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The relationship of acculturation and social support to birth outcomes of pregnant Mexican-American adolescents

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**THE RELATIONSHIP OF ACCULTURATION
AND SOCIAL SUPPORT TO
BIRTH OUTCOMES OF PREGNANT
MEXICAN-AMERICAN
ADOLESCENTS**

A Cluster Thesis

by

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MARTHA RAMIREZ, RN BSN

**Submitted to the Graduate School of the
University of Texas-Pan American
in partial fulfillment of the requirements for the degree of**

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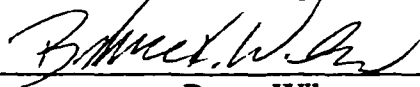
**THE RELATIONSHIP OF ACCULTURATION AND SOCIAL SUPPORT
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ENRIQUETA GARCIA, RNC BSN
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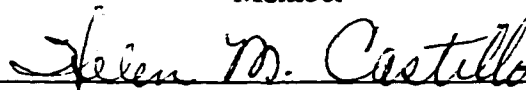
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ABSTRACT

The adolescent pregnancy rate in the U.S. continues to be an issue that concerns nursing and allied health related fields. There has been minimal research published regarding Mexican-American adolescent pregnancy outcomes. The purpose of this study was to assess the relationship between social support and acculturation on pregnancy outcomes of Mexican-American adolescents.

Statistical descriptive analysis analyzed the relationships between the demographic data, the Acculturation Rating Scale-II for Mexican-Americans, the Norbeck Social Support Questionnaire, and birth outcomes. Pearson's product moment correlation analyzed the relationship between acculturation and social support on birth outcomes. Several positive correlations were found at the $p \leq 0.01$ and $p \leq 0.05$ significance levels. Significant positive correlations were found between the three social support categories, the acculturation levels, acculturation scale scores, gestational age, birth weight, maternal age and education levels. A weak positive correlation was found between the Mexican Orientation Score and gestational status.

DEDICATION

We would like to extend our sincere respect and gratitude to our thesis committee chairperson, Dr. Carolina Huerta, as well as the committee members, Dr. Jan Maville, and Dr. Bruce Wilson for their generous guidance and support. Each member provided encouragement and made a difference toward the completion of this project.

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CHAPTER I

Introduction

Since 1980, Hispanics have become the fastest growing ethnic group in the United States (Rew, Resnick, & Blum, 1997; Koshar, Lee, Goss, Heilemann, & Stinson, 1998). According to Brindis (1992), the proportion of Hispanic youth is also expanding rapidly and by the year 2030 the Hispanic youth population will grow by 80%. Hispanics (of any race) account for 31,767,000 of the 273,866,000 total population in the United States according to population estimates from November 1999 (U.S. Census Bureau, 2000). In 1995, Mexican-Americans accounted for 62% of the total Hispanic population in the United States. Although there are Mexican-Americans in every state, the majority of them are concentrated in the border states of Texas and California (Burk, Weiser, & Keegan, 1995).

The adolescent pregnancy rate in the United States remains very high (Price, McKenry, & Gavazzi, 1994). According to Reynoso, Felice, and Shragg (1993), one in five Hispanic births in the United States are to women in their teens. Since Mexican-Americans account for the majority of the total Hispanic population, it is important to review the statistics for births to adolescents in Texas. In 1998, there were 21,752 births in Texas to mothers 17 years of age or younger, of which 12,765 were to Hispanics (Texas Department of Health, 1998). For Region 11 of Texas (including Cameron,

Hidalgo, and Starr Counties), the mothers who were 17 years of age or younger had a total of 2,990 births in the year 1998, 2,793 were from Hispanic mothers (Texas Department of Health, 1998).

Cameron and Hidalgo Counties in the southern region of Texas had 1,583 births for those who were 17 years of age or younger. Hispanic births accounted for 1,547 total births from these two counties. Hispanics accounted for 98% of all births to mothers 17 years of age or younger from both counties (Texas Department of Health, 1998). This is a reflection of the population from the Lower Rio Grande Valley where the Hispanics in the two counties account for an average of 86% of the total population (Texas State Data Center, 1998).

Studies concerning perinatal health problems of Hispanics have suggested that the health conditions of Hispanic teens are similar to non-Hispanic whites (Koniak-Griffin, Mathenge, Anderson, & Verzemnieks, 1999). Health conditions of Hispanics, and of Mexican-Americans in particular, suggest the health conditions of this group are similar to non-Hispanic whites in prevalence of low birth weight and infant mortality. These health conditions prevail despite the lower socio-economic status and the lower use of prenatal care services characterizing this minority group (Balcazar, Cole, & Hartner, 1992).

It has been hypothesized that the concept of familism (the perceived strength of family bonds and sense of loyalty to family) may contribute to positive pregnancy outcomes in Mexican-Americans (Burk et al., 1995; Luna, Torres de Ardon, Lim, Cromwell, Phillips, & Russell, 1996). Different findings were found on the contribution of acculturation on birth outcomes among Mexican-American adolescents in research (Kosher et al., 1998; Balcazar, Peterson, & Cobas, 1996). Balcazar et al. (1996) found

that there were differences in the number of prenatal care visits between Mexico born and U.S. born adolescents but Koshar et al. (1998) did not. Both studies found that there was a significant relationship between fewer prenatal visits and increased risk for pregnancy complications (Koshar et al., 1998; Bacazar et al., 1996).

Other studies have shown that social support is also important for positive health-related outcomes in pregnant adolescents (Hupcey, 1998; Keeling, Price, Jones, & Harding, 1996; Langford, Bowsher, Maloney, & Lillis, 1997). Direct health benefits of social support may influence an individual physiologically, psychologically, and behaviorally (Keeling et al., 1996). Recommendations based on the results of these studies were for research to identify the cultural, social, familial, economic, and medical variables that may have been responsible for the birth outcome differences (Roye & Balk, 1996; Koshar et al., 1998; Barone, Iscoe, Trickett, & Schmid, 1998; Henley, 1997). Consequently, this study will focus on the relationships between acculturation levels, social support levels, and demographic variables on pregnancy outcomes of Mexican-American adolescents.

Statement of the Problem

Pregnancy outcomes appear to be better among Mexican-American adolescents when compared to other minority groups despite the lower socio-economic status and the lower use of prenatal care services (Balcazar, Cole, & Hartner, 1992). The effects of acculturation and social support appear to have a positive impact on pregnancy outcomes (Koshar et al., 1998; Balcazar, Peterson, & Cobas, 1996; Hupcey, 1998; Keeling et al., 1996). Research is needed to study how the levels of acculturation, social support, and

demographic variables effect the birth outcomes of pregnant Mexican-American adolescents.

Balcazar, Cole, and Hartner (1992) found ethnic differences in patterns of prenatal use, social profiles, and medical risk factors. Non-Hispanic whites, when compared to Mexican-Americans, showed a greater risk for low birth weight and preterm delivery in those groups receiving poor prenatal care versus those who received adequate care. Within Mexican-Americans, the risk of low birth weight was not the same for all subgroups. A higher overall prevalence of preterm delivery and macrosomia (large for gestational age) in comparison to low birth weight occurred in Mexican-Americans in general (Verrier, Spears, Ying, & Kerr, 1993). According to the U.S. Bureau of the Census in 1990 and the Indigent Health Care Program in 1992, adolescent pregnancies account for 14.5% of all live births (as cited in Burke et al., 1995).

The Lower Rio Grande Valley consists of mostly a Mexican-American population. The data obtained from the Bureau of Vital Statistics in Texas indicates that in 1998 in Cameron county, 626 births were to mothers 17 years of age or younger; two percent were born to non-Hispanic whites; less than one percent were born Blacks; and 97% were born to Hispanics. In Hidalgo county there were a total of 957 births: two percent of births were to non-Hispanic whites; less than one percent were to Blacks; and 97% to Hispanics (Texas Department of Health, 1998). The other counties of the Lower Rio Grande Valley also had similar statistics in 1998, when compared to the two counties above.

Few research studies with Mexican-American adolescent pregnancies have been done. The statistics available for the Lower Rio Grande Valley show that there is a large

population of pregnant Mexican-American adolescents that are available for research (Texas Department of Health, 1998). There is a great need to assess for both the risk factors these adolescents face as well as to determine if any cultural protective mechanisms exist that may lead to better pregnancy outcomes.

Purpose of the Study

A subgroup of the Mexican-American population, pregnant teenagers, was the focus of this research. The purposes of this quantitative non-experimental research study were to assess: (a) Acculturation among Mexican-American pregnant adolescents; (b) social support systems among Mexican-American pregnant adolescents; (c) relationships among the selected demographic variables, acculturation and social support among Mexican-American pregnant adolescents; and (d) how these variables affected the birth outcomes of Mexican-American pregnant adolescents. This research study will provide more information regarding factors that influence birth outcomes among Mexican-American adolescents as well as provide direction for future studies.

Definitions

Definitions of the terms used for the purposes of this study include:

Acculturation: “comprehends those phenomena which results when groups of individuals having different cultures come into continuous first-hand contact, with subsequent changes in the original cultural patterns of either or both groups” (as cited in Cuellar, Harris, & Jasso, 1980, p. 278).

Adolescents: females between the age of 13 to 18 years old.

Anglo: white non-Hispanic in origin

Appropriate for gestational age: those infants that fall between the 10th and the 90th percentile for all categories (Lubchenco, Hansman, & Boyd, 1966).

Birth outcomes: pre-term, term, and post-term as well as small for gestational age, appropriate for gestational age, and large for gestational age.

Culture: the learned, shared, and transmitted values, beliefs, norms, and lifeways of a particular group that guide their thinking, decisions, and actions in patterned ways (Leininger, 1991).

Emotional Support: individual's overall feelings of acceptance by others, and belief that others will generally be helpful in times of difficulty.

Estimated date of confinement (EDC): date calculated for the delivery of the infant.

Familism: a strong identification and attachment of individuals with their families, and strong feelings of loyalty, reciprocity and solidarity among family members (Triandis, Marin, Betancourt, Lisansky, & Chang, 1982).

Family (support): those members of the immediate family that the subject lives with or interacts with (and provides assistance).

Functional Support: support that encompasses affect, affirmation, and aid (Norbeck & Anderson, 1989).

Gestational age: completed weeks from date of last menstrual period.

Large for gestational age: those infants above the 90th percentile (Battaglia & Lubchenco, 1967).

Low birth weight: newborn weight between 1,500 grams to 2,500 grams (Cunningham, MacDonaold, Gant, Levano, & Gilstrap, 1993).

Hispanics: those individuals of Spanish descent

Mexican-Americans: those who self-identify themselves as being of Mexican heritage and living in the United States.

Post-term: infants born after the forty-first completed week (Cunningham et al., 1993).

Preterm delivery: newborn with a birth weight of 1000 - 2500 grams and a duration of gestation of 28 to less than 38 weeks (DeCherney & Pernoll, 1994).

Primigravida: a woman who is pregnant for the first time (Cunningham et al., 1993).

Small for gestational age: those infants below 10th percentile (Battaglia & Lubchenco, 1967).

Social support: the support obtained from others through behaviors, encouragement, as well as the giving of symbolic or material aid (Norbeck, Lindsey, & Carrieri, 1981).

Tangible Support: the number of individuals in the support network, the duration of the relationships, and the frequency of contact (Norbeck & Anderson, 1989).

Term infants: those infants who are born greater or equal to 38 weeks gestation (Cunningham et al., 1993).

Assumptions

- (1) All subjects will answer the questions truthfully.
- (2) There are various levels of acculturation found in Mexican-American adolescents.
- (3) Pregnant adolescents understanding of how to answer the questionnaires will not be effected by the variables of age, grade level, marital status, or generation status.
- (4) Subjects will be able to complete the instruments regardless of the subjects' age and knowledge base.

Limitations

- (1) Study is limited to a convenience sample of subjects from Hidalgo and Cameron County school districts and private physician offices.
- (2) Study is limited to Mexican-American pregnant adolescents between 13 to 18 years of age.
- (3) Other factors that affect birth outcomes were not included.
- (4) English speaking subjects.
- (5) The reliability of the tools has not been determined for the adolescent population.

Theoretical Framework

In identifying the problem and variables, two distinct theoretical conceptual frameworks were noted: Sarason's Social Support Theory and Leininger's Theory of Transcultural Care, Diversity, and Universality. Sarason's Social Support Theory provided the background on how social support benefits the various aspects of life. Through this understanding, one can then look at how social support affects adolescent pregnancy outcomes among Mexican-Americans. Leininger's Theory of Transcultural Care, Diversity, and Universality provided an understanding of another's cultural context, in understanding more clearly the concept and complexity of the acculturation process.

Social Support

Sarason's Social Support Theory focuses on perceptions of social support. This theory directs attention toward person and environmental variables that lead to perceptions of support (Pierce, Sarason, & Sarason, 1990; Sarason, Pierce, & Sarason,

1990). The model focuses on perceived social support in the context of close relationships. This context was based on the belief that people have a universal need to have a network that is both available and mutually supportive as a part of their daily life (Reppucci, 1990).

Sarason went beyond individual psychology and developed a broad social perspective in the approach to contemporary problems (Levine, 1998). He emphasized the psychological sense of community which looked at both the contexts in which people lived their lives as well as the norms that are maintained by that community (Levine, 1998). He perceives this as support and this sense of support reflects the individual's overall feelings of acceptance by others as well as the belief that others would generally be helpful in times of difficulty (Sarason et al., 1990). Sarason's theory emphasizes an individual's need to be understood in context with a focus on the interactions between people and their natural environments (Reppucci, 1990).

Sarason developed the Social Support Questionnaire (SSQ) to measure both network and appraisal of support. This tool has been used as a means of studying social support as a buffer against stressful life events (Sarason & Sarason, 1984; Sarason, Sarason, Shearin, & Pierce, 1987).

In recognition of the contributing effects of network, behavior, and appraisal of social support, several researchers developed methods to measure multiple aspects within one instrument. Norbeck, Lindsey, and Carrieri (1981, 1983) developed the Norbeck Social Support Questionnaire (NSSQ) which measures three main variables related to social support. These variables were taken from Kahn's (1979) definition. This definition addresses: Total Functional (affect, affirmation, and aid), Total Network (number in

network, duration of relationships, and frequency of contact), and Total Loss (number of persons lost and amount of support lost) (Norbeck & Anderson, 1989).

In addition to types of support, the NSSQ allows for the calculation of support from nine source categories. Most of the total support from the network is usually provided by a smaller number of categories such as the spouse, relatives, friends, or work associates categories (Norbeck & Anderson, 1989). Because the individual's convoy can change over time, questions regarding recent losses of network members were included in the NSSQ as a variable of secondary interest. Scores for the three functional components and three network properties were derived from ratings made by the subject for each person in the personal network. Descriptive data regarding sources of support can be calculated for the network as a whole and for specific sub-scales and variables (Norbeck et al., 1983). Due to the simplicity of the NSSQ in measuring multiple parameters and the ease in which the respondent can answer, the NSSQ will be the assessment tool utilized to measure the level of social support of subjects in this research study.

Acculturation

Acculturation occurs when an individual or group from one main culture comes into continuous first-hand contact with another culture and results in subsequent changes in either or both of the groups (Cuellar, Harris, & Jasso, 1980). Rogler, Cortes, and Malgady (1991) concluded that the acculturation process presupposes that involvement in mainstream culture involves a corresponding disengagement from the culture of origin. Among Mexican-Americans, an adaptive stance that has developed was the concept of biculturalism. Biculturalism involved the language and behavioral preferences that permitted

the individual to feel comfortable in two diverse cultural environments by simultaneously accommodating the mainstream culture while continuing to be attached to the original culture (Agar, 1991; Szapoczaik & Kurtines, 1993). Recognition of the length of time in the United States was found important for the measurement of acculturation. Distinct sociopolitical profiles suggested diversity among Mexican-Americans. It included those born in the United States, those who lived in the states that were close to the border, and those who had moved to United States from Mexico (Leininger, 1995). Those factors and others could vary in the level of acculturation. According to Leininger (1995) acculturation was referred to as the process by which an individual or group from a culture learned how to take on the many behaviors, values and practices of the new culture. The degree of acculturation can have an impact on the health behaviors of adolescents. Acculturation could be expected therefore to reinforce, modify, or change the values that the individuals hold from their original culture (Marin, 1993). Leininger (1981) related cultural values as those values common to cultural bonds that gave meaning to peoples' thoughts, decisions and actions.

Leininger's Transcultural Cultural Care, Diversity, and Universality

Cultural Care Diversity and Universality provided a framework for the present study. This model is useful in assisting the health care provider to understand the differences and similarities of cultures. Leininger defined culture as the learned shared, and transmitted knowledge of values, beliefs, norms and lifeways of a particular group that guided an individual or group in their thinking, decisions, and actions in pattered ways (Leininger, 1995). Leininger (1995) pointed out that cultural value developed as a direction of the individual's desirable or preferred way of knowing something that is often sustained by a culture over time and that governed their decisions. It is important to understand the cultures' view about their own culture also referred as emic (insiders)

(Leininger, 1995, p. 667). Leininger related how the etic (outsider) was equally valued since it could contrast with the emic's cultural views and values. Both etic and emic were used interchangeably to assess the culture. The Mexican-American descendants have come from Mexico. Some prefer to move back and forth between Mexico and the United States in order to remain in contact with native customs.

Leininger's Sunrise Model focused on the culture and the social structure dimensions that included technology, religion, kinship, cultural values, politics and education. In essence, the model can be used as a guide for the assessment of cultural values, beliefs, practices and social ties (Leininger, 1995). The model depicted a full sun with four levels of focus.

The model reflects Leininger's theory and has been applied to the nursing profession. Through the discovery of culture care values and practices, the analysis of similarities and differences, the nurses can provide culturally congruent care (Leininger, 1991). Although Leininger's model is not directly related to acculturation, it can be helpful in envisioning how culture works with different life forces and influences the human condition. Leininger has explained how the model can be used to focus on the total gestalt of diverse influences to describe and explain care with health and well being outcomes (Leininger, 1991). The culture was seen as a whole instead of fragmented parts.

Reflecting on Leininger's model, world-views and social structure factors are important. The Mexican individual's world-view is focused on the extended family, a belief in God and dealing with present time reality (Leininger, 1995). The family unit is central to the Mexican-American culture (Leininger, 1991). Confidence, respect, and pride are important to the culture. The concept of familism is reflected in cultural patterns that cross class lines and different levels of acculturation (Domingo & Acosta, 1980; Mindel 1980). Contrary to what others believe about acculturation, familism is deeply ingrained in the culture and does not seem to change the process of acculturation (Sabogal, Marin, Otero-Sabogal, Marin, & Eliseo, 1987). The family network consists of

extended family members who have stronger ties, live closer to each other and actively maintain relations with relatives. (Schaffer and Wager, 1996).

An understanding of Leininger's model serves as a guide for nurses to provide culturally congruent care that adapts to the clients' values, beliefs and lifeways (Leininger, 1995). Although Leininger's theory has an emphasis on transcultural nursing, the components of this theory also pertain to assessment of acculturation. The needs of clients can vary depending on the level of acculturation. The degree of acculturation can also have a bearing on birth outcomes (Balcazar et al., 1999).

The rate of acculturation proceeds at different rate and depends on the individual's age. The younger the individual at the time of initial exposure to a new culture, a higher acculturation score results. The longer an individual has been exposed to the culture and its language, a higher acculturation score will result. According to Scribner and Dwyer (1989), language is a component of acculturation. The Mexican-American's language varies depending on the area of origin and location of residence. The contact between the Mexican-American culture and host culture involves the process of acculturation (Cuellar, Harris, & Jasso, 1980). Orshan (1996) concluded that when the mainland acculturation is increased, values and social support is increased.

CHAPTER II

Review of Literature

This chapter will present selected literature regarding what are known about adolescent pregnancy as well as the factors that can effect pregnancy outcomes. This literature review will include discussions on adolescent pregnancy, Mexican-American pregnancy, birth outcomes, the role of family support, social support, and acculturation levels.

Adolescent Pregnancy

The adolescent pregnancy rate in the United States exceeds that of every other industrialized country (Price et al., 1994; Burk et al., 1995). Over one million adolescents become pregnant each year. Approximately 46% of these pregnancies result in live births; 41% are aborted, and the remaining end in miscarriage or stillbirths. Approximately five percent of adolescent mothers relinquish their babies for adoption (Price et al., 1994). These pregnancies occur when the adolescent is still maturing. Consequently, their bodies must adjust to giving birth at an earlier age. It is generally accepted that adolescents are at higher risk for complications than older adult women are (Scholl, Hediger, & Belsky, 1994). The changes that occur with these pregnancies disrupt the course of their lives. Adolescent pregnancy is related to: poor perinatal outcomes, low educational achievement, unemployment, welfare dependence, repeat pregnancy, parenting problems,

marital discord, and divorce if teens marry (Price et al., 1994). Several research studies have found that Hispanic youth are more likely to become pregnant than other ethnic group (Price et al., 1994; Balcazar, Peterson, & Krull, 1997).

Adolescent Pregnancy and Birth Outcomes

Verrier, Spear, Ying, and Kerr (1993), revealed that although the Hispanic populations in the United States shared many of the same sociologic risk factors with the African-American population, they did not appear to share the same elevated risks for low birth weight or pre-term birth. This finding was obtained after analyzing computer files containing birth certificate information from 1984 through 1986. The analysis was limited to the three major ethnic groups in Texas. Among the maternal age categories, mothers' younger than 18 years had the highest rates of preterm birth (Verrier et al., 1993).

Not all the studies agreed with those results. A research study, comparing the trends and obstetric outcomes of pregnancy in teenage women with those of adult women, was done in 1996. Amini, Catalano, Dierker, and Mann (1996) analyzed a 19-year (1975-1993) computerized perinatal database with data on 69,096 births collected prospectively from a single inner-city tertiary medical center. Amini et al. (1996) found that, on average, females 16-19 years old had better obstetric outcomes than adults did. Those who were younger (12-15) had worse obstetrical outcomes than the adults did (Amini et al., 1996). In general, a consistent pattern of less optimal obstetric outcomes among young teens was noted, confirming the high-risk level of younger teen pregnancy (Amini et al., 1996). The data also confirmed national data showing a decline in the teenage pregnancy rates for the past 10-15 years among all races (Amini et al., 1996).

Hispanic Adolescent Pregnancy and Birth Outcomes

Several researchers have studied the influences that age and culture have on pregnancy and the subsequent outcomes (Koshar et al., 1998; Balcazar et al., 1992; Mendoza et al., 1991; Verrier et al., 1993). Koshar et al. (1998) obtained a convenience sample of 781 women who were born either in the United States or in Mexico. There were 129 adolescents comprising 16.5% of the total sample. The variables were analyzed for complication rates for the total group as well as origin of birth in order to determine if these were related to the number of maternal and neonatal complications in the Hispanic teen mothers. The major findings confirmed that neither place of birth nor language spoken was related to any complication other than the c-section birth rate. The findings showed that younger Mexican mothers, regardless of place of birth, have a lower than expected pregnancy, labor, postpartum, and neonatal complication rate, given their young age and low socio-economic status (Koshar et al., 1998).

English, Kharrazi, and Guendelman (1997) examined Mexican immigrants and Mexican-Americans prenatal health behaviors and psycho-social behavioral risk factors to see if there were any associations with adverse birth outcomes (pre-term delivery and large for gestational age) in English speakers and U.S. born Spanish speakers. The authors searched for the effects of language use and pregnancy outcomes. The authors reported that Mexican-American women had generally more undesirable prenatal behaviors and risk factors than Mexican-immigrant women. The results were similar to other research findings that concluded that Spanish speaking mothers, born in the U. S. and possibly more acculturated and who usually speak Spanish, have the highest risk for low birth

weight, but not preterm birth. The results indicated that there were no direct effects of acculturation on infant's gestational age or birth weight. The authors also concluded that their findings were indicative of socio-demographic indices and birth outcomes (English et al., 1997).

Family Support

Family support is also a part of social support but is differentiated in that support comes specifically from family members. This is an important to note that traditionally Mexican culture has an extended family structure with extensive support given within that family setting.

A strong family bond, a commonly identified aspect of traditional Mexican culture, has been found to discourage deviant and risky behaviors that leads to problematic health or psycho-social outcomes (Balcazar, Peterson, & Krull, 1997). A study by Balcazar, Peterson, and Cobas (1996) concluded that females that were more highly acculturated were more likely to smoke, take illegal substances, drink alcohol, and experience a previous fetal or postnatal death. In 1996, Cobas et al. concluded that acculturated women were more likely to have delivered low birth weight children because of smoking habits. The more highly acculturated the subject, the higher the stress that resulted from the assimilation process and the greater the use of coping strategies. Subjects that were more acculturated demonstrated greater support from family (Balcazar et al., 1997).

Mexican-American women, particularly the ones who were less acculturated, exhibited a low incidence of alcohol, tobacco, and drug usage that may have contributed to the positive pregnancy outcomes in this group. However, it has been postulated that

perhaps the single most significant influence on Mexican-American pregnancy outcomes stems from aspects of familism. Familism is the caring and supportive family network, presence of the father, high regard for parental roles, and preservation of traditional beliefs and values (Burk et al., 1995). According to Leininger (1981), the exchange of support services and the provision of nurturance, sustenance, and care for dependent relatives, including elders, and children, is a universal family function. Additionally, care giving is learned within the family, which is a cultural environment.

Cultural values, traditions, and practices influence behaviors, roles, relationships, and understandings (Phillips, Luna, Russell, Baca, Lim, Cromwell, & Torres de Ardon, 1996). Therefore, it is important to review the dynamics of family care giving within the Mexican-American culture. For Mexican-Americans, four cultural values may help frame the meaning of care giving. First, the ability to endure existential suffering, which is strongly rooted in Catholicism, is a value associated with Mexican-American culture. Care giving is viewed positively as self-sacrificing, devoted, and protective (Jenkins & Karno, 1992).

The second, among Mexican-Americans is that value for the family above the individual is strongly emphasized. The individual's emotional well being and sense of identity are closely tied to the family. Historically, family bonds have served a positive and protective function among Mexican-Americans (Simic, 1985). Escobar and Randolph (1982) suggest that strong social bonds and loyalty to the family, as well as networks of friends and neighbors, may support and buffer caregivers.

Third, within the Mexican-American family unit, interdependence, rather than independence, is valued, because interdependence strengthens the family and provides for

the reciprocal exchange of services (Henderson & Gutierrez-Mayka, 1992). Because of the value for interdependence, Mexican-American families tend to perceive the care-giving role as a positive affirmation of life and cohesion within the family unit (Escobar & Randolph, 1982).

The fourth cultural value is that within Mexican-American families, strong gender role differentiation is valued (Cox & Monk, 1993; Henderson & Gutierrez-Mayka, 1992). Within these roles, the men are expected to perform tasks that have to do with family business whereas women are highly expected to perform tasks that have to do with care giving. This expectation is so high that Hispanic women will prefer to request assistance of female non-kin before asking care giving assistance of male blood relatives (Lim, Luna, Cromwell, Phillips, Russell, & Torres de Ardon, 1996). Although these four values are all recognized as part of the Mexican-American culture, there may be great variations in the degree of these attitudes or behaviors within each group or even each individual.

The traditional Mexican-American family is defined as an extensive network composed of extended and nuclear family members. According to Luna et al. (1996), there is not a clear distinction made between extended family and nuclear family members. Instead, family tends to be defined by kinship, living in close proximity, frequent interaction, and exchange of mutual aid. Mexican-Americans tend to live near large numbers of kin in both rural and urban areas as well as interact frequently with them. Extended kin often operate as a reciprocal aid system and, in case of need, exchange a wide range of services and goods, like baby sitting, financial aid, personal advice, and moral support. Although these services are exchanged frequently with the entire family, they are most frequently exchanged with primary kin members (Luna et al., 1996).

Sherraden and Barrera (1996) found that family support had two important effects. First, it mediated the effects of moderate poverty. Economic survival strategies, such as mutual aid, sharing household expenses, and using in-kind resources stretched incomes for these families. Family support played a particularly important role in nutrition, housing, and physical well being. Second, sticking together economically also meant that women are less socially isolated during their pregnancies (Sherraden & Barrera, 1996). Family members are in a position to provide advice and guidance to the women during their pregnancies. The women received advice about physical (especially nutritional) and emotional well being (Sherraden & Barrera, 1996). These are all aspects of family support resources that Mexican-American pregnant teenagers may draw upon to make them less inclined for risk of health problems.

Pregnant and parenting teens most frequently cited their mothers, boyfriends, and peers as major sources of support (Stevenson, Maton, & Teti, 1999). Less frequently mentioned sources of support, albeit important, included the adolescent's father, siblings, grandmother, and boyfriend's family (Stevenson et al., 1999). Among primiparous adolescents, mothers provided more support in areas related to tangible aid such as financial support and advice about pregnancy than their boyfriends did. In contrast, multiparous teens are just as likely to rely on their boyfriends for tangible aid as they are on their mothers (Chen, Telleen, & Chen, 1995).

Social Support

The concept of social support dates back to biblical times (Hobfoll, 1988). In the late 1800s, organized study of social support began with concern over the breakdown of

social integration (Brownell & Shumaker, 1984). Studies were done with immigrants to study the effects resulting from the disruption of social networks that occurred with immigration (Brownell & Shumaker, 1984). Application of the concepts of social support grew and was even became the core concepts behind several theories of psychotherapy and counseling (Cohen & Syme, 1985).

From these early studies and theories, the concept of social support has been investigated by many disciplines such as anthropology, sociology and health-care to name a few. The term social support has been used in the literature to represent many different concepts (House & Khan, 1985) and this has led to difficulties in a precise definition (Keeling et al., 1996). When social support was initially examined during the mid-1970s to early 1980s, the concept of social support was used in concrete terms, referring to an interaction, person, or relationship (Veiel & Baumann, 1992; Hupcey, 1998).

In the past 15 years, however, the term has become more and more abstract encompassing anticipation, perceptions, quality of support, quantity of supportive interactions and "...abstract characteristics of persons, behaviors, relationships, or social systems" (Hupcey, 1998, p.1231). Most of the literature has agreed on a broad definition of social support as the "assistance and protection given to others, especially to individuals" (Langford, Bowsher, Maloney, & Lillis, 1997, p.95). In this way, social support can be seen to provide assistance and even protection by "shielding people from the adverse effects of life stress" (Langford et al., 1997 p.95).

Evidence also suggests that general perceptions of available support may have their roots in early childhood relationships, particularly those with parents (Sarason, Sarason, & Shearin, 1986; Pierce, Sarason, & Sarason, 1991). Although various views of

social support exist and controversy continues over what variables to measure, the results remain the same: social support is important for positive health-related outcomes (Hupcey, 1998; Keeling et al., 1996; Langford et al., 1997). The positive health effects of social support may be either direct or indirect. Health benefits may be provided regardless of stress levels by directly affecting mental and physical health. This is termed main effects hypothesis (Keeling et al., 1996). Social support may also effect health indirectly by buffering the individual's reaction to the stressor. This type of support only has beneficial effects during stressful episodes. This is termed the buffering hypothesis (Keeling et al., 1996). Direct health benefits may influence an individual physiologically, psychologically and behaviorally.

Physiologic influences can be induced "by emotional changes affecting the immune or neuro-endocrine systems" (Keeling et al., 1996, p.78). Psychological changes can occur due to "the feeling of belonging to a group" which "promotes a positive mood, elevating self-esteem and perceived security" (Keeling et al., 1996, p. 78). Behavioral changes occur through the "promotion of healthy behaviors such as exercise or discouraging unhealthy behaviors such as smoking" (Keeling et al., 1996, p. 78).

Throughout the literature, investigators have identified an existing typology of four defining attributes of social support where acts of support can be assigned. These social support attributes are emotional, instrumental, informational, and appraisal support (Langford et al., 1997). Within each of these individual attributes, exchange or reciprocity must occur for the support to continue. Social support may be an important determinant of health outcomes and well being (Langford et al., 1997; Jimenez, 1999).

Perceived social support is the awareness that one is a valued and integral member

of a group that provides attachment or intimacy, nurturance, informational, emotional, and material help (Brandt & Weinert, 1981). Hispanic adolescents reported experiencing less isolation and more support from their significant others than did their non-Hispanic counterparts (Moss & Hensleigh, 1990; Speraw, 1987). For Hispanic females, this support was generated most frequently from family members, particularly their mothers, but also their sexual partners (Orshan, 1996). In the research study by Giblin, Poland, and Ager, three factors were identified as representing interpretable independent components of social support. These three factors were intimacy, comfort, and security. Intimacy represented a woman's close personal relationship with the infant's father and a willingness to share knowledge of her pregnancy with others. Comfort represented generalized expectation of help, assistance, consolation, and a state of well being. Security represented personal safety, stability in living arrangements, and a freedom from depression, anxiety, or fear.

These social support factors did predict attaining prenatal care (intimacy) and were significantly as well as positively correlated with prenatal attitudes (initial feelings about pregnancy, hopeful about future) and behaviors (telling others about pregnancy, not using drugs). The three social support factors above were associated with pregnancy attitudes, behaviors, resources, and adequacy of prenatal care (Giblin, Poland, & Ager, 1996). However, the source of support plays a central role in an individual's perceived satisfaction (Keeling et al., 1996). In the research study by Harrison, Neufeld, and Kushner (1995), the women preferred support that came from individuals in the inner circle who they viewed as sharing commitment, history and close emotional ties.

A large body of evidence shows social support to be linked with a variety of

dependent measures including health, personal adjustment, and sense of well-being (House, Umberson, & Landis, 1988; Sarason, Sarason, & Pierce, 1990; Pierce, Sarason, & Sarason, 1992). Evidence has been given to show that perceived social support may be a stronger correlate of the dependent measures than received support (Pierce et al., 1992).

Sherraden and Barrera (1996) found that family networks were the principal social contacts for pregnant women. Both social support from others and from family have been shown beneficial to pregnant teenagers. A similar finding involved the idea that highly acculturated Mexican women (with both high and low family cohesiveness) also had developed higher degrees of social support as a means of dealing with the circumstances of their lives. However, it appears from the research obtained that in the case of Mexican-American teenagers, family support or family cohesiveness plays a larger and more important role in pregnancy outcomes.

Stevenson, Maton, and Teti (1999) found that bi-directional exchange of support between parents and adolescents was associated with increased well being while unequal ones were associated with decreased well being. The reciprocal exchange of support between parents and adolescent mothers had previously been associated with close family relationships (Stevenson et al., 1999). Bi-directional supporters with friends were not higher on any measure of well being than providers, receivers, and low supporters. Despite the emphasis on peers during adolescence, bi-directional support with parents is more important in the well being of pregnant adolescents than friend's support. The results also suggested that the relationship between well being and the significant other relationship was not as simple as the presence or absence of a partner, whether the child's father or not. The well being of the pregnant adolescents did not differ among teens

dating the father of their child, dating someone other than the father or those without a significant other. However, adolescents dating their child's father and maintaining a high quality relationship with him had a reported higher well being (Stevenson et al., 1999).

Acculturation

Since Hispanics are a large minority group, it is important to identify those processes by which Hispanics become adapted and integrated to the dominant culture. This is referred to as acculturation. The acculturation process can be assessed from two points of view: the degree of recognition and identification with the dominant culture and the degree of retention of the minority culture (Morales, 1993).

In the study done by Peterson, Cobas, Balcazar, and Amling (1998), the fact that acculturation involves a complex adaptive process through which immigrants experience various phases of cultural change in their lives was revealed. This experience of cultural transition begins and progresses as immigrants interact and cope with two or more autonomous cultures that influence their identifications, behaviors, and emotional responses (Peterson et al., 1998). The purpose of the study was to test a theoretical model designed to predict risk behavior in a sample of Mexican-American females who were pregnant and ranged in age from adolescence to early adulthood. The results provided partial support because acculturation, acculturation stress, and intergenerational family conflict were significant predictors of risk behaviors that may endanger the birth outcomes of pregnant Mexican-American females (Peterson et al., 1998). Acculturation was found to be the strongest of these direct predictors. According to Peterson et al. (1998), this finding confirms previous evidence indicating that increased adjustment (or

acculturation) to the dominant U.S. culture may enhance the tendencies for Mexican-American youth to become more involved in behaviors with problematic health implications (Balcazar, Peterson, & Cobas, 1996; Scribner, 1996; Scribner & Dwyer, 1989). Continued identification with these cultural traditions appears to provide protective mechanisms which either shelter or discourage pregnant females from involvement in risk behaviors (in Peterson et. al., 1998).

Part of this perspective involves the differences in cultural emphasis of individualism between the U.S. and Mexico. The U.S. society in general, either openly encourages or is more tolerant of individual variation, sensation-seeking behavior, and self-expression, while placing comparatively fewer demands for impulse control and personal restraint (Peterson et al., 1998). Immigrant youth in the U.S. may have less experience balancing the increased emphasis on self-expression with the need for self-control and responsibility. Highly acculturated females, may find themselves adapting to a social environment that doesn't restrict risk behaviors as Mexican cultural values do for those more closely tied to their ethnic roots (Peterson et al., 1998). It has been also found that continued identification with Mexican culture may provide them with social mechanisms that discourage or protect them from risk behaviors in spite of experiencing the most stress from the cultural transitions they face (Peterson et al., 1998).

Balcazar, Peterson, and Krull (1997) found that women who came from the more traditional Mexican group experienced greater stress from being separated from their families who were left behind in Mexico. Acculturative stress results, in this case, from the inability of these women to maintain the social support contacts that corresponded with their strong familistic commitments, a central aspect of traditional Mexican culture

(Balcazar et al., 1997). The low family cohesiveness that many of the highly acculturated women had meant that close family relationships were unlikely to function as buffers or coping mechanisms to diminish the effects of adverse circumstances (Balcazar et al., 1997). It was also noted that women who were further along in the acculturation process had probably benefited from the greater time they had experienced since immigration to develop various coping strategies (Balcazar et al., 1997). This may mean that these highly acculturated individuals may simply have had sufficient time since immigration to reestablish social support networks in the United States (Balcazar et al., 1997). The results provide evidence that acculturation and family cohesiveness have consequences for the behaviors and psycho-social attributes that may either foster or diminish the health risks of Mexican-American women during pregnancy (Balcazar et al., 1997).

Zambrana, Scrimshaw, Collins, and Dunkel-Schetter (1997), found that although that there was growing evidence that psycho-social factors and health behaviors during pregnancy were linked to adverse birth outcomes, consistent relationships in the sample that they obtained were not evident. They did have one exception, that higher integration in the U.S. was associated with higher prenatal stress, which was associated with pre-term delivery. Early delivery was associated with lower infant birth weight. Women who were more integrated were also found to have less positive attitudes toward their pregnancy, received less support from the baby's father, had higher medical risks, and initiated prenatal care earlier. These variables were not found to be associated with birth outcomes. They noted a pattern of differences in birth outcomes by group. The rate of low-birth weight for the Mexican-Americans in the study was 4.6% which was similar to the rate for the Mexican-origin women in Los Angeles County (4.9%), and the low-birth

weight rate among the Mexican immigrants (2.6%) in the study was almost one half that rate (Zambrana et al., 1997).

Cobas, Balcazar, Benin, Keith, and Chong (1996) reanalyzed the data first studied by Scribner and Dwyer (1989) pertaining to the association between acculturation and low birth weight status. They noted that not all components of acculturation had the same effect on low birth weight status: language seemed dominant. Acculturation influenced low birth weight status through dietary intake and smoking but not through parity. Acculturation was noted to continue to have a direct effect on low birth weight status. This study reinforced the validity of the research results obtained by Scribner and Dwyer (Cobas et al., 1996).

In the study done by Reynoso, Felice, and Shragg (1993), they concluded that acculturation to American lifestyles does affect the psycho-social profile of teen mothers, their families, and the father of the infant. The acculturated pregnant teenager was more likely to have engaged in early sexual behavior, have higher educational and occupational aspirations, and view single parenthood as a viable option. There were no differences noted in the pregnancy care or outcomes between un-accultured or acculturated teens other than that acculturated teens sought earlier prenatal care (Reynoso et al., 1993). Nurses care for clients who come from different cultures and backgrounds. These clients bring with them a wide spectrum of customs, values, beliefs, and traditions that do not always fit the expectations and experiences of nurses (Hussein, 1998). The behaviors and responses of the nurses to the needs of clients are often limited to their own beliefs, values, and traditions or to the degree that they are familiar with and knowledgeable about the particular client's culture (Hussein, 1998). By incorporating cross-cultural care

through cross-cultural education of staff, involving the clients in their care, as well as providing cross-cultural competencies, nurses should be able to provide culturally competent care to their various client populations (Hussein, 1998).

Pregnant Mexican-American adolescents living in the Lower Rio Grande Valley come from a wide variety of acculturation levels due to the migration across the borders of Mexico and Texas. This variety of acculturation levels may have an impact on pregnancy outcomes. Acculturation status was found important for predicting birth weight (Balcazar & Krull, 1999). Research is needed to provide a clearer insight on how these adolescents can be given the best pregnancy outcomes possible. This research study attempts to provide sensitive cross-cultural care by providing a better understanding of how acculturation and social support impacts Mexican-American teenage pregnancy outcomes.

CHAPTER III

Methodology

This was a quantitative non-experimental research study to determine the relationship between acculturation levels, social support, and pregnancy outcomes of Mexican-American adolescents. This chapter includes a discussion of the target population, sample, setting, instrumentation, data collection procedures, and protection of human subjects.

Target Population, Sample, and Setting

The target population consisted of pregnant Mexican-American adolescents residing in the Lower Rio Grande Valley in Texas. Questionnaires were distributed to 75 subjects who were in the third trimester of pregnancy. Those subjects who were in the first two trimesters of pregnancy were excluded because they would not deliver before the conclusion of this study. Although 50 subjects were eligible to participate, only 35 were included in the study. The others were disqualified because they could not read English, could not answer the NSSQ, or they had not delivered at the time the data was analyzed. All the subjects were between 14 and 18 years of age and were able to read and write in English. The subjects were recruited from 11 school districts in Hidalgo and Cameron counties and from offices of physicians.

Demographic Data Sheet

For the purposes of this study, a demographic data sheet was developed by the researchers (Appendix G) and attached to the ARSMA-II Scale. This data sheet gathered information on age, educational level (specific categories), ethnicity, marital status, living arrangement, generational status, religion, gestational age, date of birth of the infant, infant weight and length.

The subjects answered the demographic data sheet, the ARSMA-II Scale (Appendix B), and proceeded to complete the Norbeck Social Support Questionnaire (Appendix A). The researchers provided assistance for those who could not read. Only one participant in this study needed assistance. Strict confidentiality was maintained by using a coding system to record important data in order to be able to follow up on participants birth outcomes while maintaining confidentiality. Parental consent was obtained if the adolescent was living at home and not married. The total time to answer the two questionnaires averaged about 30 to 45 minutes. The subjects were thanked for their participation.

Instrumentation

Norbeck Social Support Questionnaire (NSSQ)

The NSSQ developed by Norbeck, Lindsey, and Carrieri (1981, 1983) measures three main variables: Total Function (affect, affirmation, and aid), Total Network (number in network, duration of relationships, and frequency of contact), and Total Loss (number of persons lost and amount of support loss). Moderate levels of concurrent validity were

found with the two other instruments. Construct validity was shown with convergent and divergent interpersonal constructs. Evidence for predictive validity was also shown (Norbeck et al., 1983; Norbeck & Anderson, 1989). The measurements are done on a Likert scale. Test-retest reliability for the sub-scales and variables ranged from .85 to .92. Internal consistency was .89 or above for each of the three functional properties; correlations among the three network property items ranged from .88 to .96. The NSSQ also calculates support from specific sources in the network (Norbeck & Anderson, 1989). The subject may list up to 24 persons within their social support network. One side of the form is utilized to enter their name or initials while on the other side, the subjects enter who they are (husband, mother, or friend, etc.). These entries are entered within the nine categories assessed. It is important to note that while spouse or significant other can only be entered once to each question, family or relatives can be entered multiple times. Consequently, this may give the appearance that significant others or spouses are reported as less supportive than relatives are. This is explained further in chapter five.

Acculturation Rating Scale-II for Mexican-Americans (ARSMA-II)

The ARSMA-II (Appendix B) was divided into Scale I and Scale II. Scale I consisted of a 30-items that included 13 items that measured Anglo orientation and 17 items that measured Mexican orientation. The instrument measured orientation to Mexican culture (MOS Subscale; Cronbach alpha = .88) or Anglo culture (AOS Subscale; Cronbach alpha = .83) for all items on scale one (Cuellar, Arnold, & Maldonado, 1995). The acculturation score was classified into five acculturation levels by the use of a Likert scale. Level one represented the lowest acculturation level and level five represented the

highest acculturation level. Both scale scores of ARMSA-II have been tested and are reliable. The split-half reliability was found to be .77 and .84, and Test-Retest is .94 and .96 (Cuellar et al., 1995). Scale one and two were administered to all subjects in this study. Scale I was used to evaluate Anglo or Mexican orientation. Scale II was not used because of the small size and homogeneity of the sample obtained.

Data Collection Procedure

Before the initiation of the study, permission was obtained from individual health care providers and from the school superintendents from the school districts. Not all the superintendents agreed to participate because of their concern with confidentiality. Other school districts did not have a permanent superintendent. Once the researchers were given permission by the superintendent, they were directed to the various schools. A meeting was scheduled with the nurse, social worker, or teacher in charge of that school or parenting program. The meeting included a detailed explanation about the purposes of the research, confidentiality, the demographic form and the instruments.

All eligible subjects were females between the ages of 13 and 18 who resided in Hidalgo or Cameron counties. Participants were self-identified Mexican-American pregnant adolescents. There were several approaches used to meet with the potential participants. The most common was a scheduled meeting with the participants who were homebound and not attending school on campus. During the meeting, an explanation of the research project was given to all participants. The subjects were asked to read and sign an informed consent (Appendix C). The parents signed the consent form if the participants were single and living at home. Once the volunteer participants signed the

consent form, instructions were given on each of the questionnaires. The subjects were given the time to complete the questionnaires and all forms were returned to the researchers in an envelope.

Protection of Human Subjects

This research study was approved by The University of Texas Pan-American Institutional Review Board (IRB)-Human Subjects in Research (Appendix D). Consent was obtained from 10 Obstetrical/Gynecological and Family Practice physicians to recruit subjects from their offices. Written consent was obtained from volunteer subjects who were willing to participate in this study. To assure confidentiality of the subjects, no names appeared on the questionnaires and information was kept in an envelope. The original data was destroyed at the conclusion of the study. The data utilized from the questionnaires were given a number that corresponded with each packet. In this way, the researchers would be able to verify the data if any questions arose while maintaining confidentiality. Only the written consent forms were kept and maintained at a secure site.

CHAPTER IV

Analysis of the Data

The purposes of this quantitative non-experimental research study were to assess:

(a) Acculturation among Mexican-American pregnant adolescents; (b) social support systems among Mexican-American pregnant adolescents; (c) relationships among the selected demographic variables, acculturation and social support among Mexican-American pregnant adolescents; and (d) how these variables affected the birth outcomes of Mexican-American pregnant adolescents.

Description of Sample

The data was obtained from January through March 2000. The data was collected on 37 pregnant adolescent Mexican-American females in the third trimester of pregnancy. All of the participants were primigravidas. The subjects' ages ranged between 14 to 18 years of age and were from Hidalgo and Cameron counties. The data was obtained through home visits, on school premises, or through the adolescent's doctor's offices. Before the researcher's first meeting with the subject, they were informed of the study by the staff members from the various locations. Researchers explained the tools, witnessed the signature on the consent, issued the demographic questionnaire, and the instruments. Of the 75 eligible participants, data was collected on 37 subjects and analyzed on 35 subjects. Two of the subjects' data were not included, as they had not delivered by the

time the data analysis was completed. This constituted a 40% sample return. Descriptive data analysis as well as Pearson's Product Moment Correlational analysis was done on the data obtained.

Subject Data

The subjects' ages ranged from 14 to 18 years old with a mean of 16, mode of 17 (SD 1.2). Although the definition for adolescents specified 13 years of age to 18 years of age, no subjects of the age of 13 were obtained. The analysis of the ages revealed that: 8% of subjects were 14 years of age; 17% were 15 years of age; 26% were 16 years of age; 28% were 17 years of age; and 20% were 18 years of age. The educational levels ranged from eighth grade to first year in college, with a mean of 10 years of education (SD 1.2). The marital status of participants was that 51% were single, 46% were married and 3% were separated. Table one depicts the demographic characteristics of the subjects according to frequency and percentage in the category.

Table 1
Age, Educational Level, and Marital Status

| Variable | Frequency | Percentage |
|---------------------------------|-----------|------------|
| Age of Subjects (N = 35) | | |
| Thirteen | 0 | 0% |
| Fourteen | 3 | 9% |
| Fifteen | 6 | 17% |
| Sixteen | 9 | 26% |
| Seventeen | 10 | 28% |
| Eighteen | 7 | 20% |
| Educational Level | | |
| Eighth Grade | 1 | 3% |
| Ninth Grade | 9 | 26% |
| Tenth Grade | 12 | 34% |
| Eleventh Grade | 5 | 14% |
| Twelfth Grade | 6 | 17% |
| Other | 2 | 6% |
| Marital Status | | |
| Single | 18 | 51% |
| Married | 16 | 46% |
| Other | 1 | 3% |

Generational Status

The U.S. generational status included 17% identified as first generation, 46% as second generation, 11% as third generation, 17% as fourth generation and 9% as fifth generation. It was noted that the subjects came from a variety of generations. This may be a reflection of the bicultural transitional zone of the area. Due to the proximity with Mexico and the fluid migration patterns, the levels of acculturation varied greatly. The proximity to Mexico allows individuals to maintain close ties with the old country (Burk et al., 1995). Table two depicts the subjects' generational status according to frequency.

Table 2

Generational Status

| Variable | Frequency | Percentage |
|-----------------------------------|-----------|------------|
| Generation Status (N = 35) | | |
| First Generation | 6 | 17% |
| Second Generation | 16 | 46% |
| Third Generation | 4 | 11% |
| Fourth Generation | 6 | 17% |
| Fifth Generation | 3 | 9% |

Birth Outcomes

The gestational age of infants at delivery ranged from 31 weeks to 42 weeks with a mean of 38.3 weeks and a mode of 39 weeks (SD 2). Eighty-eight percent of the infants were appropriate for gestational age, six percent were small for gestational age, and six percent were large for gestational age. The average weight was 6.4 pounds with a mode of 6.1 pounds (SD 1.4). The mean length was 19 inches long with a mode of 20 inches (SD 1.5). Table three indicates the gestational age distribution of the infants.

Table 3

Gestational Age of Infants

| Weeks Gestation | Number of Infants Born | Percentage |
|------------------------|-------------------------------|-------------------|
| 31 | 1 | 3% |
| 34 | 1 | 3% |
| 35 | 1 | 3% |
| 36 | 2 | 6% |
| 37 | 3 | 9% |
| 38 | 8 | 24% |
| 39 | 9 | 27% |
| 40 | 8 | 24% |
| 41 | 1 | 3% |
| 42 | 1 | 3% |

Acculturation

Analysis of the data revealed that 71% of the subjects scored a level three on the acculturation level indicating a slightly Anglo or bicultural orientation. Three percent scored a level one, which indicated a high Mexican orientation. Nine percent scored at a level two, which indicated a balanced bicultural orientation of the Mexican and Anglo cultures. Seventeen percent scored a level four, which indicated a strong Anglo orientation. It is important to keep in mind that most of the subjects were second generation and this could have a bearing on their level of acculturation. No one in the study scored a level five, which means very assimilated or very high Anglo orientation. This may be because all of the participants were Mexican-American, came from traditional

Mexican-American homes, and none claimed to be of non-Hispanic white descent. Table four illustrates the acculturation level of subjects according to frequency.

Table 4

Acculturation Level

| Level | Frequency | Percentage |
|-------|-----------|------------|
| I | 1 | 3% |
| II | 3 | 9% |
| III | 25 | 71% |
| IV | 6 | 17% |
| V | 0 | 0 |

Social Support

The Norbeck Social Support Questionnaire indicated that eight percent of the total responses were from spouse or partner as a source of support; sixty-eight percent of the total were from family or relatives; twenty percent of the total were from friends; two percent of the total were from work or school associates; and one percent of the total were from neighbors, counselors or therapists. None of the total responses listed health care providers, pastoral or others as sources of support in the questionnaire. This only indicates the total number of responses (388) from all the subjects combined.

Implementation of the questionnaire requires subjects to list members of their social support network and rank each listed member on a 5-point Likert scale according to eight questions. The respondents may list up to 24 significant persons in his or her life. These significant persons are then categorized into general sources of support. Thus spouse or significant other may be listed once for each question whereas family may be listed the remainder of the time.

The categories that were cited in total may thus appear misleading. For example,

with the spouse or significant other category, the total number of responses for that category was 30, which equaled to 30% of the total responses. However, when analyzed by individual responses, it was noted that this category was listed by each individual 80% of the time. There were 15 out of 16 married individuals who cited spouses as a source of support. There were 13 out of 18 single individuals who cited a significant others as a source of support. One single individual cited a significant other as a source of support twice. One married individual and four single individuals did not cite any spouse or significant other as a source of support.

The category for friends was cited a total of 81 times as a source of support. There were a total of 23 out of 35 individuals who cited friends as a source of support. This reveals that in truth 66% of the individuals believed that friends were a source of support. Another example of how these numbers can be misunderstood is with the minister, rabbi, priest category. One individual (3%) out of 35 cited minister, rabbi or priest as a source of support twice (5%) out of a total of 388 responses cited. Table five will depict each category by both the total number of times this category was cited as a source of support as well as by the number of times this category was cited individually as a source of support.

Table 5

Norbeck Social Support Questionnaire

| Variable | Frequency | Percent | Percent |
|---------------------------|------------|-----------------|--------------------|
| Source Category | # of cited | Total responses | Individually cited |
| Spouse or partner | 30 | 8% | 80% |
| Family or relatives | 262 | 67.5% | 100% |
| Friends | 81 | 21% | 66% |
| Work or school associates | 9 | 2% | 9% |
| Neighbors | 4 | 1% | 11% |
| Health care providers | 0 | 0 | 0 |
| Counselor or therapist | 0 | 0 | 0 |
| Minister, priest or rabbi | 2 | 5% | 3% |
| Other (e.g. God, pets) | 0 | 0 | 0 |
| Total | 388 | 100% | 100% |

Pearson's Product Moment Correlational Matrix

Pearson's product moment correlations were done to assess the relationship between acculturation, social support, and birth outcomes according to gestational age and appropriateness for gestational age. There were several positive as well as negative correlations found at both the 0.01 and 0.05 significance levels. Infants' weight correlated with gestational age in both the categories of term and weeks gestation. Mothers' age correlated with educational, acculturation score, and Mexican orientation score. Both of the infants' gestation scores correlated with the mothers' Mexican orientation score. All the social support scales had strong intercorrelations with each other. Negative correlations were noted between Anglo orientation score, acculturation level, and acculturation score. A negative correlation was noted between generational status in U.S., the acculturation level, and acculturation score. These findings appear to be consistent with previous research findings when considering that the mean population of this study were second generation U.S. born and scored a level III on the acculturation scale denoting bicultural status. Chapter five provides a more detailed explanation and discussion of the findings. Table six provides an intercorrelational matrix depicting the relationships among the variables.

Table 6
Pearson's Product Moment Correlational Matrix

| N = 35 | WT. | AGE | EDUC | MAR | GES1 | GES2 | ACCS | ACCL | GUS | EMO | TAN | TLF | AOS | MOS |
|--------|--------|--------|--------|-------|--------|--------|---------|---------|--------|--------|--------|--------|---------|--------|
| WT. | 1.000 | .020 | -.090 | .295 | .731** | .634** | .070 | .091 | -.222 | .012 | .067 | .029 | .077 | .182 |
| AGE | .020 | 1.000 | .741** | .162 | .140 | .215 | .360* | .180 | -.030 | .226 | .116 | .197 | -.039 | .456** |
| EDUC | -.090 | .741** | 1.000 | .238 | .069 | .176 | .156 | .024 | -.010 | .125 | .008 | .091 | -.016 | .198 |
| MAR | .295 | .162 | .238 | 1.000 | .285 | .316 | .279 | .295 | -.247 | .314 | .278 | .309 | -.272 | .084 |
| GES1 | .731** | .140 | .069 | .285 | 1.000 | .886** | .202 | .084 | -.162 | -.014 | .081 | .015 | .092 | .383* |
| GES2 | .634** | .215 | .176 | .316 | .886** | 1.000 | .205 | .085 | -.274 | .066 | .067 | .067 | .148 | .448** |
| ACCS | .070 | .360* | .156 | .279 | .202 | .205 | 1.000 | .817** | -.382* | .141 | .073 | .123 | -.699** | .606** |
| ACCL | .091 | .180 | .024 | .295 | .084 | .085 | .817** | 1.000 | -.411* | .212 | .167 | .202 | -.700** | .352* |
| GUS | -.222 | -.030 | -.010 | -.247 | -.162 | -.274 | -.382* | -.411* | 1.000 | .004 | .075 | .026 | .224 | -.279 |
| EMO | .012 | .226 | .125 | .314 | -.014 | .066 | .141 | .212 | .004 | 1.000 | .906** | .991** | .089 | .295 |
| TAN | .067 | .116 | .008 | .278 | .081 | .067 | .073 | .167 | .075 | .906** | 1.000 | .954** | .142 | .259 |
| TLF | .029 | .197 | .091 | .309 | .015 | .067 | .123 | .202 | .026 | .991** | .954** | 1.000 | .108 | .290 |
| AOS | .077 | -.039 | -.016 | -.272 | .092 | .148 | -.699** | -.700** | .224 | .089 | .142 | .108 | 1.000 | .145 |
| MOS | .182 | .456** | .198 | .084 | .383* | .448** | .606** | .352* | -.279 | .295 | .259 | .290 | .145 | 1.000 |

**** Correlation is significant at the 0.01 level.**

WT. = Infants birth weight
AGE = Age of mother at time of delivery
MAR = Marital status of mother
GES1 = Gestational age of infant
GES2 = Gest. age +/- 2 weeks from term
TAN = Tangible support

*** Correlation is significant at the 0.05 level.**

EDUC = Education level of mother
ACCS = Acculturation scale score
ACCL = Acculturation level
GUS = Generation U.S. of mother
EMO = Emotional support
TLF = Total functional support.

AOS = Anglo Orientation
 Score

MOS = Mexican Orientation
 Score

CHAPTER V

Discussion and Implications

The data obtained in this study was examined by Pearson's product moment correlational analysis. The variables of age, gestation of infant, education level, generation status, acculturation level, the three social support categories of emotional support, tangible support and total function support scores, as well as the two acculturation scores for Anglo and Mexican orientation were assessed. This chapter will review the results obtained as well as discuss the implications and recommendations for future studies.

Research Question One

What is the extent of acculturation among Mexican-American pregnant adolescents?

The level of acculturation, acculturation scores, and the generational statuses in the United States were assessed. There was a significant correlation between the mothers' age and the acculturation scale score (.360) at the 0.05 significance level. This indicates that the older the mother's age, the longer she has been in the United States and has an increased acculturation level in the new culture. There was also a positive correlation between the maternal age and Mexican orientation score (.456) on a 0.01 significance level. This indicates that age does not change the cultural orientation even when the individuals become more acculturated to the new culture. This would be consistent with

the findings of Burke, et al. (1995), which found that familism is deeply engrained in the culture and does not seem to change in the process of acculturation.

There was a significant correlation found between the acculturation level and the acculturation scale score (.817) at the 0.01 significance level. There were also negative correlations between U.S. generation status and acculturation level (-.411) as well as the acculturation scale score (-.382) at the 0.05 significance level. This indicates that the less time the person has spent in the United States, the less acculturated they would be. This finding would be consistent with other research findings on acculturation levels (Scribner & Dwyer, 1989). A positive correlation was found between the acculturation score and Mexican orientation score (.606) at the 0.01 significance level. A positive correlation was found between the acculturation level and the Mexican orientation score (.352) at the 0.05 significance level. There were significant negative correlations between the two acculturation levels and Anglo orientation scores (-.699 to -.700) at the 0.01 significance levels. These findings were expected because a person from a Mexican culture would score higher on a scale for Mexican orientation than they would for Anglo orientation (Balcazar & Krull, 1999). Table seven depicts the various correlations between acculturation and pregnant Mexican-American adolescents.

Table 7

Pearson's Product Moment Correlation of Acculturation.

| N = 35 | AGE | ACCS | ACCL | GUS | AOS | MOS |
|--------|--------|---------|---------|--------|---------|--------|
| AGE | 1.000 | .360* | .180 | -.030 | -.039 | .456** |
| ACCS | .360* | 1.000 | .817** | -.382* | -.699** | .606** |
| ACCL | .180 | .817** | 1.000 | -.411* | -.700** | .352* |
| GUS | -.030 | -.382* | -.411* | 1.000 | .224 | -.279 |
| AOS | -.039 | -.699** | -.700** | .224 | 1.000 | .145 |
| MOS | .456** | .606** | .352* | -.279 | .145 | 1.000 |

** Correlation is significant at the 0.01 level * Correlation is significant at the 0.05 level

ACCS = Acculturation scale score

AOS = Anglo Orientation Score

ACCL = Acculturation level

MOS = Mexican Orientation Score

GUS = Generation U.S. of mother

Research Question Two

What are the Social Support systems among Mexican-American pregnant adolescents?

The three scores from the Norbeck Social Support Questionnaire were compared to the other variables to test if any correlations existed. The only significant correlations found were those between the three separate levels of social support measured.

Significant correlations were found between emotional support and tangible support (.906), between emotional support and total functional support (.991), as well as between tangible support and total functional support (.954) at the 0.01 significance level. This was expected as the NSSQ has previously been shown to have a high correlation status among the three network property items between 0.88 to 0.96 in previous studies by

Norbeck and Anderson (1989). Internal consistency was 0.89 or above for each of the three functional properties (Norbeck & Anderson, 1989). Table eight depicts the correlations among the social support scales.

Table 8

Pearson's Product Moment Correlations of Social Support

| N = 35 | EMO | TAN | TLF |
|--------|--------|--------|--------|
| EMO | 1.000 | .906** | .991** |
| TAN | .906** | 1.000 | .954** |
| TLF | .991** | .956** | 1.000 |

** Correlation is significant at the 0.01 level

EMO = Emotional support

TAN = Tangible support

TLF = Total functional support

Research Question Three

What were the relationships among the selected demographic variables, acculturation, and social support among Mexican-American pregnant adolescents?

The various demographic variables, acculturation score, acculturation status, and social support levels were assessed. There were no correlations found between acculturation status and social support among the variables. The variables that correlated at times with the acculturation status or score were discussed under research question number one. There was a weak correlation noted between marital status and emotional support (.314) as well as between marital status and tangible support (.278). There was a significant correlation found between the mothers' ages and the levels of education (.741)

at the 0.01 significance level. This finding was expected as the younger the mother's age, the less education is expected. There were no significant findings noted related to the infants' weights or marital status of the mothers. These findings were not reflective of previous research where the acculturation differences were also apparent for two social support scales (Balcazar et al., 1996). Balcazar et al. (1996) had found that within the highly acculturated group, there was greater support given by the baby's father, the subject's mother, and their relatives and friends.

Research Question Four

How do these variables affect the birth outcomes of Mexican-American pregnant adolescents?

The variables were assessed to determine if any revealed significant relationships affecting the birth outcomes of Mexican-American pregnant adolescents. Significant correlations were found for weight and gestational age (.731) and for weight and term delivery (.634) at the 0.01 significance level. There was also a significant correlation found between gestational age and term delivery (.886) at the 0.01 significance level. This can be explained by the fact that as the infant increases in gestational age, they also increase in size and come closer to term delivery. These correlations were ones that were to be expected as only one preterm delivery was found with this study. This finding was most likely because the majority of those who were in this research study were included during the last trimester of their pregnancy. A positive correlation was noted between gestational age and Mexican orientation status (.383) at the 0.05 significance level as well as a positive correlation between gestational term level and Mexican orientation status

(.448) at the 0.01 significance level. This indicates that the more Mexican oriented the subjects the closer to term they delivered. This appears to reflect the findings from Balcazar and Krull (1999) where low acculturation status was found associated with better birth weight (or term) outcomes than high acculturation status. Table nine depicts the correlations between these variables.

Table 9

Pearson's Product Moment Correlations of Variables.

| N = 35 | WEIGHT | GES1 | GES2 | MOS |
|--------|--------|--------|--------|--------|
| WEIGHT | 1.000 | .731** | .634** | .182 |
| GES1 | .731** | 1.000 | .886** | .383* |
| GES2 | .634** | .886** | 1.000 | .448** |
| MOS | .182 | .383* | .448** | 1.000 |

**Correlation is significant at the 0.01 level * Correlation is significant at the 0.05 level

GES1 = Gestational age of infant GES2 = Gestational age +/- 2 weeks from term

MOS = Mexican Orientation Score

Implications

The research did not reveal any significant findings between levels of total acculturation levels, social support status, and birth outcomes. This may be due to the homogenous group of subjects used and the levels of acculturation that they had. The findings may really be reflecting what has previously been documented (Balcazar & Krull, 1999; English et al., 1997; Balcazar, et al., 1996). The population that was chosen were

those who were self-identified Mexican-Americans and by necessity English speaking. Findings did reveal that as the MOS increases, the gestational age also increases. Subjects who were Spanish speaking only were eliminated from the study because the NSSQ was only in English. Due to difficulty with reliability issues when tools are translated and not tested, the researchers opted not to do so and thus limited the population of this study. This necessitated the elimination of approximately ten subjects that could have been part of the sample. Due to this elimination, many subjects (approximately 25%) that may have contributed different perspectives to the study were excluded.

It is important to note that 46% of the sample obtained were second generation born and 71% scored a level three on the acculturation scale which meant that they were of slight Anglo orientation and bicultural. Based on the results of previous research, this particular category of subjects would be expected to have fewer benefits from their limited cultural interactions. They would have a higher acculturation score and be more likely to have an increased risk for negative birth outcomes (Balcazar & Krull, 1999).

With the NSSQ, the present study was limited, as stated previously, to English speaking subjects only. No significant correlations were found with birth outcomes, acculturation or social support. The results also seemed to bear out previous research findings pertaining to whom the subjects felt were the greatest support to them. Several studies have found that family support is the most important source of support for pregnant teenagers. The results of this study found that among the sample assessed, 68% cited family as their source of support. Another 20% cited friends as their source of support. Only eight percent cited their spouse or significant other as a source of support. These results seem to reflect the findings of previous studies. In the study done by

Norbeck, Lindsey and Carrieri in 1982, they found that 97% of their sample reported the greatest number of subjects as a source of support was the family or relatives. In the category of friends, they reported 94% chose them as sources of support. It is interesting to note that in the present study, support from health care providers, counselors, or clergy were not reported as being sources of support. In the study by Norbeck et al. (1982), 90% of the subjects did not list these categories as sources of support.

Conclusion

The results of this study show minimal relationships between social support, levels of acculturation, and birth outcomes. However, once the results were studied in the context in which they were obtained, it appears that there may be some basis for future studies. The main difficulties were the small sample size and the lack of appropriate tools for use with this population. The subject sample size fell below the purposed goal of 100 subjects, increasing the chance of type II error. The sample size was limited because of subjects' tendency to not want to participate in the study. Another major limitation was that none of the tools administered has been developed with teenagers in mind. There may be some question regarding the accuracy of the results obtained not only due to the size of the sample but also due to the language utilized in the tools. Several terms within these tools may have been too complex for the adolescent's level of understanding and may have confounded the results. An entire section of the sample could not be a part of the study due to the lack of translation of the NSSQ into Spanish affected the results found. It is important to note that most of the subjects were second generation status in the United States.

Recommendations

Larger studies are needed to target acculturation, social support and pregnant adolescents' birth outcomes in comparison to other ethnic groups. Verification of cultural benefits that appear to be a part of the Mexican population will then be possible. Many of the studies have concentrated on the Hispanic populations in the California, Arizona and New York areas. Few studies exist relating to the border population and fewer exist with the subgroup of pregnant teenagers. This study should be replicated using a larger sample size and encompassing the younger age levels as well. Verrier et al. (1993) indicated that birth outcomes differed based on the age of the mother. This aspect of the study needs to be replicated to verify those results among the Mexican-American population. Translation of the social support instrument into Spanish would make a more powerful analysis possible. With the increased growth in the Lower Rio Grande Valley and the Mexican population, it is important to find health promotion practices that will decrease the risks that pregnant adolescent's encounter. By addressing specific risk factors that the adolescents encounter, nurses can assist with future health outcomes.

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APPENDIX A

SOCIAL SUPPORT QUESTIONNAIRE

**PLEASE READ ALL DIRECTIONS
ON THIS PAGE BEFORE STARTING**

Please list each significant person in your life on the right. Consider all the persons who provide personal support for you or who are important to you.

Use only first names or initials, and then indicate the relationship, as in the following example:

Example:

| | First Name or Initials | Relationship |
|----|------------------------|--------------|
| 1. | MARY T. | FRIEND |
| 2. | BOB | BROTHER |
| 3. | M.T. | MOTHER |
| 4. | SAM | FRIEND |
| 5. | MRS. R. | NEIGHBOR |
| | etc. | |

Use the following list to help you think of the people important to you, and list as many people as apply in your case.

- spouse or partner
- family members or relatives
- friends
- work or school associates
- neighbors
- health care providers
- counselor or therapist
- minister/priest/rabbi
- other

You do not have to use all 24 spaces. Use as many spaces as you have important persons in your life.

WHEN YOU HAVE FINISHED YOUR LIST, PLEASE TURN TO PAGE 2.

For each person you listed, please answer the following questions by writing in the number that applies.

- 0 = not at all
- 1 = a little
- 2 = moderately
- 3 = quite a bit
- 4 = a great deal

Question 1:

How much does this person make you feel liked or loved?

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____
18. _____
19. _____
20. _____
21. _____
22. _____
23. _____
24. _____

(EMO1)

Question 2:

How much does this person make you feel respected or admired?

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____
18. _____
19. _____
20. _____
21. _____
22. _____
23. _____
24. _____

(EMO2)

0 = not at all
1 = a little
2 = moderately
3 = quite a bit
4 = a great deal

0 = not at all
1 = a little
2 = moderately
3 = quite a bit
4 = a great deal

Question 3:

How much can you confide in this person?

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____
18. _____
19. _____
20. _____
21. _____
22. _____
23. _____
24. _____

[EMO3]

Question 4:

How much does this person agree with or support your actions or thoughts?

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____
18. _____
19. _____
20. _____
21. _____
22. _____
23. _____
24. _____

[EMO4]

Question 5:

If you needed to borrow \$10, a ride to the doctor, or some other immediate help, how much could this person usually help?

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____
18. _____
19. _____
20. _____
21. _____
22. _____
23. _____
24. _____

[AID5]

Question 6:

If you were confined to bed for several weeks, how much could this person help you?

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____
18. _____
19. _____
20. _____
21. _____
22. _____
23. _____
24. _____

[AID6]

Question 7:

How long have you known this person?

- 1 = less than 6 months
- 2 = 6 to 12 months
- 3 = 1 to 2 years
- 4 = 2 to 5 years
- 5 = more than 5 years

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____
18. _____
19. _____
20. _____
21. _____
22. _____
23. _____
24. _____

[DURATION]

Question 8:

How frequently do you usually have contact with this person? (Phone calls, visits, or letters)

- 5 = daily
- 4 = weekly
- 3 = monthly
- 2 = a few times a year
- 1 = once a year or less

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____
18. _____
19. _____
20. _____
21. _____
22. _____
23. _____
24. _____

[FREQUOM]

Number _____

[NOMO]

Date _____

PERSONAL NETWORK

| First Name or Initials | Relationship |
|------------------------|---------------|
| 1. _____ | _____ [SOU1] |
| 2. _____ | _____ [SOU2] |
| 3. _____ | _____ [SOU3] |
| 4. _____ | _____ [SOU4] |
| 5. _____ | _____ [SOU5] |
| 6. _____ | _____ [SOU6] |
| 7. _____ | _____ [SOU7] |
| 8. _____ | _____ [SOU8] |
| 9. _____ | _____ [SOU9] |
| 10. _____ | _____ [SOU10] |
| 11. _____ | _____ [SOU11] |
| 12. _____ | _____ [SOU12] |
| 13. _____ | _____ [SOU13] |
| 14. _____ | _____ [SOU14] |
| 15. _____ | _____ [SOU15] |
| 16. _____ | _____ [SOU16] |
| 17. _____ | _____ [SOU17] |
| 18. _____ | _____ [SOU18] |
| 19. _____ | _____ [SOU19] |
| 20. _____ | _____ [SOU20] |
| 21. _____ | _____ [SOU21] |
| 22. _____ | _____ [SOU22] |
| 23. _____ | _____ [SOU23] |
| 24. _____ | _____ [SOU24] |

PLEASE BE SURE YOU HAVE RATED EACH PERSON ON EVERY QUESTION. GO ON TO THE LAST PAGE.

9. During the past year, have you lost any important relationships due to moving, a job change, divorce or separation, death, or some other reason?

- _____ 0. No
_____ 1. Yes

(LOSS)

IF YES:

9a. Please indicate the number of persons from each category who are no longer available to you.

- | | |
|-----------------------------------|---------|
| _____ spouse or partner | (LOSS1) |
| _____ family members or relatives | (LOSS2) |
| _____ friends | (LOSS3) |
| _____ work or school associates | (LOSS4) |
| _____ neighbors | (LOSS5) |
| _____ health care providers | (LOSS6) |
| _____ counselor or therapist | (LOSS7) |
| _____ minister/priest/rabbi | (LOSS8) |
| _____ other (specify) _____ | (LOSS9) |

(LOSS10)

9b. Overall, how much of your support was provided by these people who are no longer available to you?

(LOSS11)

- _____ 0. none at all
_____ 1. a little
_____ 2. a moderate amount
_____ 3. quite a bit
_____ 4. a great deal

APPENDIX B

Acculturation Rating Scale-II (ARSMA-II)

[Circle a number between 1-5 next to each item that best applies]

| | Not at all | Very little or not very often | Moderately | Much or very often | Extremely often or almost always |
|--|------------|-------------------------------------|------------|-----------------------|---|
| 1.) I speak Spanish | 1 | 2 | 3 | 4 | 5 |
| 2.) I speak English | 1 | 2 | 3 | 4 | 5 |
| 3.) I enjoy speaking Spanish | 1 | 2 | 3 | 4 | 5 |
| 4.) I associate with Anglos | 1 | 2 | 3 | 4 | 5 |
| 5.) I associate with Mexicans and or Mexican Americans | 1 | 2 | 3 | 4 | 5 |
| 6.) I enjoy listening to Spanish language music | 1 | 2 | 3 | 4 | 5 |
| 7.) I enjoy listening to English language music | 1 | 2 | 3 | 4 | 5 |
| 8.) I enjoy Spanish language TV | 1 | 2 | 3 | 4 | 5 |
| 9.) I enjoy English language TV | 1 | 2 | 3 | 4 | 5 |
| 10.) I enjoy English language movies | 1 | 2 | 3 | 4 | 5 |
| 11.) I enjoy Spanish language movies | 1 | 2 | 3 | 4 | 5 |
| 12.) I enjoy reading (e.g. books in English) | 1 | 2 | 3 | 4 | 5 |
| 13.) I enjoy reading (e.g. books in Spanish) | 1 | 2 | 3 | 4 | 5 |
| 14.) I write (e.g. letters in English) | 1 | 2 | 3 | 4 | 5 |
| 15.) I write (e.g. letters in Spanish) | 1 | 2 | 3 | 4 | 5 |
| 16.) My thinking is done in the English language | 1 | 2 | 3 | 4 | 5 |
| 17.) My thinking is done in the Spanish language | 1 | 2 | 3 | 4 | 5 |
| 18.) My contact with Mexico has been | 1 | 2 | 3 | 4 | 5 |
| 19.) My contact with the USA has been | 1 | 2 | 3 | 4 | 5 |
| 20.) My father identifies or identified himself as "Mexican" | 1 | 2 | 3 | 4 | 5 |
| 21.) My mother identifies or identified herself as "Mexican" | 1 | 2 | 3 | 4 | 5 |

| Not at all | Very little or not very often | Moderately | Much or very often | Extremely often or almost always |
|------------|-------------------------------------|------------|-----------------------|---|
|------------|-------------------------------------|------------|-----------------------|---|

| | | | | | |
|--|---|---|---|---|---|
| 22.) My friends, while I was growing up were of Mexican origin | 1 | 2 | 3 | 4 | 5 |
| 23.) My friends, while I was growing up were of Anglo origin | 1 | 2 | 3 | 4 | 5 |
| 24.) My family cooks with Mexican foods | 1 | 2 | 3 | 4 | 5 |
| 25.) My friends now are of Anglo origin | 1 | 2 | 3 | 4 | 5 |
| 26.) My friends now are of Mexican origin | 1 | 2 | 3 | 4 | 5 |
| 27.) I like to identify myself as an Anglo American | 1 | 2 | 3 | 4 | 5 |
| 28.) I like to identify myself as a Mexican-American | 1 | 2 | 3 | 4 | 5 |
| 29.) I like to identify myself as a Mexican | 1 | 2 | 3 | 4 | 5 |
| 30.) I like to identify myself as an American | 1 | 2 | 3 | 4 | 5 |

End of Scale One

| Not at all | Very little or not very often | Moderately | Much or very often | Extremely often or almost always |
|------------|-------------------------------------|------------|-----------------------|---|
|------------|-------------------------------------|------------|-----------------------|---|

| | | | | | |
|--|---|---|---|---|---|
| 1.) I have difficulty accepting some ideas held by Anglos | 1 | 2 | 3 | 4 | 5 |
| 2.) I have difficulty accepting certain attitudes held by Anglos | 1 | 2 | 3 | 4 | 5 |
| 3.) I have difficulty accepting some behaviors exhibited by Anglos | 1 | 2 | 3 | 4 | 5 |
| 4.) I have difficulties accepting some values held by some Anglos | 1 | 2 | 3 | 4 | 5 |
| 5.) I have difficulty accepting certain practices and customs commonly found in some Anglos | 1 | 2 | 3 | 4 | 5 |
| 6.) I have, or think I would have, difficulty accepting Anglos as close personal friends | 1 | 2 | 3 | 4 | 5 |
| 7.) I have difficulty accepting ideas held by some Mexicans | 1 | 2 | 3 | 4 | 5 |
| 8.) I have difficulty accepting certain attitudes held by some Mexicans | 1 | 2 | 3 | 4 | 5 |
| 9.) I have difficulty accepting some behaviors exhibited by Mexicans | 1 | 2 | 3 | 4 | 5 |
| 10.) I have difficulty accepting some values held by some Mexicans | 1 | 2 | 3 | 4 | 5 |
| 11.) I have difficulty accepting certain practices and customs commonly found in some Mexicans | 1 | 2 | 3 | 4 | 5 |
| 12.) I have, or think I would have, difficulty accepting Mexicans as close personal friends | 1 | 2 | 3 | 4 | 5 |
| 13.) I have difficulty accepting ideas held by some Mexican Americans | 1 | 2 | 3 | 4 | 5 |
| 14.) I have difficulty accepting certain attitudes held by Mexican Americans | 1 | 2 | 3 | 4 | 5 |
| 15.) I have difficulty accepting some behaviors exhibited by Mexican Americans | 1 | 2 | 3 | 4 | 5 |
| 16.) I have difficulty accepting some values held by Mexican Americans | 1 | 2 | 3 | 4 | 5 |

| Not at all | Very little or not very often | Moderately | Much or very often | Extremely often or almost always |
|------------|-------------------------------------|------------|-----------------------|---|
|------------|-------------------------------------|------------|-----------------------|---|

| | | | | | |
|---|---|---|---|---|---|
| 17.) I have difficulty accepting certain practices and customs commonly found in some Mexican Americans | 1 | 2 | 3 | 4 | 5 |
| 18.) I have, or think, I would have, difficulty accepting Mexican Americans as closer personal friends | 1 | 2 | 3 | 4 | 5 |

APPENDIX C

INFORMED CONSENT FORM

I, _____, have been informed by Enriqueta Garcia RN or Martha Ramirez, RN that I am one of approximately 100 subjects that have been asked to volunteer for this survey entitled, "The relationship of acculturation and social support to birth outcomes of pregnant Mexican-American adolescents." This survey is designed to examine how different levels of acculturation and social support affect the pregnancy outcomes of Mexican-American teenagers. I understand that I am to put no name on the survey, just my first and last initials. My name and code number will be kept with the school nurse for the investigators to contact me after my baby is born. I agree to complete the survey to the best of my ability. I will hand in my completed survey to the investigator after placing them in the envelope provided. I understand that participation in this survey is voluntary and that I may withdraw at any time without penalty. I understand that I will be contacted after the birth of my baby to get the babies birth date, birth weight and length. I understand that no other information will be required regarding my pregnancy or the delivery of my baby. I understand that all information obtained will be used in a general manner and at no time will my identity be revealed.

This research has been reviewed and approved by the Institutional Review Board-Human Subject's In Research. For research related problems or questions regarding subject's rights, the Human Subject's Committee may be contacted through Dr. Juan Gonzalez, Ph. D., Chair, at 381-2880.

I have read and understand the explanations provided to me and voluntarily agree to participate in this study.

Signature of Student _____ Date ____/____/____
 Signature of Parent _____ Date ____/____/____
 Signature of Witness _____ Date ____/____/____

APPENDIX D



DEPARTMENT OF HEALTH AND KINESIOLOGY
THE UNIVERSITY OF TEXAS - PAN AMERICAN

1201 West University Drive • Edinburg, Texas 78842-1299 • (361) 381-3501 Office • Fax (361) 381-3500

MEMORANDUM

To: Enriqueta Garcia and Martha Ramirez-Nursing Department
Graduate Advisor, Dr. C. Huerta, Nursing Department

From: Dr. Juan Gonzalez, Human Subject Committee Chair *JG*

Subject: Protocol for "The Relationship of Acculturation and Social Support to Birth Outcomes of Pregnant Mexican-American Adolescents"

Date: February 8, 2000

The above referenced protocol has been:

- Approved (committee review)
- Approved (expedited review, IRB #39)
- Conditionally approved (see remarks below)
- Tabled for future considerations
- Disapproved (see remarks below)

by the Institutional Review Board – Human Subjects in Research.

As stipulated in the guidelines of the IRB, this protocol will be subject to annual review by the IRB and any deviations from the protocol or change in the title must be resubmitted to the Board. At the conclusion of the study, you must fill out the enclosed report form. Good luck with your investigation.

cc: George Avellano, AVPAA/GP&R

APPENDIX E

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2-07-00
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Date:

PLEASE REMIT ONE (1) SIGNED COPY OF THE AGREEMENT,
ALONG WITH ANY APPLICABLE PAYMENT TO THE ADDRESS LISTED ABOVE. THANK YOU.

APPENDIX F

1995 NESQ Scoring Instructions - page 11

Request Form

I request permission to copy the 1995 revised version of the Norbeck Social Support Questionnaire (NSSQ) for use in research in a study entitled:

The relationship of acculturation and social support to birth outcomes of pregnant Mexican-American adolescents.

I am aware that the revised 1995 Scoring Instructions should be used with this version of the NESQ.

Martha R. Ramirez 1/25/00
Signature of Investigator Date

Martha R. Ramirez
Typed or Printed Name of Investigator

RN - SMISN

Position

University of Texas, Pan-American
Institution

290 China St

Address

San Benito, TX 78586

City, State, (Country), ZIP Code

Permission is hereby granted to copy the NESQ for use in the research described above.

Jane S. Norbeck

Jane S. Norbeck

Date

1/25/00

Please send or fax two signed copies of this form to:

Jane S. Norbeck, RN, DNSc
Professor and Dean
School of Nursing, Box 0804
University of California, San Francisco
501 Parnassus Avenue
San Francisco, CA 94143-1804
FAX: (415) 476-8707

sent 1/25

APPENDIX G

DEMOGRAPHICS WORK SHEET

Initials: _____

Age: _____ DOB: _____

Marital Status: _____

What is your religious preference? _____

Are you active? Y: _____ N: _____

Current Grade Level:

- a.) 7th
- b.) 8th
- c.) 9th
- d.) 10th
- e.) 11th
- f.) 12th
- g.) Other

Ethnicity:

- a.) Anglo-American
- b.) Mexican-American
- c.) Other

Due date: _____ Baby's DOB: _____ Wt. _____ Length: _____ School: _____

LMP (last menstrual period) _____

Family Structure:

Live with

- a.) One parent
- b.) Two parents
- c.) Grandparents
- d.) Other (please state) _____

Circle the generation that best applies to you. Circle only one

1. 1st Generation=You were born in Mexico or other country
2. 2nd Generation=You were born in USA, either parent born in Mexico or other country
3. 3rd Generation=You were born in USA and all grandparents born in Mexico or other country
4. 4th Generation=You and your parents born in the USA and at least one grandparent born in Mexico or other country with remainder born in the USA.
- 5th Generation=You and your parents born in the USA and all grandparents born in the USA.

VITA

Enriqueta Garcia was born in San Luis Potosi, Mexico. She is the daughter of Justino and Rosita Garcia of Pharr, Texas. She is one of six children. She graduated from Pharr-San Juan-Alamo High School in 1983. In 1983, she entered the University of Texas-Pan American at Edinburg, Texas. In 1988, she received an Associate of Applied Science Degree. She also obtained a Bachelor of Science Degree in Interdisciplinary Studies with a minor in Special Education in 1992 and a Bachelor of Science degree in Nursing in 1996. In 1997, she entered the Graduate School of Nursing at the University of Texas Pan American. She was inducted into the Nursing Honor Society in November 1999.

Enriqueta has served as a staff nurse, a charge nurse, a system manager, an perinatal educator, a basic life support instructor, and an assistant director in labor and delivery at McAllen Medical Center. Since June 1998, she has been employed with Steven M. Gonzalez, LLP as a legal nurse consultant. She is certified in Inpatient Obstetrics since 1993 and as a Legal Nurse Consultant since 1998. In May 2000, she received her Master of Science degree in the Family Nurse Practitioner Track from the University of Texas Pan-American at Edinburg, Texas. She currently resides in Pharr, Texas.

Permanent Address: P.O Box192
Pharr, Texas 78577

VITA

Martha Ruth Ramirez was born in Kingston, Pennsylvania. She is the daughter of Stephen W. Westfall and Eleanor F. Westfall. She graduated from Faith Academy High School, Manila, Philippines in 1982. She attended Oral Roberts University in 1983 to 1984 where she met and married her husband, Robert Ramirez, Jr. During the years of 1984 to 1990, she was a mother and wife. She received a Bachelor of Science in Nursing degree in December of 1993. After graduating with her BSN, she was inducted into Sigma Theta Tau International, Epsilon Eta Chapter. During the years of 1994 through January 1996, she was employed full-time at Memorial Hospital in Belleville, Illinois. She worked as a staff nurse or charge nurse on various units including Medical, Oncology, Psychiatric, Pediatric, Obstetrical, Nursery, Telemetry, Intensive Care and Emergency Room. In January, 1996, she moved to the Lower Rio Grande Valley. She is employed full-time with Valley Baptist Medical Center in Harlingen, Texas in the Newborn Neonatal Intensive Care Unit. Her work experience included co-charge nurse, charge nurse, parent lifesaver educator, as well as new employee educator. She was active as a preceptor for students from area Universities who rotated through the unit. In August 1997, she entered Graduate School at the University of Texas Pan-American at Edinburg, Texas. While in Graduate School, she was inducted as a charter member to the Sigma Theta Tau International Pi Omicron Chapter. She remains married to Robert Ramirez Jr. from San Benito, Texas. They reside in San Benito, Texas, with their children Elana Marie, Stephen Robert, Reina Nicole, and Leah Richelle Ramirez. In May, 2000, she received her Master of Science degree in the Family Nurse Practitioner Track from the University of Texas Pan-American at Edinburg, Texas.

Permanent Address: 220 China St.

San Benito, Texas 78586