factors help parenting adolescents succeed in school.

This study adds to our understanding of the perceived social support of adolescent mothers. The decrease in perceived social support for an adolescent mother assuming a parenting role has implications for future interventions with this population. Mexican American adolescent mothers perceiving less support from friends highlights the importance of looking at this ethnic group independently in order to develop more specific and effective interventions for this population. In addition, this study points to an increase in positive educational outcomes for adolescent mothers, including being enrolled in high school, graduating high school, earning a G.E.D., and attending post-secondary schools.

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Appendix 1

Social Support

(All items were assessed using a four-point Likert scale where 1 = a lot and 4 = not at all).

Parental Support

Do you get the emotional help and support you need from your parents?

Do you feel that you can talk about your problems with your parents?

Are your parents willing to help you make decisions?

Are you close to your parents?

Friend/Special Person Support

Do you feel there is a special person who is around when you are in need?

Do you feel there is a special person with whom you can share your joys and sorrows?

Do you feel there is a special person who is a real source of comfort for you?

Do you feel there is a special person in your life who cares about your feelings?

Do your friends care about you?

Do your friends really try to help you?

Can you count on your friends when things go wrong?

Do you have friends with whom you can share your joys and sorrows?

Do you feel you can talk about your problems with your friends?

Appendix 2

Educational Outcome Questions

1. Did you graduate from high school?
    - o Yes
    - o No
    - o I have a GED

2. Have you attended any of these schools? (Mark all that apply)
    - o College/University
    - o Trade School
    - o Business College
    - o Community College
    - o Junior College
    - o Other

3. Please *mark all* that describe you:
    - o I have graduated from high school
    - o I plan to graduate from high school
    - o I am currently in high school
    - o I have returned to high school
    - o I plan to return to high school
    - o I have received my G.E.D.
    - o I plan to receive my G.E.D.
    - o I have returned to high school more than once
    - o I have quit high school more than once