

GRYD RESEARCH UPDATE

FURTHER EXPLORATION OF THE IMPACT OF THE GRYD INCIDENT RESPONSE (IR) PROGRAM ON RETALIATORY VIOLENCE

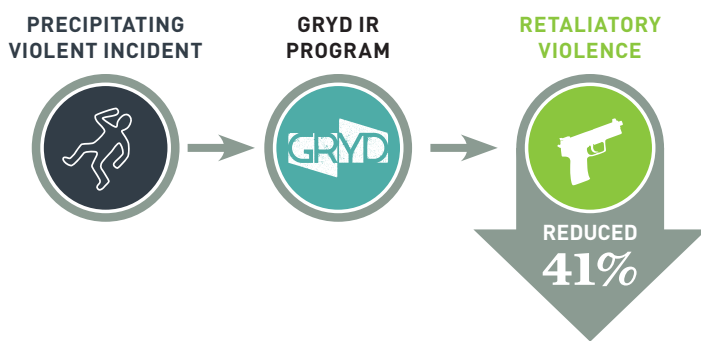
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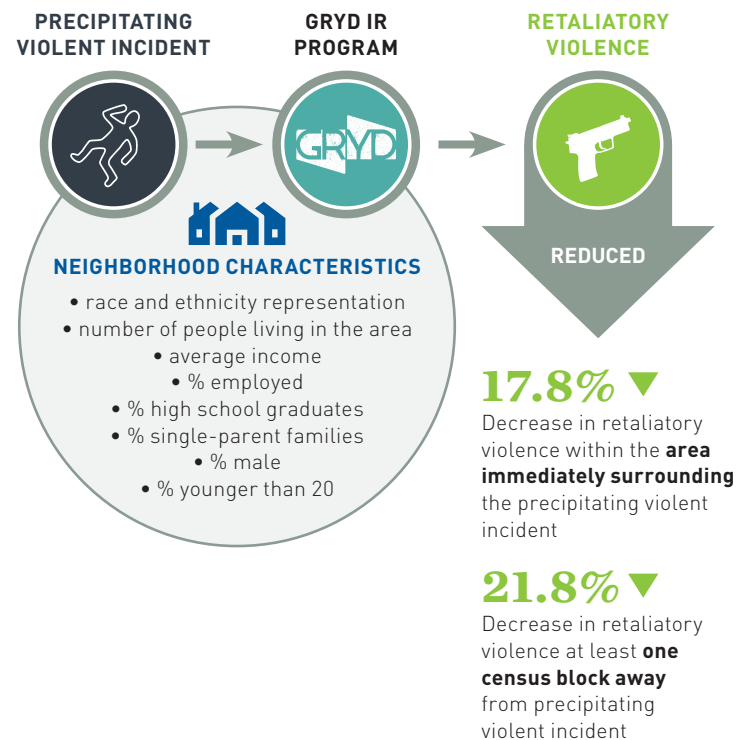
As part of the violence interruption part of the GRYD Comprehensive Strategy, the GRYD Incident Response (IR) Program is notified when a gang violent crime occurs in a GRYD Zone.¹ The GRYD Triangle Partnership plays an essential role in the GRYD IR Program by connecting the Los Angeles Police Department, GRYD Regional Program Coordinators (RPCs) and GRYD Community Intervention Workers (CIWs) once an incident is reported. The GRYD Triangle Partnership is activated to diffuse rumors and control crowds by gathering and sharing information and to provide referrals to resources for victims and their families. The intended outcome of the GRYD IR Program is to ease community tensions and increase community engagement in order to reduce the likelihood of gang violent retaliation.

Figure 1: Impact of the GRYD IR Program on gang-related retaliatory violence.



In a prior research brief, the impact of the GRYD IR Program was examined by comparing the number of retaliations following events where the GRYD Triangle Partnership was activated with the number following events where it was not activated.² It was found that activation of the GRYD Triangle Partnership led to a 41% reduction in gang-related violent retaliations. This GRYD Research Update tests whether the effect of the GRYD IR Program is also evident when neighborhood characteristics are included in the analysis.

Figure 2: Impact of the GRYD IR Program on gang-related retaliatory violence with neighborhood characteristics included in analysis.



THE IMPORTANCE OF NEIGHBORHOOD CHARACTERISTICS

The current research looks at neighborhood characteristics and the role they play in gang-related violent crime.³ The risk of gang-related violent crime varies substantially from place to place across Los Angeles. Neighborhood characteristics such as gender and income distributions, employment patterns, population density and household structures can influence the extent of violence in a neighborhood as well as the effectiveness of interventions intended to reduce violence.

Accounting for these neighborhood characteristics, activation of the GRYD Triangle Partnership reduced violent retaliations by 17.8%, in the area immediately surrounding a precipitating event, and by 21.8% in locations at least one census block away (around 130 m) from the precipitating event. The results build upon those reported previously, demonstrating that the GRYD IR Program reduces retaliation even when neighborhood characteristics and location are considered.

SUGGESTED CITATION

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TECHNICAL DETAIL APPENDIX

The statistical analysis of the GRYD IR Program relies on distinguishing so-called “background” gang violent crimes from violent retaliations. Background crimes are those events that arise spontaneously out of the social processes of gangs. For example, a shooting that happens following a chance encounter between individuals from rival gangs is understandable in social context, but it is not predicted at that specific time and place. By contrast, a retaliation committed in response to that first shooting, is not only understandable in social context, but is also a predictable consequence of that first shooting. The GRYD IR Program is premised on the predictability of retaliations following precipitating events. Thus, to estimate the impact of the GRYD IR Program, we need to be able to count retaliations separately from background crimes. The expectation is that there will be fewer retaliations following activation of the GRYD Triangle Partnership compared to situations where it is not activated.

Our prior research used crime data alone to distinguish background gang violent crimes from retaliations. In essence, background crimes were assumed to follow the general pattern of long-term (e.g., annual) crime ‘hot’ and ‘cold’ spots. The present approach uses generalized additive models to link variation in neighborhood characteristics and crime across space.³ This “covariates model” posit a close connection between social processes and crime and allows for a more precise separation of background crimes from retaliations.

Evaluating the impact of the GRYD IR Program also requires comparing outcomes when the GRYD Triangle Partnership is activated with outcomes when it is not. Such comparisons are

complicated by the fact that the GRYD IR Program is not an experimental protocol. Events are not randomly assigned to receive the attention of the GRYD Triangle Partnership. Rather, bias in the notification process means that the events that trigger the GRYD Triangle Partnership happen more often in locations that face the most serious gang problems.² Events that do not trigger the GRYD Triangle Partnership happen more often in places where there is less gang activity. This notification bias translates into differences in the spatial and temporal clustering of events. To correct for these biases, we developed a “synthetic control” approach. We repeatedly sample from “non-GRYD” events until the spatial and temporal statistics of the synthetic control match those of GRYD IR Program events. If the GRYD IR Program has no effect (i.e., the null hypothesis), similarity in the spatial and temporal clustering of the synthetic control compared to events for which the GRYD Triangle Partnership was activated should also ensure that the number of retaliations following any one precipitating event is the same. Rather, we find that there are fewer retaliations following the activation of the GRYD Triangle Partnership.

REFERENCES

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2. Brantingham, P.J., Yuan, B., & Herz, D.C. (2020). *The Impact of the GRYD Incident Response Program on Gang Retaliations* (GRYD Research Brief No. 2). Los Angeles, CA: California State University, Los Angeles.
3. Park, J., Schoenberg, F.P., Bertozzi, A.L., & Brantingham, P. J. (nd). Investigating clustering and violence interruption in gang-related violent crime data using spatial-temporal point processes with covariates. submitted to *Journal of the American Statistical Association*.

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