

## **An Empirical Evaluation of the Project B.U.I.L.D. Gang Intervention Program**

by

M. Michaux Parker Ph.D., George Wilson Ph.D., and Chalita Thomas MS

### ***Abstract***

*For decades, gang intervention programs have demonstrated mixed results. Some intervention programs have been shown to be ineffective while others have been shown to be effective at impacting juvenile behaviors loosely associated with gangs. The purpose of this study was to empirically test the Building, Uplifting and Impacting Lives Daily (B.U.I.L.D.) gang intervention program in order to determine the program impact on the participants. This study attempted to assess whether the program positively impacted gang activity and other tangential juvenile behavior. Additionally, the researchers examined how tangential behaviors, such as school failure and substance use may be correlated with gang activity.*

*The study used a two-step evaluation model that tested for statistical significance and treatment effect. Findings suggest that the Building, Uplifting and Impacting Lives Daily (B.U.I.L.D.) gang intervention program was successful in reducing the mean level of deviant behaviors across seven variables. Five of the reductions were statistically significant and the remaining two behavioral reductions were borderline significant. Additionally, all of the reductions had large effect sizes that suggested statistical importance.*

### **Introduction to the Study**

While the incidence and prevalence of gangs in the United States has increased over the past three years (National Gang Intelligence Center, 2011) consistently successful gang intervention remains elusive. Stinchcomb (2002) argues that there has never been a completely successful gang intervention program. However the reality of empirically tested gang intervention may not be quite as bleak. An extensive review of the literature on gang

prevention programs revealed that there is support for some intervention programs such as mentoring and service learning. Perhaps the true nature of the problem is that there is a lack of rigorous empirical analysis of gang intervention programs.

This study sought to address three research questions. First, whether or not there was empirical evidence that a specific faith-based gang intervention (Project B.U.I.L.D.) made a statistically significant impact on gang behaviors of its clients. The second research question considered was whether or not Project BUILD impacted tangential behaviors as seen in other gang intervention evaluations. The final research question considered was whether or not any changes in tangential behaviors correlated with gang behavior. Prior to beginning the analysis it is necessary to discuss the state of gang interventions in the United States.

### **The State of Gang Intervention**

There certainly is no shortage of recommendations for gang intervention strategies. Some of the broad recommendations for success suggest tailoring the gang intervention to the specific jurisdiction where it will be implemented (Boerman, 2001; Stinchcomb, 2002), the need for comprehensive community programs (Houston, 1994; Anderson & Dyson, 1995; Sorrentino, 1995; Stinchcomb, 2002) the need for Nurturing Models (Jackson et al. 2005), the need for school-based models (Batsis, 1997; Knox, 1997) and the need to shift the focus of gang intervention to cultural change rather than individual change (Palumbo et al., 1992). Other recommended but untested strategies appear to be derived from previous studies about gang behavior. These types of recommendations more closely resemble categories of intervention strategies rather than specific strategies.

There also appears to be no shortage of literature discussing gang intervention programs that have failed to produce credible results. Programs such as Drug Abuse Resistance Education (D.A.R.E.), Scared Straight and Operation Hardcore are examples of programs that have been ineffective at achieving their stated goals (Hansen & McNeal, 1997; Rosenbaum & Hanson, 1998; NCGCC, 2008; Palumbo et al., 1992). Some of these programs have been shown to produce positive impacts on behaviors associated with gang membership such as the Service Learning programs which were found to be effective at promoting better self-esteem, increased school attendance, lower violent behaviors and increased sensitivity to diversity (Holmes et al., 2003).

Peer mediation programs (Holmes et al., 2003) as well as almost all suppression programs (Houston, 1994; Henkel & Reichel, 2002; Stinchomb, 2002) have consistently been found to have no effect on gang intervention. Even school-based programs like Project Care and Project New Turf which are implemented in elementary schools by neighborhood coalitions have shown little impact on gangs (Palumbo et al., 1992). Ultimately, some scholars (Houston, 1996) have resorted to simply asking gang members themselves what intervention strategies would have been effective at preventing them from joining a gang.

Gang members who agreed to give interviews to researchers stated that while they

did not think educational programs like DARE or GREAT were useless, that these programs would not have prevented them from joining gangs (Houston, 1996). The gang members stated that jobs and job training programs had the most potential for stopping them from becoming gang members (Houston, 1996). Contrary to the previously discussed literature, there was one strategy that showed promise. Holmes et al. (2003) found that some mentoring programs were effective for addressing gangs but only when the mentoring programs had both an effective training infrastructure and support available to both the mentors and the students. Mentoring is a core component of Project BUILD.

### **The Project B.U.I.L.D. Model**

Project BUILD is a non-profit organization that was founded in February 2009, by Delphine Sellars and the Durham Cooperative Extension. The purpose of Project BUILD is to serve as a catalyst for positive growth, development and change in the Durham Community. The program is dedicated to enhancing young lives by directly linking them to educational and employment resources, mentors, pro-social role modeling and encouragement all in an effort to decrease negative activity and more importantly to increase productivity. The program is geared to serve most populations between ages 14-21 their primary focus is gang and potential gang members (Project BUILD, 2009).

Project BUILD is designed to function as a wraparound (system) structure. Upon being referred to BUILD, individuals are assessed and assigned an Outreach Worker. Each case is individually reviewed by our Intervention Team (IT). The IT makes appropriate resource referrals based upon goals, aspirations, circumstances coupled with the presented information. The BUILD Outreach Workers assist the youth in following through on the resource referrals and conduct aftercare services until goals are achieved. Project BUILD functions under the Office of Juvenile Justice and Delinquency Prevention's Comprehensive Gang Model: There are five core service strategies: (1) Community Mobilization-Project BUILD solicits the support of the community in responding to issues concerning youth and gang problems, (2) Opportunities Provision-BUILD presents both educational and employment opportunities as a means of setting and accomplishing goals and increasing productivity, (3) Suppression-BUILD partners the community and community based agencies in an effort to reduce crime, violence and harm to the community, (4) Social Intervention-BUILD addresses social deficits and issues such as mental health, family dysfunction, substance abuse, and other factors that will diminish an individual's ability to disengage from the gang and gang activity and (5) Organizational Change and Development-through education and communication, BUILD aims to improve the ability of organizations and agencies to respond to gangs (Project BUILD, 2009).

### **Study Methodology**

The sample for this study was drawn from Project BUILD archival data. The sample consisted of all juvenile delinquents in the Project BUILD program, between the

years of February 2009 and June 2011. In order to determine if the Project BUILD intervention made statistically significant impact on gang behaviors of its clients, researchers used a two-step testing procedure. This quantitative analysis testing the statistical significance of one dependent variable, which is 'gang activity' and six independent variables over different points in time. The additional study variables were: family problems, juvenile delinquency, mental health symptoms, association with deviant peers, school failure and substance use. The study variables were tested using a variety of statistical techniques including Pearson's  $r$ , independent sample  $t$ -test and Cohen's  $d$ .

Cohen's  $d$  is a statistical technique that assesses treatment effect size of an intervention. The calculation of treatment effect is vital for developing a deeper understanding of complex social phenomena such as behaviors involving symbolic interaction. The American Psychological Association has urged researchers to provide 'enhanced characterization' of their inferential statistics by including both the direction and size of the effect (MaCartney & Rosenthal, 2000). Unfortunately this request is not always followed by social science researchers. The reliance on statistical significance, alone, is almost ritualistic (Maltz, 1994). The value of assessing the effect size cannot be over stated because the effect size is a measure of how important the treatment's change was to the participants.

Politicians and policy makers often confuse the significance of a finding with the importance of the finding (MaCartney & Rosenthal, 2000). For example, an anti-aggression intervention that shows a reduction in the average number of fights per day ( $T_1 = 15$ ,  $T_2 = 13$ ) may be statistically significant ( $p = .021$ ) in that the reduction did not occur by chance. However if the effect size is small ( $d = .048$ ), the statistically significant difference is still not important. Theoretically there is only .048 of one standard deviation difference between the average number of fights per day at time-one and time-two; realistically, that may equate to only one less fight per day. The concept of statistical significance is only a probability that the researcher has not mistakenly rejected the null hypothesis (MaCartney & Rosenthal, 2000).

One of the more common statistics used to determine the treatment effect is the Cohen's  $d$ . The  $d$ -statistic can be used when researchers compare group means and have results that are directly interpretable (MaCartney & Rosenthal, 2000). Cohen's  $d$  summarizes the distance, in standard deviations, between two groups with respect to a given measure (Ibid). As previously stated, Cohen's  $d$  is interpreted in standard deviations. For the purpose of this study, the researchers used a 1.00 treatment effect threshold. In order for a treatment effect to be considered 'important', it must attain this level.

### **Study Findings**

Prior to examining the study questions, researchers conducted a univariate analysis of the data in order to contextualize the findings. The majority of respondents were male (85.0%,  $n=68$ ) and African American (61.3%,  $n=49$ ). Less than three percent of the

respondents were white (2.5%, n=2). Additionally, the majority of the respondents were in the 9<sup>th</sup> grade (35.0%, n=28). When examining the respondents' history of gang violence, the data revealed that the majority of the respondents (86.3%, n=69) had a history of gang violence. Less than 14% (13.8%, n=11) of the respondent, however, reported a history of school behavior (See Table-1).

table 1 about here

The data also indicated that the respondents' average age was slightly over 16 years old (mean=16.50). When examining gang activity 1, the data indicated a mean of 1.43 on the scale of gang activity (md= 2.00, sd= .823).

The data revealed that the mean level of family problems was 2.50 (md= 2.50, sd=1.630).

When examining the data on school failure, the data indicated a mean of 4.22 (md= 4.50, sd= 2.371) and the mean level of substance use was 3.86 (md= 4.00, sd= 2.438). The association with deviant peers variable had a mean of 1.23 (md= 1.00, sd= .811) and the mean level of delinquency was 2.20 (md= 2.00, sd= 1.444). Lastly, the respondent's mean number of mental health symptoms was 3.31 (md= 3.00, sd= 1.688) (See Table-2).

Table 2 about here

### **Outcome Evaluation and Treatment Effect**

When considering the study variables, all seven of the categories of behaviors showed marked decreases from time-1 to time-2. The gang activity score decreased from an average of 1.43 to an average of .10 ( $t= 2.18, p= .032$ ). The corresponding statistics suggested that the not only was the decrease statistically significant but statistically important as well ( $d= 2.15$ ). There was a 2.15 standard deviation of difference in the mean score of gang activity from time-1 to time-2.

The mean score for family problems decreased from an average of 2.50 to an average of .48 ( $t= 2.72, p= .008$ ). The Cohen's  $d$  statistic suggested that the decrease was also statistically important ( $d= 1.26$ ). There was a 1.26 standard deviation of difference in the mean score of the family problem scale from time-1 to time-2. While the decrease in family problems was both significant and important, this variable produced the lowest

treatment effect of all the study variables.

The level of school failure also decreased from an average of 4.22 to an average of .24 ( $t= 2.07, p= .041$ ). The corresponding Cohen's  $d$  statistic suggested that the not only was the decrease statistically significant but statistically important as well ( $d= 2.34$ ). There was a 2.34 standard deviation of difference in the mean amount of school failure from time-1 to time-2.

The mean score for substance use decreased from an average of 3.86 to an average of .28 ( $t= 2.35, p= .021$ ). The Cohen's  $d$  statistic suggested that the decrease was also statistically important ( $d= 2.05$ ). There was a 2.05 standard deviation of difference in the mean amount of substance use from time-1 to time-2.

Mental Health symptoms also decreased from an average of 3.31 to an average of .20 ( $t= 2.27, p= .026$ ). The corresponding Cohen's  $d$  statistic suggested that the not only was the decrease statistically significant but statistically important as well ( $d= 2.51$ ). There was a 2.34 standard deviation of difference in the mean score of mental health symptoms from time-1 to time-2. The treatment effect seen on mental health symptoms was the strongest in the study. In addition to the previous five study variables, there were two variables that experienced reduction that did not attain statistical significance.

Both 'association with deviant peers' and 'delinquency' experienced decreases but neither were statistically significant. It should be noted, however, that both association with deviant peers ( $t= 1.92, p= .058$ ) and delinquency ( $t= 1.92, p= .057$ ) approached significance. Additionally, the treatment effect for 'association with deviant peers' ( $d= 2.12$ ) and delinquency ( $d= 1.85$ ) did attain the treatment effect threshold. This suggests that despite their inability to attain statistical significance, the amount of association with deviant peers and delinquency were substantially affected by the Project BUILD intervention (See Table-3).

Table 3 about here

In order to explore the final research question of whether or not tangential juvenile behaviors impacted gang behaviors, researcher subjected the data to both bivariate and multivariate testing. Table-4 shows that there was a statistically significant relationship between mental health and gang activities ( $r = .222, p = .048$ ). The direct correlation was moderate in strength and suggested that as respondent's gang activity increased, their mental health symptoms also increased.

There was also a statistically significant relationship between gang activity and substance use ( $r = .351, p = .001$ ), gang activity and association with deviant peers ( $r = .803, p = .000$ ). This suggests that as gang activity increases so does association with deviant peers and substance use.

Association with deviant peers was also found to be related to mental health symptoms ( $r = .441, p = .000$ ), school failure ( $r = .242, p = .031$ ) and substance use ( $r = .270, p = .015$ ). These data suggest that as association with deviant peers increases so does school failure and substance use.

One of the more interesting set of correlations occurred when examining mental health symptoms. There were correlations between mental health symptoms and school failure ( $r = .482, p = .000$ ), substance use ( $r = .450, p = .000$ ), association with deviant peers ( $r = .336, p = .002$ ). This suggested that as school failure and substance use increase so does the juvenile's mental health symptoms.

Substance use was also correlated with school failure ( $r = .369, p = .001$ ) and association with deviant peers ( $r = .256, p = .022$ ). These data suggest that there as substance use increases so does school failure and association with deviant peers. The data also revealed a relationship between substance use and association with deviant peers ( $r = .605, p = .000$ ). The data suggests that as respondent's drug usage increases, their association with peer influence also increases (See Table-4).

Table 4 about here

### **Discussion and Conclusion**

The findings associated with the Project BUILD data were definitely remarkable. Of the seven categories of deviant behaviors, Project BUILD was able to show a statistically significant reduction in all except two. Those two categories, while not statistically significant, did show reductions in deviant behaviors that failed to attain statistical significance by seven-thousandth (.007) and eight-thousandths (.008) of a point (See table-3). However, these two areas, association with deviant peers and delinquency, did display statistically important reduction in that the effect sizes for both variables were well over the 1.00 threshold for Cohen's *d*. The most interesting finding can be seen once the effects of the Project BUILD gang intervention program are ranked.

The greatest impact of the Project BUILD intervention was in the area of juvenile mental health symptoms. The findings suggested that there was a 2.51 standard deviation of difference in mental health symptoms from time-1 to time-2. Even if the intervention program was ineffective at reducing gang-related activities, the benefit to juvenile mental health would make a strong case for the scaling and replication of the program. The reductions in school failure and gang activity were the second and third strongest effects, respectively. Both school failure and gang activity having more than twice the effect size necessary to be considered statistically important.

The weakest effect size was seen in the reduction of family problems. This comparatively lower effect size may have had less to do with the participants' behaviors and more to do with the dynamics of the individual families. Within the family setting, conflict can be created without the participant taking an active role. Therefore, family problems may increase despite the program participant's desire to avoid the conflict. Conversely, the

program participant may also act as an instigator in the family. This instigator dynamic may help explain the statistically significant and important reduction in family problems found in the data. In addition to the program findings, the data also revealed a complex set of correlation between juvenile behaviors.

The researchers wanted to examine the assumption that improvements in tangential behaviors may lead to substantial changes in gang activities. The Project BUILD data suggested that mental health symptoms, substance use and association with deviant peers were correlated with gang activities. The relationship between the association with deviant peers was so strong that researchers could easily consider it to be collinear. This exclusion leaves mental health symptoms and substance use as tangential correlates. Mental health symptoms appear to theoretically be a dependent variable in the relationship. There are no credible theories that argue mental illness as the genesis for organized crime and deviance. Researchers are left to ponder the role of substance use.

The Project BUILD data showed that substance use was correlated, not only with gang activities, but also with delinquency, mental health symptoms and school failure (See Table-4). The only study variable that was not significantly correlated with substance use was family problems. These data suggest that maybe scholars should revisit the role of substance use in the production of juvenile deviance. Rather than serving as an aside to juvenile deviant behavior, perhaps substance use should be considered as more of a catalyst deserving of more focused study.

Ultimately scholars must continue to subject programs like Project BUILD to rigorous evaluations. The next step in the evolution of intervention programs is to attempt to replicate the finding in this study. Additional longitudinal data should be collected from the project in order to begin to track the stability of these observed effects.

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