

Miami-Dade County Juvenile Weapons Offenders Program (JWOP): a potential model to reduce firearm crime recidivism nationwide

Hahn Soe-Lin,^{1,2} Anjali Sarver,¹ Joyce Kaufman,¹ Marilyn Sutherland,¹ Enrique Ginzburg¹

¹Ryder Trauma Center, University of Miami Miller School of Medicine, Miami, Florida, USA
²Division of Trauma Surgery, Creighton University School of Medicine Phoenix Regional Campus, Phoenix, Arizona, USA

Correspondence to

Dr Enrique Ginzburg;
EGinzbur@med.miami.edu

Received 2 November 2020
Accepted 2 November 2020

ABSTRACT

Introduction Youth firearm violence has been a growing problem in the USA. Several programs across the country aimed at reducing recurrent gun violence in this vulnerable population have published recidivism rates of 40% to 50%. For the past 18 years, the Juvenile Weapons Offenders Program (JWOP) in Miami-Dade County has provided a unique multidisciplinary intervention encompassing 100 hours of violence education, behavioral modification, and social mentoring. The present study defines its outcomes as a national model for youth firearm recidivism prevention.

Methods Retrospective analysis of Florida Juvenile Justice Department records from 2008 to 2016 defined a group of youths convicted of firearm-related crimes and subsequently enrolled in the program. Cohorts were those who demonstrated successful completion of the JWOP program versus those who partially completed the program. At 6 and 12 months after release, records were cross-referenced with Florida Department of Justice criminal record system to prospectively capture rates of new all-comer and firearm-specific criminal charges.

Results 215 youth were included in the prospectively followed cohort at 6 months and 163 youth followed at 12 months after release. The 6-month recidivism rate for any criminal charge was 20.1% for program completers versus 32.9% for those who did not complete the program ($p=0.047$). When excluding unarmed criminal offenses, the recidivism rate dropped to 10.1% versus 22.4%, respectively ($p=0.008$). At 12 months, all-comers recidivism was 33.6% for the GATE program completion cohort versus 50% for the incomplete cohort ($p=0.045$). When excluding unarmed offenses, the recidivism rates were 18.6% versus 33.9%, respectively ($p=0.035$).

Conclusion The JWOP program has one of the lowest recidivism rates for reoffense for firearm and non-firearm-related offenses. Further investigation into details of the program's efficacy and its applicability for expansion to other state and national jurisdictions should serve a model for decreasing youth gun violence across the country.

INTRODUCTION

In 2016, the most recent year with national statistics, the annual number of people killed or injured by firearm in the USA was 133 853.¹ Homicide by firearm is the third leading cause of injury and death among youth aged 15–24, costing billions annually in combined medical and work loss costs.¹ Factoring in suicide by firearm, gun-related fatalities account

for the number one cause of unintentional injury death in this age group.¹

In an editorial statement, the American Association for the Surgery of Trauma (AAST) renewed its calls for the development of specific actions to stem the tide of escalating firearm violence.² During the past two decades a bevy of community, school, and hospital-based programs have been developed and implemented with the aim of reducing youth firearm violence.³ The Centers for Disease Control and Prevention (CDC) as part of this movement named eight comprehensive centers as National Academic Centers of Excellence on Youth Violence and provided funding in support of their mission.⁴ What has become clear from this and other efforts is that the scope of the problem, the multifactorial etiologies leading to firearm violence, and the multidisciplinary requirements of developing and measuring effective strategies to combat structural disparities have proven extremely challenging.⁵

In Miami-Dade County, the Juvenile Weapons Offenders Program (JWOP) is a unique educational program aimed at abrogating youth violence recidivism in juvenile weapon offenders. The program encompasses violence education, behavioral modification, and social mentoring, and has been based at Ryder Trauma Center (RTC)/Jackson Memorial Hospital for the past 18 years. The current study aims to describe and define its outcomes as one of the nation's most effective reducers of youth firearm recidivism and a model for developing programs both state and nationwide.

METHODS

Description of the program

The JWOP program (originally known as the GATE program) was developed in 1999 as an educational/interventional performance-based program for non-violent juvenile weapon offenders between the ages of 13 and 17. It was developed in collaboration by a neurotrauma nurse at RTC in collaboration with the County State Attorney's Office, supported by the Office of the Public Defender, and funded by the Miami-Dade County Youth Crime Task Force.

Male adolescents convicted of non-violent weapon-related offenses are referred from the juvenile justice system by court mandate. The program's long-term goal is to keep youth out of the juvenile justice system, trauma centers, rehabilitation centers, and morgues. Graduates are required to

© Author(s) (or their employer(s)) 2020. Re-use permitted under CC BY-NC. No commercial re-use. See rights and permissions. Published by BMJ.

To cite: Soe-Lin H, Sarver A, Kaufman J, et al. *Trauma Surg Acute Care Open* 2020;**5**:e000637.

complete a total of 100 hours comprising 46 classes during a 6-month period.

The program is divided thematically into three segments. The first third of the program focuses on developing awareness on the traumatic consequences of firearms injury. Experiential classes include site visits to the trauma resuscitation unit and pediatric intensive care unit, rehabilitation center, and nursing home. Participants witness what happens to families when a child dies violently, with visits to the medical examiner's department as well as a local funeral home. They plan their own funeral and write their own eulogy. Program participants meet victims and families of firearm injuries who have agreed to participate. Participants are educated on the consequences a criminal record has on education, employment, travel, and even voting.

The middle third of the program focuses on personal experiential awareness. Unhealthy behaviors and risk factors are addressed in all aspects of interpersonal violence, substance abuse, and relationships. Classes in this segment cover risk-taking behaviors, drug and substance abuse, sexually transmitted diseases, rape, gender issues, domestic violence, gang involvement, bullying, power and control, and peer pressure. Clients visit a rape treatment center and are put in stirrups to help them understand what happens if they are raped in jail or prison. They also meet adults who were sent to prison or jailed as adolescents.

The third and final portion of the curriculum focuses on choices, decision-making skills, and attitudinal change. Skill-building segments encompass anger management, emotional and behavioral self-control strategies, conflict resolution skills, and personal responsibility and accountability. Participants acquire basic first aid and cardiopulmonary resuscitation (CPR) skills, attend courses on career development and resume writing, and graduate with both a CPR certificate and a self-authored resume. Juveniles are required to prepare a written speech for their graduation, as well as complete any other sanctions assigned by the referring division including community service. Parents and more recently siblings participate in monthly family group sessions.

Graduates are encouraged to remain in contact with the program in a longitudinal fashion, and those interested are developed as peer mentors. A graduated three-step peer mentor model affords ongoing skill development beyond program graduation.

Evaluation of the program

The program was independently evaluated via retrospective analysis of participants in the GATE/JWOP program during a 10-year period from 1999 to 2009. By the inclusion criteria of the program the examined cohort consisted of males aged 13–17 at time of enrollment convicted of a non-violent firearm-related offense. This cohort was followed prospectively for 6 and 12 months from time of graduation or last class, and records were cross-referenced with the Florida Department of Justice criminal record system to quantify any individual rearrested during this time period. Recidivism was defined as any rearrest and stratified for both overall criminal charges as well as firearm-specific criminal charges. This cohort was then stratified by those who completed the full 100-hour requirements of the program and successfully graduated, versus those who completed anything less and who were then deemed non-completers. Fisher's exact test was used for comparing rates of recidivism among program completers versus non-completers.

RESULTS

A total of 600 clients were enrolled over the life of the program to date with an overall 85% completion rate. Forty-three percent of graduates returned to engage with the program after successful completion of its curriculum, and 39 program graduates were eventually trained as peer mentors who lead subsequent group classes, 12 of whom continued in this role for a duration between 2 and 14 years.

In terms of recidivism, 215 participants of the JWOP program were analyzed in the Department of Juvenile Justice (DJJ) criminal record database for a new criminal offense within 6 months of program completion, and 163 youth were included for analysis of a new criminal offense within 12 months of program completion. In the 6-month cohort, 139 of 215 (64.6%) enrolled had completed the program with (35.3%) deemed non-completers. Results were near identical in the 12-month cohort, with 107 of 163 (65.6%) enrollees who had completed the program with 56 completers (34.4%) deemed non-completers.

The 6-month recidivism rate for any criminal charge was 28/139 (20.1%) for program completers versus 25/76 (32.9%) for non-completers ($p=0.047$). When excluding unarmed criminal offenses, the recidivism rate dropped to 14/139 (10.1%) versus 17/76 (22.4%), respectively ($p=0.008$). At 12 months, recidivism for any class of offense was 36/107 (33.6%) for the program completion cohort versus 28/56 (50.0%) for the non-completion cohort ($p=0.045$). When excluding unarmed offenses, the recidivism rates were 20/107 (18.6%) versus 19/56 (33.9%), respectively ($p=0.035$).

DISCUSSION

During the past 20 years, multiple calls for action in abrogating firearm violence at the national, state, and community levels have occurred including backing from major institutions such as the CDC,⁶ the AAST,² and the Office of Juvenile Justice and Delinquency Prevention.⁷ On the basis of these and other efforts, hundreds of publications and programs have attempted to either analyze or address the problem of firearm violence, and more specifically firearm-related violence in youth populations.³

The choice to select youth populations as a target demographic for our intervention is based both on the statistical prevalence of violence among this age group, and the considerable sociological evidence that this age group is at higher risk for violence due to increased impulsivity and incompletely developed sense of self-risk.⁸

Firearm-related deaths represent the number one cause of unintentional injury and death in this population. As our knowledge of the risk factors driving firearm-related violence grows in sophistication and breadth, a multifactorial causation model has emerged that is not dissimilar to other medical diseases. Risk factors related to socioeconomic, zip code,⁹ peer groups, family dynamics, school infrastructure, and the aforementioned developmental factors can all result in the same phenotype of violence.⁵

The lack of demonstrable efficacy in many other youth violence prevention programs is therefore likely attributable to an inability of programs, either due to design restriction or funding limitations, to fully address a sufficient quantity of risk factors leading to this phenotype. A family dynamic intervention may not save a youth from the peer pressures of gang violence even with an intact support structure at home,⁵ whereas a school-based intervention abrogating gang behavior may not provide sufficient rehabilitation of a broken family dynamic and absence of appropriate role modeling.

Recidivism—a metric commonly used in the evaluation of interventional programs for juvenile offenders—is defined most basically as the repetition of a criminal behavior. The Center for Violence Prevention provides a comprehensive compendium on data collection for use in program evaluation of recidivism via self-reported questionnaires.¹⁰ In the current study, we instead chose rearrest data as a primary endpoint of recidivism due to its objective superiority over self-reported data previously collected at this and other intervention programs. While this endpoint does not differentiate between conviction and arrest, a documented goal of the JWOP program is to prevent youth from reinterfacing in any fashion with the juvenile justice system, and thus this broad definition of recidivism represents a stricter marker of success.

Program participants were followed during a 6 and 12-month span with robust results within this time frame. The lack of a longer follow-up period is an admitted limitation for objectively defining the long-term efficacy of the program. This time frame was chosen in part due to the limitations of the DJJ arrest database, which tracks arrest data in juveniles only. As the database does not follow adult (age 18 and greater) arrests, and the program clients were aged 13–17 at the time of their enrollment in the program, a longer follow-up period would represent a major confounder of not tracking arrests of those juveniles who crossed into adulthood at the time of rearrest.

A follow-up analysis cross-referenced to an adult rearrest database may be required to better define longer term efficacy. However, this analysis would require use of a national arrest database to capture those adults who subsequently move to other states. In addition, the effect size of the program as adults get farther out from program completion may also be more difficult to measure statistically. As many psychosocial and developmental studies have defined particular risk for violent behavior in youths due to developmental factors influencing impulsivity,⁸ so to have these risks been defined as becoming smaller as individuals mature into young adults. We therefore consider the short-term efficacy defined here as a critical finding of effective intervention during a developmentally high-risk period in these individuals' lives.

Why is the JWOP program arguably more effective in preventing recidivism than myriad other well-supported and structured programs? As compared with more traditional 'boot-camp' or 'scared straight' programs, our method of rehabilitation and delivery of educational content is focused on skill development, decision-making and introspection. Program directors, peer mentors and instructors tailor the classes to each group of clients to understand their backgrounds and teach in a way that reflects this culture. The program adapts to the needs of the boys which changes from week to week and individual to individual. A meta-analysis of juvenile rehabilitative programs noted that there was no significant correlation between the level of supervision/surveillance and reduced recidivism, and in fact drew a negative association between increased discipline and recidivism.¹¹

In summary, we demonstrate a unique multidisciplinary intervention which during a 10-year period has shown an objective statistically significant decrease in arrest recidivism in particular for firearm or violence-related charges. This program could potentially serve as a model for expansion in other communities in the ongoing effort to abrogate violent injury and death by firearm in this country.

Acknowledgements The authors would like to thank the collaborative efforts of the County State Attorney's Office, the Office of the Public Defender, the Florida Department of Juvenile Justice, and support from the Miami-Dade County Youth Crime Task Force in making this program possible.

Contributors HSL: article drafting, data acquisition, analysis and interpretation. AS: article editing, background, data acquisition. JK: article editing, data analysis. MS: program founder, background, article editing, interpretation. EG: corresponding author, study design, article editing, interpretation.

Funding The JWOP program was funded by the Miami-Dade County Youth Crime Task Force.

Competing interests None declared.

Patient consent for publication Not required.

Ethics approval Research approval was granted by the Institutional Review Board of the Florida Department of Juvenile Justice (DJJ) and locally authorized under University of Miami (IRB number SITE00000365).

Provenance and peer review Not commissioned; internally peer reviewed.

Open access This is an open access article distributed in accordance with the Creative Commons Attribution Non Commercial (CC BY-NC 4.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited, appropriate credit is given, any changes made indicated, and the use is non-commercial. See: <http://creativecommons.org/licenses/by-nc/4.0/>.

REFERENCES

- Centers for Disease Control and Prevention National Centers for Injury Prevention and Control. Web-based injury statistics query and reporting system (WISQARS) [Internet]. 2005. <http://www.cdc.gov/injury/wisqars> (1 Sep 2018).
- American Association for the Surgery of Trauma (AAST) Board of Managers. AAST statement on firearm injury. *Trauma Surg Acute Care Open* 2018;3:e000204.
- Gabor T. *Confronting gun violence in America*: Springer, 2016.
- Centers for Disease Control and Prevention. Violence prevention: youth violence [Internet]. <https://www.cdc.gov/violenceprevention/youthviolence/index.html> (1 Sep 2018).
- Bushman BJ, Newman K, Calvert SL, Downey G, Dredze M, Gottfredson M, Jablonski NG, Masten AS, Morrill C, Neill DB, *et al*. Youth violence: what we know and what we need to know. *Am Psychol* 2016;71:17–39.
- Centers for Disease Control and Prevention. Youth violence: prevention strategies. 2017. <https://www.cdc.gov/violenceprevention/youthviolence/prevention.html> (1 Sep 2018).
- OJJDP Research Projects. OJJDP Research Projects [Internet]. <https://www.ojjdp.gov/research/research-projects.html> (5 Sep 2018).
- Vogel M, Van Ham M. Unpacking the relationships between impulsivity, neighborhood disadvantage, and adolescent violence: an application of a Neighborhood-Based group decomposition. *J Youth Adolesc* 2018;47:859–71.
- Zebib L, Stoler J, Zakrisson TL. Geo-demographics of gunshot wound injuries in Miami-Dade County, 2002–2012. *BMC Public Health* 2017;17:174.
- Swahn M L, Dahlberg L B, Toal S B, Behrens C. *Measuring violence-related attitudes, behaviors, and influences among youths*. 2 edn: Centers for Disease Control and Prevention, 2018.
- Lipsey MW. The primary factors that characterize effective interventions with juvenile offenders: a meta-analytic overview. *Vict Offender* 2009;4:124–47.