

## **FACTORS ASSOCIATED WITH SUCCESSFUL FUNCTIONING IN AMERICAN INDIAN YOUTHS**

Hiie Silmere, M.S.W., and Arlene Rubin Stiffman, Ph.D.

*Abstract: This study examines environmental and cultural factors related to successful functioning in a stratified random sample of 401 American Indian youths. The success index included seven indicators: good mental health, being alcohol and drug free, absence of serious misbehavior, clean police record, good grades, positive psychosocial functioning, and positive behavior and emotions. Family satisfaction was positively related to overall successful functioning, whereas misbehaving peers, living in a dysfunctional neighborhood, and experiencing child abuse had an inverse relationship with success.*

Most research on adolescents focuses on pathological and problem behaviors (Barnes, Welte, Hoffman, & Dintcheff, 2005; Donovan, Jessor, & Costa, 1999; Ferdinand, Verhulst, & Wiznitzer, 1995; Griffin, Botvin, Scheier, Doyle, & Williams, 2003; Hunter, 2004; Orlando, Tucker, Ellickson, & Klein, 2005; Whitbeck, Hoyt, Chen, & Stubben, 2002). American Indian youths have received perhaps the most negative attention of all American adolescents due to a high occurrence of various problems in many American Indian communities, such as alcohol, tobacco, inhalant, and other drug use; pathological gambling; and mental health problems (Dick, Manson, & Beals, 1993; Frank & Lester, 2002; Freedenthal & Stiffman, 2004; Howard, Walker, Walker, Cottler, & Compton, 1999; Novins & Barón, 2004; Spear, Longshore, McCaffrey, & Ellickson, 2005; Whitbeck et al., 2002). Understanding the prevalence and predictors of pathological functioning is important, but focusing predominantly on problem behaviors creates a skewed picture of American Indian youths

as primarily “bad” and in need of correction. To provide more balance to the extant literature, this study focuses on American Indian youths who function successfully.

An important question to address is: What constitutes successful functioning in adolescence? Extant theoretical and empirical literature has approached this question from two slightly different angles. The first approach defines successful functioning in terms of staying problem-free (e.g. avoiding the use of drugs) (Small & Memmo, 2004). It is argued that engagement in various problem behaviors can interfere with the accomplishment of important developmental milestones and diminish later life chances (Lerner & Galambos, 1998; Simons-Morton & Haynie, 2003). Even though there is plenty of evidence to support this argument (Bardone, Moffitt, Caspi, & Dickson, 1996; Chassin, Pitts, & DeLucia, 1999; Fergusson, Horwood, & Swain-Campbell, 2002; Newcomb & Bentler, 1988; Novins & Barón, 2004), it must be kept in mind that experimentation with some risk behaviors during adolescence is normative and will not inevitably lead to long-term problems (Lerner & Galambos, 1998).

The emerging field of positive youth development offers an alternative framework to define and study successful functioning (Catalano, Berglund, Ryan, Lonczak, & Hawkins, 2004; Small & Memmo, 2004). Proponents of this approach argue that positive development should entail more than just staying problem-free (Catalano et al., 2004; Small & Memmo, 2004). Instead, the focus should be on promoting emotional, social, behavioral, and cognitive competence. Outcomes of positive youth development have been assessed in the following four broad domains: educational achievement and cognitive attainment, health and safety, social and emotional development, and self-sufficiency (Bornstein, Davidson, Keyes, & Moore, 2003; Moore, Lippman, & Brown, 2004). However, since positive youth development is a relatively new approach, there is currently a lack of consensus over what outcomes are most indicative of successful or positive development and how to best operationalize them.

Small & Memmo (2004) argue that these two approaches—the “problem-free” model and positive youth development—are best seen as complimentary to each other and only differ with regard to the relative emphasis they place on different developmental outcomes. In other words, we can consider these approaches as representing two different sides of the same coin with a common goal of promoting the health and well-being of youths. The majority of parents, teachers, community leaders and policy makers would likely agree that helping youths to avoid risky behaviors and mental health problems is important. However, the

unique contribution of the positive youth development approach is the inclusion of additional criteria (e.g. academic, cognitive, emotional, and social competence) that are equally important when defining successful or positive development (Catalano et al., 2004). Consequently, it makes sense to use criteria from both approaches when conceptualizing and studying successful functioning in adolescence. This offers major improvements over previous studies that have tended to focus on examining predictors and correlates of only one positive outcome at a time (e.g. academic achievement). It would be clearly more valuable and realistic to use multiple outcomes, as development is a multifaceted process (Moore et al., 2004). In addition to using several outcomes, it would also be desirable to use multiple indicators to measure each of these outcomes in order to increase the validity of responses (Mitchell & Beals, 1997; Moore et al., 2004).

Another question that warrants attention is whether significant ethnic differences exist in outcomes that are considered desirable for youths. Unfortunately, the meager literature that exists on positive youth development and healthy functioning has focused predominantly on Caucasian adolescents (Catalano et al., 2004; Lerner & Galambos, 1998). For example, a search of the PsycInfo database for keywords "positive youth development" and "American Indian or Native American" only yielded 14 results, none of which specifically addressed the issue of what positive or successful functioning may look like in American Indian adolescents. Mitchell and Beals (1997), two of the few authors who have studied both positive and problem behaviors in American Indian youths, also voice a concern over the lack of clear understanding on what constitutes positive functioning in American Indian youths, how to best assess these outcomes, and how such outcomes may differ across location or tribal affiliation. Due to this paucity of research that addresses potential ethnic differences in defining successful or positive functioning, we need to begin this study with a focus on outcomes that are considered desirable for youths in general.

Ecological systems theory, also known as the bioecological model, has been widely used to understand determinants of youth problem behaviors (Bronfenbrenner, 1979, 1986, 2005). This theory postulates that youth development is embedded in multiple environmental contexts that interact with each other and with the individual to determine developmental outcomes. Although typically used to study the development of problem behaviors, it is equally suitable to use this theory to study how familial, social, and cultural factors impact successful functioning.

*Family environment.* Despite the increased time spent with peers during adolescence, families across cultures continue to play an important role in the socialization process of their children (Oetting & Donnermeyer, 1998). However, few studies have examined how family environment and relationships influence positive development among American Indian youths. One study found that perception of a caring family was a significant protective factor for emotional health for both American Indian boys and girls (Cummins, Ireland, Resnick, & Blum, 1999). Numerous studies report that dysfunctional family environment increases the risk of various youth problem behaviors including substance abuse, delinquency, and school dropout (Bahr, Hoffmann, & Yang, 2005; Guo, Hill, Hawkins, Catalano, & Abbott, 2002; Hawkins, Catalano, & Arthur, 2002; Oetting, Beauvais, & Edwards, 1988; Patterson, Forgatch, Yoerger, & Stoolmiller, 1998).

*Social environment.* Adolescent development is also impacted by peer, neighborhood, and school influences. Supportive peer networks, schools, and neighborhoods enhance the bonding to conventional society and provide more resources for youths to function successfully (Hawkins, Cummins, & Marlatt, 2004). Negative school and neighborhood influences, on the other hand, may interfere with positive functioning by weakening bonds between the child and these institutions, or by providing direct negative role models (Oetting & Donnermeyer, 1998).

*Religion and culture.* The role of religion as a protective factor for adolescent psychological and social adjustment has recently received more attention. Limited findings provide preliminary support that religious involvement can decrease youth risk behaviors and enhance healthy lifestyle patterns (Brown, Parks, Zimmerman, & Phillips, 2001; Frank & Kendall, 2001; Regnerus & Elder, 2003). However, significant ethnic differences may exist. For example, Brown et al. (2001) found that religious service attendance and frequency of prayer served as protective factors against alcohol use for African American youths, whereas for White youths, the importance placed on religion was the more significant aspect.

Literature on the role of cultural identification and participation in cultural activities on adolescent health-related behaviors is conflicting. Some studies have found that participation in traditional American Indian activities is positively correlated with various problem behaviors (Hawkins et al., 2004; Petoskey, Van Stelle, & De Jong, 1998; Whitbeck et al., 2002), but there is also evidence that identification with American Indian culture is positively related to some healthy behaviors (e.g. healthy eating habits) (Weaver, 1999). More research is clearly needed to clarify

how involvement in cultural activities impacts successful functioning of American Indian youths (Hawkins et al., 2004).

The goal of the present study is to 1) describe the prevalence of successful functioning of American Indian youths in seven criterion areas drawn from both positive youth development and “problem-free” paradigms (good mental health, being alcohol- and drug-free, clean police record, absence of serious misbehavior, good grades, positive behavior/emotions, and positive psychosocial functioning); and to 2) examine how familial, social, and cultural/religious factors relate to overall successful functioning for these adolescents. Based on theory and past empirical evidence, we hypothesize that supportive family and social environments enhance the likelihood of experiencing positive outcomes, whereas dysfunctional environment interferes with successful functioning. The findings will provide important information for the planning and development of programs that strengthen American Indian youths.

## **Methods**

### **Sample**

Data obtained from interviews with 401 southwestern urban and reservation-based youths (~200 from each area) in 2001 are used in these analyses (Stiffman, Freedenthal, Brown, Ostmann, & Hibbeler, 2005b; Stiffman et al., 2006b). The urban and reservation areas were chosen because they are relatively closely positioned, as the reservation is peri-urban. Also, both areas described confronting similar cultural issues in terms of assimilation, loss of culture, and extensive youth problems. Both were attempting to strengthen youths’ connections to their heritage by providing cultural activities and experiences. However, the two areas had very different resources and funding streams for their health and mental health programs (Stiffman, Alexander-Eitzman, Silmere, Osborne, & Brown, 2006a).

The NIDA-funded American Indian Multisector Help Inquiry (AIM-HI) gathered information on youth service use, mental health, substance use and other problem behaviors, behavioral and emotional functioning, familial and social environment, and cultural identification. Youths between the ages of 12 and 19 were recruited through a two-stage sampling method. First, a random sample of 300 urban and 300 reservation-based youths was selected from complete school district

and tribal enrollment records, respectively. The school records were kept by the school system to qualify it for reimbursement, as based on the Johnson O'Malley Act whereby school systems are reimbursed for educating American Indian youths. The school claimed to maintain full rosters of all eligible American Indian youths including those currently enrolled in school, ever enrolled, never enrolled, and those who had dropped out or were enrolled in alternate training or GED programs. Certainly the tribal records and the urban Johnson O'Malley records were the best available, and we were assured that these lists were current and representative of all the American Indian youths in both areas. Only one child per household was enrolled.

Second, out of the 567 youths who completed a brief screening questionnaire, about 150 from each area were randomly selected to participate in the long interview. Since the primary purpose of this NIDA-funded study was to examine youth service use and drug-use information, and not the indicators of success discussed in this article, we needed to oversample troubled youths. Therefore, we enriched this sample of approximately 300 youths with 50 additional randomly selected youths from each area who were likely to need services, as determined by exceeding the clinical cutoff points in the brief screening questionnaire using the Achenbach Youth Self-Report form - YSR (Achenbach, 1991) and the child version of the Columbia Impairment Scale - CIS (Bird et al., 1993).

Consent and protection procedures for this study were reviewed and shaped by Internal Review Boards at Washington University, the tribal council, the urban school district, and a team of local stakeholders composed of American Indian human service professionals, political leaders, and parents (Stiffman, Brown, Striley, Ostmann, & Chowa, 2005a). Two field supervisors, one from each area, who were familiar with the local American Indian communities and knowledgeable concerning field research and adolescents were hired and trained for this study.

## **Procedures**

Personnel from local American Indian educational and health services and tribal representatives made the initial contact with the selected families, notifying them about AIM-HI and encouraging their participation. Families were asked to return a fold-over, pre-stamped postcard signed by the youths and a guardian where they either

consented to or refused the research. Families who did not actively refuse were contacted directly by the interviewers. Only six families or youths refused in each area (12 total).

The youths were then contacted by trained, mostly American Indian interviewers in 2001. The interviewers explained the purpose of the brief interview and the entire study, obtained parent/guardian and youths' consent (if not already signed), and administered the brief screening questionnaire tapping behavior and functioning (Stiffman et al., 2005a). The brief and long interviews were administered in the youths' place of choice, typically in a private area in the youths' home. We used CAPI (computer assisted personal interviews) to conduct the interviews and included a number of safety measures to assure the well-being of youths and increase the validity of responses to sensitive questions (Stiffman et al., 2005a). Youths who participated in the brief interview received a T-shirt with an AIM-HI logo designed by a local American Indian artist. Youths were paid an additional \$25.00 for the long interview. Only 2.7% of those who completed the brief interview and were scheduled for the long refused to participate or had a parent withdraw consent.

### **Measures**

The measures from the long interview used in these analyses comprised both structured and qualitative open-ended questions that tapped youth functioning and environmental characteristics. All instruments were developed and modified in collaboration with local human service workers, tribal elders, council members, parents, and representative youths who directed the types of questions that they wanted included in the survey (Stiffman et al., 2005a). This stakeholder team helped to identify and develop the interview items that indicated successful functioning. All items were also piloted with groups of American Indian parents and youths in both areas.

### **Dependent variable: Successful functioning**

In this study, we defined and operationalized successful functioning by using seven indicators—drawn from various parts of the structured interview instrument that tapped different aspects of youth functioning reflecting both positive youth development and “problem-free” perspectives. The indicators (each described below) include good



mental health, being alcohol- and drug-free, clean police record, absence of serious misbehavior, good grades, positive behavior/emotions, and positive psychosocial functioning. Each indicator is a dichotomous variable, with 1 denoting that youths possess the positive quality. The sum of these seven items comprises the overall success index, with higher scores signifying greater success (range = 0 – 7, mean = 2.5,  $SD = 2.0$ ).

*Good mental health.* The good mental health indicator consists of five items (Cronbach  $\alpha = .72$ ) derived from the National Institute for Mental Health's Diagnostic Interview Schedule (DIS-IV) (Robins & Helzer, 1994). Youths who reported two or fewer lifetime symptoms for each of the following—alcohol abuse, drug abuse, depression, and conduct disorder—and no suicidal thoughts were considered to have good mental health.

*Being alcohol-, tobacco-, and illicit drug-free.* Remaining substance-free was likewise measured by items from the DIS-IV. Since experimentation with substances is normative during adolescence, we allowed for some experimental use of alcohol, tobacco, and illicit drugs. In order to qualify as alcohol- and drug-free, a youth must have reported consuming fewer than six drinks of alcohol during lifetime, no use of tobacco more than once or twice a week (including cigarettes, cigars, pipes, and snuff or chewing tobacco, except for tobaccos used exclusively for ceremonial purposes), and no use of any illicit drugs more than five times during lifetime.

*Clean police record.* Involvement with police was measured by one item. Youths were regarded as successful in this area if they reported no lifetime involvement with the police or juvenile courts for any reason besides curfew, a minor traffic violation, or being questioned on the street.

*Absence of serious misbehavior.* Since not all delinquent behavior comes to the attention of law enforcement officials, we developed an absence of serious misbehavior indicator using seven items from the YSR (Achenbach, 1991; Walker, Lambert, Walker, & Kivlahan, 1992): not destroying things belonging to others, getting into many fights, physically attacking people, setting fires, stealing from home or other places, and threatening to hurt people (Cronbach  $\alpha = .75$ ). Youths who reported no past 30-day involvement in any of these behaviors were considered to be successful in this domain.

*Good grades.* Academic success was measured by one item asking what kinds of grades the respondent averaged for the last semester he or she was in school. Getting mostly As or Bs qualified the youths as successful in this area.



*Positive behavior and emotions.* YSR items (Achenbach, 1991) were used to identify respondents with positive behavior and emotions. The seven YSR items that were already used to detect youths without serious misbehavior were excluded from this scale. Internal consistency of the abbreviated YSR scale with the remaining 92 items was .95. Lower scores on YSR indicate fewer behavioral and emotional problems. In order to identify youths with truly positive behavior and emotions, we designated those youths as successful in this domain whose YSR score fell at least 1 *SD* below the mean ( $\leq 20$ ).

*Positive psychosocial functioning.* Psychosocial functioning was measured by 13 items from the Columbia Impairment Scale (CIS) (Bird et al., 1993). This scale taps four major areas of functioning: interpersonal relations, psychopathology, school or work, and leisure time. Internal consistency of this scale in the current study was .83. Youths whose CIS score fell at least 1 *SD* below the mean ( $\leq 3$ ) were considered to have positive psychosocial functioning.

*The success index.* The seven indicators described above comprised an overall success index ranging from 0 to 7. Please note that our goal was not to develop a homogeneous scale with high internal consistency. Instead, we created an index by deliberately choosing items that represented different aspects of successful functioning. According to Wright and Feinstein (1992), indices differ from scales in that they are not expected to be homogeneous because they represent different attributes of a complex phenomenon. Nevertheless, the internal consistency of the success index was .61 (quite high for an index). We examined the validity of the overall success index in light of youths' self-reports to two open-ended questions regarding personal strengths and biggest accomplishments. Youths who reported more personal strengths and more accomplishments had also higher scores on the success index ( $r = .16, p < .001$ ), providing evidence that the success index correlates with other aspects of positive functioning (Moore et al., 2004). Details about these open-ended questions are outside the scope of this paper and are described elsewhere (Stiffman et al., in press).

### **Independent variables: Environmental and cultural factors**

#### Family Environment

Family environment was assessed by youths' self-reports of family satisfaction, family problems, stressful events, and child abuse experiences.

*Family satisfaction.* A modified version of the family satisfaction scale (Hudson, 1982) included five items asking youths how they felt about their family in the last six months, including really enjoying one's family, being able to depend on one's family, etc. The response options ranged from 1 (*Rarely or none of the time*) to 5 (*Most or all of the time*). Responses to these five items were summed (Cronbach  $\alpha = .70$ ), with higher scores indicating greater family satisfaction.

*Family problems.* The family problems scale consisted of ten dichotomous yes/no type items tapping parental and sibling emotional and mental health problems, alcohol and drug use, suicide attempts, gambling, and fighting (Stiffman, Hadley-Ives, Elze, Johnson, & Doré, 1999). Positive responses to these ten items were summed (Cronbach  $\alpha = .63$ ), with higher scores being indicative of more family problems.

*Stressful events.* Questions concerning stressful events came from the Diagnostic Interview for Children and Adolescents (DICA) (Reich, 2000). Youths were asked if they had experienced situations in their family during the past six months that made them worry a lot. These situations included arguing and fighting, financial worries, serious illness of a family member, family member's alcohol or drug abuse or involvement with police, and threats or actual harm to self or a family member. Summing positive responses to these nine dichotomous items resulted in a stressful events scale (Cronbach  $\alpha = .64$ ), with higher scores implying more stressful events.

*Child abuse.* Child abuse experiences included lifetime assessment of both physical and sexual abuse (Stiffman et al., 1999). A dichotomous (0/1) variable was created, with 1 denoting having being abused for youths who reported any of the following: being hit or beaten until having bruises or being injured by someone in some other way (excluding street or playground fights), being raped, or being pressured into having sex.

### Social Environment

Assessment of social environment involved youths' self-reports of neighborhood and school characteristics and peer misbehavior (Hadley-Ives et al., 2000; Stiffman et al., 1999).

*Negative neighborhood environment.* Youths were asked to report how much of the following—shooting, drug dealing, murders, prostitution, abandoned buildings, neighbors on welfare, and homeless people in street—had been going on in their neighborhood or community during the past six months (Stiffman et al., 1999). Sum of responses to these seven items on a 3-point scale (*none, some, a lot*)

formed the negative neighborhood scale (Cronbach  $\alpha = .68$ ), with higher scores reflecting more negativity. Both the urban and tribal areas had distinct areas that the community stakeholders described as more or less desirable. In the questionnaire, the delimitation of neighborhood was left up to the youths, as the important quality was their perception of their living space rather than a fixed area (Hadley-Ives et al., 2000).

*Negative school environment.* Negative school factors were assessed with an eight-item scale, with questions such as fighting between students, being discriminated against, and shootings or stabbings on school property (Hadley-Ives et al., 2000). Summing these responses resulted in the negative school environment scale (Cronbach  $\alpha = .77$ ).

*Peer misbehavior.* To assess peer misbehavior, youths were asked how many of their friends and acquaintances about their age used alcohol, tobacco, or other drugs; sold drugs; were both out of school and unemployed; had problems with police; had babies or fathered babies; belonged to a gang; and had attempted or committed suicide. Responses to these 11 questions on a 5-point scale were summed (Cronbach  $\alpha = .85$ ), with higher scores reflecting more peer misbehavior.

### Culture/Religion

Culture and religion were assessed by two items self-reported by youths: cultural participation and religious involvement.

*Cultural participation.* Participation in cultural activities was measured with questions adapted from the orthogonal cultural identity scale (Oetting & Beauvais, 1990). Youths were asked to report their level of involvement in 11 different American Indian traditions (e.g. memorials, powwows, sweats, talking circles). Responses to these items on a 4-point scale (*not at all, a little, some, a lot*) were summed (Cronbach  $\alpha = .87$ ), with higher scores indicating greater involvement in traditions.

*Religious involvement.* Religious involvement was measured by a dichotomous (yes/no) item, asking youths if they belonged to or were involved with any organized religious group or church.

### **Analyses**

All analyses were completed using SAS software, version 9.1 (SAS Institute, 2004). Because the original sample was enriched with youths likely to need services, all analyses were weighted to ensure the generalizability of findings to the community sampled. Ns presented in the tables are the actual N, but percentages reflect the weighted data.

Multivariate regression models were used to identify familial, social, and cultural factors that best predicted overall successful functioning for these youths. In addition, we also performed these analyses (although not reported herein) on the pooled urban and reservation data after weighting them to reflect the sampling frame for each area. Because the basic results were parallel, and we wanted to maximize the policy and services implications for each area, we report here data in which we kept location as a covariate and examined all of its potential interactions with the predictor variables (there were none).

## Results

### Descriptive information (See Table 1)

About one-half of the youths in this study lived in an urban area (49.0%), and a little over one-half were female (55.1%). The average age of participants was 15.6 years ( $SD = 1.9$ ). Concerning successful functioning, over one-half of the youths had a clean police record and also reported no involvement in serious misbehavior (56.8% and 54.2%, respectively). Close to one-half of the youths received good grades (45.6%). One-third reported being alcohol- and drug-free (32.0%), about one-fourth were successful in terms of positive psychosocial functioning (23.6%), and one-fifth had good mental health (20.2%). Less than one-fifth of the youths qualified as successful in the domain of positive behavior and emotions (16.8%), as measured by the YSR (at least 1  $SD$  below the mean). The average number of successful outcomes for the youths was 2.5 ( $SD = 2.0$ ), with a range of 0 to 7. In terms of the distribution of the success index, 38% of the youths qualified as successful in two to three outcome domains and 36% in zero or only one domains of functioning as assessed in this study. Twenty-one percent were successful in four to five domains and another 5% qualified as being successful in six to seven domains of functioning.

**Table 1**  
**Descriptive Statistics of Demographic, Independent,**  
**and Dependent Variables**

Characteristic	Percentage or Mean (SD)	n (Total N = 401)
<b>Demographics</b>		
Female	55.1%	401
Urban	49.0%	401
Age (range 12-19)	15.6 (1.9)	401
Socioeconomic status (range 0-17)	5.6 (4.3)	372
<b>Independent variables</b>		
<i>Family environment</i>		
Family satisfaction (range 2-25)	19.9 (4.5)	400
Family problems (range 0-9)	2.1 (2.2)	391
Stressful events (range 0-8)	2.0 (2.2)	391
Child abuse experience	25.9%	385
<i>Social environment</i>		
Negative neighborhood (range 0-11)	2.4 (2.6)	394
Negative school environment (range 0-12)	3.4 (3.1)	337
Peer misbehavior (range 0-34)	10.0 (7.5)	398
<i>Culture/spirituality</i>		
Involvement in AI traditions (range 0-31)	8.7 (8.0)	399
Religious involvement	28.8%	399
<b>Dependent variable</b>		
<i>Successful functioning</i>		
Clean police record	56.8%	393
Absence of serious misbehavior	54.2%	401
Good grades	45.6%	386
Alcohol- and drug-free	32.0%	399
Positive psychosocial functioning	23.6%	401
Good mental health	20.2%	401
Positive behavior/emotions	16.8%	401
Cumulative success index (range 0-7)	2.5 (2.0)	401

### Bivariate Relationships

Relationships between each of the environmental characteristics and the success index showed that all family environment variables were bivariately significantly related to overall successful functioning (see Table 2). Family satisfaction showed a significant positive relationship ( $r = .34, p < .0001$ ) to successful functioning, while negative family environment variables, such as stressful events ( $r = -.36, p < .0001$ ), family problems ( $r = -.31, p < .0001$ ), and child abuse ( $r = -.31, p < .0001$ ), exhibited an inverse relationship.

Youths' social environment also showed significant bivariate relationships with overall successful functioning. Peer misbehavior had the strongest negative bivariate relationship with being successful ( $r = -.50, p < .0001$ ), followed by negative neighborhood ( $r = -.34, p < .0001$ ) and negative school environment ( $r = -.25, p < .0001$ ).

Finally, both cultural and religious involvement variables were moderately related to successful functioning at the bivariate level: the relationship of religious involvement was positive ( $r = .12, p < .05$ ), whereas involvement in American Indian traditions was negative ( $r = -.10, p < .05$ ) (see Table 2).

**Table 2**  
**Bivariate Associations of Independent Variables and the Success Index (N = 401)**

Independent variables	Dependent variable: Success Index
<i>Family environment</i>	
Family satisfaction	.34 <sup>a</sup>
Family problems	-.31 <sup>a</sup>
Stressful events	-.36 <sup>a</sup>
Child abuse	-.31 <sup>a</sup>
<i>Social environment</i>	
Negative neighborhood	-.34 <sup>a</sup>
Negative school environment	-.25 <sup>a</sup>
Peer misbehavior	-.50 <sup>a</sup>
<i>Culture/religion</i>	
Involvement in AI traditions	-.10 <sup>b</sup>
Religious involvement	.12 <sup>b</sup>

<sup>a</sup> $p < .0001$ , <sup>b</sup> $p < .05$

We also explored how environmental and cultural factors related to each of the individual seven success indicators (see Table 3). With a few minor exceptions, the problem environment variables—negative neighborhood, peer misbehavior, family problems, and stressful events—were inversely related to each of the seven successful outcomes. Supportive environment, in terms of family satisfaction, was consistently positively associated with each success indicator. Religious involvement was positively related to having a clean police record, being alcohol- and drug-free, and good mental health. Participation in American Indian traditions was negatively associated with being alcohol- and drug-free.

There were demographic differences (area of residence, gender, age, and socioeconomic status) in experiencing each of the seven successful outcomes. Compared to reservation youths, those living in an urban area were significantly more likely to have a clean police record ( $\chi^2 = 9.28, p < .01$ ), less likely to have been involved in serious misbehavior ( $\chi^2 = 6.00, p < .05$ ), and more likely to have good grades ( $\chi^2 = 4.41, p < .05$ ). Girls were also more likely to have good grades ( $\chi^2 = 7.18, p < .01$ ) and report no involvement in serious misbehavior ( $\chi^2 = 4.18, p < .05$ ) compared to boys, but were less likely to be successful in

terms of positive psychosocial functioning ( $\chi^2 = 11.54, p < .001$ ), positive behavior and emotions ( $\chi^2 = 5.88, p < .05$ ), and good mental health ( $\chi^2 = 5.44, p < .05$ ). Being older was positively associated with absence of serious misbehavior ( $p < .05$ ), but negatively related to good mental health ( $p < .01$ ) and being alcohol- and drug-free ( $p < .0001$ ). Higher socioeconomic status was positively associated with having a clean police record ( $p < .05$ ).

**Table 3**  
**Bivariate Associations of Independent Variables**  
**with Individual Success Indicators (N = 401)**

	Individual Success Indicators						
	Good mental health (n=74)	Alcohol- and drug-free (n=122)	Clean police record (n=220)	Absence of serious misbehavior (n=202)	Good grades (n=170)	Positive behavior/emotions (n=58)	Positive psychosocial functioning (n=81)
<i>Family environment</i>							
Family satisfaction	+ <sup>a</sup>	+ <sup>c</sup>	+ <sup>d</sup>	+ <sup>c</sup>	+ <sup>d</sup>	+ <sup>a</sup>	+ <sup>a</sup>
Family problems	- <sup>a</sup>	- <sup>a</sup>	- <sup>a</sup>	- <sup>d</sup>	NS	- <sup>b</sup>	- <sup>d</sup>
Stressful events	- <sup>a</sup>	- <sup>a</sup>	- <sup>b</sup>	- <sup>b</sup>	- <sup>c</sup>	- <sup>a</sup>	- <sup>a</sup>
Child abuse	- <sup>a</sup>	- <sup>a</sup>	- <sup>a</sup>	- <sup>c</sup>	NS	- <sup>a</sup>	- <sup>a</sup>
<i>Social environment</i>							
Negative neighborhood	- <sup>a</sup>	- <sup>a</sup>	- <sup>a</sup>	- <sup>b</sup>	- <sup>d</sup>	- <sup>c</sup>	- <sup>d</sup>
Negative school environment	- <sup>b</sup>	- <sup>a</sup>	NS	- <sup>c</sup>	NS	- <sup>c</sup>	- <sup>d</sup>
Peer misbehavior	- <sup>a</sup>	- <sup>a</sup>	- <sup>a</sup>	- <sup>a</sup>	- <sup>d</sup>	- <sup>b</sup>	- <sup>c</sup>
<i>Culture/religion</i>							
Involvement in AI traditions	NS	- <sup>c</sup>	NS	NS	NS	NS	NS
Religious involvement	+ <sup>d</sup>	+ <sup>c</sup>	+ <sup>a</sup>	NS	NS	NS	NS

**Note:** Since the nature of the variables involved in these analyses required the utilization of different statistical tests, for ease of interpretation, only the direction of each relationship and its level of significance is provided.

+ denotes a positive significant relationship

- denotes a negative significant relationship

NS = not significant

<sup>a</sup>  $p < .0001$ , <sup>b</sup>  $p < .001$ , <sup>c</sup>  $p < .01$ , <sup>d</sup>  $p < .05$



### Multivariate Analyses

Multiple regression analyses were used to investigate what familial, social, and cultural factors best explain overall successful functioning (see Table 4). Multicollinearity was checked and found not to be an issue. After controlling for all demographic and predictor variables, two family environment variables (family satisfaction and child abuse), and two social environment variables (peer misbehavior and negative neighborhood) remained significant unique factors relating to successful functioning ( $F = 44.12, p < .0001, R^2 = .36$ ). Family satisfaction was positively related to being successful, whereas child abuse, peer misbehavior, and negative neighborhood diminished the likelihood of functioning successfully. Participation in American Indian traditions did not contribute unique variance to successful functioning in this model. However, since many youths attend traditional activities with their friends, we also investigated a potential interaction between involvement in American Indian traditions and peer misbehavior. This interaction term was significant ( $p < .05$ ) (see Figure 1). Youths with many misbehaving peers were less successful regardless of their level of involvement in American Indian traditions. However, high involvement in traditional activities also resulted in less success for those youths who did not have many misbehaving peers. Finally, since we pooled the urban and reservation samples in the multivariate analyses, we explored the potential interactions between location and each of the independent variables on successful functioning. None of these interaction terms were significant.

**Table 4**  
**Multiple Regression Models Predicting Successful**  
**Functioning in American Indian Youths ( $n = 383$ )**

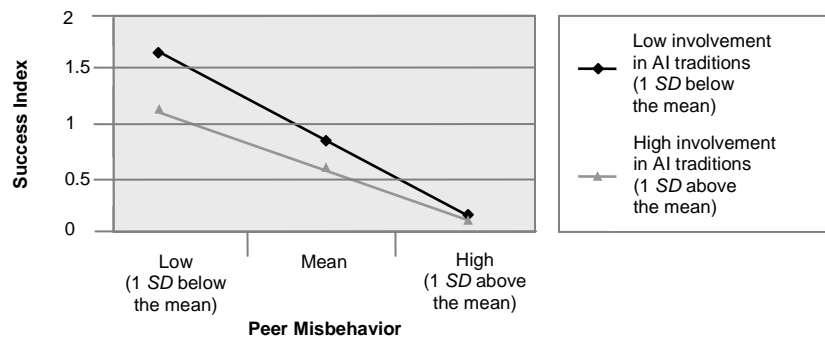
Variables	Model 1		Model 2	
	b	SE	b	SE
Intercept	1.96 <sup>a</sup>	.40	2.22 <sup>a</sup>	.41
<i>Family environment</i>				
Child abuse	-.42 <sup>b</sup>	.14	-.41 <sup>b</sup>	.14
Family satisfaction	.10 <sup>a</sup>	.02	.11 <sup>a</sup>	.02
<i>Social environment</i>				
Peer misbehavior	-.10 <sup>a</sup>	.01	-.13	.02
Negative neighborhood	-.11 <sup>b</sup>	.03	-.12 <sup>b</sup>	.03
<i>Culture/spirituality</i>				
Involvement in AI traditions	-.02	.01	-.05	.02
Peer misbehavior * AI traditions			.003 <sup>c</sup>	.001
	R <sup>2</sup> = .36 F = 44.12 <sup>a</sup>		R <sup>2</sup> = .37 F = 38.17 <sup>a</sup>	

**Note:** Age, gender, SES, and location (urban/reservation) were included as control variables and were not significant.

<sup>a</sup> $p < .0001$ , <sup>b</sup> $p < .01$ , <sup>c</sup> $p < .05$

**Figure 1**  
**Interaction of Peer Misbehavior and Involvement**  
**in American Indian Traditions**

Regression of Success on the Interaction of Peer Misbehavior and Involvement in AI Traditions



## Discussion

Extant literature on American Indian adolescents has focused predominantly on pathological and problem behaviors. Our study found that over one-third of the youths are functioning at a moderately successful level (38%), and one-fourth are clearly highly successful. Approximately one-fifth to one-half of American Indian youths experienced positive outcomes in at least one out of seven different areas of functioning. Over one-half had a clean police record (56.8%) and reported no involvement in serious misbehavior (54.2%). Nearly one-half of the youths received good grades (45.6%) and one-third reported hardly any involvement with alcohol or drugs (32.0%). However, less than one-quarter of youths qualified as successful in the domains of positive psychosocial functioning (23.6%), good mental health (20.2%), and positive behavior and emotions (16.8%), and one-third (36%) of the youths had almost no areas of successful functioning. These findings are consistent with the communities concerns and the high prevalence of various problems in American Indian adolescents reported in previous studies (Frank & Lester, 2002; Hawkins et al., 2004; Spear et al., 2005).

This study is one of the first to examine how family, social, and cultural/religious factors relate to overall successful functioning in American Indian youths. Consistent with previous theory and research with the general population of adolescents, we found that family and social environment can both enhance or interfere with successful functioning in American Indian youths. Family satisfaction was a

significant positive predictor related to overall successful functioning, whereas youths who had experienced either physical or sexual abuse were significantly less likely to be successful. Living in a dysfunctional neighborhood and having many misbehaving peers also interfered with overall successful functioning. It is possible that these adverse experiences and influences interfere with youths' ability to develop or maintain healthy bonds with parents and other institutions, which in turn may make them more susceptible to negative peer influences and lead to greater involvement in various problem behaviors (Oetting & Donnermeyer, 1998).

Additional research is needed regarding youth participation in American Indian traditions and activities. In this study, such participation was associated with more substance use and less overall successful functioning at the bivariate level. However, since youths often attend traditional activities with their friends, we explored how participation in these activities in conjunction with peer misbehavior affects successful functioning in the multivariate model. Not surprisingly, youths who had many misbehaving peers were less successful overall regardless of their level of involvement in American Indian traditions. Nevertheless, youths who did not have many misbehaving peers—but participated frequently in traditional activities—were still less successful compared to those who were less involved in such activities. Several other studies have found that participation in American Indian traditional activities was related to various problem behaviors (Hawkins et al., 2004; Petoskey et al., 1998; Whitbeck et al., 2002), but the reasons for these findings remain unclear and need further investigation.

Our study is unique in a number of ways. First, instead of focusing on only one positive outcome, we used seven indicators of successful functioning tapping criteria from both positive youth development and “problem-free” perspectives in order to more accurately understand development as a multifaceted process. Second, as has been suggested (Mitchell & Beals, 1997; Moore et al., 2004), we measured five of our seven success indicators with multiple items, with an exception of good grades and clean police record. Moreover, as recommended by Moore et al. (2004), we examined if our choice of successful outcomes was intrinsically important for these youths, finding a significant positive correlation between youths' self-reports on personal strengths and biggest accomplishments, and the overall success index. In addition, a number of youths volunteered that their biggest accomplishment was staying out of trouble, not using alcohol and drugs, and doing well at

school—lending some support to the idea that these outcomes may be intrinsically important (Stiffman et al., in press). Third, our sample involved youths from both urban and reservation areas.

The study also had several limitations. First, the findings reported here are cross-sectional, making it difficult to identify causal links. Future waves of this longitudinal project should offer more insight into potential patterns of causality and long-term patterns of successful functioning. Second, our study was confined to only one reservation and one urban area located in close proximity to each other. The findings of this study may not be generalizable beyond these areas, but can serve as a model for other settings. However, because 39% of American Indians and Alaska Natives are under age 20, and most belong to mid- to small-size peri-urban reservations (U.S. Census Bureau, 2001), the similarities enhance the potential generalizability of results. Finally, due to the paucity of research that describes successful functioning in American Indian youths, we defined successful functioning using criteria that apply to adolescents in general. Even though we used indicators reflecting both positive youth development and “problem-free” approaches to successful functioning, we did not directly measure other emerging constructs of positive development, such as social and moral competence, character strengths, self-efficacy, community-mindedness etc. Future studies should broaden the definition of successful functioning by examining other outcomes that are valued by American Indian youths and their communities. Qualitative studies with youths, their parents, or key leaders in a community might clarify what they, rather than the investigator, consider successful or desirable outcomes (Mitchell & Beals, 1997; Moore et al., 2004).

Despite any limitations, our findings have important implications for intervention. We identified several modifiable environmental factors that might be incorporated into programs designed to support American Indian youths in their growth and development. Strengthening families and creating safer neighborhoods may enhance successful functioning for these adolescents. Developing and implementing culturally appropriate peer-oriented interventions is also an important goal. However, the role of participation in American Indian traditional activities as a potential intervention method remains unclear. In this study, we found that such participation was associated with less successful functioning, even for youths who did not have many misbehaving peers. Other studies have reported similar findings (Hawkins et al., 2004; Petoskey et al., 1998; Whitbeck et al., 2002). More research is needed to determine the

circumstances under which participation in American Indian traditional activities enhances or interferes with successful functioning in American Indian adolescents (Hawkins et al., 2004).

In sum, this study is one of the first to focus on successful functioning in American Indian youths, and the first to use multiple positive outcomes with several indicators. Our findings identified a number of modifiable targets that might be incorporated into programs designed to strengthen American Indian youths in their healthy development and ultimate outcomes, and also identified several avenues for future research.

Hiie Silmere, M.S.W.  
The George Warren Brown School of Social Work  
Comorbidity and Addictions Center  
Washington University  
St. Louis, MO 63130  
Phone: (314) 935-6447  
E-mail: hsilmere@wustl.edu

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### **Acknowledgements and Authors' Notes**

This work was supported by: NIMH K02 MH01797-01A1, and NIDA R24DA13572-0 and R01 DA13227-01. The authors want to acknowledge Dr. Ed Spitznagel for valuable statistical suggestions.