

Identifying high-risk youth for secondary gang prevention

Karen M. Hennigan^{a*}, Cheryl L. Maxson^b, David C. Sloane^c, Kathy A. Kolnick^c and Flor Vindel^a

^a*Department of Psychology, Dornsife College of Arts and Sciences, University of Southern California, Los Angeles, CA, USA;* ^b*Department of Criminology, Law and Society, School of Social Ecology, University of California, Irvine, CA, USA;* ^c*Price School of Public Policy, University of Southern California, Los Angeles, CA, USA*

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Efforts to reduce gang violence by deterring youth from joining street gangs are of major interest in cities across the United States. Current thinking supports a comprehensive gang reduction approach that includes concurrent efforts that prevent joining, encourage leaving, and interrupt gang violence. This paper focuses on a method of strengthening the prevention component by improving the identification of youth at high risk for gang joining. The authors advocate a secondary prevention approach supported by an empirically based assessment of risk factors consistently associated with gang joining in rigorous studies across multiple locations in the United States, Canada, and Europe.

The process of developing a Gang Risk of Entry Factors (GREF) assessment tool to identify youth at high risk for gang involvement is described in the context of the authors' collaboration with ongoing comprehensive gang reduction efforts undertaken by the City of Los Angeles. The rationale for the approach as well as the framework used to create and implement the assessment in a collaborative context is detailed.

Process-level data is reported on the usefulness of the assessment for identifying high-risk clients for secondary gang prevention. Analyses suggest that boys referred to the gang reduction program had risk levels that were no higher than risk levels observed in general school populations on three of the four risk factors compared (though the girls referred were higher risk on these factors). Using the assessment to screen youth allowed programs to identify and enroll only the subset of youth with risk levels similar to youth from the same neighborhoods who self-reported gang involvement on six of the eight risk factors.

Identifying youth with high risks provides the opportunity to implement secondary gang prevention programs that are more intensive than programs typically provided for primary prevention. The assessment supports more intensive efforts that can be focused on a common set of risks the clients are experiencing, as well as challenges unique to each individual.

Keywords: secondary gang prevention; gang risk; gang risk assessment; comprehensive gang programs; GRYD; GREF; YSET

Introduction

Gang activity and violence remain a pressing issue for US policymakers. Recent analyses of 15-year trends in the prevalence of gangs in middle to large US cities reveal that the presence of gang activity remains unchanged in over two-thirds of those jurisdictions

*Corresponding author. Email: hennigan@usc.edu

(Howell *et al.* 2011). These scholars note that in 70% of cities with populations of 100,000 or more, the proportion of homicides related to gangs ranges between 20% and 40%.

A comprehensive report commissioned by the City of Los Angeles (Advancement Project 2007) documents that Los Angeles has had a violence crisis for more than 20 years driven by a long-term epidemic of youth gang homicide and gang violence. In 2009, more than one-half of all homicides in Los Angeles were gang-related (Howell *et al.* 2011) and gang-related mortality estimates place Los Angeles firmly ahead of the 32 other large cities (McDaniel *et al.* 2012). The Vera Foundation (cited in Advancement Project 2007) estimated the criminal justice system costs of gang violence in the City of Los Angeles at approximately \$1.145 billion per year.

Given a long line of studies that provide consistent and clear evidence of dramatic increases in crime and violence with gang participation, there is much to gain from the reduction of youth participation in gangs (for reviews, see Klein and Maxson 2006, Krohn and Thornberry 2008). However, success in achieving this goal has eluded us. Despite massive efforts on the federal, state and local levels, only a few programs, in a few places, have been evaluated to be effective, and none of these has yet attained the status of a 'model' program based on scientific standards of evidence (Klein and Maxson 2006, Thornberry 2008). A recent review of 38 evaluation studies published in the past three decades found that 'findings in regard to effectiveness were not encouraging, especially for studies evaluating general prevention, and gang membership prevention programs.' The authors noted, 'None of the evaluations of comprehensive and holistic programs produced any strong evidence in terms of effectiveness' (Wong *et al.* 2011, p. 4). Gang suppression programs had the most consistent positive outcomes to date, especially where gang problems were chronic.

Comprehensive models are favored over pure suppression approaches due to concerns that strictly law enforcement efforts are unsustainable since they do not constrict the influx of youth entering gangs or reduce the size of gangs by discouraging gang participation. Thus, whether suppression efforts, alone, can have a lasting impact on the prevalence of gangs and gang members is questionable (Decker 2003). A consensus is growing that effective programs will need to take a comprehensive approach combining prevention, intervention and suppression to achieve a lasting impact on three important outcomes: reductions in gang joining, reductions in gang violence, and ultimately, reductions in the number and size of gangs.

However, comprehensive models clearly are difficult to implement, as reflected in the descriptions of the early tests of the Spergel Model demonstration projects (Klein and Maxson 2006). Decker and Curry (2002) document a litany of impediments to the faithful implementation of the SafeFutures program in St. Louis. Reflecting back on earlier descriptions of the interpersonal or interagency rivalries and turf issues that emerge in projects where diverse agencies must work together, Decker and Curry (2002, p. 214) note that 'resolving turf issues may be more difficult for rational organizations than it is for loosely structured gangs.' They also described the difficulty of achieving a good match between clients and services. In the case of SafeFutures, agencies needed to reconfigure their methods to providing program services to be appropriate for gang offenders. In the case of the gang secondary prevention efforts described here, agencies were required to suspend their typical methods of identifying suitable clients and accept a rigorous approach that permitted only the documented high-risk youth to be served in their programs. Challenges involved in shifting the paradigm in Los Angeles from the usual *primary* gang prevention efforts (i.e., serving all interested youth) to a new *secondary* gang prevention approach (i.e., serving only those youth documented to be at high risk of

joining a gang) are detailed below. This transition did not come without considerable collaborative effort.

In the toolbox of comprehensive gang control efforts at this time, secondary gang prevention and gang intervention strategies appear to be the weakest links. A recent systematic review (Wong *et al.* 2011) as well as a recent meta-analysis of youth violence reduction strategies (Lipsey 2009), reinforces the value of targeting high-risk youth for secondary prevention efforts. However, to paraphrase a recent study on risk assessment for gang prevention, the success of secondary prevention hinges on our ability to identify those youth most at risk for joining gangs (Melde *et al.* 2011) and our ability to do so at this time is questionable.

The focus on secondary prevention is a deliberate shift from broad community-level approaches that are prevalent for primary prevention efforts. Social scientists have accumulated a long inclusive list of risk factors that predict a range of problem behaviors beginning in early adolescence – such as truancy, dropping out of school, substance use, precocious sexual behavior, delinquency, and violence – based on the observation that a variety of problem behaviors tend to co-occur due to common origins (Jessor and Jessor 1977). Wide ranging community efforts have been undertaken to support positive youth development and discourage a wide array of problem behaviors (see Hawkins *et al.* 2002, Brown *et al.* 2011), while other researchers of the causes of violent and delinquent behaviors have taken a broad systems view for community violence prevention (see Herrenkohl *et al.* 2007).

These broad community-level approaches have been important and useful for supporting positive youth development in general, but not for preventing gang joining. Despite an array of general gang prevention efforts – including community-based efforts such as Boys and Girls Club programs and a variety of after-school programs – relatively little progress has been made over recent decades in preventing gang affiliation (Advancement Project 2007, Howell *et al.* 2011).

How can communities that want to focus on preventing gang affiliation achieve a more targeted approach? We argue here that shifting from a focus on primary prevention to an emphasis on secondary prevention is required. Studies have documented that even in communities with considerable gang activity; the vast majority of youth do not join a gang (Klein and Maxson 2006). This article describes the development of an assessment used by practitioners to identify and target a smaller number of youth at high risk for joining street gangs and to enroll these youth in a secondary gang prevention program in Los Angeles.

Very few documented attempts have been made to develop gang-related assessments to support secondary gang prevention. Gebo and Tobin (2012) report on an effort in Springfield, Massachusetts where responsibility for the development of an assessment was vested with multiple agency partners and community stakeholders with only advisory input from the research partners. Gebo and Tobin document challenges in reaching a consensus on the nature and content of the assessment, lack of follow through in using it, and the impact the effort to reach consensus had in the evolution of the program itself. Their experiences underscore the critical importance of local ‘buy-in’ and training as well as evidence-based knowledge.

In this study, researchers in collaboration with program managers and program providers developed an assessment to support secondary gang prevention for the Los Angeles Gang Reduction and Youth Development (GRYD) Program. This paper describes steps taken by the researchers to identify an empirically defensible set of risk factors, develop a strategy to determine reasonable cutpoints to define high risk on each factor, and provide program providers with the feedback needed to selectively enroll high-risk youth

in the GRYD Secondary Prevention Program. We document details of the collaboration with program providers and GRYD managers undertaken to improve the implementation and use of the assessment. Process-level data that assess progress toward the goal of selecting youth at high risk for gang joining for secondary prevention services are detailed.

Collaboration with the Los Angeles GRYD Program

In early 2008, following two scathing critiques of previous gang prevention and intervention efforts in Los Angeles (Advancement Project 2007), the mayor's office resolved to try a new approach, leading to the creation of a comprehensive program in 12 GRYD zones with a high rates of gang affiliation and rates of violent gang-related crime at least 40% higher than elsewhere in Los Angeles.¹ After seeking input from local researchers and other gang experts,² the city issued a solicitation to local agencies for the provision of secondary gang prevention services in these zones. The solicitation stated that a lead service agency in each zone would be contracted to target a narrowly defined client pool selected on the basis of scores on a new assessment tool. Our group was engaged to develop this instrument.³

Throughout the development period, our research group met frequently with the GRYD program staff and with the agencies contracted to provide secondary prevention services. We developed a beta version of the assessment and began training the staffs at the participating agencies to administer the beta version of the assessment to youth recruited or referred to the GRYD program from local school and community settings. Key aspects of the training included a standardized method of conducting the assessment interview and a heated but healthy debate on the logic behind using the assessment for program intake. The city mandated agencies' use of the assessment in program recruitment, which was a departure from the usual practice of accepting most if not all of the recruited or referred youth on the basis of recommendations from parents, local school personnel, other local agencies or probation. Service providers expressed the opinion that youth who were experiencing difficulties, or were exhibiting risky or rebellious behavior, were the very youth who were being recruited or referred to the program anyway. They had the expectation that this group of youth was exactly the kind of youth the programs wanted to target insofar as they were riskier than the general population. Veterans of prior gang prevention efforts expressed strong reservations about using the new assessment in lieu of relying on the familiar referral systems and the judgment of their own program staff, who were concerned that youth who needed the services were being turned away. This type of resistance to different approaches is of course not unusual in gang programming (Decker and Curry 2002). The GRYD program director, staff, and the researchers were called upon to defend the new approach in multiple meetings with the service providers, city council members, media, and the general public.

Lack of confidence in the empirically based assessment tool was only one challenge. Frustration grew over administering the lengthy interview, especially over the first months when only one out of every three interviews resulted in an eligible client.⁴ The focus on secondary prevention was new to the contracted providers, most of whom had previously been involved in city-funded primary prevention programs. Some referral networks felt discouraged and even resentful when many referred youth were not accepted into the new programs. In an effort to turn this around, GRYD program staff became proactive in defining and explaining the identified risk factors to school and community groups in the program areas. To their credit, most program agencies also worked to change their previous recruitment and referral patterns by adopting more proactive approaches,

including sending out personnel to meet one-on-one with school staff and community leaders to convey the concept of multiple risks and explain the kinds of risks the programs were targeting.

Recruitment and referrals

Over the first three years, 40% of the referrals to the free GRYD program came from school-related sources, including counselors, teachers, administrators, and other school professionals. Family-related referrals were the next largest group overall at 39%. These included parent and child walk-ins who heard about the program from a variety of neighborhood, community, and school events, as well as from neighbors and other youth who were enrolled in the program. Fewer, but still a significant number of referrals, came from other service providers (8%), or from law enforcement or probation-related programs (6%). The remaining 7% were from miscellaneous or unspecified sources.

Revisions and adaptations

During this tumultuous period, program providers and researchers worked together to improve the assessment process. Most of the scales adopted for the GREF had been used successfully with middle school-aged youth, while the GRYD program targeted youth of this age and younger (ages 10–15). Those interviewing the referred youth provided valuable feedback on difficulties in comprehension, especially among younger clients. During the initial interviews, interviewers noted and passed along to the researchers, alternative language used when a youth did not understand the question as read. Working together in this way, a list of acceptable synonyms was developed and distributed.⁵

Other adaptations were made to improve comprehension issues reported by the program staff. The response set used for some of the risk factors was changed to frequency-based options (*never, rarely, half the time, often, and always*) to accommodate younger respondents who found it difficult to respond in terms of degrees of agreement about behaviors that vary across time. Likert scales anchored from *strongly agree* to *strongly disagree* were retained for measures of attitudes or beliefs and concrete response options (*yes or no/none to all*) were used for questions about behaviors and friend's behaviors.

Missing data also became a significant challenge. Over the first several months, one in three assessment interviews was submitted with missing or uninterpretable answers. While a client's refusal to answer a question was accepted (but very rare), omissions or blanks were not. The assessment was considered incomplete until missing data were resolved. Coordinators at each program site were designated as contacts to assist in retrieving the necessary information quickly. Interviewers who consistently missed questions were identified and re-trained. The format of the interview was changed to make it easier for interviewers to read and follow-up as needed on each question. As a result, the number of submitted interviews with missing data dropped dramatically. Once this system was in place, an individual feedback report was provided to each agency, typically within a week, on each client's risk-specific factor levels and eligibility for program enrollment.

Another important collaborative accommodation was the implementation of a procedure to challenge an ineligible finding. Agency staff challenged an ineligible finding if they believed that the youth was grossly misleading in his or her responses. In these cases (2.1% of cases submitted over the first 3 years), alternative information, from school records and occasionally probation, parent or other service provider records, could be

assembled to document the target risk factors with archival evidence. Care was taken to restrict the challenge review criteria to the same risk factors included in the assessment. A committee of a clinical psychologist and a program director with support from the research team reviewed the challenge, and in 39% of cases admitted the youth into the program.

Development of the GREF assessment

Our goal was to identify the subset of youth who are at high risk for joining a gang from the larger pool of youth who were not likely to join a gang despite some involvement in delinquency and other risky behaviors in general. In the criminal justice field, a myriad of assessments have been developed to identify youth at high risk for delinquency and recidivism. As one of the lessons learned in a review of these assessments, Baird (2009) cautions that the widespread practice of including a long list of risk factors, even those with weak or indirect empirical relationship to recidivism (despite face value), greatly weakens the assessments' predictive value. Acknowledging this caution, we aimed to identify a subset of factors that have consistently been empirically related to *gang affiliation in particular*, favoring evidence from studies with rigorous research designs. Fortunately, a rich empirical literature on gang risk factors has accumulated. We also considered the possibility that some context-specific factors may be important (e.g., areas with multigenerational gangs vs. areas where gangs are a relatively new phenomenon; cultural, racial, or ethnic differences).

Step 1: Identifying risk factors consistently related to gang joining

White (2008) argues that relying broadly on static risks – such as age, ethnicity, and structural poverty in the neighborhood of residence – for the purpose of selecting youth for gang intervention is akin to social profiling because it ignores the behaviors, circumstances, and decisions made by the individuals who meet these broad criteria. While the GRYD programs are located in areas of the city where these static risks are high, it is not assumed that most of the youth in these areas will join a gang simply because they live there. Our focus has been to identify dynamic factors empirically associated with gang involvement during early adolescence because youth are most likely to join a gang during this time (OJJDP 1998, Esbensen and Osgood 1999, Thornberry *et al.* 2003). The primary purpose of the GREF assessment is not to predict gang joining in an actuarial sense (e.g., based primarily on static risks such as poverty or neighborhood of residence), but rather to identify youth who have an accumulation of dynamic characteristics, attitudes, circumstances, and behaviors that are empirically associated with gang joining. These identified youth can be enrolled in intensive programs designed to reduce these risks by addressing the youths' needs. Gottfredson and Moriarty (2006, pp. 190–193) discuss the implications of focusing on static or dynamic risks.

We relied on two recent reviews of the vast literature on gang risk factors that focus on multiple and consistent empirical findings that link risks to gang affiliation as a measured outcome. Klein and Maxson (2006) reviewed longitudinal and cross sectional studies from the United States, Canada, and Europe; Krohn and Thornberry (2008) focused specifically on the accumulated longitudinal evidence on risk factors for gang joining.

In their review, Klein and Maxson (2006) conclude that six areas of risk have strong consistent empirical associations with gang membership across multiple studies in multiple locations. These factors included: (1) cumulative exposure to stressful life events; (2) nondelinquent problem behaviors (broadly defined to include impulsivity and risk

taking, as well as oppositional, aggressive or externalizing behavior); (3) delinquent beliefs (neutralizing guilt for delinquent acts); (4) parental supervision, (5) affective dimensions of peer networks (such as negative peer influence); and (6) characteristics of peer networks (typically measured as friends involvement in delinquency). Reviews in Thornberry *et al.* (2003) and Krohn and Thornberry (2008) confirm these risk factors and add early delinquency, because they found that a rise in delinquent activities often *precedes* gang joining as well as escalates after joining.

Given the strength of the empirical data reviewed, we chose to focus the assessment on factors within the areas highlighted in both reviews as well as early delinquent behavior, confirmed in the Krohn and Thornberry review (2008). Both reviews and others make the case that no single risk factor alone is predictive of gang joining, rather it is the accumulation of multiple risks that most strongly predicts gang joining (see also Thornberry *et al.* 2003 as well as Esbensen *et al.* 2009). Key risk factors were derived from studies conducted in various locations across Northern America and Europe, including a few studies in Los Angeles County (Maxson *et al.* 1997, Maxson and Whitlock 2002; and one of the sites included in Esbensen 2003), lending some confidence that these risk factors would be appropriate for the intended GRYD service population.

Some factors, surprisingly, do not appear to consistently predict gang joining. Both of the systematic reviews concluded that the preponderance of evidence from multiple studies in multiple locations failed to support a direct causal relationship between self-esteem, family poverty, family structure, affective bonds with parents (as measured in these studies), and gang membership. Several other factors have to date had weak or inconsistent support for a causal relationship with gang membership, including family deviance, internalizing behaviors (e.g., anxiety, withdrawal), lack of involvement in conventional activities, attitudes toward the future, parenting style (e.g., hostile family environment), commitment to education/educational aspirations, low academic achievement, unsafe school environment, attachment to school, criminogenic neighborhood indicators, and neighborhood crime. Many factors shown to predict illegal behavior have not specifically predicted gang joining. We concluded that without consistent empirical support, these factors would likely weaken the assessment.

Step 2: Select a measurement approach for each risk factor

We identified appropriate measures for the chosen risk factors using scales developed in past research. All the risk factor measures with modifications made after the pilot period are provided in the Appendix.

Accumulated strain due to stressful life events. Researchers using Agnew's (1992, 2001) general strain theory have documented a strong relationship between a wide array of chronic stressors, or accumulated negative life events, with delinquency. More recent research has documented a strong relationship between accumulated stressful life events – such as school failure, school disciplinary sanctions, difficulties or changes in relationships with friends, and illness or death of loved ones with gang joining.⁶ A checklist method has been used to measure an accumulation of powerful life events over a relatively short period of time that contributes to an adolescent's stress or strain. The scale used in the Rochester study (Thornberry *et al.* 2003) was adopted for the GREF assessment.

Nondelinquent problem behaviors including antisocial tendencies and weak self control. Two types of measures have been used by researchers under the general rubric labeled nondelinquent problem behaviors by Klein and Maxson (2006). We split this broad category into two factors: antisocial tendencies and weak self-control.

Antisocial tendencies. The relationship between gang joining and broadly defined conduct disorder or externalizing behavior (e.g., lying, stealing, getting angry) was tested prospectively in several longitudinal studies around the United States. A significant relationship has been consistently confirmed⁷ using various scales including the Achenbach Child Behavior Checklist (Achenbach 2009) and the Social Behavior Questionnaire (Tremblay *et al.* 1991). Given our goal to create an assessment readily available to a myriad of prevention providers, we chose to work with a similar scale that is in the public domain, the Goodman Strengths and Difficulties Questionnaire (Goodman and Scott 1999, Goodman and Goodman 2009). This scale is appropriate for 11–16-year-olds and correlates well with the Child Behavior Checklist used in past studies (Bourdon *et al.* 2005, Achenbach *et al.* 2008).

Self-control: impulsivity and risk-taking. Grasmick *et al.* (1993) developed a general measure of self-control of impulses based on Gottfredson and Hirschi's (1990) complex definition that combined six correlated concepts strongly related to criminal activity. Two of these, the impulsivity and risk-taking subscales, were included in the beta version of the assessment because their relationship with gang joining has been tested and consistently confirmed in cross sectional and longitudinal studies in several locations.⁸

Delinquent beliefs that neutralize guilt for offending. Agnew (1994) observed that a relatively small number of people approve of violence while a larger number come to accept neutralizing justifications for it. Moral justifications for crime have been consistently linked to involvement in criminal activities, and have been found to predict or explain gang involvement in most of the studies that have tested it.⁹ We chose the scale used by Esbensen and Osgood (1999) in their work with G.R.E.A.T., a primary gang prevention program implemented in middle schools across the United States.

Weak parental monitoring. Many aspects of parenting might contribute to youth becoming involved in a gang; however, parental monitoring has emerged as the one aspect with consistent evidence.¹⁰ The strength of this factor derives from its implicit incorporation of both honest disclosure on the part of the youth as well as parents' interest and skills in setting boundaries for their youth (see Kiesner *et al.* 2009, Lac and Crano 2009). For the beta version of the assessment, we adopted questions used in the G.R.E.A.T. evaluation (Esbensen and Osgood 1999) to measure monitoring.

Negative peer influence. Friends are very influential in the lives of adolescents. Youth who are susceptible to negative peer influence (sometimes referred to as peer pressure) are more likely to go along with trouble. Joining a gang is a social act that is very much tied to peers. Longitudinal and cross sectional studies found that youth who are committed to peers, despite their negative influence, are more likely to join a gang.¹¹ The questions used

to measure this construct in the G.R.E.A.T. evaluation (Esbensen and Osgood 1999) were adopted for this assessment.

Peer delinquency. The hypothesis that associating with delinquent peers causes delinquent behavior is derived from social learning theory, especially the work of Akers *et al.* (1979). Association with friends who are involved in a variety of delinquent activities – from school truancy to stealing, drug sales, robbery, and other activities – precedes, coincides with and continues after joining a street gang. This risk factor predicts gang joining in each of the major longitudinal and cross sectional studies that have tested it. The evidence is consistent and clear.¹² The scale used to measure this construct for the G.R.E.A.T. program evaluation (Esbensen and Osgood 1999) was adopted for this assessment.

Early delinquent activities and substance use. Similarly, a youth's own involvement in a variety of delinquent activities including substance use precedes, coincides with, and continues after joining a street gang (Krohn and Thornberry 2008). The scale used in the beta version of the assessment was derived from the G.R.E.A.T. evaluation (Esbensen and Osgood 1999). The measure used here combines delinquent activities and substance use into a single indicator by counting the number of types of delinquent activities (including substance use) that the youth reported to create a variety score (see Thornberry and Krohn (2000) for a discussion of the validity of this approach).

Step 3: Review of scale measurement properties

After eight months, agency staff had interviewed over 1200 youth using the beta instrument. We reviewed the measurement properties of each scale in the beta version. The measurement reliability of each ordinal scale was strong with Cronbach alphas ranging from .77 to .88 with the exception of impulsivity. The impulsivity subscale had low measurement reliability in this population (alpha = .43). Feedback provided by the program staff indicated that younger clients struggled with this scale. We sought to improve it by making the questions more concrete. For example, the question: 'I often act without stopping to think' became 'I often do things without stopping to think if I will get in trouble for it.' Further, since the impulsivity scale and the risk-taking scale were originally written as two components of self-control (see Grasmick *et al.* 1993) and these two scales were correlated in our sample, we created a single hybrid scale to represent the concept of self-control. The hybrid scale, called impulsive risk taking, contained two strong items from each subscale (alpha = .80).

We took steps to reduce the assessment's length, a frequently voiced concern, without compromising measurement. For each scale (not including the self-report delinquency protocol or the strain checklist), we dropped weaker items so long as the alpha remained above .70 (alphas for the shortened scales ranged from .72 to .85). A total of 15 items were dropped from the original factors included in the beta version.¹³ The revised scales used for the GREF assessment are given in the Appendix.

Step 4: Determine cutpoints to define high risk for each factor

Cutpoints for the beta version. Given that the programs were immediately beginning to recruit youth, we sought existing data that could be used to establish preliminary risk factor cutpoints for the beta version of the assessment. All but two of the risk-factor scales

we had chosen to include in the beta version were used in the G.R.E.A.T. program evaluation (Esbensen and Deschenes 1998) and data from this project were publically available. This dataset includes baseline risk-factor data from middle school-aged youth living in 11 American cities (Esbensen 2003). We examined the risk scores for the subset of African-American and Latino youth between the ages of 13 and 15 ($n = 2497$). We compared the distribution of risk scores for youth who indicated that they were past or current gang members (17%) to the scores from the rest of the sample. We observed that the pattern of differences was fairly consistent: the median score for the gang-involved youth was generally close to the 75th percentile of the distribution of scores for the nongang participants. Based on this information, we set the initial cutpoints for each risk factor on the beta version of the GREF close to the score at 75th percentile among the nongang youth in the G.R.E.A.T. evaluation. Different cutpoints were determined for males and females as needed.¹⁴ For the two factors that were not included in the G.R.E.A.T. study, the antisocial tendencies subscale and the accumulated stressful life events checklist, cutpoints for the beta version were set using a similar approach based on data available from two local datasets involving youth of the same age (some of whom were gang affiliated while most were not) from neighborhoods in the Los Angeles area that experience gang issues (Maxson *et al.* 2000, Hennigan *et al.* 2005).

By placing the cutpoint used for each factor at roughly the median of the score for the gang-involved youth, we reasoned that if gang-prone youth approach similar levels of risk as the gang-involved youth, then about half of the gang-prone youth would receive a risk point on any given factor. Alternatively, only about a quarter of other youth would receive a risk point. Thus, the gang-prone youth would accumulate a greater number of risk points. Researchers in this area agree that high risk is not related to the presence of one risk or another, rather it is the accumulation of multiple risks, across multiple domains, that is most clearly associated with gang joining (Thornberry *et al.* 2003, Esbensen *et al.* 2009).

Over the first several months, staff from each GRYD program site faxed the completed assessments to the research team. The team then scored (independent of the program providers) each assessment using the beta version cutpoints. A feedback report was sent back to the agency and program staff then invited youth with four or more elevated risk factors to enroll in the program. Youth with fewer risk factors were not eligible for the GRYD program and were referred to other local agencies or programs whenever possible.

Recalibration of the cutpoints using local data. After eight months of program intake, we examined the performance of the initial cutpoints used for the beta version. At this point, with over 1200 GRYD accumulated assessments; we could use the GRYD data to recalibrate the cutpoints. During this time 39 interviews were submitted for youth who reported that they were already gang members. We used the responses of the gang-involved youth who were interviewed across the GRYD zones to recalibrate the cutpoints used to define high risk. For each factor, we were able to identify a value (within sex and age groups) that came as close as possible to the 50th percentile of the referral population and 75th percentile of the gang-involved youth assessed. Applying the new cutpoints, we observed that the percentage of nongang youth who scored above the cutpoint varied from 42% to 59% across the factors and in the gang-involved sample from 69% to 85% with a minimum difference of 20% for each factor. The new GRYD cutpoints were implemented beginning in November of the first year.

Applying the locally calibrated cutpoints. For purposes of this paper, we applied the recalibrated cutpoints to the entire GRYD dataset. Over the first three years, 3339 (56.5%) youth were found eligible for the program and 2276 (38.5%) youth were found ineligible due to low risk. The remaining 5% of referred youth had indicated current gang membership and/or substantial involvement in street gang activities during the interview. These youth were referred to the GRYD program intervention partner in the same zone.

Step 5: Consider context-specific factors

On an experimental basis (not weighed in the eligibility decisions during the pilot period), we included several factors in the beta version that were advocated by the Los Angeles-based providers (e.g., commitment to school, neighborhood characteristics, and family gang influence). Based on the data accumulated over the pilot period, we chose to add one context-specific factor to the assessment. Family gang influence was added and defined as having two or more family members that either were themselves currently involved in a gang or had communicated that they expect the youth will join the gang (because out of several questions included in the beta version, only these two questions enhanced discrimination of nongang youth with risk levels that matched gang-involved youth). This dichotomous factor, not included in the tables below, was added to the eligibility decision after the pilot test.

Another issue that arose was the importance of diverting gang-involved youth away from prevention and toward intervention. Over the first three years of the program, more than 350 youth indicated that they were already gang-involved (beyond just hanging out) when they were interviewed for the GRYD prevention program. The assessment included direct questions about gang membership as well as a set of indirect questions developed by the Eurogang research network (Weerman *et al.* 2009).¹⁵ Based on early feedback from the GRYD program providers, we also added questions about the nature of the groups youths said they had joined. The questions used to flag gang-involved youth are provided in the Appendix.

Screening for current gang involvement became a critical part of the assessment process because studies have shown that programs that facilitate interaction among naive youth and sophisticated youth will more likely influence the naive youth to become more sophisticated rather than the reverse (see Klein 1995, Dodge *et al.* 2006, Hennigan and Maxson 2012). Youth who indicated gang involvement on the assessment were flagged for additional screening to determine suitability for enrollment in prevention or in the GRYD gang intervention program in the same zone. GRYD prevention and intervention providers in the same zone developed procedures to collaboratively determine the appropriate placement for these youth. The placement choice was communicated back to the research group.

Results

Evidence of a shift from primary-to-secondary gang prevention

Figure 1 plots the percentage of youth found eligible, ineligible or gang-involved each month over the first three years. The percentage of eligible referrals increased over time. Changes in approaches to recruiting potential clients nearly doubled efficiency in reaching youth with gang risk factors over time, rising from a 37% average eligibility rate over the first three months to a 70% rate during the last three months.¹⁶ Spikes with lower percentages of eligible youth occurred during the summer months when the GRYD

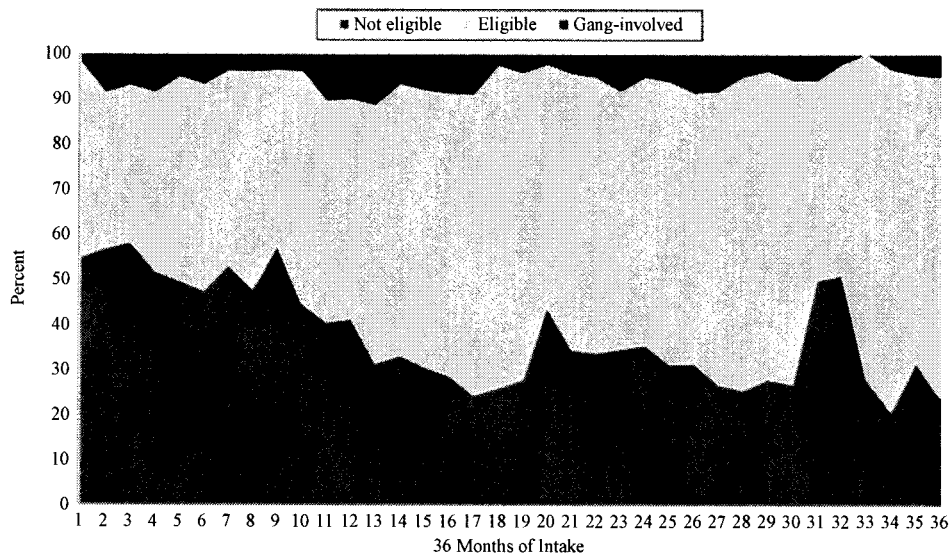


Figure 1. Eligibility status of youth referrals to the GRYD program (Jan 2009–Dec 2011).

program staffs were heavily engaged with the GRYD Summer Night Lights (SNL) program and had less time to focus on client recruitment.¹⁷

A large part of the resistance to using an assessment to select clients derived from a belief that an assessment was not necessary to recruit high-risk youth. Given the findings reported by Melde *et al.* (2011) that clients engaged in gang programs may not necessarily be at higher risk as a group than their local school populations, we looked for a way to compare the riskiness of youth assessed for the GRYD program with general school populations. The overall risk levels of the youth assessed could be compared to the school populations that participated in the G.R.E.A.T. evaluation study baseline (Esbensen and Osgood 1999). Youth assessed for GRYD and G.R.E.A.T. answered the same questions on measures and scales for four risk factors including guilt neutralization, negative peer influence, peer delinquency, and delinquent and violent activities. The comparison was restricted to youth between 13 and 15 years old to match the G.R.E.A.T. sample and to African-American and Latino youth to match the GRYD sample.

The results of these tests are best understood within sex. Relative to the boys in the G.R.E.A.T. program, boys referred to the GRYD program have lower risk scores on guilt neutralization ($F = 42.99$; $df = 1,3087$; $p = .000$) and peer delinquency ($F = 21.91$; $df = 1,3087$; $p < .000$), and do not differ on the variety of self-reported delinquent activities ($F = 0.03$; $df = 1,3087$; ns). The GRYD program boys are higher only on one of the four factors, negative peer influence ($F = 85.90$; $df = 1,3087$; $p < .000$). There is little evidence that the boys referred to the GRYD program were at higher risk than the general school populations that participated in the G.R.E.A.T. program (controlling for age and race-ethnicity). The means for boys are given in Table 1a.

The results are starkly different for the girls. Relative to girls in the G.R.E.A.T. program, girls referred to the GRYD program have higher risk scores on all four of the common risk factors: guilt neutralization ($F = 7.78$; $df = 1,2516$; $p < .005$), negative peer influence ($F = 229.10$; $df = 1,2516$; $p < .000$), peer delinquency ($F = 46.34$; $df = 1,2516$; $p < .000$), and self-reported delinquent activities ($F = 64.27$; $df = 1,2516$; $p < .000$), controlling for age and race-ethnicity. The means tested are given in Table 1b.

Table 1a. Boys referred to GRYD Program relative to the boys in G.R.E.A.T. Program.

		Mean	SD	N	test ^c
Guilt neutralization	GREAT ^a	20.25	4.80	1199	$F(1,3087) = 42.99, p = .000$
	GRYD ^b	19.14	4.44	1890	
Negative peer influence	GREAT	7.33	3.38	1199	$F(1,3087) = 85.90, p < .000$
	GRYD	8.55	3.69	1890	
Friends involved in delinquency	GREAT	12.69	5.43	1199	$F(1,3087) = 21.91, p < .000$
	GRYD	11.86	4.42	1890	
Self-reported delinquent activities	GREAT	5.41	4.01	1199	$F(1,3087) = 0.03, ns$
	GRYD	5.44	3.61	1890	

^a GREAT sample here only includes African American and Latino youth age 13–15.

^b GRYD sample here only includes youth age 13–15. Ninety-eight percent are African American and Latino.

^c Criteria, $p < .01$.

Does the assessment identify youth appropriate for secondary gang prevention?

Given that an increase in average risk levels of the youth referred to the GRYD program was observed over time, was the assessment still necessary and appropriate to support secondary prevention? For each risk factor (controlling for sex and age), we tested the mean for the subset selected as eligible: (a) to the mean of the entire referral population and (b) to the mean for the subset of youth who were already gang-involved. If the eligible group is significantly higher-risk than the population referred and it is similar to the subset of youth already gang-involved (controlling for sex and age), then the assessment is useful and successful in this context.

Table 2 shows the results of these comparisons. Without exception, across older and younger, boys and girls, the eligible group had significantly higher risk scores than the overall referral population on each of the eight scaled risk factors. See comparison (a) for each risk factor in Table 2. These results are not surprising, as the assessment was calibrated to identify high-risk youth, but it does confirm that the using the assessment was necessary to identify this subset of high-risk youth.

The next question is how similar are the risks observed for youth who were identified as eligible to the risks observed among gang-involved youth from the same neighborhoods. See comparison (b) in Table 2. The analyses here show that youth identified as GRYD-eligible by the assessment had risk levels very similar to gang-involved youth of the same age and sex on five of the eight risk factors. On two factors – self-report delinquency and peer delinquency – the gang-involved youth scored higher than the youth identified by the assessment. This finding is reasonable and expected, given that past research has documented that levels of involvement in crime and violence increase when one joins a gang and decrease when one leaves (see Krohn and Thornberry (2008) for a review). Unexpectedly, the older eligible boys and girls scored higher than the gang-involved youth on the antisocial tendencies factor.

Spheres of influence

The bottom line for most researchers studying gang joining is a concern about the accumulation of risks rather than the presence of any particular risk factors. Past findings (Thornberry *et al.* 2003, Krohn and Thornberry 2008, Esbensen *et al.* 2009) suggest that gang membership rises significantly among youth with risks accumulated across four or more domains.

Table 1b. Girls referred to GRYD Program relative to the girls in G.R.E.A.T. Program.

		Mean	SD	N	Test ^c
Guilt neutralization	GREAT ^a	18.56	4.46	1298	$F(1,2516) = 7.78, p = .005$
	GRYD ^b	19.07	4.57	1220	
Negative peer influence	GREAT	6.82	3.33	1298	$F(1,2516) = 229.10, p < .000$
	GRYD	8.95	3.74	1220	
Friends involved in delinquency	GREAT	11.01	4.72	1298	$F(1,2516) = 46.34, p < .000$
	GRYD	12.26	4.53	1220	
Self-reported delinquent activities	GREAT	4.05	3.42	1298	$F(1,2516) = 64.27, p < .000$
	GRYD	5.15	3.50	1220	

^aGREAT sample here only includes African American and Latino youth age 13–15.

^bGRYD sample here only includes youth age 13–15. Ninety-eight percent are African American and Latino.

^cCriteria, $p < .01$.

Here we examine *spheres of influence* rather than *domains* because of conceptual and operational differences in the available data. We use the term spheres of influence to avoid confusion with the way domains have been defined in prior research. In past research, a broad range of risk factors have been included to represent each domain, regardless of the strength of the bivariate relationship between each factor and gang involvement. For this assessment, we include only factors with a strong and consistent relationship to gang involvement in past empirical work and organized them into spheres of influence. Our purpose here is not to test the relationship between broad domains and gang involvement, rather our purpose is to examine the number of spheres of influence in which an eligible youth has significant risks. We expect that that gang-prone youth will have risks across multiple spheres.

The risk factors measured on the GREF assessment do not include two important domains identified by Thornberry *et al.* (2003): area characteristics and family socio-demographics. In the context of the Los Angeles GRYD program, area characteristics (i.e., a context of high crime and high poverty throughout the area) and family socio-demographics (i.e., family economic disadvantage and race or ethnic minority status) are likely included through the selection of the zones where the GRYD program is implemented. The 12 zones selected because of high gang crime levels are also areas with high structural poverty and high proportions of low-income minority residents. Given this context one may assume that most of the youth who live in the identified GRYD zones – including those who are referred to the GRYD gang prevention programs – have these challenges, but not all of these youth are at high risk for gang joining (see Gottfredson and Moriarty 2006, White 2008).

The GREF assessment includes dynamic risk factors in five spheres of influence. The first three were defined as individual characteristics (antisocial tendencies, impulsive risk taking, and guilt neutralization), peer associations (peer delinquency and negative peer influence), and early delinquent behavior. A family sphere of influence was defined with two factors (parental monitoring and family gang influence) beginning November 2009 after family gang influence was added to the beta version. The data used to examine spheres of influence were limited to this time range in order to include this factor. The school domain, which has been included in some past empirical studies, was not specifically included in the GREF assessment because reviews of the strongest empirical studies have not found consistent findings for any particular school factor and tests of the beta version of this assessment did not support adding it for the GRYD context (see

Table 2. Comparison of risk scores for eligible youth to the entire referral population and the subset of and gang-involved youth assessed from 2009 to 2011.

	n	%	Antisocial tendencies		Parental monitoring		Self control		Strain		Guilt neutralization		Negative peer influence ^a		Peer delinquency		Delinquent activities		
			Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean
<i>Males, ages 13–15</i>																			
Referral population																			
(a) Eligible mean ^b	1865	100	15.89	4.10	7.70	3.35	13.80	3.37	4.26	1.67	19.14	4.44	13.56	4.76	11.86	4.40	5.41	3.59	
(b) Gang-involved ^c	1037	56	17.68***	3.41	8.95***	2.99	15.36***	2.20	4.85***	1.33	21.06***	3.25	15.04***	4.15	13.11***	3.83	6.57***	3.00	
	195	10	16.98*	4.03	8.70 ns	3.52	15.08 ns	2.97	4.78 ns	1.48	20.98 ns	3.98	14.68 ns	4.40	15.02***	4.79	8.38***	3.84	
<i>Females, ages 13–15</i>																			
Referral population																			
(a) Eligible mean ^b	1204	100	16.11	4.22	7.72	3.43	14.17	3.43	4.44	1.65	19.06	4.54	13.51	4.96	12.23	4.50	5.11	3.46	
(b) Gang-involved ^c	758	63	17.83***	3.43	8.83***	3.04	15.56***	2.22	5.00***	1.36	20.88***	3.34	15.18***	4.43	13.43***	4.03	6.14***	2.93	
	93	8	16.73**	3.99	8.74 ns	3.72	16.01 ns	2.8	4.95 ns	1.44	21.01 ns	3.92	14.54 ns	4.77	15.84**	4.52	8.54***	3.76	
<i>Males, ages 10–12</i>																			
Referral population																			
(a) Eligible mean ^b	1798	100	16.06	4.38	7.14	3.28	13.38	3.61	3.81	1.73	18.12	4.88	12.74	4.47	9.37	3.51	3.73	3.06	
(b) Gang-involved ^c	995	55	18.44***	3.44	8.71***	2.97	15.45***	2.16	4.56***	1.48	21.06***	3.07	14.35***	4.24	10.87***	3.24	5.28***	2.70	
	58	3	17.66 ns	4.03	8.64 ns	3.36	15.43 ns	2.36	4.69 ns	1.38	21.02 ns	3.80	13.89 ns	4.90	12.91**	5.14	7.69***	3.70	
<i>Females, ages 10–12</i>																			
Referral population																			
(a) Eligible mean ^b	1005	100	15.42	4.53	6.58	3.34	12.83	3.92	3.52	1.78	17.53	5.10	12.90	5.03	9.17	3.63	3.15	2.81	
(b) Gang-involved ^c	497	49	18.18***	3.30	8.47***	3.07	15.40***	2.02	4.54***	1.45	21.00***	3.19	14.85***	4.45	11.00***	3.55	4.91***	2.43	
	31	<1	18.32 ns	4.87	8.00 ns	4.02	15.13 ns	3.19	4.58 ns	1.61	19.74 ns	4.77	16.22 ns	5.46	13.19***	4.36	5.94*	3.51	

^aThe scale used for this factor was changed from 3 items to 5 items at the end of the first year. The *n*'s for these tests are as follows: for males 10–12 *n* = 1006; males 13–15 *n* = 1076; female 10–12 *n* = 622; and females 13–15 *n* = 778.

^bThe statistical test in row (a) compares the mean for eligible youth to the mean in the referral population.

^cThe statistical test in row (b) compares the mean for gang-involved youth to the mean of eligible youth.

^d*t* = <.10; * = *p* <.05; ** = *p* <.01; *** = *p* <.001.

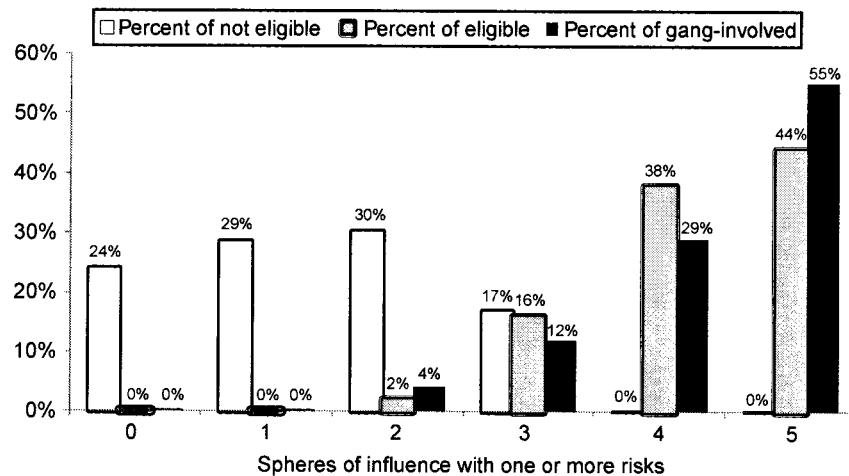


Figure 2. Percentage of youth classified as not eligible, eligible, or gang-involved by the number of spheres of influence (0–5).

chapter four in Klein and Maxson 2006). However, school failure and disciplinary actions (including suspensions, expulsions, or opportunity transfers) were part of the accumulated stressful life events checklist used. Because the checklist spans multiple areas (including stressful events at school as well as in individual, family and peer contexts) and has been one of the strongest factors in rigorous empirical tests (see Krohn and Thornberry 2008), we counted accumulated strain as a fifth sphere of influence in our analysis.

In Figure 2, we compare the number of spheres of influence involved for the youth classified as eligible, ineligible, or gang-involved. The primary goal of the assessment is to identify and enroll those youth with risks in similar ratios as observed among gang-involved youth from the same areas. As Figure 2 shows, these two groups (eligible and gang-involved) demonstrated very similar trends. The assessment also identifies youth with fewer spheres of influence so that they may be directed toward appropriate primary prevention options.

Discussion

Gang involvement remains a critical public safety concern, both for the individual youth who join the gang and the society that is affected adversely by that decision. While suppressing gangs is one response to the persistent presence of gangs within our cities, trying to develop methods of limiting the population that join a gang is another method. This paper presents one such effort. The available social science research was used to develop an approach to better identify which youth are at greatest risk for joining gangs. This shift from primary prevention (e.g., activity programs open to all who are interested) to secondary prevention (i.e., focusing highly structured interventions on youth identified as the ones most likely to join a gang) is not easily nor quickly achieved.

In Los Angeles, the process played out on many levels over three years. It required a high level of collaboration among the program sponsors (city staff, including GRYD program leadership and managers), university-based researchers, and multiple program providers (service agencies contracted by the city to do the prevention work). It required a firm commitment by the city leadership to stick with the proposed innovation long enough

(despite considerable criticism and substantial challenges) to develop the assessment described here and to develop an intensive program model to adequately address the greater needs of the high-risk youth selected for the secondary prevention programs. Over time, the assessment used for program recruitment matured through adaptations needed for the Los Angeles population and the accumulation of data needed to confirm cutpoints for the assessed risk factors. The familiar recruitment and referral networks shifted to more efficient identification of high-risk youth (as the percentage of eligible youth assessed doubled over 3 years), but the data reviewed here confirm that the assessment was still needed to select high-risk youth for secondary gang prevention.

This article is focused on developing the capacity to support secondary prevention by identifying high-risk youth for program enrollment. Others have found that youth referred to special gang programs without the use of a selection tool such as the GREF were not as high-risk as expected. Without using an assessment to gauge risk levels, and despite sincere efforts, the youth recruited will likely be assumed to be at much higher risk than they are (see Melde *et al.* 2011). Similarly in Los Angeles, we found that the overall population of boys recruited or referred for possible GRYD program enrollment was not at higher risk than a school-based national sample of boys of the same age and ethnicity. This underscores the importance of using a statistical rather than a clinical approach to identifying high-risk youth for secondary prevention. In 1996, William Grove and Paul Meehl concluded that a statistical approach was 'almost invariably equal to or superior' to a clinical method in terms of *identifying or diagnosing problems* (Grove and Meehl 1996, p. 293; see also a meta analysis by Grove *et al.* 2000). We argue here that the GREF provides a more reliable mechanism to identify youth in need of more intensive gang prevention than is possible (or desirable) at a primary prevention level.

It is interesting to note that the girls recruited or referred for GRYD programs were at higher risk on all four of the factors tested relative to the same school-based national sample. Since many gang studies include only males, females' risk for gang participation is less well understood. Some criminal justice studies have found that gender differences on risk assessments are not severe (Schwalbe 2008, Smith *et al.* 2009), perhaps because the girls included in the assessments tend to be at higher risk overall. Other research (Miller 2001, Maxson and Whitlock 2002) suggests that girls have to be more symptomatic to be referred for services; perhaps due to the misperception that girls are unlikely to join gangs. Our work suggests that referral agents may be inclined to refer higher-risk girls for secondary gang prevention services. It remains to be seen whether or not this implies that services should be customized for girls.

While the data presented here suggest that the assessment was useful and necessary for identifying youth with an array of risks matching the risk levels manifested by youth in the same population who had recently become gang-involved, a demonstration of the prospective validity of the assessment is needed.¹⁸ Furthermore, while the assessment to date has been scored using equal weighting for the nine risks measured, more sophisticated weighting schemes may be developed given the appropriate data. Consistent with past research (see Thornberry *et al.* 2003, Klein and Maxson 2006, Krohn and Thornberry 2008, Esbensen *et al.* 2009), the analyses here imply that risk across domains or spheres of influence is important and should be considered in the scoring of gang risk assessments.

Once youth at high risk for gang joining are identified, the challenge of successfully engaging these youth in appropriate intensive ameliorative programs is the foundation of the work needed for secondary gang prevention. Mark Lipsey (2009) highlights the importance of pairing high-risk clients with intensive or 'therapeutic' programming. A sophisticated family-based program has been developed to address the high-risk/high-

need youth brought into the GRYD programs (Cespedes and Herz 2012). This program is focused on addressing the specific risks identified by the assessment in the broad context of a multigenerational view of one's family as well as current social contexts. The family-based program is more intense than typical gang prevention work, as is appropriate for its high-risk clients. These approaches to working effectively with the high-risk youth are being evaluated.¹⁹

In summary, our findings affirm the need to use a rigorous approach to targeting youth for secondary gang prevention programs. We believe that our experience in developing and implementing the GREF provides encouragement for other locations responding to chronic and emerging gang issues. We have shown that a systematic and rigorous risk assessment – built from a large body of empirical research – can be employed by service agencies to target appropriate clients. Strong program leadership and careful monitoring are critical elements. The improvement in risk targeting among client referrals is testament to the effort on the part of GYRD administrators to remain faithful to the idea of matching services to the appropriate youth clients. With this effort, the GYRD program appears to have more effectively responded to implementation challenges than has been in the case in several other attempts, such as the St. Louis attempt at SafeFutures (Decker and Curry 2002). The clarity and acceptance of the assessment and program model at each site will, in the end, determine the level of success achieved by this new approach. While many challenges remain, paths to success are coming more clearly into focus.

In closing, as James Short reminds us, controversies concerning the realities of measuring various aspects of criminality, including gang involvement, are always subject to distortion of the phenomena they are meant to represent (Short 2009). No risk assessment, especially one intended to portend gang involvement (such as the one described here) will be flawless. Nonetheless, we believe that the assessment reviewed here is promising, and we hope that others will choose to develop and test assessments in the interest of strengthening approaches to gang prevention and intervention.

Acknowledgements

The assessment discussed here, called the Gang Risk of Entry Factors (GREF) assessment is the generic version of an assessment tailored to the Los Angeles context called the Youth Services Eligibility Tool (YSET). The YSET is a customized tool, developed for Mayor Antonio Villaraigosa's Office of Gang Reduction and Youth Development program. The authors would like to acknowledge support from the GRYD program for our work developing the assessment and sustaining its implementation by the GRYD program service providers.

The questions included on the GREF assessment are provided in the Appendix without the adaptations made specifically for the Los Angeles context, i.e., clarifying synonyms.

While the current report describes the development of the GREF assessment, we also acknowledge support for an ongoing prospective test of the assessment by AWARD No. 2008-IJ-CX-0016 from the National Institute of Justice, Office of Justice Programs, U.S. Department of Justice. The opinions, findings, and conclusions or recommendations expressed in this paper are those of the authors and do not necessarily reflect those of the Department of Justice or those of Los Angeles GRYD program.

Notes

1. Los Angeles Gang Reduction and Youth Development Program (GRYD), see <http://mayor.lacity.org/Issues/GangReduction/index.htm>.
2. Constance Rice, co-director of the Advancement Project, convened a panel of local experts on gang research and programs in the aftermath of their report (Advancement Project 2007). The group included some of the authors of this paper.

3. In the Los Angeles GRYD program, the assessment developed is known as the YSET, Youth Services Eligibility Tool, which was drafted by the first three authors of this paper and Malcolm Klein.
4. A couple of agencies resisted to the point of working to circumvent the mandated GRYD program requirements. These challenges required intervention on the part of the GRYD program director's staff and precipitated some turnover in the agencies that staffed the program.
5. For example, 'illegal' was defined as 'against the law'; 'skipped school without an excuse' was defined as 'ditched without permission'; 'selling drugs' as 'slanging'; 'dangerous' as 'risky, not safe.'
6. This concept has been tested in at least three studies and was strongly related to gang involvement in all three studies conducted in Miami (Eitle *et al.* 2004), Los Angeles (Maxson *et al.* 1997), and Rochester (Thornberry *et al.* 2003).
7. This factor was found to be predictive of gang joining in Montreal (Craig *et al.* 2002, Gatti *et al.* 2005); Seattle (Hill *et al.* 1999); Pittsburgh (Lahey *et al.* 1999); and Rochester (Thornberry *et al.* 2003).
8. Low self-control and gang involvement as been confirmed across the sample of large and medium US cities involved in the G.R.E.A.T. Program including Las Cruces, NM; Omaha, NE; Phoenix, AZ; Philadelphia, PA; Kansas City, MO; Milwaukee, WI; Orlando, FL; Will County, IL; Providence, RI; Pocatello, ID; and Torrance, CA (Esbensen and Deschenes 1998); The Hague, Netherlands (Esbensen and Weerman 2005); Denver, CO (Huizinga *et al.* 1998); and Los Angeles, CA (Maxson *et al.* 1997, 1998).
9. Neutralizing justifications for involvement in crime has been associated with gang involvement across the sample of large and medium US cities involved in the G.R.E.A.T. program evaluation (Esbensen and Deschenes 1998, Esbensen *et al.* 2001) and in Denver (Huizinga *et al.* 1998); The Hague, Netherlands (Esbensen and Weerman 2005); Seattle (Hill *et al.* 1999) and in Rochester (Thornberry *et al.* 2003).
10. Studies documenting a relationship between parental monitoring and gang joining include studies in Montreal (Craig *et al.* 2002, Gatti *et al.* 2005); Seattle (Hill *et al.* 1999); Rochester (Thornberry *et al.* 2003); Denver (Huizinga *et al.* 1998); Los Angeles (Maxson *et al.* 1998); The Hague, Netherlands (Esbensen and Weerman 2005); and the sample of large and medium US cities involved in the G.R.E.A.T. program (Esbensen and Deschenes 1998).
11. Negative peer influence was related to gang involvement in the sample of large and medium US cities involved in the G.R.E.A.T. program (Esbensen and Deschenes 1998, Esbensen *et al.* 2001), Seattle (Hill *et al.* 1999); and Los Angeles (Maxson *et al.* 1998).
12. Studies confirming the relationship between peer delinquency and gang joining were conducted in Edinburgh, Scotland (Bradshaw 2005); Montreal (Craig *et al.* 2002); Oklahoma (Eitle *et al.* 2004); Seattle (Hill *et al.* 1999); Pittsburgh (Lahey *et al.* 1999); Rochester (Thornberry *et al.* 2003); Denver (Huizinga *et al.* 1998); Los Angeles (Maxson *et al.* 1997, 1998); The Hague, Netherlands (Esbensen and Weerman 2005); and the sample of large and medium US cities involved in the G.R.E.A.T. program (Esbensen and Deschenes 1998).
13. In the process of tailoring the assessment for the Los Angeles context, we added a brief measure of family gang influence as a context-specific factor for the Los Angeles GRYD program based on data gathered in the pilot test. This factor is not included in the analyses here.
14. The risk literature on female gang joining is less robust than that on males. Fewer risk factors for girls emerge in these analyses and these typically are also risk factors for boys (Klein and Maxson 2006). Given the paucity of studies on girls' risk factors, we decided include the same factors for both sexes but to use the available data to calibrate different cutpoints where appropriate. We could not take age into consideration at this point because the G.R.E.A.T. sample and GRYD program overlapped for a narrow age span. Later, after several months of assessments accumulated, cutpoints that varied by age were adopted.
15. See <http://www.unsl.edu/ccj/Eurogang/instruments.html>
16. There is always a possibility when changes like this are observed that they are the result of finding a way to circumvent the system. In fact one zone clearly had issues of this nature; the GRYD program director took strong and immediate steps to stop it. We have no way to be certain but there is ample anecdotal evidence of changes in recruitment approaches that are consistent with recruiting higher risk referrals.

17. GRYD Summer Night Lights is an anti-gang initiative that keeps parks open after dark with free food and expanded programming.
18. A prospective test of the predictive validity of the Gang Risk of Entry Factors (GREF) assessment funded by the National Institute of Justice (AWARD No. 2008-IJ-CX-0016) is underway.
19. A locally funded evaluation of the GRYD family systems-based program is also underway.

Notes on contributors

Karen M. Hennigan, Ph.D. is Director of the Center for Research on Crime in the Department of Psychology at the University of Southern California. Her current research interests focus on the implications of group dynamics and social identity on gang intervention, suppression and other approaches. Dr. Hennigan is continuing her collaboration on secondary prevention with the GRYD program in Los Angeles and in Central America.

Cheryl L. Maxson, Ph.D. is Associate Professor in the Department of Criminology, Law and Society at the University of California, Irvine. Her current research interests include the scope and nature of gangs in Europe, gang violence in youth correctional settings and developing effective responses to street gangs.

David C. Sloane, Ph.D. is Professor in the Price School of Public Policy at the University of Southern California. His research focuses on neighborhood scale issues related to public safety, health disparities, and public commemoration specifically related to the built environment and urban planning.

Kathy A. Kolnick, Ph.D. teaches in the USC Price School of Public Policy and oversees research projects in the Center for Research on Crime in the USC Department of Psychology, including the LA GRYD program. Her current research interests include juvenile justice issues and gang programs, and the development of local regulations concerning immigration and land use issues.

Flor Vindel, MSW, coordinates and assists in research projects at the Center for Research on Crime in the USC Department of Psychology. Her current research interests include the social psychology of street gangs and the development of local and international gang prevention programs.

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Appendix

GREF ASSESSMENT: Los Angeles GRYD program version, the Youth Services Eligibility Tool (YSET)

Antisocial/prosocial tendencies total (Mn on 5-point scale = 15.91, SE = .056, range = 6–30)

- I try to be nice to other people because I care about their feelings.
- I get very angry and lose my temper.
- I do as I am told.
- I try to scare people to get what I want.
- I am accused of not telling the truth or cheating.
- I take things that are not mine from home, school, or elsewhere.

Weak parental supervision total (Mn on 5-point scale = 7.34, SE = .044, range = 3–15)

- When I go out, I tell my parents or guardians where I am going or leave them a note (or text or phone them).
- My parents or guardians know where I am when I am not at home or at school.
- My parents or guardians know who I am with, when I am not at home or at school.

Critical life events total (Mn count = 4.03, SE = .023, range = 0–7)

- Did you fail to go on to the next grade in school or fail a class in school?
- Did you get suspended, expelled or transferred to another school for disciplinary reasons?
- Did you go out on a date with a boyfriend or girlfriend for the very first time?
- Did you break up with a boyfriend or girlfriend or did he or she break up with you?
- Did you have a big fight or problem with a friend?
- Did you start hanging out with a new group of friends?
- Did anyone you were close to die or get seriously injured?

Impulsive risk taking total (Mn on 5-point scale = 13.58, SE = .047, range = 4–20)

- Sometimes I like to do something dangerous just for the fun of it.
- I sometimes find it exciting to do things that might get me in trouble.
- I often do things without stopping to think if I will get in trouble for it.
- I like to have fun when I can, even if I will get into trouble for it later.

Neutralization total (Mn on 5-point scale = 18.51, SE = .062, range = 6–30)

- It is okay for me to lie (or not tell the truth) if it will keep my friends from getting in trouble with parents, teachers, or police.
- It is okay for me to lie (or not tell the truth) to someone if it will keep me from getting into trouble with him or her.
- It is okay to steal something from someone who is rich and can easily replace it.
- It is okay to take little things from a store without paying for them because stores make so

much money that it won't hurt them.

- It is okay to beat people up if they hit me first.
- It is okay to beat people up if I do it to stand up for myself.

Negative peer influence total (Mn on 5-point scale = 13.18, SE = .082, range = 5–25)

- If your friends were getting you into trouble at home, would you still hang out with them?
- If your friends were getting you into trouble at school, would you still hang out with them?
- If your friends were getting you into trouble with the police, would you still hang out with them?
- If your friends told you not to do something because it is wrong, would you listen to them?
- If your friends told you not to do something because it is against the law, would you listen to them?

Family gang influence (35% two or more think you will; 34% two or more family gang members)

- Including everyone you think of as being in your family, how many people in your family think that you probably will join a gang someday?
- How many people in your family are gang members now?

Peer delinquency total (Mn on 5-point scale = 10.69, SE = .055, range = 5–25)

- How many of your friends have skipped school without an excuse?
- How many of your friends have stolen something?
- How many of your friends have attacked someone with a weapon?
- How many of your friends have sold marijuana or other illegal drugs?
- How many of your friends have used any of these: cigarettes, tobacco, alcohol, marijuana or other illegal drugs?
- How many of your friends have belonged to a gang?

Self-report delinquency total (6 months time frame) Mn count = 4.43, SE = .044, range = 0–17)

- Used alcohol or cigarettes?
- Used marijuana or other illegal drugs?
- Used paint or glue or other things you inhale to get high?
- Skipped classes without an excuse?
- Lied about your age to get into some place or to buy something?
- Avoided paying for things such as movies, bus, or subway rides?
- Purposely damaged or destroyed property not belonging to you?
- Carried a hidden weapon for protection?
- Illegally spray painted a wall or a building – doing graffiti?
- Stolen or tried to steal something worth \$50 or less?
- Stolen or tried to steal something worth more than \$50?
- Gone into or tried to go into a building to steal something?
- Hit someone with the idea of hurting him/her?
- Attacked someone with a weapon?
- Used a weapon or force to get money or things from people?
- Been involved in gang fights?
- Sold marijuana or other illegal drugs?
- Hung out with gang members in your neighborhood?
- Participated in gang activities or actions?
- Been a member of a gang?

Used to screen for gang involvement:

Based on provider feedback (asked only if the youth indicated he or she is in a gang)

- Did you have to do anything to join the gang? Explain . . .
- Which of the things in the list above have you done with another member of your gang in the last 6 months?

From: Eurogang Youth Survey (<http://www.umsi.edu/ccj/eurogang/euroganghome.html>)

Some people have a group of friends that they spend time with, doing things together, just hanging out or kicking it. Do you have a group of friends like that?

- How old are the people in your group of friends?
- Does your group of friends spend a lot of time together in public places like the park, the street, shopping areas, or out in the neighborhood?
- How long has this group existed?
- Is doing illegal things accepted or okay for your group?
- Do people in your group actually do illegal things together?
- What kind of illegal things do people in your group do together?

Auxiliary questions

- Is your group of friends: a gang, a crew, clique, crowd, or posse that is not a gang?
- Right now, are you a gang member, a member of a crew, clique, crowd, or posse that is not a gang?
- Does your group have a name?
- Tell me three things that you and others in your group do together