KEY RISK AND PROTECTIVE FACTORS AMONG MULTI-ETHNIC, ELEMENTARY AGED CHILDREN: FINDINGS FROM NEW MEXICO'S BEHAVIORAL HEALTH SERVICES PREVENTION BUREAU

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INTRODUCTION

More than at any time in recent history, many young school aged children are confronted with a multiplicity of factors that increase their risk for behavioral problems such as school failure, tobacco and other drug use. Elementary aged youth face increased social pressures prompted by video and media (TV) where peer conformity and materialism are highly endorsed and valued by American society. In addition, the changing nature of the family system, inadequate and ineffectual parenting skills, and in some cases economic hardship in single-parent headed homes, further exacerbate the risks that young children are expose to. Further, multi-ethnic youth, including Native American children also face a variety of cultural based risk factors such as acculturation stress (Cervantes & Ortiz 2003), perceived discrimination, and other forms of conflict with majority culture youth.

Elementary aged youth in America includes over 72,293,812 children. Of this total, 5,274,343 children are living in high-poverty neighborhoods. Children who live in census tracts where 20 percent or more of the population is below poverty are classified as "high poverty" neighborhoods. Based on this criteria about 7.4 percent nationally live in high poverty neighborhoods. In comparison, a higher percentage of New Mexico youth reside in these high poverty neighborhoods. New Mexico leads the nation in childhood poverty. Of the 508,574 of New Mexico's youth, 10.7 percent are living in high-risk poverty neighborhoods (US Census 2003). The New Mexico median income in year 2000 was $39,425, as compared to $50,046 nationally, and 14 percent of New Mexico's families are food insecure, with 9.2 percent nationally (New Mexico Voices for Children 2003).

According to the 2000 U.S. Census, the total New Mexico population is 1,819,046. Twenty-eight percent of the population is under 18 years of age, with 7 percent of the total under the age of 5 years. Forty-two percent of the population is Hispanic, 45 percent Anglo, 10 percent Native American, and 2 percent African American. The average household size in New Mexico is 2.63 persons, with 3.18 persons per family (New Mexico Voices for Children 2003; New Mexico Kids Count Data Book 2002).

Based on a number of other youth indicators, many children in New Mexico lag behind other elementary-aged youth nationally. For example, 10.2 percent of the children ages 5 to 17 have "difficulty speaking English", while the national average is at 6.6 percent (US Census 2000). Twenty six percent (135,428) of New Mexico's youth are living in single-parent households, compared to 23.3 percent of America's youth. Twelve percent (13,665) of New Mexico youth are high school dropouts, compared to 9.8 percent nationally. Six percent (18,374) are living with one or more disabilities, compared with 5.8 percent nationally. New Mexico's 2000 census data show that in fiscal year 2001, there were 62,025 juvenile offenses reported, and 30,032 referrals (6% of the juvenile population) to the juvenile justice system. In New Mexico's public schools, 56 percent of the students qualify for the free or reduced cost lunch program. In the area of prenatal care, in 2000, 12.9 percent of mothers received little or no prenatal care (New Mexico Voices for Children 2003 32).

Data reported on the New Mexico Youth Risk and Resiliency (administered statewide in the public schools by the Departments of Education and Health) for high school students reflect that 50.1 percent report having at least one drink on at least one day during the past thirty days; 35.2 percent report having at least one drink on two to five days during the past thirty days (binge drinking); 30.2 percent report having five or more drinks of alcohol within a couple of hours at least once during the past thirty days; 27 percent report smoking cigarettes during the past

thirty days. Thirty percent reported using mari-juana at least once during the past thirty days, with 9 percent reporting marijuana usage on school property during the past thirty days (New Mexico Voices for Children 2003 32).

New Mexico's youth are exposed to and affected by substantial risk factors and prob-lem behaviors in their communities and in the state as a whole, brought about by pov-erty, lack of hope in the future, and an educa-tional system that does not provide sufficient social structures or bonding with positive adults and their community. By the 4th grade, 49 percent of children in New Mexico score below the basic math level, compared with 33 percent nationally (The Annie E. Casey Foundation, Kids Count Data 2002 120). These data highlight the importance of de-veloping systems for identifying youth who experience multiple risks such that early in-terventions and drug prevention programs can be effectively implemented in the state of New Mexico.

In addition to the above, Native American youth in New Mexico may represent a partic-ularly high-risk population. For example, New Mexico Kids Count Data 2002 shows that 64,953 Native American children under the age of 18 who live in New Mexico's pueblos and reservations are living in extreme high poverty neighborhoods. Close to 30 percent live in single-family households, with 15 per-cent linguistically isolated. There is a 20 per-cent high school dropout rate, and nearly 7 percent live with at least one disability, which is defined as a long-lasting physical, men-tal, or emotional condition determined for non-institutionalized persons aged 5 and over (Kids Count Census Data 2000).

Substance Abuse Prevention for Young Children

The field of Substance Abuse Prevention has made significant advances over the past decade. Scientifically based prevention ef-forts have resulted in a number of programs that reduce risks and improve resiliency among youth who are prone to drug use and abuse. The Center for Substance Abuse Pre-vention along with other researchers (Hawkins, Catalano, & Miller 1992) have pro-moted a Web of Influence frame work for un-derstanding the causes and correlates of substance abuse and this model has been equally important in designing prevention programs. This framework emphasizes the

importance of specific risk and protective fac-tors within the domains of the individual, fam-ily, peer group, school, and community. The SAMSHA Center for Substance Abuse Pre-vention has now articulated and tested pre-vention interventions that are in many cases life domain specific. While efforts are impres-sive, most of this prevention research work has focused on youth in the 12-17 age group. Very few studies exist on either the assess-ment of risk and protective factors among younger school age children (K-6th grade) or on specific clinical trails that test the effi-cacy of prevention programming for younger children.

Recent advances have been made, for ex-ample, Gensheimer, Roosa, and Ayers (1990) examine strategies for recruiting school aged youth into a school based pre-vention program. Among 4th thru 6th grad-ers exposed to a film about parental alcohol-ism, self-selected children tended to score higher on emotional and behavioral symp-toms. In another study, family risk in the form of parental alcohol dependence was found to greatly increase a number of behavior and emotional risk factors in elementary aged children (Dawson 1992).

With respect to the research on drug pre-vention programming, a number of studies have focused on younger elementary aged children. Werch and colleagues (2003) tested an alcohol prevention program, STARS, for reducing alcohol risk. In that study, students receiving the intervention had significantly less intentions to use alcohol in the future and less alcohol quantity. Dielman, Shope, Leech, and Butchart (1989) tested a social skills/peer resistance curriculum for alcohol misuse. Among 5th and 6th grade partici-pants results indicated the intervention was effective in reducing the rate of increase of alcohol use and misuse among grade six students who entered the study with prior unsupervised as well as supervised alcohol use. In one study related to peer pressure among elementary school youth, Dielman and colleagues (1992) found that prevention programs had a differential effect to suscep-tibility of peer pressure depending on the par-ticipants previous experience with alcohol experimentation.

Shope, Copeland, Marcoux, and Kamp (1996) tested the Michigan Model for Com-prehensive School Health Education among 5th thru 8th grade students. Following these

youth across the three-year span, at the end of grade seven, program students' rates of substance use had increased significantly less and knowledge of alcohol pressures, effects, and skills to resist had increased significantly more than those of comparison students. Another promising approach for ethnic youth, R.E.A.L. curriculum serves 7th grade students and is currently in the process of being tested for positive program effects (Gosin, Marsiglia, & Hecht 2003). One interesting tobacco prevention program was assessed among American Indian Youth in New Mexico. This school based cancer based prevention project was implemented for 7th and 5th grade Navajo and Pueblo Indian children. Using the Pathways to Health Curriculum, the researchers found that boys were more likely to use and intend to use cigarettes more than girls. The use of smokeless tobacco also increased with increasing grade level, though this trend was less pronounced for girls. The researchers concluded that there is evidence of experimentation and regular use of tobacco products by both Navajo and Pueblo boys and girls. Even more students' indicated intention to use tobacco products in the future. These data confirm the need for primary prevention programs designed for this population of American Indians. Botvin, Griffin, Diaz, and Ifill-Williams (2001) tested a school-based drug abuse preventive intervention in a sample of predominantly minority students (N=3621) in 29 New York City schools. Results indicated that those who received the program (n=2144) reported less smoking, drinking, drunkenness, inhalant use, and poly-drug use relative to controls (n=1477). The findings from this study show that a drug abuse prevention program originally designed for White middle-class adolescent populations is effective in a sample of minority, economically disadvantaged, inner-city adolescents.

These studies highlight the efficacy of drug prevention programs and point out the need for future research on identifying specific, culturally based risk and protective factors and the need for testing appropriate drug prevention interventions for younger school-aged youth. In addition, studies that include multi-ethnic samples have great utility in identifying cross-cultural risk and protective factors, as well as differential program effects across cultural groups.

The purpose of this research was to document and evaluate those risk and protective factors experienced in a multi-ethnic sample of elementary aged youth across the state of New Mexico. This study was part of a larger research investigation aimed at identifying effective drug prevention strategies for at risk youth in Pre-Kindergarten through sixth grade. In this sub-study, we were particularly interested in examining how ethnicity predicted various personal, family and school related risk factors in fifth and sixth grade students.

METHODOLOGY

The New Mexico State Incentive Grant drug prevention initiative established the states science based programming efforts. Contracted agencies implemented a variety of evidence-based prevention programs for youth in 5th and 6th grade. Most of the programs were directed primarily toward youth, with a few programs focusing on parents/families. A large number of 5th and 6th graders participated in the *Life Skills Training* curriculum developed by Gilbert J. Botvin, which was implemented mainly in rural schools with high percentages of Hispanic and Native American youth, such as the communities of Chama, Dulce (Jicarilla Apache), Tierra Amarilla, Acoma Pueblo, Laguna Pueblo, the Pueblo of Zuni, Roswell and Dexter. The single urban site for implementation of the *Life Skills Training* was in the Santa Fe Public Schools. Student participation in the curriculum was determined by acceptance and approval of the curriculum by school administrative officials. As a universal prevention approach, there were no specific recruitment strategies for student participation. In most cases, the entire student population of fifth and sixth graders of the various school sites participated in the curriculum.

In addition, fifth and sixth grade students participated in the SMART Moves curriculum in San Juan County. Specific schools within the county were identified as 'high risk' for substance abuse and related social problems based on a county needs assessment. School officials within the various school districts were approached about offering SMART Moves as part of classroom instruction, the first point of contact being district superintendents. Other school personal that assisted in identifying specific classrooms for

delivery of the curriculum included the school principals, the Safe and Drug-Free Schools and Community Coordinators, and class-room teachers. The SMART Moves curriculum was implemented in various schools in the communities of Bloomfield, Aztec, Shiprock, and Farmington, which have a high percentage of Native American youth, mainly Navajo. Approximately 40 percent of the youth participants in the SMART Moves curricula in San Juan County were Native American, approximately 30 percent were Anglo, and approximately 25 percent were Hispanic. In addition, SMART Moves was implemented in coordination with the local Boys and Girls Club at local club settings with a small number of youth.

Funds from the New Mexico State Incentive Grant Project also supported locally developed prevention programs with the potential of becoming promising prevention programs or model prevention programs. One of these programs, *Project Venture*, was developed by the National Indian Youth Leadership Project in Gallup, New Mexico, and is now being considered by the Center for Substance Abuse Prevention as a model prevention program. Designed as an intervention specifically for Native American youth, *Project Venture* is a positive youth development approach that encourages youth to develop into capable, caring, and healthy individuals through adventure-based experiential education and service learning in classroom and out-of-school settings and through intensive summer camp and wilderness trek experiences. The approach incorporates elements of traditional wisdom shared by Native elders utilizing alternative methods--outdoor/experiential education, servant leadership (services learning), reconnecting with traditional culture and the natural world--as a means to assist youth develop in healthy and positive ways. *Project Venture* consists of a universal prevention service component and a selective prevention service component. The universal prevention service component was delivered in the school setting and was negotiated between school officials and project staff to determine which classrooms are served and the fit of the services in regard to the school curriculum. Of the identified classes, all students participated in *Project Venture* activities.

Another locally developed prevention program funded through the New Mexico State

Table 1: Grade in School

Grade	Number	Percent	Valid Percent
4th	141	13.3	13.5
5th	466	43.8	44.5
6th	438	41.2	41.8
other	2	.2	.2
missing	16	1.5	
total	1063	100	100

Table 2: Gender

	Number	Percent	Valid Percent
Male	550	51.7	51.0
Female	509	47.9	48.1
Missing	4	.4	
Total	1059		100

Incentive Grant Project was *Learning to Lead*, a program developed and implemented by Cornstalk Institute of Albuquerque, New Mexico. The emphasis of the program is on facilitating the transition from elementary school to middle school and from middle school to high school by fostering self-efficacy in academics and social development. The main components of the program include mentoring, tutoring, skills building, experiential education, leadership through service, as well as a family interaction component. Services are delivered within the school setting and also have out-of-school activities. The schools selected for the services are in high-risk urban neighborhoods in the City of Albuquerque. The staff of Cornstalk Institute negotiates with school administrators and teachers to identify the classrooms for participation in the Learning to Lead Program. As such, the program maintains a high rate of retention.

As mentioned, this study was part of a larger, state and federally funded drug prevention initiative emphasizing "evidence based" prevention programming. Local evaluation experts were instrumental in the coordination and collection of self report and parent report data.

Participants

Youth in the NM K-6 programs were used to develop the sample reported here. The sample consists of children from some twenty prevention programs throughout the state. Programs were in both community-based organizations and in prevention coalitions and partnerships. Eighty percent of the children in this sample were ages ten and

Table 3: Ethnic Breakdown for the Sample

Group	Frequency	Percent
Latino	388	36.5
Native American	628	40.9
White/Anglo Saxon	194	18.3
Total	1210	95.7

eleven.

In terms of school grade, some 84 percent of the sample were in grades 5 and 6. Most of the remaining children, 13.3 percent were in the fourth grade (Table 1). The gender split for respondents was relatively even with slightly more boys than girls answering the survey (Table 2).

Ethnicity

A negligible number of African American (14 or 1.2%) and Asian American children (2 or .2%) responded to the survey. An additional 67 students identified themselves as "other" or a combination of more than one category. The majority of the survey respondents identified themselves as Anglo or White, Native American or Latino/Hispanic. The Native American respondents could identify themselves as Pueblo, Navajo, Apache, or other Native American. For the purpose of this analysis, Native American respondents were re-categorized to form one large Native American group. Latino respondents were similarly re-categorized from the various response categories that included: Hispanic, Mexican, Central American, South American, Spanish, Puerto Rican, and Cuban. Respondents in the other and mixed categories were eliminated as outliers. Table 3 provides a breakdown of the sample included in this study.

All ethnic groups except for the three largest groups were eliminated from the sample. The resulting total for ethnicity is larger than the entire sample (1063) as some students identified themselves in two or more of the three major ethnic categories. A total of 65 percent of the respondents or 691 of the students indicated that a language other than English was spoken at home. The largest number of these respondents spoke Navajo or Spanish. Pueblo dialects (Tiwa, Tewa, Towa, and Keres) as well as Apache or "Indian" also were identified as the language spoken at home.

Instruments

The statewide evaluation of evidence-based outcomes consisted principally of data collection using a pre-test/post-test evaluation strategy. This was accomplished through the use of a standardized instrument developed in New Mexico that included self-reported measures of substance use and related behaviors. Known as the Pre K-6 Version of "Strategies for Success" evaluation instrument, the survey asks a series of questions about youth experimentation and patterns of current (past 30 day) alcohol, tobacco, and other illicit drug use. The data collection instrument was worded in simple, understandable language for elementary aged youth and was made available in both English and Spanish. This analysis is based upon pre-test, baseline survey responses.

An initial set of evaluation input meetings were held with local evaluators in New Mexico, including those with considerable experience in the assessment of young children. The group was charged with developing a set of measures that would adequately assess program effects in terms of youth and family risk and protective factors, in addition to the assessment of drug outcomes for young children. Through a series of advisory meetings, as well as a search of all academic databases and literature sources, a set of tools were evaluated for appropriateness and a final set of tools was selected. This set of tools included components of the following standardized tools:

- Standardized Parent and Youth Demographic Information Sheets
- The Conner's Rating Scales for Parent
- The Conner's Rating Scales for Teachers
- A Youth Risk Survey (Modeled from the CSAP National High Risk Youth Study)
- The Family Cohesion and Adaptability Scales (FACES III)

Youth in the 5-6th grade age range were administered the Strategies for Success—Youth Risk Survey which also included specific items on lifetime and current substance use. No parent or teacher report data were collected for this older aged sub-sample.

Procedures

Informed consent procedures were developed for each of the data collection sites, and in some cases, parental consent had been previously obtained as part of school district policy for extracurricular school and drug education activities. Local evaluators established data collection schedules and

Table 4: Scale Reliabilities

Scale	Description	Alpha Coefficient
School disruptive behaviors	3 items including fighting, tagging, safe schools violations	0.63
School protective factors	11 items including teacher and staff care for child, school is important to finish, try hard to do well in school, etc.	0.78
Parent communication	3 items including talk to parents about your future, how often do you talk to parents about your problems, etc.	0.32
Family Bonding	5 items including get along well with parents, feel safe with parents, have respect for parents, etc.	0.42
30 day tobacco use	2 items including used chewing tobacco, smoked a cigarette	0.55
30 day illicit drug use	2 items including marijuana use and inhalant use	0.34
Attitude toward use	9 items that included how wrong would adults think, parent think, someone your age think it is for youth to use marijuana, smoke cigarettes, drink alcohol?	0.87
Perceived availability	3 items including how easy to get cigarettes? Marijuana? Alcohol?	0.87
Perceived harm	3 items including how risky is it to tuse cigarettes? Marijuana? Alcohol?	0.82

worked closely with school officials and teachers to gather data during regular school hours. Group administration of the research tools was conducted.

These analyses focused on the survey tool developed for fifth and sixth grade students. A total of nine scales were developed to reduce the number of items investigated and to avoid inflating the probability of finding significant differences among the three ethnic groups. Table 4 illustrates sub-scales and reliability coefficients. Data were cleaned using the method prescribed by Tabachnick and Fidell (1989 67). Univariate outliers were removed within plus or minus 3 standard deviations for each variable. Multivariate analyses were not planned. A composite ethnicity variable was developed using the three largest ethnic categories. This variable was used as the independent variable in one way analysis of variance in order to compare the three different ethnic groups on the protective and risk factors measured with the outcome instrument.

RESULTS

Several of the sub-scales were shown to have low or very low alpha coefficient sub-scales that were found to be particularly unreliable were PARENT COMMUNICATION, FAMILY BONDING and a two item composite score for illicit drug use. These low reliabilities should be considered in the following analysis.

Levene's statistic to test for homogeneity of variance was conducted for each scale. Several of the comparisons (usually when the scale was unreliable) indicated that the assumption of homogeneity was violated. However, the ANOVA is not sensitive to violations of the assumption of normality for an independent variable with a fixed number of levels (Shavelson 1988). Omega square was conducted to test the strength of the association for each of the analyses completed as the sample size was very large. Table 5 provides the results of the ANOVA tests.

Neither Disruptive School Behavior nor Parent Communication yielded a significant comparison indicating that the means for the three groups on these scales are essentially the same. However the reliability for parent communication scale was extremely low. Usually when the scale was unreliable significant differences among the means were not found. However, a number of the comparisons were significant. Post hoc Sheffe tests were conducted to identify which means were significantly different for each of the scale comparisons. For the School Protective Factors scale, Anglo students had the highest mean score followed by Native Americans. Latino students scored the lowest on this scale indicating the fewest protective factors. Anglo students scored significantly higher than Latino students with no significant difference between the mean scores of Latino and Native American students on this scale. For

Table 5: ANOVA Results Including Mean Scores and Omega Square Tests

Scale	N	Mean	DF	F	Sig.	Omega Squared
Disruptive School	Anglo 169	2.17	Between 2	1.159	0.314	n/a
Behavior	Latino 266	1.79	Within 1013			
	Nat. Am. 581	1.86	Total 1015			
Protective School	Anglo 169	37.68	Between 2	11.674	0	0.0215
Factors	Latino 266	39.19	Within 1014			
	Nat. Am. 582	37.41	Total 1016			
Parent Communica-	Anglo 169	6.41	Between 2	2.299	0.101	n/a
	Latino 266	6.96	Within 1013			
	Nat. Am. 581	6.56	Total 1015			
Family Bonding	Anglo 169	4.66	Between 2	5.279	0.005	0.0083
	Latino 266	4.61	Within 1013			
	Nat. Am. 581	4.48	Total 1015			
30 Day Tobacco	Anglo 169	0.005	Between 2	13.863	0	0.0247
Use	Latino 265	0.003	Within 1012			
	Nat. Am. 581	0.17	Total 1014			
30 Day Illicit Drug	Anglo 169	0.008	Between 2	8.4216	0	0.0145
Use	Latino 265	0.007	Within 1011			
	Nat. Am. 581	0.18	Total 1013			
Attitude Toward Use	Anglo 169	34.47	Between 2	4.216	0.015	0.0063
	Latino 265	34.42	Within 1012			
	Nat. Am. 581	33.76	Total 1014			
Perceived Availability	Anglo 168	6.34	Between 2	13.742	0	0.0246
	Lation 262	5.85	Within 1007			
	Nat. Am. 580	5.01	Total 1009			
Perceived Harm	Anglo 158	6.83	Between 2	4.894	0.008	0.0082
	Latino 247	7.13	Within 936			
	Nat. Am. 534	6.47	Total 938			

the Family Bonding scale, Anglo students once again had the highest mean score and this was significantly different from the mean score for Native Americans which were the lowest on this scale. There was no significant difference between the mean score for Latino students and Native American students.

For both 30-day tobacco use and 30-day illicit drug use, Native Americans reported significantly higher use than the other two groups. Latino and Anglo students did not differ in their drug or tobacco use as measured by this instrument. In terms of the Attitudes Toward Drug and Tobacco Use scale, Native Americans scored significantly lower than the other two groups indicating that they have more liberal attitudes toward drug use as compared to their non-Native peers and would explain the higher rates of drug use in the Native American sample. There was no difference between the Anglo and Latino students on this scale. Native Americans also considered drug, alcohol, and tobacco more available than their non-Native peers did. Their score on this measure was significantly lower than their peers who did not differ from each on the Availability scale. Finally, on the

scale that measured student perception of the harm from using drugs, alcohol, and tobacco, Latino students perceived substance use to be significantly more harmful than Native American and Anglo students did. Native Americans were found to to have significantly lower scores when compared to either Anglo or Latino students. There was no difference between Latino and Anglo students on this scale.

Omega square tests also were conducted to identify how much of the variance in the dependent variables was accounted for by the comparison among the three ethnic groups. The largest amount of variance accounted for was on the 30-day Tobacco Use, Perceived Availability, and School Protective Factors scales. However the amount of variance accounted for on these scales was between 2.15 percent and 2.47 percent, relatively small amounts. Overall, although there were statistically significant differences among the three groups related to ethnicity, other factors are probably accounting for more variance than this variable does.

DISCUSSION
A relatively large sample of elementary

school aged youth in grades four through six took a standardized risk and resiliency survey to assess baseline attitudes and behaviors with regard to alcohol, tobacco, and other drug use. This sample included three large ethnic groups with no prior exposure to science-based prevention programs in their schools and communities. First, our results demonstrate the success of the New Mexico State Incentive Grant Initiative in recruiting a uniquely multiethnic sample of children. Demographic information suggests a great deal of cultural variation in the sample, with a number of distinct languages spoken in the homes of these children. In addition, this sample was comprised of children residing in both rural and urban communities, and also included youth who reside in tribal communities.

There were significant differences between the groups. Results of the eight comparisons were significant indicating that the groups differed on the risk and resiliency scales and drug use rates, although some of the Omega Square tests indicated that the significant differences did not account for a significant amount of variance in these measures. The strength of association was small. Of particular interest were the higher use rates of alcohol and drugs among Native American children, and this coincided with their more liberal attitudes toward drugs and lower perceptions of harm. Tribal and Pueblo communities may experience a number of historical and current day trauma that could result in increased risk for drug use, although it must be noted that this sample is not representative of all children statewide but only those recruited into drug prevention services. Overall, Anglo students faired much better across all the eight risk and protective factors and had low drug, tobacco and alcohol use rates.

Future research must continue to focus on ethnicity and culture in explaining differences in risk and protective factors. Statewide, normative samples using similar risk and protective measures could shed additional light on these issues. In addition, based on data from this study, drug prevention strategies must be uniquely tailored to meet the need of different groups. For example, our study suggests that Latino students have few school related protective factors in the school domain. These are the same factors that other researchers have found both at the statewide and national levels related to excessively high academic failure rates. Drug prevention initiatives for Latinos must include some form of school enhancement strategies that could involve their English and non-English speaking parents. In addition, our result suggests that there is a particular need for addressing attitudinal risks and perception of availability in tribal and other native American communities. Prevention and evaluation research on model programs implemented in tribal communities must ensure their success in strengthening these factors among Native American children and may require specific cultural adaptation to existing science based prevention programs. Finally, more research is needed in the development of valid and reliable measures for multiethnic children given that existing standardized tool used in this study were shown to have some weaknesses, particularly Parent Communication and Family Bonding scales.

REFERENCES

Botvin GJ, KW Griffin, T Diaz, & M Ifill-Williams. 2001. Drug abuse and prevention among minority adolescents: posttest and one-year follow-up of a school-based preventive intervention. *Prevention Sci* 2 1 1-13.

Cervantes RC & F Ortiz. 2003. Substance abuse among Chicanos and other Mexican groups. Pp. 325-352 in *The Handbook of Chicana/o Psychology and Mental Health*. RJ Velasquez, LM Arellano, & BW McNeill, eds. Lawrence Erlbaum Associates, Inc.

Dawson DA. 1992. The effect of parental alcohol dependence on perceived children's behavior. *J Substance Abuse* 4 4 329-340.

Dielman TE, DD Klsoka, SL Leech, JE Schulenberg, & JT Shope. 1992. Susceptibility to peer pressure as an explanatory variable for the differential effectiveness of an alcohol misuse prevention program in elementary schools. *J School Health* 62 6 233-237.

Dielman TE, JT Shope, SL Leech, & AT Butchart. 1989. Differential effectiveness of an elementary school-based alcohol misuse prevention program. *J School Health* 59 6 255-263.

Gensheimer LK, MW Roosa, & TS Ayers. 1990. Children's self-selection into prevention programs: evaluation of an innovative recruitment strategy for children of alcoholics. *Amer J Community Psychol* 18 5 707-723.

Gosin M, FF Marsiglia, & ML Hecht. 2003. Keepin' it R.E.A.L.: a drug resistance curriculum tailored to the strengths and needs of pre-adolescents of the southwest. *J Drug Edu* 33 2 119-142.

Hawkins JD, RF Catalano, & JY Miller. 1992. Risk

and protective factors for alcohol and other drug problems in adolescent and early adulthood: implications for substance abuse prevention. *Psychological Bull* 112 64-105.

Kids Count Census Data. 2003. *Population reference bureau, analysis of data from US census bureau.* Retrieved November 28, 2003. Online. http://www.aecf.org.

New Mexico Voices for Children. 2003. Minority/ Majority: A Profile of New Mexico's Children 2003. *A Kids Count Special Report.* Pp 12-18, 32.

Shavelson RJ. 1988. *Statistical Reasoning for the Behavioral Sciences.* Second edition. Boston, MA: Allyn and Bacon, Inc.

Shope JT, LA Copeland, BC Marcoux, & ME Kamp. 1996. Effectiveness of a school-based substance abuse prevention program. *J Drug Edu* 26 4 323-337.

The Annie E. Casey Foundation. 2002. *Kids Count Data Book.* pp. 120.

Tabachnick BG & LS Fidell. 1989. *Using Multivariate Statistics.* Second edition. California State University, Northridge: Harper Collins.

Werch CE, DM Owen, JM Carlson, CC DiClemente, P Edgemon, & M Moore. 2003. One-year follow-up results of the STARS for families alcohol prevention program. *Health Edu Res* 18 1 74-87.

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