Published in final edited form as:

J Exp Criminol. 2016 March ; 12(1): 105–126. doi:10.1007/s11292-016-9255-1.

The Impact of Two Los Angeles County Teen Courts on Youth Recidivism: Comparing Two Informal Probation Programs

Lauren N Gase, MPH^{1,*}, Tony Kuo, MD, MSHS², Elaine Lai, MPH³, Michael A Stoll, PhD⁴, and Ninez Ponce, PhD⁵

¹TL1 Predoctoral Fellow, University of California, Los Angeles Fielding School of Public Health; Chief, Health and Policy Assessment, Division of Chronic Disease and Injury Prevention, Los Angeles County Department of Public Health; 3530 Wilshire Blvd, 8th Floor, Los Angeles, CA, 90010

²Adjunct Associate Professor, Department of Epidemiology, University of California, Los Angeles Fielding School of Public Health; Deputy Director, Division of Chronic Disease and Injury Prevention, Los Angeles County Department of Public Health; 3530 Wilshire Blvd, 8th Floor, Los Angeles, CA, 90010

³Research Analyst, Division of Chronic Disease and Injury Prevention, Los Angeles County Department of Public Health; 3530 Wilshire Blvd, 8th Floor, Los Angeles, CA, 90010

⁴Professor of Public Policy, University of California, Los Angeles, Luskin School of Public Affairs; 3250 Public Affairs Building, Box 951656, Los Angeles, CA, 90095

⁵Professor, Department of Health Policy and Management, University of California, Los Angeles Fielding School of Public Health, 10960 Wilshire Blvd, Suite 1550, Los Angeles, CA, 90024

Abstract

Objective—This study sought to examine the impact of two Teen Courts operating in Los Angeles County, a juvenile justice system diversion program in which youth are judged by their peers and given restorative sentences to complete during a period of supervision.

Methods—A quasi-experimental design was used to compare youth who participated in Teen Court (n=112) to youth who participated in another diversion program administered by the Probation Department (the 654 Contract program) (n=194). Administrative data were abstracted from Probation records for all youth who participated in these programs between January 1, 2012 and June 20, 2014. Logistic and survival models were used to examine differences in recidivism - measured as whether the minor had any subsequent arrest or arrests for which the charge was filed.

Results—Comparison group participants had higher rates of recidivism than Teen Court participants, after controlling for age, gender, race/ethnicity, and risk level. While the magnitude of

*Corresponding author: Lauren N Gase, MPH, lgase@ph.lacounty.gov, Telephone: 213-427-4402, Fax: 213-351-2713.

Conflicts of Interest

The authors declare that they have no conflict of interest.

Ethical Approval

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

the program effects were fairly consistent across model specifications (odd ratios comparing Teen Court [referent] to school-based 654 Contract ranging from 1.95 to 3.07, hazard ratios ranging from 1.62 to 2.27), differences were not statistically significant in all scenarios.

Conclusions—While this study provides modest support for the positive impact of Teen Court, additional research is needed to better understand how juvenile diversion programs can improve youth outcomes.

Keywords

diversion; juvenile justice; peer court; teen court; youth court

Introduction

The juvenile justice system in the United States has massive reach and extensive costs. In 2010, more than one million youth had contact with the system; an estimated half a million were either incarcerated or placed on probation (Knoll and Sickmund 2012; National Center for Juvenile Justice n.d.; Sickmund 2010). In recent years, an increasing number of youth have come to the attention of the justice system by way of schools and child welfare agencies, for example, with the increase in schools' zero-tolerance policies (and associated increases in the number of suspensions, expulsions, and school based arrests) and the referral of status offenses (e.g., truancy, incorrigibility) to the justice system (Bonnie et al. 2013). While the number of youth committed to residential placement has declined over the past decade, estimates suggest that incarcerating youth can cost as much as \$21 billion annually in the United States when considering costs associated with lost educational opportunities and the potentially harmful experiences of young people while confined (Petteruti et al. 2014). Moreover, significant disparities persist, with economically disadvantaged and minority youth being disproportionately represented at every stage of the juvenile justice system (Bonnie et al. 2013; Piquero 2008; Annie E. Casey Foundation 2013).

Processing juvenile offenders in the traditional justice system can lead to a range of negative consequences for youth and their families. Research on adolescent development underscores the differences between adults and adolescents, the latter of which are characterized by increased experimentation and risk taking, a tendency to discount long-term consequences, and heightened sensitivity to social influences (Bonnie et al. 2013). Youth have needs distinct from adults, and a system which relies heavily on containment, confinement, and control can be harmful, as it removes youth from their families, peer groups, and neighborhoods (Bonnie et al. 2013). In addition, a growing body of literature suggests that contact with the justice system early in the life course can lead to poor social, economic, and health consequences, such as lower high school graduation and employment rates, increased substance abuse, and worse mental health outcomes (Hjalmarsson 2008; Lambie and Randell 2013).

In light of such data, many states and local jurisdictions have begun to develop and implement more developmentally appropriate ways of handling youth who come to the attention of the juvenile justice system (Bonnie et al. 2013). One increasingly popular trend

is the use of diversion protocols or policies. While there is no clear consensus on its definition (Wilson and Hoge, 2013), diversion is generally structured so that youth avoid or reduce their contact with traditional justice system processing. Diversion programs are often designed to better identify offender needs (i.e., what is driving their behavior) and ways to bring resources to aid in treatment and other needed services. One popular diversion model - specialized or problem centered courts (e.g., drug courts, mental health courts) - has been promulgated within the juvenile justice system because of its ability to focus on each youth's circumstances and provide targeted treatment options (Bonnie et al. 2013). Bringing this "root cause" perspective, diversion programs can have a range of potential benefits, including reduced recidivism and better youth development outcomes such as educational attainment, skill development, behavioral health improvements, and better family functioning (Seigle et al. 2014; Bonnie et al. 2013; Drake et al. 2009). When comparing their costs and benefits, many juvenile offender programs show great potential to be impactful and cost-effective (Bonnie et al. 2013). However, it is not always clear which diversion programs for juveniles are the most effective. For example, a recent meta-analytic review of drug courts demonstrated consistently large reductions in recidivism among adults, but much smaller effects on juveniles (Mitchell et al. 2012). With decreasing funding for court systems nationally and locally in California (Yarbrough 2013), the importance of identifying cost-effective alternatives may be of particular importance.

Teen Courts, also called youth, peer or student courts, are one increasingly popular model of juvenile diversion. Similar to other problem-centered court models, Teen Courts generally include two primary intervention components: a hearing (court appearance) and a period of supervision (Gase et al. 2015). Over the past 40 years the number of such programs has grown substantially – in 2010, there were more than 1,000 programs throughout 49 states (National Association of Youth Courts 2015). Teen Court programs vary in their operating structure and processes (e.g., agencies involved in administration, ways in which jurors are trained, participation criteria for offenders); however, the goal of all Teen Courts is to determine a fair and restorative sentence or disposition (National Association of Youth Courts 2015). This is typically accomplished through the involvement of the participating offenders' peers in determining the verdict or sentences and the use of future Teen Court jury service as a primary sanction. Teen Courts are grounded in seven different theoretical perspectives: peer justice, procedural justice, specific deterrence, labeling, restorative justice, law-related education, and skill building (Butts et al. 2002). Teen Courts are thought to be superior over processing in the traditional justice system because of their focus on restorative sentencing (e.g., mandated sentences that include community service, apology letters, family/individual counseling, academic tutoring, or substance abuse services) that helps meet youths' underlying needs without giving them a formal criminal record. In addition, they are seen as more beneficial than adult-led juvenile diversion because they provide a peer-driven sentencing mechanism that allows youth to take responsibility, to be held accountable, and to make restitution (National Association of Youth Courts 2015). According to theories of peer justice, peer pressure from pro-social peers may propel youth toward law-abiding behavior (Butts et al. 2002). Despite their popularity, a relatively small number of rigorous research studies have examined the effectiveness of Teen Courts. What research is available shows conflicting evidence as to whether and how these programs

impact the behavior of participating offenders. Therefore, the goal of this study was to examine the impact of two Teen Courts operating in Los Angeles County on rates of recidivism among a sample of primarily non-white juvenile offenders.

Review of the Literature

Research examining the impact of Teen Courts on juvenile offender outcomes has shown mixed results. The National Research Council (Bonnie et al. 2013) cites numerous examples of positive evaluation results in its description of Teen Courts as a promising model for diversion, but notes the lack of definitive studies about the impact of Teen Courts on juvenile offender outcomes. Two recent systematic reviews provide useful summaries of the current evidence base. Schwalbe and colleagues (2012) reviewed and summarized evidence from a range of diversion efforts, including seven Teen Court programs. Meta-analyses suggested that diversion programs did not have a significant impact on recidivism; of the five program types, Teen Courts had the smallest effect size. A more recent qualitative review, which focused solely on Teen Courts as a diversion model, synthesized results from 22 experimental or quasi-experimental studies (Gase et al. 2015). Among the 15 studies that assessed statistical significance of the impact of Teen Courts on recidivism, 4 found statistically significant results favoring Teen Courts, 1 found statistically significant results favoring the traditional justice system, and 10 found null results. Most studies provided little detail regarding the structure or approach of Teen Courts under study and varied widely in their research design, composition of the comparison group, and operationalization of recidivism, making it difficult to compare results. Heterogeneity in study results is evident, for example, in the frequently cited work by Butts and colleagues (2002), who examined four Teen Court programs across the country. The authors found that youth who participated in the Alaska youth tribunal court and the Missouri youth judge court had significantly lower rates of six-month delinquency referrals compared to youth processed in the traditional juvenile justice system. However, statistically significant differences in recidivism were not seen for youth in the Tempe and Chandler Justice Courts or the Montgomery County Teen Court in comparison to traditional justice processing (Tempe/Chandler) or an alternative diversion program (Montgomery). A number of other studies have shown no differences in outcomes between youth who participated in Teen Courts and other justice system alternatives, including two studies which used random assignment (Patrick and Marsh 2005; Stickle et al. 2008). Indeed, one quasi-experimental study of a Teen Court program in Maryland found statistically significant findings favoring processing in the traditional justice system (Povitsky 2005) while another study showed trends (although not statistically significant) that suggested that Teen Courts could have a negative impact on male offenders' self-concept, substance use, and delinquent behavior when compared to processing in the traditional justice system (Wilson et al. 2009).

Results of both systematic reviews underscore the substantial gaps present in the current evidence base, including the quality of the research design and methods and the lack of focus on potentially differential program impacts (Gase et al. 2015; Schwalbe et al. 2012). A very limited number of studies have employed designs and methods that allow for an unbiased measure of impact, such as randomization or an adequate comparison group. Observational studies and the use of youth not involved in the Teen Court intervention as the

comparison group (e.g., program dropouts, youth not involved in the justice system) are common practice in the evaluation of Teen Court programs (Gase et al. 2015). Additionally, few studies have compared the effectiveness of Teen Courts to other types of diversion programs (Butts et al. 2002; Norris et al. 2011; Patrick and Marsh 2005). However, as jurisdictions move toward diversion models, it is important to examine the effectiveness of Teen Courts in comparison to other forms of juvenile diversion. Furthermore, few studies have considered differential rates of recidivism over time – i.e., looking at recidivism at more than one time point (Nochajski et al. n.d.) - and none have examined differences in program effectiveness by comparing different definitions of recidivism (e.g., arrests versus referrals). The nature and timeframe in which recidivism is judged is likely to have a significant effect on the conclusions made about the impact of Teen Courts. Finally, only a limited number of studies have examined outcomes among primarily non-white youth or offenders with different risk profiles (Norton et al. 2013). Given preliminary evidence for potentially differential impact of Teen Courts (Hissong 1991; Wilson et al. 2009) and the significant racial/ethnic disparities present in rates of juvenile arrest and incarceration (Annie E. Casey Foundation 2013), the need to examine these issues is of central importance.

In order to address many of these and other gaps in the current literature, the present study sought to examine the impact of two Teen Courts operating in Los Angeles County (LAC). The quasi-experimental study hypothesized that youth who participated in the Teen Court program would have lower rates of recidivism than youth who participated in another diversion program used by the LAC Probation Department (the 654 Contract program) because the Teen Court program helps better address youth needs through its peer-driven process and focus on restorative sentencing (National Association of Youth Courts 2015). Our study helps address some of the gaps in the literature by: 1) using a comparison group of offenders similar to those participating in Teen Courts and adjusting for baseline risk level to form a more appropriate counterfactual; 2) comparing the impact of Teen Courts to another diversion program (a practice-based justice system response); 3) using two measures of recidivism (rearrest and court filings) and examining patterns in these outcomes over time using improved statistical methods; and 4) assessing impact on a group of primarily non-white offenders.

Method

Background

At the time of study, the Los Angeles Superior Court operated a Teen Court program comprising 24 Teen Courts, located in schools across the region. The Superior Court coordinates all of these Teen Courts, providing guidance to a) schools sites, which house the program (e.g., recruit and train jurors, host the hearings), b) area probation offices, which identify minors eligible for Teen Courts and supervise minors in completing sentences, and c) volunteer judges who preside over hearings. The focus of this study was two Teen Courts operating between January 1, 2012 and June 20, 2014 under the jurisdiction of one probation office serving residents of south and downtown Los Angeles. To preserve confidentiality, the name and exact location of the courts will not be shared in this article. The courts and period

of operation were selected based on input provided by Superior Court staff because they were experiencing high and relatively stable levels of implementation (based on their length of time of operation, use of standardized protocols and guidance, and consistent judge, probation and school-based personnel). The study sought to compare minors who participated in these Teen Courts and an alternative informal probation program (the 654 Contract program). As best practices for research specify the need to compare the intervention under study to alternatives routinely offered in practice (Berger et al. 2009), the 654 Contract program was selected as the comparison group. The Teen Court and 654 programs enroll roughly the same types of youth (charge severity, risk level, etc.) and Deputy Probation Officers (DPOs) are often able to choose between these two options, based on the factors described below.

Citation Processing

Each of the 16 probation offices in LAC receives referrals for minors arrested or cited under section 652 of the Welfare and Institutions Code (WIC) who live within its zip code jurisdiction. For each referral, a DPO initiates outreach with the minor, conducts a pre-filing investigation, and makes a recommendation within 29 days about how to proceed. The office can take one of four actions (Figure 1). First, the case can be closed. Closed cases are often offered referrals to community-based resources. Second, the case can be referred back to the District Attorney with a recommendation to file a petition against the minor. This is usually done because of the serious nature of the offense and/or the occurrence of a subsequent arrest while the case is under review. Third, the case can be placed on informal probation through one of two mechanisms: Teen Court or 654 Contract. In deciding between Teen Court and 654 Contract, the DPO considers a number of factors, including characteristics of the minor (e.g., age, academic achievement, parental involvement), the alleged offense (e.g., whether it involved physical harm, whether the conduct is in dispute), the potential for the minor to benefit from Teen Court participation, and whether the Teen Court has capacity to hear the case. Specifically, Teen Courts do not accept certain types of offenses, including those that are sexual in nature or gang-related. Furthermore, since Teen Court attempts to address youth who have “outstanding needs” and requires the youth and a parent/guardian to participate, DPOs try to identify youth who will both benefit from the process and appear at the hearing.

Informal Probation Programs

Participation in both the Teen Court and 654 programs is voluntary. Minors and their guardian are given the option to sign a contract in which they agree to participate in an informal probation program in lieu of processing the citation through other mechanisms (i.e., filing with the District Attorney). If the minor complies with the terms of informal supervision, the case does not come to the attention of the District Attorney or the delinquency court; however, if the minor fails to comply, the DPO can refer the case for filing consideration.

The LAC Teen Court program included two key intervention components: a) a hearing at which minors are judged either innocent or guilty by their peers and, if the minor is found guilty, b) issuing of sentences by an adult judge (a court appointed judge who volunteers for

the Teen Court) using recommendations from the peer jurors and a six month period of supervision by a DPO. The hearing is conducted using a peer jury model at a high school participating in the Los Angeles Superior Court's Teen Court Program (i.e., has a teen court in operation at the site). The court is run by a volunteer school-based coordinator who recruits and trains the peer jurors through justice-focused trainings (e.g., classes in the law and public service magnet program). Sentences are often restorative (attempting to meet youth needs and/or provide restitution to victims) and can include: individual or family counseling, substance abuse treatment, curfews, orders not to be in contact with certain individuals, community service, essays, apology letters (to the victim, guardians, etc.), and future Teen Court jury service. Minors are required to meet with their assigned DPO (usually once every two weeks) and complete the sentences over a six month period.

Minors who sign a 654 contract are required to meet regularly with a community- or school-based DPO and comply with the terms outlined by that officer, including obtaining counseling, mental health services, drug treatment, or other community-based resources. The minor's parents or guardians may also be asked to participate in counseling or education programs. By law, contracts can be in place for up to six months. 654 contracts can be monitored by a juvenile supervision DPO (who operates from the area office) or by a school-based DPO (who operates from the minor's school). If a minor attends a school with a school-based officer, then he/she is assigned to school-based supervision. Minors who are supervised by school-based DPOs generally have considerably more contact and supervision. For example, many school-based DPOs have minors sign in every day whereas juvenile supervision DPOs usually see minors once per month. School-based DPOs also have direct access to the school administrators and faculty, class schedules, attendance records and grades, and have smaller caseloads, in comparison to juvenile supervision DPOs.

Sample

The research team, in collaboration with staff from the probation office, abstracted records for all WIC 652 referrals received by the office between January 1, 2012 and June 20, 2014 (census of all WIC 652 referrals received during that time). Cases were identified using the office log, which keeps track of all incoming referrals. For each referral, a limited set of variables were abstracted, including arrest date, date received, gender, race/ethnicity, and action taken (classified as Teen Court, 654 Contract, closed, or referred to the District Attorney). For cases in which the action taken was unclear in the log (e.g., multiple actions or no action noted), the action taken was looked up in the electronic probation system.

From the list of WIC 652 cases, one member of the research team, in collaboration with a supervising DPO, used eight electronic database systems to abstract additional variables for all minors who signed either a Teen Court or 654 contract during the study time period. Information was abstracted based on the minor's unique probation identifier. Data were abstracted on a) the nature of the arrest for which the Teen Court/654 contract process was assigned; b) personal characteristics of the minor; c) program implementation; and d) information on subsequent arrests from both the juvenile and adult systems. Data abstraction

was conducted between September 25, 2014 and November 26, 2014. The exact abstraction date was noted for each case.

Variable Construction

Recidivism—The outcome, recidivism, was measured two ways: whether the minor had any subsequent a) arrest(s) (receipt of a citation with or without being detained) and b) case(s) filed with the District Attorney (a citation referred for processing in court) during the period of time between the date that he/she signed the Teen Court/654 contract and the date the record was abstracted. The decision to file a case is based on the sufficiency of the evidence to prove the charged offense(s) beyond a reasonable doubt and, for juveniles, the minor's prior record. Both aspects of recidivism were considered (separately) as outcomes in order to provide a more holistic perspective of subsequent justice system contact. Information on both juvenile and adult arrests and filings was obtained. The length of follow-up time (time at risk for subsequent justice system contact) was calculated as the number of days between the date the minor signed the contract and the date the record was abstracted.

Program Participation and Completion—A minor was considered to be a participant in the Teen Court or 645 Contract program if he/she signed a contract form between January 1, 2012 and June 20, 2014. In accordance with the "intent to treat" model, if a minor dropped out of the program, he/she was still considered to be in that program group. Program completion was judged based on a review of case notes (i.e., minor satisfied all requirements) and noted as "yes," "no," or "pending" (minor still under supervision). In order to lessen bias, we included individuals who were still under supervision (i.e., were currently enrolled in the program without having acquired a subsequent arrest). For those not currently under supervision, the date which the case was officially closed or the date which the minor dropped out of the program was abstracted and used to calculate length of time in the program.

Risk Level—Risk level was assessed using the Los Angeles Risk and Resiliency Checkup (LARRC), which measures the risk and protective factors of minors and families. The LARRC is completed by the supervising DPO every 6 months through a semi-structured interview process with the minor using motivational interview techniques. After the interview, the DPO rates 60 items in 12 sections (delinquency risk factors, delinquency protective factors, education risk factors, education protective factors, family risk factors, family protective factors, peer risk factors, peer protective factors, substance use risk factors, substance use protective factors, individual risk factors, individual protective factors). Items are rated as "yes", "somewhat", or "no", and summed to create an overall score which ranges from 0 to 46. The total LARRC score has been shown to be highly predictive of subsequent recidivism in LAC youth (Turner et al. 2005). For the present study, the LARRC score at baseline (during intake) was used. Only the total LARRC score was available; therefore, no details were available on risk/protective factor sub-scales.

Type of Offense—Offense charge codes and descriptions abstracted from the probation files were used to classify each arrest into categories identified in consultation with

Probation staff: theft, burglary or receiving stolen property; battery or assault; vandalism or arson; possession of a weapon; possession of a controlled substance; threats or conspiracy; resisting arrest or false police report; trespassing, gang-related trespassing or disturbing the peace; vehicle related (e.g., driving under the influence); or sex related (e.g., prostitution). The primary offense for which the minor was charged was used to classify the offense. When two or more primary offenses were noted, the most serious offense, as outlined in the Bureau of Criminal Statistics hierarchy (State of California Department of Justice 2015), was used. In addition to these ten offense categories, offenses were also categorized as violent (any arrest for battery or assault) or nonviolent.

Individual Characteristics—Minors were classified as to whether they ever had contact with the LAC Department of Children and Family Services (DCFS). A contact with DCFS at any time point for any reason (e.g., neglect, sexual abuse) was noted as “yes.” Minors were also classified as to whether they had any gang affiliation. This information was obtained during interviews with the minor and noted by the DPO in a section of the electronic record. Any mention of a current or previous gang affiliation was noted as “yes.” Both DCFS history and gang affiliation were thought to represent additional indicators of risk level. Age at the date of offense was calculated during data abstraction by subtracting the minor’s date of birth from the date of the offense. Gender and race, asked of the minor by the DPO, were abstracted from the online system. Race was classified as Hispanic/Latino, Black/African American, or other (which included those who identified as Asian, white, Jewish or other; collapsed based on the small number of respondents and the limitations of the administrative classification system).

Analysis

Analyses were conducted to examine associations between program type (Teen Court, school-based 654 program, and office-based 654 program), a) subsequent arrests, and b) cases that were filed with the District Attorney. For each outcome, both a logistic regression model (to model any event) and a Cox survival regression analysis (to measure time to first event) were developed. Because the proportional hazard assumption was found to hold, a Cox proportional hazards model using the Efron method to handle tied failures was used.

Two versions of the logistic and survival models were developed: one that included follow-up time, age (continuous), gender, race, and LARRC (continuous) (model 1) and the second which added any DCFS history (model 2); this was done because of the uncertainty about the time point at which the minor’s contact with DCFS occurred. For each of the logistic and survival models, two robustness checks were conducted. First, in order to identify potential differential impacts of the program, interactions between program type and (separately) age, gender, race, DCFS status, LARRC, and type of charge (violent or nonviolent) were tested. Second, to examine potential differential effects of the program over time, stratified models (by program year) were examined. All analyses were conducted for cases with complete data for all variables of interest using Stata statistical software (version 13.1). All study protocols including data abstraction tools were reviewed and approved by the Los Angeles County Department of Public Health Institutional Review Board prior to field implementation.

Results

Sample Descriptives

Between January 1, 2012 and June 20, 2014, the probation office received 970 WIC 652 referrals: 113 minors were referred to and participated in Teen Court (12% of all WIC 652 referrals received by the office) and 194 minors were referred to and participated in the 654 Contract program (20% of all WIC 652 referrals received by the office) (Table 1). While the administrative database did not provide any information on youth who refused an offer to participate in the Teen Court or 654 programs, feedback from DPOs suggest that refusal to take part in these diversion programs is rare. After excluding one Teen Court case for which no risk level data were available, analyses were performed on 306 minors (>99%) of the study sample.

The majority of the sample was Hispanic (72%), categorized as low risk (74%), male (67%) and between the ages of 13 and 17. Teen Court and 654 program participants were similar in terms of gender, race/ethnicity, risk level, and gang affiliation; however, both office- and school-based 654 program participants were likely to be younger than Teen Court participants ($p<0.001$) and more likely to have had contact with DCFS ($p<0.001$). The types of offenses for which the contract was signed did not differ across the 10 categories assessed ($p=0.119$), nor did the groups differ with respect to violent versus nonviolent offences ($p=0.451$) (Table 2).

Teen Court and 654 program participants had comparable rates of program completion and dropout. The vast majority (>90%) of minors who dropped out of either program did so because they were rearrested, which violated the terms of their contract. Females were more likely than males to complete either program, while African Americans were less likely than other races to complete either program. The average length of time minors spent in the office-based 654 program was significantly shorter than the time individuals spent in Teen Court ($p=0.001$), although the range across both programs was large. For example, Teen Court participation ranged from 0 days (for 5 minors who were found not guilty at the hearing) to 363 days. A greater percentage of Teen Court participants signed their contract in 2012. The average length of follow-up time for the full sample was about 1.4 years (mean: 513 days, standard deviation: 267); follow-up time was longer for Teen Court compared to the office-based 654 (97 days less, $p=0.003$) and school-based 654 (86 days less, $p=0.073$) programs. To account for these differences, we controlled for length of follow-up in multivariable analyses.

Program Effectiveness

Almost a quarter of the minors in the sample were rearrested. Teen Court program participants were less likely to have any subsequent arrest; 20 Teen Court participants (18%) had any rearrests compared to 38 (25%) office-based and 17 (40%) school-based 654 program participants ($p=0.01$). Differences in whether any of these arrests was for a violent offense was not statistically significant among the three groups ($p=0.08$), but trends suggest that fewer Teen Court participants committed any violent offense (15%) when compared to minors in the office-based 654 program (42%). Similar results were seen for any subsequent

filed offense. A fifth of the sample had any case filed; sixteen (14%) Teen Court participants had any subsequent offense filed, compared to 34 (22%) office-based 654 and 12 (29%) school-based 654 program participants ($p = 0.096$) (Table 2).

In multivariable logistic models, program type was associated with arrest. School-based 654 program participants were found to have 3.07 times the odds of being rearrested, compared to Teen Court program participants, after controlling for follow-up time, age, race, gender, and risk level. This effect was statistically significant (95% confidence interval [CI] for the odds ratio: 1.31, 7.18). Office-based 654 program participants did not differ from Teen Court or school-based 654 program participants in the odds of being rearrested (Table 3).

Predictive margins suggest that, on average, Teen Court participants were 20 percentage points less likely to be rearrested (95% CI: 3.7, 38.4) than school-based 654 program participants, all else being equal. Teen Court participants were 6 percentage points less likely to be rearrested (95% CI: -3.7, 16.4) than office-based 654 program participants, all else being equal.

African Americans were significantly more likely to be rearrested than Hispanics, after controlling for other factors in the model. This effect was no longer statistically significant after controlling for any history with DCFS. Females were significantly less likely to be rearrested compared to males after controlling for other factors. Finally, for every one point increase on the risk scale, youth had 1.05 times the odds of being rearrested (95% CI: 1.01, 1.09) after controlling for age, race, and gender. In general, similar associations were found after controlling for any history with DCFS (Table 3).

In multivariable logistic models, Teen Court, office-based and school-based 654 program participants did not have statistically significant differences in having a case filed, although the trends in odds ratios were similar to those in the arrest models. In the full model (that included DCFS history), African Americans were more likely to have a case filed compared to Hispanics after controlling for other factors in the model, females were less likely to have had a case filed, and those with higher risk levels had greater odds of having a case filed (Table 3).

Raw Kaplan-Meier survivor function curves show the proportion of youth rearrested by program over time (Figure 2). School-based 654 program participants had a 127% increase in the rate of being rearrested, compared to Teen Court program participants, after controlling for age, race, gender, and risk level. This effect was statistically significant (95% CI for the hazard ratio: 1.16, 4.44). Office-based 654 program participants had a 54% increase in the rate of being rearrested, compared to Teen Court participants; however, this effect was not statistically significant. In addition, African Americans (compared to Hispanics), those at higher risk level, and males had a significantly greater hazard of being rearrested, after controlling for other factors. After DCFS history was included in the model, these estimates remained of similar magnitude (Table 4).

Office and school-based 654 program participants had similar hazards for having a case filed. Office-based participants had a 93% increase in the rate of having a case filed, compared to Teen Court participants, after controlling for age, race, gender, and risk level.

This hazard ratio was statistically significant (95% CI: 1.05, 3.55). While slightly larger in magnitude, the hazard ratio for having a case filed was not statistically different for school-based 654 and Teen Court program participants. Once DCFS history was added to the model, statistically significant differences were not seen between any of the programs. As with arrests, African Americans and males both had a significantly greater hazard of having a case filed, after controlling for other factors (Table 4).

Across logistic and survival models, no interactions between program and participant characteristics were found to be significant and the associations between program and the odds (or hazard, in survival models) of being rearrested or having a case filed were similar across program years.

Discussion

Current evidence of the impact of Teen Court programs on juvenile offender outcomes is mixed. In order to help inform local decision-making and add to the current evidence base, this study sought to examine the impact of two Teen Courts in Los Angeles County. Overall, this study found moderate support for differences in recidivism for youth who participated in Teen Courts when compared to participants in another juvenile justice system diversion program. Across models, 654 program participants showed higher rates of subsequent arrests and cases filed than Teen Court participants, after controlling for a range of individual factors. While the magnitude of the program effects were fairly consistent across models, differences in outcomes were not statistically significant in all models. These results align with previous research on Teen Courts which has showed mixed impacts, including some studies that suggest Teen Court participants have lower recidivism compared to traditional justice processing (Butts et al. 2002; Hissong 1991) and other types of juvenile diversion (Forgays 2008) whereas other research has shown no differences between groups (Patrick and Marsh, 2005; Stickle et al. 2008). In its design (comparison group of offenders, length of follow-up, comparison condition), this study is most similar to those conducted by Seyfrit et al. (1987) and Nochajski et al. (n.d.) which both reported null results. Of the three studies to date that have used survival analysis, two reported null results (Nochajski n.d.; Norris et al. 2010) and one reported a significant positive impact of Teen Courts on recidivism (Hissong 1991). In terms of study population, we are not aware of any studies to date that have examined the impact of Teen Courts on a predominantly Hispanic group of offenders.

In the present study, while program impacts were generally similar in direction and magnitude across models, there were differences in levels of statistical significance depending on a) which covariates were included in the analysis; b) the use of subsequent arrests or cases filed as the outcome; c) whether the 654 program as a whole or the 654 program locations were used as the comparison condition; or d) whether logistic or survival modeling was used. Variability in these (and other) factors is ubiquitous in previous research on Teen Courts. While best practices for study design and analysis remain undefined, these findings help illustrate one of the potential reasons for variability in the results of previous studies examining impacts of Teen Court programs across the US. One design option to which this study can contribute is the decision to use program dropouts as a comparison

group, which has been done in previous studies (Bright et al. 2013; Norton et al. 2013). In our study, program completers had almost 60 times the odds of being rearrested and 30 times the odds of having a case filed, compared with those who did not complete the program.

In general, minors who participated in a 654 school-based program showed the least promising outcomes. As minors who participate in school-based supervision generally have greater intensity of intervention (e.g., potentially daily contact with a DPO), these results were unexpected. Previous studies that have compared school and office-based supervision in LAC have demonstrated lower rates of recidivism among school-based participants, although this has only been assessed over a period of six months (Fain et al. 2013). There are many potential reasons for this finding. First, while youth who were assigned to office and school-based supervision did not differ on any of the measured variables, including risk level, the groups may have unmeasured differences. The probation office assigns DPOs to schools based on neighborhood characteristics and the volume of minors on formal and informal probation at the school. Youth participating in school-based diversion may have greater exposure to school or community risk factors not captured by the LARRC. Alternately, some features of a school-based diversion program may be harmful. Even though minors are not on formal probation, as a result of participating in a school-based program they may a) have the opportunity to interact with youth at higher risk levels (who are on school-based formal probation) and/or b) be negatively labeled by their peers or school staff, creating stigma and further perpetuating criminal involvement. A previous systematic review of crime prevention programs suggests that such efforts can produce harmful effects through negative labeling and deviancy training (Welsh and Rocque 2014).

Across models, youth with greater risk levels, males, and African Americans had greater rates of recidivism. These findings align with previous work on the importance of risk level (Fain et al. 2013), gender (Hissong 1991; Norris et al. 2011), and race (Hissong 1991) in predicting recidivism. The large magnitude of racial differences in arrest and filing rates after controlling for risk level are a troubling finding. It is well documented that youth from minority racial and ethnic backgrounds experience higher rates of incarceration and are disproportionately represented in the juvenile justice system (National Center for Juvenile Justice n.d.). While there are likely to be many reasons that underlie these disparities (e.g., structural, family, and individual differences), the pathways through which disparities occur (e.g., conscious or subconscious decisions by DPOs in assigning youth to treatment; racial stereotyping by schools, welfare agencies, or law enforcement; residential segregation and the negative influences of environmental stressors) (Crutchfield et al. 2012; Feld 1995; Grahm and Lowery 2004; Bridges and Steen 1998) and ways to address these disparities warrant further exploration.

Limitations

While this study helps provide important insight on the relationship between Teen Courts and recidivism, it has limitations. First, youth were not randomly assigned to treatment conditions and participation in these programs is voluntary. While efforts were made to make the Teen Court and 654 program participants as similar as possible (i.e., by using

measures of risk, age, race, and gender in regression adjustment), participants in the two groups may vary on unmeasured differences which affect recidivism rates (e.g., parental and family involvement, school environment). Therefore, the study may suffer from selection bias; differences in recidivism may be the result of youth characteristics (and not program participation). While information about whether the minor ever had an open case with DCFS might serve as a helpful marker, we were not able to abstract any information on the nature and timing of the open case, limiting our ability to interpret this variable. In addition, as the administrative database did not provide any information about whether minors declined to participate in the Teen Court or 654 programs, we could not examine the extent of this potential source of bias. Second, due to system constraints and time limitations, we were not able to obtain any process measures (e.g., level of contact between officer and youth, number of services accessed, quality of relationship between officer and youth). While we were able to control for supervision site, the study was not able to understand officer-level effects. While length of time spent in the program provides some insight, the measure is limited because it was calculated based on when the case was administratively closed, not when contact with the DPO ended. Future studies should aim to obtain such process as well as short term measures (e.g., changes in youth attitudes and behaviors), from both the DPO and minor's perspective. Third, our sample was relatively small and the outcome was relatively rare, especially for the school-based 654 group. While we attempted to limit the number of covariates in multivariable analyses, the analyses may have suffered from limited power, especially in analyses exploring differential program impacts (i.e., the impact of the program on high risk offenders, females, etc.). Fourth, study results depend heavily on the quality of the data abstracted. While efforts were made to use consistent abstractors and double check implausible values, some aspects remain unverified, for example, the completeness of the probation log in identifying all youth eligible for WIC 652. Furthermore, changes in the processing of citations in 2014 led to minor errors in case triaging and assignment, including 11 cases that were not eligible being immediately referred back to the District Attorney (see Table 1) and two minors in our sample having received a 654 contract twice.

Implications

This study provides modest support for the positive impacts of Teen Courts on rates of youth recidivism. Our study of two Teen Courts in LAC adds to the literature by examining a group of primarily non-white program participants, comparing the performance of Teen Courts to an alternative diversion program, adjusting for potential confounding participant characteristics, and examining two different ways of measuring recidivism. However, in spite of this contribution to the evidence base, much remains unknown about the programmatic elements that mediate juvenile diversion program success or failure.

Fueled by declining court budgets and increasing interest in keeping youth out of traditional justice system processes, use of diversion programs is a widely growing in practice. Given the increasing and routine use of Teen Courts as well as office- and school-based informal probation programs in LAC, additional research is needed to understand how these juvenile diversion programs can improve youth outcomes. Future studies should consider impact as well as client/family preferences, partner perspectives on implementation (e.g., availability

of referral resources, challenges to engaging youth), and time and costs associated with program implementation. Furthermore, methodologically rigorous studies should aim to collect process and short-term impact measures in order to provide greater insights to assist with causal inference, inform theory, and contribute to decision-making and process improvement. By systematically gathering additional information on factors such as variation in program protocols, rates of service referral and utilization, and changes in youth attitudes and knowledge, we will be better able to understand program implementation, short term outcomes, and strategies for refining such efforts to best meet youth and family needs.

Acknowledgments

Funding

This work was supported in part by grants from the National Institutes of Health/National Center for Advancing Translational Science, University of California, Los Angeles Clinical Translational Science Institute [grant number: TL1TR000121].

The authors thank Deborah Weathersby, Tanesha Lockhart, and Edward Howard from the Los Angeles County Probation Department for their support and contributions to the project. The authors also thank Scott Comulada from the University of California, Los Angeles Center for Community Health and Joni Ricks-Oddie from the University of California, Los Angeles Institute for Digital Research and Education for their statistical support.

References

- Annie E. Casey Foundation. Youth Incarceration in the United States. Baltimore: Authors; 2013.
- Berger ML, Mamdani M, Atkins D, Johnson ML. Good research practices for comparative effectiveness research: Defining, reporting and interpreting nonrandomized studies of treatment effects using secondary data sources: The ISPOR Good Research Practices for Retrospective Database Analysis Task Force-Part I. *Value in Health*. 2009; 12:1044–1052. [PubMed: 19793072]
- Bonnie, RJ.; Johnson, RL.; Chemers, BM.; Schuck, J. Reforming juvenile justice: A developmental approach. Washington, DC: The National Academies Press. National Research Council; 2013.
- Bridges GS, Steen S. Racial Disparities in Official Assessments of Juvenile Offenders: Attributional Stereotypes as Mediating Mechanisms. *American Sociological Review*. 1998; 63:554–570.
- Bright, C.; Morris-Compton, D.; Walter, J.; Falls, B.; Young, D. Multijurisdictional teen court evaluation: A comparative evaluation of three teen court models. Williamsburg, VA: Administrative Office of the Courts; 2013.
- Butts, JA.; Buck, J.; Coggeshall, MB. The impact of teen court on young offenders. Washington, DC: The Urban Institute; 2002.
- Crutchfield RD, Skinner ML, Haggerty KP, McGlynn A, Catalano RF. Racial disparity in police contacts. *Race and Justice*. 2012; 2(3):179–202. DOI: 10.1177/2153368712448063
- Drake EK, Aos S, Miller MG. Evidence-based public policy options to reduce crime and criminal justice costs: Implications in Washington State. *Victims and Offenders*. 2009; 4(2):170–196.
- Fain, T.; Turner, S.; Greathouse, SM. Los Angeles County juvenile justice crime prevention act, fiscal year 2012–2013 report. Santa Monica, CA: RAND Corporation; 2013.
- Feld, BC. The social context of juvenile justice administration: racial disparities in an urban juvenile court. In: Kempf-Leonard, K.; Pope, C.; Feyerherm, W., editors. *Minorities in Juvenile Justice*. Thousand Oaks, CA: Sage; 1995. p. 66-97.
- Forgays DK. Three years of teen court offender outcomes. *Adolescence*. 2008; 43(171):473–484. [PubMed: 19086665]
- Gase LN, Schooley T, DeFosset A, Stoll MA, Kuo T. The Impact of Teen Courts on Youth Outcomes: A Systematic Review. *Adolescent Research Review*. 2015 Epub ahead of print.
- Graham S, Lowery BS. Priming unconscious racial stereotypes about adolescent offenders. *Law and Human Behavior*. 2004; 28(5):483–504. [PubMed: 15638206]

- Hissong R. Teen court: Is it an effective alternative to traditional sanctions? *Journal for Juvenile Justice and Detention Services*. 1991; 6(14):14–23.
- Hjalmarsson R. Criminal justice involvement and high school completion. *Journal of Urban Economics*. 2007; 63(2008):613–630. DOI: 10.1016/j.jue.2007.04.003
- Knoll, C.; Sickmund, M. Juvenile Offenders and Victims National Report Series. 2012. Delinquency cases in juvenile court, 2009.
- Lambie I, Randell I. The impact of incarceration on juvenile offenders. *Clinical Psychology Review*. 2013; 33(3):448–59. DOI: 10.1016/j.cpr.2013.01.007 [PubMed: 23454219]
- Mitchell O, Wilson DB, Eggers A, MacKenzie DL. Assessing the effectiveness of drug courts on recidivism: A meta-analytic review of traditional and non-traditional drug courts. *Journal of Criminal Justice*. 2012; 40:60–71.
- National Association of Youth Courts. Facts and stats. 2015. Retrieved from http://www.youthcourt.net/?page_id=24
- National Center for Juvenile Justice. Easy access to juvenile court statistics: 1985–2010. Retrieved from: <http://www.ojjdp.gov/ojstatbb/dmcdm/asp/sources.asp>
- Nochajski, TH.; Hayes, E.; Kramer, L.; Michaels, T.; Hill, B.; Schreck, L.; ... Dingman, M. Hillside Children's Center: Livingston County youth court and community services evaluation. New York, NY: State University of New York at Buffalo; n.d. Retrieved from http://www.globalyouthjustice.org/uploads/Livingston_County_Youth_Court_Evaluation.pdf
- Norris M, Twill S, Kim C. Smells like teen spirit: evaluating a midwestern teen court. *Crime and Delinquency*. 2010; 57(2):199–221. DOI: 10.1177/0011128709354037
- Norton, MH.; Gold, E.; Peralta, R. Youth courts and their educational value: An examination of youth courts in Chester, Pennsylvania. *Research for Action*; 2013. Retrieved from http://www.researchforaction.org/wp-content/uploads/publication-photos/1187/Norton_M_Youth_Courts_and_their_Educational_Value.pdf
- Patrick S, Marsh R. Juvenile diversion: Results of a 3-year experimental study. *Criminal Justice Policy Review*. 2005; 16(1):59–73. DOI: 10.1177/0887403404266584
- Petteruti, A.; Schindler, M.; Ziedenberg, J. Sticker shock: Calculating the full price tag for youth incarceration. Washington, DC: Justice Policy Institute; 2014.
- Piquero, A. In *The Future of Children*. Vol. 18. Princeton: Princeton University; 2008. Disproportionate minority contact; p. 59–79.
- Povitsky, WT. Unpublished master's thesis. University of Maryland; College Park: 2005. Teen court: Does it reduce recidivism?. Retrieved from <http://drum.lib.umd.edu/bitstream/1903/3274/1/umi-umd-3102.pdf>
- Schwalbe CS, Gearing RE, MacKenzie MJ, Brewer KB, Ibrahim R. A meta-analysis of experimental studies of diversion programs for juvenile offenders. *Clinical Psychology Review*. 2012; 32(1):26–33. [PubMed: 22138452]
- Seyfrit CL, Reichel PL, Stutts BL. Peer juries as a juvenile justice diversion technique. *Youth and Society*. 1987; 18(3):302–316. DOI: 10.1177/0044118X87018003005
- Sickmund, M. Office of Juvenile Justice and Delinquency Prevention Fact Sheet. 2010. Juveniles in residential placement, 1997–2008.
- Seigle, E.; Walsh, N.; Weber, J. *Core Principles for Reducing Recidivism and Improving Other Outcomes for Youth in the Juvenile Justice System*. New York: Council of State Governments Justice Center; 2014.
- State of California Department of Justice. Law enforcement codes and tables: Offense codes. 2015. Retrieved from <http://oag.ca.gov/law/code-tables>
- Stickle WP, Connell NM, Wilson DM, Gottfredson D. An experimental evaluation of teen courts. *Journal of Experimental Criminology*. 2008; 4(2):137–163. DOI: 10.1007/s11292-008-9050-8
- Turner, S.; Fain, T.; Sehgal, A. Validation of the risk and resiliency assessment tool for juveniles in the Los Angeles County probation system. Santa Monica, CA: RAND Corporation; 2005.
- Welsh BC, Rocque M. When crime prevention harms: A review of systematic reviews. *Journal of Experimental Criminology*. 2014; 10(3):245–266. DOI: 10.1007/s11292-014-9199-2

- Wilson AH, Hoge RD. Diverting our attention to what works: evaluating the effectiveness of a youth diversion program. *Youth Violence and Juvenile Justice*. 2013; 11(15):313–331.
- Wilson DM, Gottfredson DC, Stickle WP. Gender differences in effects of teen courts on delinquency: A theory-guided evaluation. *Journal of Criminal Justice*. 2009; 37(1):21–27. DOI: 10.1016/j.jcrimjus.2008.12.006
- Yarbrough, A. Budget cuts jeopardize health of nation's court systems. *California Bar Journal*. 2013. Retrieved from <http://calbarjournal.com/September2013/TopHeadlines/TH9.aspx>

Fig 1.
Process for Assigning Youth Offenders that are Eligible for Welfare and Institutions Code
652 at one Probation Office, Los Angeles County, 2014

Fig 2.
Raw Kaplan-Meier Survivor Function Curve of First Subsequent Arrest, Teen Court and 654 Program Participants in one Los Angeles County Probation Office, January 2012–June 2014

Table 1

Summary of Action Taken on Welfare and Institutions Code 652 Referrals Received by one Los Angeles County Probation Office, 2012–2014

Action Taken	2012 n=378	2013 n =381 ^b	2014 (January 1 – June 20) n= 211
Teen Court	51 (13%)	48 (13%)	14 (7%)
654 Contract	46 (12%)	97 (25%)	51 (24%)
Referred to District Attorney	50 (13%)	28 (7%)	23 (11%) ^c
Closed (with or without referrals) ^a	231 (61%)	207 (54%)	123 (58%)

^aCases are closed for many reasons, including: incident is isolated or relatively minor, the minor is remorseful/willing to make amends, the minor or parent is non-responsive to outreach from Probation staff, the minor does not live within the county, a more serious offense has already been filed with the District Attorney, or the minor is already receiving services from another county or community agency.

^bAction taken could not be identified for one case.

^cIncludes 11 cases that were not eligible for informal probation because of prior arrests.

Table 2

Characteristics of Teen Court and 654 Program Participants in one Los Angeles County Probation Office, January 2012–June 2014

	Teen Court n=112 ^a	654 Contract (Office) n=152	654 Contract (School) n=42	P value ^b
Demographics				
Gender				
Male	72 (64%)	104 (68%)	30 (71%)	0.646
Female	40 (36%)	48 (32%)	12 (29%)	
Age (years)	15.6 (1.4)	14.7 (1.7)	14.7 (1.3)	<0.001
Race/Ethnicity				
Hispanic	81 (72%)	114 (75%)	26 (62%)	0.184
African American	20 (18%)	32 (21%)	12 (29%)	
Other	11 (10%)	6 (4%)	4 (10%)	
Risk Level (<i>continuous, range 1–46</i>)	9.3 (8.0)	9.1 (8.1)	9.0 (7.0)	0.976
Risk Level (<i>categorical</i>) ^c				
Low	80 (71%)	113 (74%)	34 (81%)	0.835
Medium	28 (25%)	34 (22%)	7 (17%)	
High	4 (4%)	5 (3%)	1 (2%)	
Any History with the Department of Children and Family Services				
Yes	4 (4%)	39 (26%)	8 (19%)	<0.001
No	108 (96%)	113 (74%)	34 (81%)	
Any Gang Affiliation				
Yes	0 (0%)	2 (1%)	2 (5%)	0.068
No	112 (100%)	150 (99%)	40 (95%)	
Offense for Which Youth was Referred				
Theft, burglary, or receiving stolen property	45 (40%)	55 (36%)	20 (48%)	0.119
Battery or assault	36 (32%)	55 (36%)	11 (26%)	
Vandalism or arson	8 (7%)	6 (4%)	3 (7%)	
Possession of weapon	11 (10%)	8 (5%)	3 (7%)	
Possession of controlled substance ^d	6 (5%)	8 (5%)	1 (2%)	
Threats or conspiracy	2 (2%)	5 (3%)	1 (2%)	
Resisting arrest or false police report	4 (4%)	0 (0%)	1 (2%)	
Vehicle related	0 (0%)	3 (2%)	1 (2%)	
Trespassing, gang-related trespassing or disturbing the peace	0 (0%)	4 (3%)	1 (2%)	
Sex related	0 (0%)	8 (5%)	0 (0%)	

Program Participation

Year Contract Signed				
2012	46 (41%)	38 (25%)	8 (19%)	
2013	44 (39%)	61 (40%)	25 (60%)	
2014	22 (20%)	53 (35%)	9 (21%)	0.002
Program Status				
Complete	87 (78%)	113 (74%)	29 (69%)	
Drop Out	15 (13%)	20 (13%)	8 (19%)	
Pending	10 (9%)	19 (13%)	5 (12%)	0.745
Time in Program (<i>days</i>) ^e				
	200.8 (78.7)	166.9 (53.8)	210.3 (119.2)	
	Range: 0 – 363 (n=102)	Range: 20 – 494 (n=133)	Range: 33 – 716 (n=37)	<0.001
Follow-up Time (<i>days</i>) ^f				
	572.6 (269.5)	475.8 (265.1)	486.9 (242.2)	
	Range: 127 – 988	Range: 78 – 1034	Range: 97 – 1033	0.011
Recidivism				
Number of subsequent arrests				
0	92 (82%)	114 (75%)	25 (60%)	
1	10 (9%)	21 (14%)	11 (26%)	
2	5 (4%)	10 (7%)	2 (5%)	
3	4 (4%)	4 (3%)	2 (5%)	
4	1 (1%)	3 (2%)	2 (5%)	0.146
Nature of subsequent arrests				
Any violent ^g	3 (15%)	16 (42%)	4 (24%)	
All non-violent	17 (85%)	22 (58%)	13 (76%)	
	(n=20)	(n=38)	(n=17)	0.080
Number of subsequent filings				
0	96 (86%)	118 (78%)	30 (71%)	
1	9 (8%)	24 (16%)	7 (17%)	
2	5 (4%)	6 (4%)	2 (5%)	
3	1 (1%)	4 (3%)	1 (2%)	
4	1 (1%)	0 (0%)	2 (5%)	0.107

^aExcludes one observation with missing risk level data.

^bP values based on results of chi-square test (categorical variables) or ANOVA (continuous variables).

^cBased on the reported risk and protective factors, the minor is classified as low (female: 0–12, male: 0–14), medium (female: 13–25, male: 15–26) or high (female: 26–46, male: 27–46) risk.

^dThis included some youth who had been referred for the sale or possession for sale of a controlled substance and/or possession of narcotics at school. They were likely allowed to participate in an informal probation program because there was not enough evidence to file the case.

^eNumber of days elapsed from the date the contract was signed until the case was administratively closed. This excludes those individuals who were still under supervision at the time of data abstraction. By law, contracts for the Teen Court and 654 programs can be in place for up to six months.

^fNumber of days elapsed from the date the contract was signed until the date that data were abstracted for this study.

^gViolent arrests include any arrest for battery or assault.

Author Manuscript

Author Manuscript

Author Manuscript

Author Manuscript

Table 3

Multivariable Logistic Regression Models of Recidivism, Teen Court and 654 Program Participants in one Los Angeles County Probation Office, January 2012–June 2014

	Outcome: Any Case Filed		Outcome: Any Subsequent Arrest	
	Model 1	Model 2	Model 1	Model 2
Odds Ratio (95% Confidence Interval)				
Program				
Teen Court (ref)	--	--	--	--
654: Office	1.50 (0.78, 2.91)	1.32 (0.66, 2.62)	1.80 (0.89, 3.67)	1.49 (0.71, 3.11)
654: School	3.07 (1.31, 7.18) **	2.81 (1.19, 6.65) *	2.28 (0.91, 5.74)	1.95 (0.75, 5.02)
Follow-Up Time	1.00 (1.00, 1.00)	1.00 (1.00, 1.00)	1.00 (1.00, 1.00)	1.00 (1.00, 1.00)
Other Characteristics				
Age	0.88 (0.74, 1.05)	0.89 (0.74, 1.06)	0.96 (0.80, 1.16)	0.98 (0.81, 1.18)
Race				
Hispanic (ref)	--	--	--	--
African American	1.95 (1.02, 3.73) *	1.83 (0.95, 3.53)	2.34 (1.19, 4.59) *	2.15 (1.08, 4.27) *
Other	0.50 (0.13, 1.90)	0.56 (0.15, 2.09)	0.45 (0.10, 2.09)	0.52 (0.11, 2.44)
Gender				
Male (ref)	--	--	--	--
Female	0.51 (0.27, 0.98) *	0.50 (0.26, 0.96) *	0.40 (0.20, 0.83) *	0.38 (0.18, 0.80) *
Risk Level	1.05 (1.01, 1.09) *	1.05 (1.01, 1.09) *	1.06 (1.01, 1.10) **	1.05 (1.01, 1.09) *
Any DCFS History				
No (ref)	--	--	--	--
Yes		1.74 (0.85, 3.57)		2.23 (1.07, 4.67) *

*
p<0.05,

**
p<0.01

Table 4

Survival Analysis Regression Models of Recidivism, Teen Court and 654 Program Participants in one Los Angeles County Probation Office, January 2012–June 2014

	Outcome: First Subsequent Arrest		Outcome: First Case Filed	
	Model 1	Model 2	Model 1	Model 2
Hazard Ratio (95% Confidence Interval)				
Program				
Teen Court (ref)	--	--	--	--
654: Office	1.54 (0.88, 2.69)	1.41 (0.79, 2.52)	1.93 (1.05, 3.55) *	1.63 (0.86, 3.08)
654: School	2.27 (1.16, 4.44) *	2.04 (1.02, 4.08) *	2.06 (0.96, 4.45)	1.62 (0.72, 3.64)
Other characteristics				
Age	0.89 (0.77, 1.02)	0.90 (0.78, 1.04)	0.95 (0.81, 1.11)	0.98 (0.84, 1.16)
Race				
Hispanic (ref)	--	--	--	--
African American	1.83 (1.08, 3.07) *	1.73 (1.02, 2.94) *	2.19 (1.26, 3.82) **	2.00 (1.14, 3.53) *
Other	0.58 (0.18, 1.86)	0.63 (0.19, 2.03)	0.52 (0.13, 2.17)	0.60 (0.14, 2.51)
Gender				
Male (ref)	--	--	--	--
Female	0.47 (0.27, 0.82) **	0.45 (0.26, 0.79) **	0.37 (0.20, 0.70) **	0.33 (0.17, 0.63) **
Risk Level	1.03 (1.01, 1.06) *	1.03 (1.00, 1.07) *	1.03 (1.00, 1.07) *	1.03 (0.98, 1.06)
Any DCFS History				
No (ref)	--	--	--	--
Yes		1.50 (0.85, 2.65)		2.13 (1.15, 3.93) *

*
p<0.05,

**
p<0.01