

EDITORIAL INTRODUCTION

YOUTH AT RISK FOR GANG INVOLVEMENT

A Roadmap for Advancing the Science of Gang Prevention

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As noted in the article by Terence Thornberry and colleagues (2018: 953–989) and in the subsequent policy essay by James Howell (2018: 991–999), despite significant progress in the identification of effective delinquency and crime prevention programs (Elliott and Fagan, 2017), there is a dearth of scientific evidence about how to prevent youth from joining gangs, reduce offending by gang members, and eliminate existing gangs. Thornberry and colleagues (2018) seek to rectify this problem, and in doing so, they provide a roadmap for how researchers can conduct rigorous scientific evaluation of gang prevention strategies. As Howell (2018) remarks, their evaluation of FFT-G, a version of Functional Family Therapy modified to address the needs of gang-involved youth, “represents a remarkable achievement in the history of gang programming.” I concur and would like to point out some of the remarkable achievements evidenced in this study.

As is common in evaluation research, Thornberry and colleagues (2018) faced several roadblocks during this project, but what sets their research apart is their ability to resolve these challenges and maintain the scientific integrity of their study. Their *first* significant challenge—and remarkable achievement—was gaining permission from a juvenile and family court in Philadelphia to assign youth randomly to participate in a test of FFT-G. Although their use has increased in recent years (Telep, Garner, and Visher, 2015), randomized controlled trials (RCTs) have not been the norm in criminal justice evaluations (Farrington, 2003; Weisburd, 2010). Howell’s (2018) comment that gangs cannot be randomly assigned to conditions sheds light on one possible explanation for the lack of RCTs in our field: the belief that RCTs are often not feasible to conduct in criminology. Criminologists have also cautioned that criminal justice officials will not agree to random assignment of participants

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and that it is unethical to allow some individuals but not others to receive a potentially effective treatment (Pawson and Tilley, 1994; Weisburd, 2003).

Despite these cautions, Thornberry and colleagues (2018) decided to evaluate FFT-G in a RCT because this method reflects “the basic requirements of good scientific study” and because this type of evaluation design is “the minimum needed to respond to a problem as serious and entrenched as adolescent street gangs.” In fact, the authors found that many judges were not interested in participating in their research project. Nevertheless, one judge was agreeable. She “understood the importance of having gang members as participants” and “valued rigorous evaluation of this program” (Thornberry et al., 2018). Thus, despite initial resistance to their study, Thornberry and colleagues persevered, continued to emphasize the importance of their work with the family court judges, and eventually secured the “champion” (Greenwood and Welsh, 2012) they needed to launch the study.

Second, Thornberry and colleagues (2018) worked with the FFT-G developers and staff to design and implement a program that successfully engaged a high-risk group of youth offenders and their families. Other researchers have emphasized the difficulties of ensuring that families—especially higher risk families—regularly attend, participate in, and complete family-focused interventions (Chu, Farruggia, Sanders, and Ralph, 2012; Prinz and Sanders, 2007; Spoth, Kavanagh, and Dishion, 2002). There are many barriers to participation, including competing commitments and the stigma associated with receiving services, and low recruitment and retention rates are common (Chacko et al., 2016; Institute of Medicine and National Research Council, 2014). In fact, the comparison group in this study was assigned to receive a different family-based intervention (FTTP), but only 17% of those assigned to this treatment received it, a success rate that the authors state is “probably typical when implemented with high-risk families.” Yet, Thornberry et al. (2018) and their partners managed to achieve the atypical: 70% of the high-gang-risk group and 62% of the low-gang-risk group completed FFT-G.

As Howell (2018) emphasizes, implementation fidelity is the “key to success” in prevention programming (see also Durlak and DuPre, 2008; Lipsey, 2009; Washington State Institute for Public Policy, 2004), and the successful delivery of the FFT-G intervention in this study is likely no accident. Knowing that FFT-G would be delivered to high-risk families living in a city (Philadelphia) with elevated crime and gang-related crime rates, Thornberry et al. (2018) took the actions necessary to produce a well-implemented and engaging intervention. They selected three agencies that already had an adequate number of staff with a demonstrated ability to deliver FFT with fidelity. They made sure that staff were trained in the FFT-G model and received the regular weekly supervision embedded in the FFT (and FFT-G) protocols. Finally, their research staff monitored implementation procedures, presumably to identify problems before they could undermine program success. Although RCTs are sometimes critiqued for delivering services in artificial settings that do not reflect the real-world challenges of local agencies (Pawson and Tilley, 1994; Weisburd, 2003), Thornberry and colleagues (2018) worked *with* their partners to understand the

constraints they faced when delivering FFT-G and to minimize deviations to the FFT-G model.

Treatment contamination was the *third* major problem faced by Thornberry and colleagues (2018). It turned out that the family court judge/champion of the study was so enthusiastic about the FFT intervention that she assigned 13 control families to receive the program (1 of whom inadvertently received FFT-G). The control group's exposure to the treatment condition (or, at least, a closely related treatment) likely reduced the ability to detect intervention effects in this study. Rather than drop the contaminated cases, however, the authors conducted an intent-to-treat (ITT) analysis with all participants using their original assignment to treatment and control conditions. The ITT approach is recommended (Gottfredson et al., 2015) because omitting contaminated cases undermines the randomization process and can bias results in favor of the intervention group (Schultz and Grimes, 2002). Here again, Thornberry and colleagues (2018) hold fast to their commitment to conduct "good science."

These examples demonstrate that evaluation is not for the faint of heart, but Thornberry and colleagues (2018) provide a roadmap that demonstrates how criminologists can conduct rigorous evaluation, even in the area of gang prevention where good science is especially lacking (Gravel, Bouchard, Descormiers, Wong, and Morselli, 2013). As illustrated in this study, scientists must spend significant time building relationships with partners prior to the start of a study and throughout the implementation process. In addition, "researchers have an ethical responsibility to be sensitive to [the] concerns" of their partners, and they may need to adjust research protocols to address these concerns (Thornberry et al., 2018). Researchers, however, must maintain the scientific integrity of the evaluation if they want their results to matter.

I hope this study will lead to more rigorous studies of gang prevention, including the type of replication research conducted by Thornberry and colleagues (2018). Although innovation is important in science, so too is replication, but such efforts are often viewed as less worthy of publication and as less creative than "novel" research (Lösel, 2018). Thornberry and colleagues (2018) embrace replication and illustrate how replication can be important and innovative. Rather than create and test an entirely new approach to reduce gang members' delinquency and encourage youth to leave gangs, they draw on and extend an existing program (FFT) that already has a strong theoretical foundation and a clear logic model that specifies how to strengthen family relationships and reduce youth delinquency (as summarized by Howell, 2018).

Given the factors addressed by FFT, it seems likely that the intervention *could* reduce gang membership and reduce delinquency by gang members, but these outcomes had not been examined prior to this study. Thornberry and colleagues (2018) used their scientific imagination to conceptualize this replication project, and in demonstrating the impact of FFT-G on gang members, they strengthened the evidentiary base of FFT and advanced the gang prevention literature. It is easy to imagine additional replication efforts in which

the impact of existing interventions on gang membership and/or members' delinquency is evaluated, including both the programs identified by Thornberry and colleagues (2018) and other interventions that target gang-related risk and protective factors.

I also hope that researchers will follow Thornberry and colleagues' (2018) lead in assessing effect heterogeneity (Sampson, Winship, and Knight, 2013); that is, examining the degree to which intervention effects vary across specific populations. Subgroup analyses are recommended because evaluations in which only the average effect of an intervention is estimated may fail to detect results if some populations benefit and others do not (Farrell, Henry, and Bettencourt, 2013; Gottfredson et al., 2015). In addition, such analyses may not help identify populations that could be harmed by an intervention. As articulated by Thornberry and colleagues (2018), subgroup analyses can also be used to influence how and to whom interventions are delivered. They hope that their results, which indicate stronger effects of FFT-G for high-gang-risk youth, will convince policy makers and practitioners to implement community-based prevention approaches for higher risk youth as well as for lower risk youth.

Being true to the principles of good scientific evaluation, Thornberry and colleagues (2018) recommend that the current study results be replicated in a different site to ensure that they generalize beyond Philadelphia. In contrast, Howell (2018) advocates that communities put these research findings into use immediately. More specifically, he recommends a community-centered approach to gang prevention in which communities assess existing gang activity, create a strategic plan to address their specific gang problems, and then implement a continuum of gang prevention activities to address local problems. These strategies would include FFT-G, as well as universal prevention to prevent youth from joining gangs and law enforcement suppression strategies. Howell's recommendations are well aligned with other calls for comprehensive, community-based approaches to reduce substance use, delinquency, violence, and related behavior problems (Catalano et al., 2012; National Academies of Sciences, 2017; Spoth et al., 2013). This perspective takes into account the fact that communities differ in the prevalence and causes of crime and other problems (Hawkins, Van Horn, and Arthur, 2004; Sampson, 2012), which means that a "one-size-fits-all" approach to prevention is not appropriate.

What Howell (2018) does not include in his list of recommended gang prevention strategies, however, are those that would address the community-level structural, social, and/or cultural factors that may be associated with gang joining and gang violence. As he indicates, gangs are especially prevalent in economically disadvantaged, inner-city neighborhoods, but programs focused on individuals will not change these structural deficits. Likewise, suppression strategies implemented by law enforcement agencies are unlikely to change the underlying community conditions that motivate youth to join gangs or that allow gangs to flourish (although some programs, like Cure Violence, do try to change community norms that promote or condone violence, as mentioned by Howell). Such programs will no doubt be difficult to implement and

evaluate, but they are needed in a comprehensive, long-term approach to eradicating gangs.

The science of prevention advances every day, however, and studies such as the one conducted by Thornberry and colleagues (2018) lead to findings that reveal that we should be optimistic about our chances of preventing and reducing gang violence. I am confident that readers of this piece will draw both inspiration and guidance from this study and be persuaded of the benefits to be gained by creating, refining, replicating, and evaluating gang prevention strategies. This is how science works and knowledge is advanced.

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