

Adolescent Pregnancy along the Texas-Mexico Border: A Systematic Analysis of Risk and Resiliency in a Mexican American Population*

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Abstract

This study offers a systematic secondary analysis determining whether birth risk factors of adolescents under the age of 20 living in the Lower Rio Grande Valley region of Texas were higher compared to those of the United States and those of the State of Texas. Aggregated data base archives of the three areas were compared related to adolescent pregnancies and births. The researchers also reviewed 27 anonymous case records of pregnant adolescents who were attending a school-based pregnancy program in the Rio Grande Valley. Current literature (Child Trends, 2007) indicates that Latina adolescent women of Mexican American origin living in Texas have the highest birth rate nationally of this age group. The researchers anticipated finding a higher number of adolescent birth risk factors in the Lower Rio Grande Valley due to the predominantly young Mexican American population and other factors such as high poverty rates associated with adolescent pregnancy. However our analyses did not fully support our assumptions. Except for the factor “maternal weight gain of less than 15 pounds,” the geographic area had percentages that were similar or better than those of the United States and Texas. The researchers speculated that the Latina/o family system or familismo may have accounted for the resiliency shown by Valley sample in mediating birth risks. The researchers encourage future investigations on how the

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Latina/o Mexican American family system may mediate adolescent birth risks. These findings have implications for providing culturally competent evidence based interventions across cultures and for improving social welfare policy.

Resumen

Este artículo presenta un análisis sistemático de datos secundarios con el cual se intenta determinar si los factores de riesgo de adolescentes embarazadas menores de 20 años que viven en la región del Valle Bajo del Río Bravo en Texas, son mayores en comparación con los de la población general de los Estados Unidos y del estado de Texas. Se compara la relación entre embarazos adolescentes y nacimientos en bases de datos agregados de estas tres áreas. Asimismo se examinaron 27 expedientes anónimos de adolescentes embarazadas que asistían a una escuela como parte de un programa de asistencia escolar de mujeres embarazadas en el Valle del Río Grande. La literatura reciente (Child Trends, 2007) indica que las adolescentes latinas de origen mexicanoamericano que viven en Texas, tienen la mayor tasa de natalidad nacional en este grupo de edad. En la investigación se anticipaba encontrar un alto número de factores de riesgo en adolescentes embarazadas en el Valle Bajo del Río Grande debido a la predominante población mexicano-americana en esta zona y a las altas tasas de pobreza asociadas con el embarazo adolescente. Sin embargo, los resultados del estudio no apoyan plenamente esta hipótesis. A excepción de la variable “peso de embarazo menor de 15 libras,” en esta zona geográfica se encontraron porcentajes similares o mejores que los de los Estados Unidos y Texas. Los autores especulan que el sistema latino de familia (el *familismo*) debe tomarse en cuenta para entender la resiliencia que se encontró en este estudio como factor que media en los riesgos de nacimiento. Los autores urgen a desarrollar investigaciones sobre cómo las familias latinas y mexicanoamericanas pueden reducir los riesgos de embarazo entre adolescentes. Estas conclusiones buscan proponer programas de intervención culturalmente competentes y mejorar las políticas de bienestar social.

Keywords

Latino adolescent pregnancy, adolescent prenatal care, Texas- Mexico border, Latino family values.

Palabras clave

Embarazo adolescente de población latina, cuidado prenatal adolescente, frontera Texas- México, valores familiares latinos.

Introduction

Pregnant adolescents and their children are a population vulnerable to poor birth outcomes. *Healthy People 2010*, a major health surveillance study published through the U.S. Department of Health and Human Services (2000) defines birth risks as (a) maternal morbidity, (b) fetal death, (c) low birth weight or weighing less than 5.5 pounds, (d) premature births, or being born at 37 weeks or less gestation, and (e) congenital deformities and developmental and psychological problems. These risk factors present serious long-term problems for the mother, the child, and the society-at-large (Annie E. Casey Foundation, 2007; March of Dimes, 2008a; U.S. Department of Health and Human Services, 2000).

For the first time since 1991, U.S. birth data revealed an increase in adolescent births over the prior year from 40.5 births per 1,000 adolescents in 2005 to 41.9 per 1,000 adolescents ages 15 to 19 in 2006. This increase raises concerns about the potential birth risks (Hamilton, Martin, & Ventura, 2007; National Center for Health Statistics, 2007).

Starting prenatal care in the first trimester of pregnancy is the service most likely to lower risks associated with pregnancy and birth (U.S. Department of Health and Human Services, 2006). Prenatal care consists of regular examinations to check maternal blood pressure and weight, as well as to monitor the infant's growth. Nutritional counseling, preparation for labor and delivery, and information on care of the newborn are offered. Adequacy of care is measured by combining the timing of initiation of services with the number of visits. Prenatal care may be obtained at physician offices, hospitals, out-patient clinics, and Planned Parenthood centers. The physician obstetrician is usually the major provider of service (American Academy of Pediatrics and American College of Obstetricians and Gynecologists, 1997; March of Dimes, 2008b).

The United States adolescent population has the lowest percentage of all populations of initiating prenatal care on a timely basis. Reasons for this include lack of knowledge of pregnancy symptoms, denial of pregnancy, shame, and fear of repercussions (Wendekier & Twal, 2003).

The United States continues to have the highest adolescent birth rate of economically developed nations, a rate that is almost twice that of Great Britain and Canada and approximately four times that of Sweden and France. Each year approximately 750,000 women ages 15 to 19 years become pregnant in the U.S. (Annie E. Casey Foundation, 2007; Guttmacher Institute, 2006).

Latina adolescent females had the highest birth rates of all ethnic groups in the U.S. in 2003, with 82.6 per 1,000 adolescent females. This figure is nearly twice that of 41.7 per 1,000 adolescents for all backgrounds (Ryan, Franzetta, & Marlowe, 2005). Adolescent females of Mexican origin between the ages of 15 to 19 years had the highest birth rate of all Latina groups in 2005, at 95.4 per 1,000 births (Martin et al., 2007).

Texas currently has the highest rate of adolescent pregnancy in the United States; reaching 63 births per 1,000 adolescents aged 15 to 19 in 2006. Of added concern is that Texas also has the highest levels of repeat teen births, at 24% (Child Trends, 2007).

This study is significant in that it focuses on the predominately Mexican American, pregnant and recent adolescent birth mothers of the Lower Rio Grande Valley region north of the Mexican border. Our purpose was to perform a secondary analysis of data that compares pregnancy and birth risk factors of the adolescent population of the United States, the State of Texas, and the socio-economically vulnerable Lower Rio Grande Valley in order to determine whether the population of this area had a higher rate of risk factors which would, in turn, necessitate designing and implementing improved and targeted services. Specifically, the researchers analyzed the following quantitative factors: (a) Commencement of prenatal care, (b) premature births, (c) fetal deaths, (d) low birth weight, (e) maternal weight gain of more than 44 pounds, and (f) maternal weight gain of less than 15 pounds. These factors have been determined by the United States

Department of Health and Human Services (2000) to indicate potential birth risks. Additional qualitative 27 case records were reviewed from students attending a program for pregnant adolescents in the Lower Rio Grande Valley. Some of the issues addressed in the records were: (a) what would improve prenatal care services (b) how did your family react to your pregnancy, (c) what do you feel about your pregnancy.

The rationale for selecting the Lower Rio Grande Valley is that the area is known to have one of the highest poverty rates in the United States. It is located within the State of Texas, which currently has the highest rate of adolescent pregnancies. The researchers looked at weight gain factors during pregnancy due to the high rates of obesity and diabetes in the region. It was anticipated that these factors, in addition to projections that the number of Latinas/os in the Valley between 15 to 19 years of age will increase from approximately 100,000 in 2004 to almost 134,000 by the year 2020, predispose the area to be especially susceptible to risk factors related to adolescent pregnancy. Increased birth risks have far-reaching implications for health care, education, social services, housing, employment, and social planning (Child Trends, 2007; Martin et al., 2007; Texas Department of State Health Services, 2008).

The Latino Population: Demographics

The Latina/o population is the fastest growing overall group in the United States, increasing by 40% from 1990 to 2000. Over 66% of U.S. Latina/os are of Mexican origin or descent. Latina/os are expected to become the majority population group by 2020 in the country. The Latina/o population between the ages of 15 to 19 years is projected to increase nationally by 50% by 2025 (Child Trends, 2003).

The female population in the State of Texas between the ages of 15 to 19 years was just under 788,800 in 2000. This group is expected to grow to more than 860,000 by 2010 due to high fertility rates and strong international immigration rates (Texas Department of State Health Services, 2007a; Vigness & Odintz, 2007.)

The Lower Rio Grande Valley: Environmental Context and Social Conditions

The Lower Rio Grande Valley, or the Valley, as it is known to local residents, is an unusual area along the northern border of Mexico known simultaneously for its explosive economic growth and some of the highest poverty rates in the United States. The area is one of the most heavily crossed borders in the United States, with legal and illegal crossings bringing multitudes of health and social problems to a heavily overburdened and inadequate health care system (FedStats, 2008).

The Lower Rio Grande Valley lies in the southernmost part of Texas and is comprised of nearly 4,870 square miles encompassing Cameron, Hidalgo, Starr, and Willacy counties. With the exception of Willacy, each county lies along the United States-Mexico border. The counties have an approximate total population of 1,162,030, in addition to approximately 25,000 unauthorized migrants from Mexico and Central America. During winter months, approximately 143,000 retired individuals from the northern part of the United States also make the Valley their migratory home (Vigness & Odintz, 2007; U.S. Census Bureau, n.d.).

The Valley is an area of overwhelming economic and social inequalities, experiencing problems similar to those of developing countries with high rates of poverty and unemployment, unequal distribution of resources, and poor health care and education. Simultaneously, it has witnessed remarkable economic growth in the last 15 years due to the North American Free Trade Agreement (NAFTA) and the development of maquiladoras, or industrial plants for manufacturing such things as automotive equipment and electronics on the Mexican side of the border. However, the economic growth has not filtered to the general population (Lopez, 2006). While it is one of the fastest growing regions in terms of population of the United States, with the city of McAllen in Hidalgo County being ranked fourth in the Nation, the Valley is one of the poorest and most underserved areas of the United States (Immroth & Lukenbill, 2007; Seth & Arriola, 2002; Texas Department of State Health Services, 2007b).

The four counties that comprise the Lower Rio Grande Valley region are recognized by the Department of Health and Human Services as Medically Underserved Areas (MUA). The designation is given to areas that have more than 3,500 individuals per physician, high poverty rates,

high infant mortality rates, and large numbers of live births. Because of the high rate of migration and difficult economic factors, people from each side of the border often utilize health care services on the other side. Utilization of health care services on the United States side has burdened an already over-taxed system (Texas Medical Association, 2008).

Diseases in the Texas-Mexico border population are more difficult to treat due to the transient nature of the population. Autoimmune disorders and communicable diseases are of serious concern. Tuberculosis had a rate 192% higher than the State of Texas in 2001.

Gastrointestinal disorders and rarer diseases such as dengue and cholera are other health hazards. Latina/os demonstrate a higher predisposition for diabetes influenced by rates of obesity of 34% of the Valley population due to a high-fat, low-fiber diet. High rates of Type-1 and childhood-onset Type-2 diabetes prevail. An estimated eight percent of the population age 18 and over in the Valley in 2001 had diagnosed diabetes, compared to just over six percent for Texas as a whole. Figures on childhood diabetes are not collected in the United States at this point (Warner & Jahnke, 2003; National Diabetes Information Clearinghouse, 2005; Ryan et al., 2005).

The poverty rate of 30.4% for the total population of the Valley in 2004 was nearly twice that of Texas. The average income of Valley residents for the previous year was less than \$27,000. Of the approximately 1,128,000 people living in the area in 2004, more than 400,000 lived in about 1,500 unincorporated substandard shanty towns known as colonias that often lack basic services such as water and plumbing. Many living in these areas are undocumented migrants (Texas Department of State Health Services, 2007a; López, 2006).

Texas had the highest rate of children without health insurance in the nation in 2006, with 20.3% or over 1.4 million children, compared to the National average of 11.6%. Of this population, 30% were living in the area along the Texas-Mexico border, though over 80,000 are estimated to be eligible for the State Medicaid or Children's Health Insurance Program (CHIP) – along the border. Almost 40% of all Latina/o Texans do not have health insurance (Texas Hospital Association, n.d.; Center

for Civic Engagement, 2008).

It is anticipated that the rate of adolescent pregnancy and related birth risks will continue to grow because the population of the Valley between the ages of 15 to 19 years is projected to increase more than 30% between 2004 and 2020 (Texas Department of State Health Services, 2008). This necessitates particular attention by researchers and service providers involved in health care.

Methodology

Systematic secondary analysis is emerging as a viable methodology given the increasing accessibility of database archives that have relevance to social problems (Sales, Lichtenwalter, & Fevola, 2006). Researchers have long recognized secondary analysis as a key option where existing data sets can offer insight in social issues of public concern. Often the primary utility of these data sets have been for managing field-based administrative information and to serve as official records for governmental agencies. Hence, they are typically underutilized and remain unexplored for new epistemological discovery (Petrou, Sach, & Davidson, 2001) Secondary research methods such as was used for this study suggest professionally responsible use of public data archives that can be instrumental for informing scholarly inquiry (Grinnell, 2005).

While there are multiple types of secondary data analysis, two methods used for this study included: 1) aggregated quantitative data analysis and 2) qualitative case record analysis. These two methods we employed are further outlined below.

Aggregated Data Analysis

Aggregate-level data analysis in this study consisted of using descriptive statistics derived from quantitative micro-level existing data sets from both government and private archives. In our analysis individual data units were no longer identifiable. During this systematic analysis, we compared descriptive statistics outlining risk factors reported by the State of Texas to National data sets outlining overall United States rates of prevalence.

Specifically for this study, our aggregated data sources co-opted several key public health surveillance information systems as well as private organizational data. While multiple possible data bases were explored, only those data sets were included where we found compatible variables and sample populations. Selective sampling limited the data sets analyzed to females <20 years old. Data base validity was triangulated using multiple secondary data sources and only data that appeared valid across divergent sources was incorporated into our research findings. The specific aggregated data sets qualified for inclusion in this systematic secondary analysis were: (a) Annie E. Casey Foundation, 2007; (b) Child Trends, 2007; (c) FedStats, 2008; (d) Texas Department of State Health Services, 2004; and (e) the U.S. Department of Health and Human Services, 2000.

Data collection was obtained through public access to the Internet and from published reports. Follow-up emails and/or telephone contacts were made with database managers when questions with data or variables emerged. Out systematic data analysis included: (a) name and affiliation of the data base administration, (b) the data collection period, (c) sampling method utilized; (d) size of the sample, (e) data collection method, (f) the data sources, and (g) any notes provided about data base administrators. After the data sets were downloaded, tables of comparison were made, descriptive statistics analyzed, and data differentiations noted and results outlined.

Case Record Analysis

The second type of data used to enhance the inductive outcomes of this study was qualitative case record analysis. As suggested by Grinnell (2005) and Rubin and Babbie (2005) qualitative secondary data sets can include both descriptive narratives and case records. The researchers relied on secondary research data sets of anonymous client logs (N=27) by pregnant adolescents to explore and understand birth risk factors as voiced by pregnant teens to their case managers. These secondary records were provided by the Teenage Parenting Assistance Program (TPAP), a school-based pregnancy program located in the Rio Grande Valley. The qualitative theme of these case record narratives offered supplemental insights into the thinking and perspectives of pregnant

adolescents. This type of information would not have been obtainable through quantitative data. As discussed previously, some of the cased record topics were related to: (a) what would improve your prenatal care services? (b) how did your family react to your pregnancy (c) what do you feel about your pregnancy.

Limitations of Methodology

Performing secondary analysis intrinsically suggests some methodological limitations. Beyond the advantages of accessibility and cost effectiveness, our secondary analysis presented problems described in the literature as lack of standardization, omission of relevant variable(s), data integrity issues, and an overabundance of data (Grinnell, 2005, Sales et al, 2006). Lack of standardization may have negatively impacted our study reliability. Since primary data was not available, there was no real mechanism we could use for checking this. Another problem was that the many existing data sources offered much information of relevance, but some data bases we would have liked to have used omitted key points and had to be excluded. For example, data sets existed that described the increase of disease risk in the Lower Rio Grande Valley without clarifying which diseases were being addressed. Additionally we could not attest to the data sampling, collection and entry integrity. Staff from both the public and private organizations managed the existing data bases we selected and the data integrity relied solely on the overall quality and training of these administrators and staff.

One other issue of concern to the researchers was that the statistics offered for public access were not always timely or relevant to current issues. For example, the set of data provided by the Texas Department of State Health Services had the year 2004 for the latest data available on several pregnancy related issues, however, it was Child Trends (2007) statistics that revealed that Texas has the highest percentage of adolescent pregnancies at 6.3% for those 15 to 19 years of age and the highest percentage (24%) for repeat teen births in the United States. While challenges to data analysis remained, the archives explored revealed important insights that are highlighted as follows.

Results

The study explored birth risk factors identified as critical by the U.S. Department of Health and Human Services (2000) and other health surveillance groups: (a) late commencement of prenatal care, (b) premature births, (c) fetal mortality, (d) low birth weight, (e) maternal weight gain of more than 44 pounds, and (f) maternal weight gain of less than 15 pounds.

Systematic comparison of the data sources revealed that 96% of the Rio Grande Valley population <20 is Latina/o who may be at-risk. The poverty level of 45% for this population of the Valley was twice that of the State of Texas. The large percentage of adolescents who are poor compounded by increasing fertility rates is of serious concern as poverty is one of the leading indicators for early sexual relations and adolescent pregnancies. Women who are poor are more likely to have poor diets and less-than-adequate prenatal care leading to premature births and low birthweight infants. See Table 1 for population demographics on those under 20 years of age.

Table 1. Population Demographics <less than 20 years old

	USA	Texas	Rio Grande Valley
Population <20 Years Old (2004)	77,402,014	6,601,872	418,280
Population of Latino ethnicity <20 Years Old (2004) (except where indicated)	35% (15-19 years; 2000)	43%	96%
Population below federal poverty level <20 Years Old (except where indicated)	10.4% (2003-05)	23% (2004)	45% (2003-05) For <18 Years Old

Sources: Child Trends, 2007; PEW Hispanic Center, 2007; PRAMS, 2007; Texas Department of State Health Services, 2004; U.S. Census Bureau, 2004.

Note: Contains the latest available data

Over 16% ($n = 4,389$) of the births in 2004 in the Rio Grande Valley were to mothers 20 years old and under. The birthrate was approximately two and one-half percent higher than the State rate and almost six percent higher than National rates. Of the women in the Valley, 96% were Latinas and slightly over 69% started prenatal care in the first trimester (PRAMS, 2007; U.S. Department of Health and Human Services, 2002; March of Dimes, 2008a). Prenatal care rates were similar across the three geographic areas.

Almost 14% of the adolescent births in the Rio Grande Valley were premature, or born at less than 37 weeks gestation. This is less than one-half percent of State rates and about one percent less than the National rate. Only a small number of births, or 0.71%, resulted in fetal death compared to .62 % of the State rate and the much higher rate of 9.2 % of the National figures. Of the total live births to adolescents, 7.5% were of low birthweight compared to the higher rates of 10.6% for the State and 11.8% for the Nation. Only about 9% of the mothers had a weight gain of more than 44 pounds during pregnancy while the State rate where almost 5% more and the National rate were over two and one-half times higher. Regarding weight gain of less than 15 pounds during pregnancy, nearly 20% of the mothers gained less than 15 pounds compared to a much lower rate of 9.3% for the State. National figures for weight gain less than 15 pounds were not available. See Table 2 for comparison birth risk data.

Table 2. Adolescent Pregnancy and Birth Risk Data

	USA	Texas	Rio Grande Valley
Adolescent Birth Rates (per 1,000 adolescents) for <20 Years Old	10.4 (2003-05)	13.7 (2004)	16.2 (2004)
1st trimester prenatal care for <20 Years Old (2004)	69.1%	70.4%	69.2%
Preterm births at <37 weeks for <20 Years Old (2004)	14.3%	13.9%	13.5%
Fetal deaths for <20 Years Old (2004)	9.2%	.62%	.71%
Low birth weight or <2500 grams for <20 Years Old (2004)	11.8%	10.6%	7.5%
Maternal weight gain >44 pounds for <20 Years Old (2004)	25% (2005)	15.8%	9.1%
Maternal weight gain <15 pounds for <20 Years Old (2004)	n/a	9.3%	19.8%

Sources: Child Trends, 2007; PEW Hispanic Center, 2007; Texas Department of State Health Services, 2004; U.S. Census Bureau, 2004; Martin et al., 2007.

Note: Contains the latest available data

The 27 student case records were analyzed and revealed that 40% ($n = 10$) of 25 responding stated that they “would not have done anything differently to avoid the pregnancy if they could have.” All but two stated that their families were “either angry or hurt” when learning of the pregnancy. Regarding issues related to prenatal care, all received prenatal care and almost 89% ($n = 24$) attended the care at a physician’s office.

Of 25 responding, 84% ($n = 21$) started prenatal care during the first trimester of pregnancy. Over 25% were accompanied by their boyfriend's mother to their first prenatal appointment, often choosing them over their own mothers. The most common point of concern for over 59% of the group was a desire that the "appointment waiting time be not so boring." Fifty-six percent of those responding wished that they could "walk in at any time." Just fewer than 19% suggested the waiting time be used for "learning how to be a mother." Almost one-third wished that they could be seen by a female physician.

Discussion and Implications

The researchers had expected to find that birth risk factors in the Lower Rio Grande Valley would be higher than those of the State of Texas and the United States. However, our analyses, while revealing significant insights overall, did not support our preliminary assumptions. Except for the factor of "maternal weight gain of less than 15 pounds," the Valley had percentages that were surprisingly similar to or better than State and United States percentages. It seems that despite the Lower Rio Grande Valley having factors that predispose a population to having increasing birth risks such as higher poverty rates, less medical services, and higher fertility rates, the Valley population was able to circumvent our expectations of having higher birth risks.

The findings challenged the researchers to ponder what protective factors this particular population might have that could be mediating the anticipated potential birth risks. Simultaneously, we considered how these birth risk factors were as low as they were given that the percentage of adolescent births for the Valley at 16.2%, was almost 3% percent higher than the State of Texas and almost 6% percent higher than the figures of the United States. Additionally, we were aware that nationally, females of Mexican origin between the ages of 15 to 19 years had the highest birth rate of all Latina groups in 2005 at 95.4 per 1,000 births (Martin et al., 2007).

As the Valley adolescent population is over 96% Latina/o of Mexican American descent, it was decided to address our research results through a Latina/o cultural perspective rather than solely from a set of

socioeconomic and demographic characteristics. Cultural values and belief systems play a significant role in the Latina/o family (Falicov, 1998; Raffaelli & Ontai, 2001). It may well be that the traditional Latina/o cultural system may be playing a key role in mediating birth risk factors.

The Latina/o, Mexican-American population stresses the importance of *familismo*, or the value of the family system, and *respeto*, or respect for authority figures. These values play a major part in traditional Latina/o homes in shaping the entire family including the female adolescent developmental process. Much of the family belief system is centered on religion and historical family codes that value chastity of women as a way for the family to gain honor. Traditional gender roles promote lack of knowledge about sexuality among females, whereas the male is expected to be sexually active and adept (Falicov, 1998; Raffaelli & Ontai, 2001). Just how these values impact adolescent birth rates and birth risk factors strongly suggest opportunity for future research efforts.

Latina/o cultural beliefs often conflict with conditions that Latina adolescents encounter with American-style dating, and ill-prepare them to avoid pregnancy. Latina/o adolescents are the group least likely to use birth control methods. They often find themselves poorly prepared to deal with sexuality as they acculturate within a changing environment. Rather than being given information about sex it has been described that Latina females are taught how to avoid sex (Raffaelli & Ontai, 2001; Ryan et al., 2005).

National pregnancy prevention programs stress delaying pregnancy until after educational and career goals are attained. These goals are often in direct contradiction to Latina/o traditional cultural beliefs that place the highest value on family and motherhood roles for women (Russell & Lee, 2004). Though the value of having an education is certainly of importance for the Latina female, career goals traditionally remains secondary to having a child. Cultural factors may account in part for the increasing rates of pregnancy among the adolescent Latina population but yet they may simultaneously account for the low birth risk factors.

Interestingly, the content analysis of the student case records revealed that a 84% of these adolescents began prenatal care during the first

trimester compared to the general Valley adolescent population. Social isolation and leaving school before graduation are two well-known risk factors for adolescent pregnancy, as well as poor care of self and the pregnancy (Gutmacher Institute, 2007). The reality that the adolescents who participated in the regional teen pregnancy school program commenced and followed through on prenatal care at a better rate than the general adolescent population is perhaps due to the fact that that they remained in school and had the support of this special adolescent pregnancy program.

Studies have documented that Mexican American infants have relatively favorable birth outcomes compared to other ethnic groups. These findings have been attributed to family ties of the Latina/o culture that promote close family support and connections to extended support systems (Frisbie, Forbes, & Hummer, 1998; Galanti, 2003; Padilla, Boardman, Hummer, & Espitia, 2002; Rodriguez, Bingham-Mira, Paez, & Myers, 2007).

One study of Latina pregnant adolescents found that adolescents who felt that those close to them would support them in times of need took better care of their pregnancies (Feldman, 2007). Within the Mexican American population, women who are recent immigrants, despite their social disadvantage and lack of appropriate prenatal care, have fewer birth-related problems than women who are more acculturated to the United States (Callister & Birkhead, 2002). Reasons for this include that immigrant woman usually initially depend more on family support and are less likely to drink alcohol, smoke, or use illicit drugs (Buekens, Notzon, Kotelchuch, & Wilcox, 2000). Some studies have stated that while Mexican American infants may have similar birth weights to non-Latina/o groups, they cognitively lag behind other groups later in childhood suggesting strong postnatal environmental effects (Barnet, Duggan, & Devoe, 2003; Garcia-Coll & Magnuson, 2000; & Padilla et al., 2002). However, in general, the reviewed studies added validity to the possibility that the Latina Valley population was able to circumvent high birth risks due to factors inherent in the traditional Latina/o family system.

Regarding premature adolescent births, the Valley percentage of

13.5% was comparable to the Texas State percentage but about 1% lower than the National percentage. Of the total live births to adolescents in the Valley, 7.5% were of low birthweight. This figure was several percentage points better than State and National numbers, 10.6% and 11.8%, respectively. Prematurity and low birthweight have been attributed to inadequate prenatal care (U.S. Department of Health and Human Services 2000). The finding of low birthweight was particularly of interest as it indicates better care during the pregnancy. In our assumption, this better care is attributed to Latina/o *familismo*.

Regarding the timeliness of initiation of prenatal care, the Valley percentages were similar to State and National figures. Regarding weight gain of over 44 pounds during pregnancy, just over 9% of the Valley's pregnant adolescents had this weight gain even though the Latina adolescent diet typically includes unhealthy foods rich in corn and lard and consumption of "junk foods" (Texas Department of State Health Services, 2007a). State and National weight gains were much higher, 15.8% and 25% respectively. As far as weight gain of less than 15 pounds during the pregnancy, the Valley figure of just under 20% was over twice the State percentage. (Texas Department of State Health Services, 2004; March of Dimes, 2008b). National figures were not available. Literature discussing the "less than 15 pounds weight gain" in pregnant adolescents was not found; however, anecdotal data from practitioners working with this population indicated that these adolescents often would try "due to shame to hide the pregnancy by losing weight so that they would appear smaller."

As cultural factors may play a significant role in circumventing adolescent Latina pregnancy risks, the authors recommend that future research explore with more detail how the Latina/o culture may account for the resiliency of this population in mediating birth risks. The extended family support system of the Latina/o, Mexican American family may strongly account for this resiliency. It would behoove practitioners and researchers studying adolescent pregnancy to further investigate if indeed the Latina/o culture has inherent qualities and further define what specifically are these qualities. Furthermore, these explorations could suggest significant implications for lowering adolescent birth risks across cultures and for improving the policy debate and development.

In conclusion, the authors strongly urge further research to investigate the potential strengths of the Latina/o family system in mediating adolescent birth risks as results could have substantial impact on promoting minority health disparities. Additionally there is a pressing need for improvement and standardization of statistics of rural, less populated areas regarding adolescent pregnant women, especially those of Latina ethnicity.

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