



The effects of post-release community supervision reform

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Abstract

Objectives We test the effects of assignment to a collaborative model of post-release community supervision (PRCS), which emphasizes release planning, prioritizes the officer-client relationship, and invites the client to actively participate in their reentry process.

Methods Conditionally exogenous assignment of 261 high-risk, male clients to the collaborative *Pathways Home Program* or a traditional PRCS supervision model. All clients were released from California state prison to PRCS in Alameda County, California, between December 31, 2018, and July 31, 2020.

Results We find that clients assigned to the collaborative model are 17 percentage points ($p < 0.01$) more likely than the control group to report to their first probation meeting within the required 48 h following release. In the longer-term, we find that intervention clients are 14 percentage points ($p < 0.05$) less likely to have their probation revoked during the year following release, relative to those assigned to the traditional probation model.

Conclusions Results demonstrate that a collaborative model of post-release community supervision holds promise for helping high-risk clients successfully complete their supervision term.

Keywords Probation and parole · Reentry · Community corrections · Offender supervision · Offender intervention

Introduction

As of 2019, an estimated 4.2 million adults were under some form of community supervision, most commonly probation or parole (Minton et al., 2021). In some states, the number of individuals on post-release supervision (specifically state parole or county-based post-release probation) has grown in the last 2 years, as policies have aimed to reduce prison populations due to crowding, prison closures, and

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the COVID-19 pandemic (LAO Budget Series, 2020; Lerman & Mooney, 2021). Despite increased reliance on post-release supervision, however, political and policy debates have focused far more on other forms of criminal justice activity, such as policing and mass incarceration. In part due to this lack of attention, there is a great deal of uncertainty about when and how post-release community supervision serves either to grow or reduce incarceration on the back end. In particular, there is a marked lack of experimental evidence on this question (for exceptions, see Taxman, 2012; Schaefer & Little, 2020).

In this study, we examine the effects of a novel post-release community supervision (PRCS) program in Northern California called Pathways Home. California is relatively unique in its use of probation instead of parole for many individuals following incarceration. Pursuant to Section 3451 of the state's penal code, "all persons released from prison on or after October 1, 2011, after serving a prison term for a felony and, if eligible,¹ upon release from prison shall be subject to supervision provided by a county agency" (CDCR n.d.). The Pathways Home program we describe incorporates two key components: (1) early release planning designed to ensure individuals can access the support services they need as quickly as possible and (2) a collaborative case planning model that aims to strengthen the officer-client relationship and provide the client with an opportunity to take an active role in his or her reentry.

Leveraging an experimental set-up, we find that PRCS clients are more likely to report to their first probation meeting within the required 48 h of release if they engage in a pre-release planning meeting with their probation officer. In addition, we study the longer-term effects of assignment to a collaborative model of supervision and find that clients who participate in the Pathways Home program are less likely to have their probation revoked during their year-long post-release supervision, relative to clients assigned to the traditional model. As a potential mechanism to explain these longer-term effects, we show that Pathways clients are more likely to be referred to at least one supportive program than those in the control group, are provided with a greater number of referrals, and are provided with referrals more quickly following release from prison.

These findings are important given that reentry represents a critical juncture in the criminal justice pipeline. As Michelle Phelps notes in her seminal work on probation, it is therefore critical to understand whether and how community supervision "serves as [either] an opportunity for rehabilitation that reduces future incarceration, or as a pathway to prison that pushes individuals deeper into the criminal justice continuum" (2013). In the post-release context, community supervision can help individuals transition from prison back into their communities, such as by connecting them to supportive services (Vera Institute 2013). However, researchers warn that post-release supervision can also (or alternatively) serve as a form of targeted surveillance that funnels individuals back into the carceral system (Cullen et al., 1996; Petersilia, 1999).

¹ Excluded from PRCS eligibility are those serving time for a serious or violent felony; serving a current life sentence; those classified as high-risk sex offenders; and those classified as mentally disordered.

Transitioning back into one's community after serving time in prison can be fraught with challenges. Individuals released from prison are particularly vulnerable to recidivism, drug overdose, homelessness, and a host of other negative outcomes (Lutze et al., 2014; Ryan et al., 2013; Leach and Oliver, 2011), especially immediately following release (Nelson et al., 2011; Lim et al., 2012; Binswanger et al., 2007). The support systems available to an individual (e.g., assistance with employment, drug rehabilitation, housing, and education programs) can mean the difference between returning to prison and successfully reentering the community.

Post-release supervision: support or surveillance?

Over the last four decades, the number of individuals under some form of post-release supervision—most commonly referred to as parole—has quadrupled. Between 1980 and 2020, Americans under parole supervision increased from nearly 200,000 to over 800,000 (Hughes et al., 2001; Bureau of Justice Statistics, (2020)). Like mass incarceration, post-release community supervision disproportionately affects black Americans. In 2020, 28% of parolees were Black, even though they only account for 12% of the population in the USA (Bureau of Justice Statistics, (2020); US Census Bureau 2020).

This growth in post-release supervision shows no sign of abating. Indeed, in recent years, some locales have begun increasing the use of post-release community supervision in order to reduce the size of the prison population and manage costs (Lerman and Mooney, 2021). Most notably, in 2011, the California legislature passed Assembly Bill 109, enabling individuals convicted of non-serious, non-violent, and non-sexual offenses to complete the last year of their prison sentence under the supervision of county probation departments instead of waiting for release and supervision by state parole. The number of new post-release community supervision (PRCS) cases in California grew by 7.2% between 2016 and 2018 (Chief Probation Officers of California, 2018). Nationwide, 30 states increased parole caseloads during 2020, and the total number of adults on parole increased from 1.3% to 862,100 (Bureau of Justice Statistics, (2020)).

Despite this growth, however, post-release community supervision has historically received a relatively small share of state criminal justice budgets (Lin & Peter-silia, 2014). The average annual cost per prison inmate in California is \$106,131 per year (Legislative Analyst's Office, 2022), while the state spends about \$28 per day supervising someone on parole (Grattet and Martin, 2015). This pattern holds across many states, despite sizable variation in overall budgets, funding streams, and agency capacity (Taxman, 2012).

Likewise, post-release supervision practices have received a comparably low share of scholarly attention relative to mass incarceration. In particular, it remains unclear whether post-release supervision is best understood as a means to reintegrate individuals into their communities or as a form of state surveillance that functionally operates as a pipeline back to incarceration. Some prominent scholars argue that a reliance on state parole (or, in California's case, post-release community supervision operated by county probation offices) merely serves to "widen the net" on the

back end of carceral control, imposing rules and restrictions that impede successful reentry (Uggen & Stewart, 2015). In 1980, parole violations accounted for 18% of admissions to prison, a figure that climbed to 37% by 2001 (Travis & Petersilia, 2001). Post-release community supervision continues to have a very high “failure rate,” with 44% of individuals on parole being rearrested within the term of their supervision (Ostermann et al., 2013).

Others, however, argue that post-release supervision does not necessarily need to be a path towards surveillance and sanctions. Instead, it can provide individuals with the opportunity to be released early from prison and offer on-going guidance and support (Caplan, 2006). Moreover, post-release supervision can play a critical role in connecting individuals with community services that are both customized and responsive to their needs. This can be especially important in the context of post-release supervision, as individuals emerging from prison often have complex risk factors and needs—factors that both pre-date incarceration and can be created or exacerbated by prison itself. For example, a prison term can leave individuals with considerable debt (deVuono-powell et al., 2015), exacerbate housing instability or homelessness, result in negative psychological effects (Haney, 2001) and chronic health conditions that were untreated in prison (Mallik-Kane & Visser, 2008), and result in fractured relationships with family and social networks (Hutcherson, 2008; Wakefield and Garcia-Hallett, 2017). The range of barriers many individuals face when returning from prison, including low levels of education, lack of transportation, limited formal work experience, lack of vocational skills, and discriminatory hiring practices, further complicates how well individuals can navigate a difficult job market to successfully obtain employment (Pager et al., 2009; Harlow, 2003).

Critically, there is also a high level of variation in the type and quality of post-release supervision, and the effects of community supervision are conditional on the way it is carried out. During the height of mass incarceration, community supervision practices largely shifted away from a caseworker model, which focuses more on rehabilitation, toward a surveillance model that largely ignores the social determinants of crime and instead locates the source of criminality squarely within the individual’s moral failing (Cox, 2017; Western, 2018; McKim, 2017; Miller, 2014; Werth, 2012). This shift to a punitive surveillance framework saw a reduction in the number and range of services available to parolees (Chamberlain et al., 2018) and coincided with a steady rise in parole violations leading to readmission to prison; through systematic and often intrusive monitoring, parole officers were instructed to closely monitor parolees in order to “catch them if they fail and return them to prison” (Caplan, 2006). Officers placed onerous conditions on individuals they supervised and then aggressively searched for evidence that they violated these conditions in order to send them back to confinement (Vera Institute of Justice 2013: 132). In a survey of Eastern Missouri parole and probation officers, officers reported they spent a plurality (41%) of their time conducting surveillance activities, such as writing violation reports or conducting drug tests (Seiter & West, 2003).

In contrast to this traditional, top-down approach, some community supervision agencies have adopted a more collaborative model, whereby parole officers are “firm, fair, and caring” (Kennealy et al., 2012), focus on clients’ individual

well-being, are affirming rather than confronting, and rely more heavily on neutral and positive reinforcements than on negative ones. In this model, officers strive to be “coaches” rather than “referees” (Lovins et al., 2018). As a “referee,” officers serve as whistleblowers, applying rules and punishing infractions rather than helping clients learn from their mistakes. As a “coach,” officers work in partnership with clients to overcome barriers and chart a path toward success.

The evolution of these distinct models is likely to be consequential for the success of community supervision. As Phelps notes, the effects of community supervision on recidivism “depends (in part) on how much benefit or harm the monitoring and services associated with [it] provides” (Phelps, 2013:59). Extant empirical work supports this contention: failure rates are associated with the characteristics of supervision and the ways that it interacts with individuals’ risks and needs (Grattet et al., 2011), as well as an officer’s caseload size (Jalbert & Rhodes, 2012; McKean & Ransford, 2004) the frequency of contact (Aos et al., 2006; MacKenzie, 2006; Petersilia & Turner, 1993) and connections to local service providers (Hipp et al., 2010). In addition, the working relationship or “alliance” between officers and clients has an impact on future justice involvement (Walters, 2016; Phelps & Ruhland, 2021), with failure rates predicted by the client/officer relationship (Blasko et al., 2015; Chamberlain et al., 2018; Morash et al., 2015).

Yet important empirical questions remain about whether and how a collaborative approach might improve reentry outcomes. Do collaborative approaches to post-release supervision have lower failure rates than traditional approaches? If so, why? In part, these questions have not yet been satisfactorily answered because few studies are able to compare community supervision clients who are randomly assigned to a more collaborative relative to a traditional approach. This has implications for causal inference, given that officers within a PRCS or parole department who employ a more collaborative or hybrid model might be less likely to issue revocations and violations for behaviors in the first place, relative to officers who choose a more top-down approach. Likewise, much of the extant literature does not address potential selection bias resulting from the possibility that officers who are predisposed to a collaborative model of supervision might be more likely to select into departments that employ these methods.

Improving reentry through post-release supervision reform: the Pathways Home

In this study, we employ a field experiment to examine the effects of a collaborative release planning intervention implemented by the California Department of Corrections and Rehabilitation (CDCR) and the Alameda County Probation Department (ACPD) in Northern California. The state of California permits individuals convicted of certain offenses to complete the last year of their prison sentences under post-release community supervision (PRCS). Legislation also requires county probation departments to provide a range of supportive services to individuals who have been incarcerated in state prison. In this context, ACPD’s Pathways Home was designed as a collaborative, service-oriented program to help meet the critical needs

of those returning from prison. According to ACPD, Pathways Home “will redesign the way in which clients return to their home communities by creating targeted pathways, infused with evidence-based services and warm connections, that reduce barriers and address clients’ needs and reduce recidivism” (Alameda County Probation Department, 2018). The intervention draws on eight key principles that emphasize the collaborative nature of the long-term supervision process (see Table 1A in the Online Appendix).

These principles prescribe three key features of the Pathways Home program that are central to the collaborative model and intended to guide the orientation of the probation officer and the structure of reentry. The first is *self-direction*. Officers are instructed to foster intrinsic motivation in their clients, emphasizing skills trainings, organization, and cognitive-behavioral approaches to unwanted or unproductive thoughts. They are also tasked with providing feedback to clients to help them assess change and progress.

The second is *individualized support*. In order to devise a plan for effective case management, probation staff are trained to administer tools for screening dynamic and static risk factors, as well as criminogenic needs. They are then instructed to work with clients to outline a set of tailored resources, providing referrals to a set of targeted interventions that are responsive to individuals’ specific criminogenic needs and responsive to their particular temperaments, learning styles, motivation, culture, and gender.

Finally, in contrast to the traditional focus on surveillance and violations, the Pathways model focuses on *positive reinforcement*. Probation staff are encouraged to relate to offenders in sensitive and constructive ways designed to increase personal investment and behavior change, such as by drawing upon evidence-based techniques of communication like motivational interviewing (Miller & Rollnick, 2012). Likewise, staff are instructed to provide more “carrots” than “sticks.” Staff emphasize positive reinforcement in response to good behavior rather than focusing on technical violations that return people to custody, and in the event of negative behavior, sanctions are swift, certain, and appropriate.

More specifically, our analyses examine the effects of two key components of the Pathways Home program pre-release planning and post-release partnership. The term “release planning” describes preparations made specifically for the “moment of release” from prison and the period that immediately follows (La Vigne et al., 2008). Release planning is important, as evidence suggests that individuals are at highest risk of committing a new crime or violating the terms of their supervision during the first few days and weeks after their incarceration. In particular, the first 72 h following release from prison is a period of extreme instability, during which clients are at especially high risk for recidivating if they do not have access to resources like stable housing and substance use treatment (Metraux & Culhane, 2004; Nelson et al., 1999; Remster, 2019).

The primary goal of pre-release planning is to address these and other basic needs. In particular, logistical planning regarding access to transportation, food and clothing, documentation, and housing present immediately pressing, but often overlooked, concerns (La Vigne et al., 2008). For example, many states provide only limited “gate money” to individuals upon their release. At the high end, individuals in

California receive \$200 upon release, an amount that has not increased since 1973. On the lower end, Alabama and Louisiana provide \$10 or \$20 and New Hampshire provides nothing (Armstrong & Lewis, 2019). Moreover, many individuals are provided with gate funds via debit cards that charge a fee per use or ATM withdrawal fees, and a portion of allocated funds may be deducted for clothing and transport (Armstrong & Lewis, 2019), lowering the total available amount. In some cases, state support is supplemented by private nonprofits that meet individuals outside the prison gates offering rides and/or temporary housing (e.g., the Louisiana Parole Project and the First 72+, as well as the Homecoming Project in the Bay Area), but the availability of these services depends heavily on community resources, rendering quality and consistency unreliable (Jonson & Cullen, 2015).

By intervening at the moments just prior to and following discharge from prison, when returnees face an array of especially time-sensitive challenges, release planning can help keep individuals from returning to old patterns of behavior (Nelson & Trone, 2000). A 2008 survey of criminal justice practitioners suggested that 70% conduct a pre-release meeting during which planning for release can occur (La Vigne et al., 2008). However, we have limited empirical evidence on the short-term utility of these meetings or their longer-term effects. What data are available suggest that release planning offers a potentially promising intervention for reducing initial risk, as clients with better release planning tend to have lower rates of recidivism (Trupin et al., 1999; Willis & Grace, 2008). Moreover, clients may be less likely to recidivate overall if they are engaged in reentry planning prior to release, becoming “more engaged in defining, and adhering to, the conditions of their release plan” (La Vigne et al., 2008; Walters et al., 2007).

In addition to pre-release planning, the on-going community supervision model of Pathways Home takes a collaborative approach wherein officers and clients work together to create an individualized plan designed to meet the clients’ articulated goals. This kind of collaborative case-planning aims to disrupt a “one-size fits all” method, by matching programs and supports directly to clients’ specific risks and needs (Warwick et al., 2013). The referral process is critical to this model. Many agencies passively refer clients to services by providing them with a list of programs and services. In contrast, a minority (about 36%) use active referrals (Taxman, 2012). While the former puts the onus on clients to select services and make their own appointments, the latter encourages the officer to make an appointment on behalf of clients and provide a “warm handoff” to service providers.

The collaborative case-planning model is also particularly dependent on the nature of the relationship between a probation or parole officer and their client—a relationship that can be fraught, given that officers must still embody the potentially conflicting roles of counselor and authority figure (Chamberlain et al., 2018; Phelps, 2020) and serve a dual role as both social worker and law enforcement (Skeem et al., 2007; Trotter, 2015). Yet, sizable benefits can accrue if these hurdles are successfully overcome. For instance, a positive relationship between clients and officers is associated with a significant increase in compliance during supervision (Dowden & Andrews, 2004; Gleicher et al., 2013; Taxman & Ainsworth, 2009), as well as a lower likelihood of recidivating (Chamberlain et al., 2018; Aos et al., 2006; Paparozzi & Gendreau, 2005; Petersilia & Turner, 1993; Taxman, 2008; Kennealy

et al., 2012), and reductions in substance use (Blasko et al., 2015). Individuals likewise report higher levels of accountability and loyalty to their parole officers when they perceive a positive relationship with them (Robinson, 2005).

The past decade has seen a proliferation of research into effective strategies and practices for achieving positive outcomes for justice-involved individuals and the community. In response, the Alameda County Probation Department has enthusiastically embraced progressive evidence-based practices in its effort to equip our youth and adult clients with the skills and tools necessary to enable them to lead successful, crime-free lives. To that end, in the past 36 months, we have undergone a significant transformation. From collaborating with judges on the front end of sentencing, to leading the effort to eliminate fines and fees for juveniles and adults, the department continues to position itself as a nationwide leader in Community Corrections.

Data and methods

In order to measure the effect of the Pathways Home program, we carried out a randomized controlled experiment (RCT) in partnership with the probation department. All clients scheduled to be released from prison to Alameda County PRCS between December 31, 2018, and July 31, 2020, were given a risk and need assessment prior to their release by the probation department. If the assessment determined that a client required a high level of supervision, they were assigned to either Pathways Home or traditional PRCS by the probation department. Assignment to Pathways was conditionally exogenous based on high supervision designation as well as probation officer availability. The department's random assignment protocol was intentionally designed and implemented to enable rigorous evaluation of the program.

In the standard PRCS model, individuals did not meet with their probation officer before their release and instead received a form telling them their officer's name and notifying them that they were expected to report to the probation office within 48 h of their release. Clients in the Pathways Home program, in contrast, received both pre-release planning and a more comprehensive collaborative case plan. It should be noted that even the traditional PRCS model of supervision at ACPD is fairly collaborative relative to other supervision models around the country. Officers across the department are encouraged to follow evidence-based practices with all PRCS clients and provided with optional resources that facilitate case planning; as the departments' vision statement notes, ACPD is committed to "providing compassionate supervision to justice-involved youth and adults by providing effective rehabilitative services. (Dawal, n.d.). The progressive nature of non-Pathways client supervision provides us with a strict test, given that it likely minimizes any differences we find between Pathways and non-Pathways clients, biasing our results downward.

Beginning in March 2019, a designated probation officer from ACPD conducted a 1-h case-planning video conference with individuals assigned to the Pathways treatment. The aim of the video conference is twofold. First, it is designed to ensure that critical services, including transportation and housing, are available to clients immediately upon release. Second, the meeting allows probation officers to explain their collaborative approach to supervision.

In the Pathways Home program, goals are co-created between the client and probation officer. During the release planning conference, the Pathways probation officer asks clients about their personal goals and how DPOs can assist in achieving them. The officer also goes through the client's completed risk assessment, using information from the assessment to begin devising a plan for achieving the client's vision for his or her future. This is a key component of the Pathways Home program, designed to signal the personal investment of probation officers in the lives and challenges of their clients. Once the goals are agreed upon by both stakeholders, both parties move forward with a "partnership model"—this term is explicitly used with clients. In addition to allowing the client and probation officer to discuss the client's specific needs, the case-planning conference provides an opportunity for the client and officer to begin developing a rapport and potentially helps to allay clients' concerns about reporting to the probation office following release.

Following the case-planning video conference, the probation officer makes referrals, as needed, to local service organizations in the areas of housing, employment, career technical education, higher education, family reunification, mental health, substance use, and general supportive services. The probation officer may also schedule appointments related to identification card or benefit enrollment applications. At a minimum, the probation officer ensures that clients have transportation from their prison facility to Alameda County and that housing is arranged for the immediate days following release. At the end of the pre-release conference, the probation officer answers any remaining questions and schedules an initial office visit with the client.

Once a client in the Pathways Home program is released from prison, he or she is instructed to report to a first meeting with the probation officer within 48 h. At this meeting, the collaborative nature of the Pathways Home program is reiterated, and the client and officer again review some of the client's specific risks and needs. Together, they co-create a longer-term case plan designed to mitigate these risks, and they discuss services and opportunities that can meet the client's needs (e.g., permanent housing, job training, employment, counseling).

Given the existing literature and the programmatic goals of Pathways Home, we generate three key hypotheses regarding the Pathways Home program. First, we hypothesize that individuals assigned to Pathways Home are more likely to report to their first meeting with their probation officer within 48 h following their release. Second, we hypothesize that individuals assigned to Pathways Home will be less likely to have their probation term revoked and more likely to complete a successful PRCS term of 1 year relative to non-Pathways clients.

Finally, we explore potential mechanisms by which Pathways might reduce revocation rates among individuals. One significant feature of the Pathways collaborative model is its focus on individuals' specific needs once released, and probation officers are encouraged to make referrals to outside organizations that can assist with reintegration following incarceration. Given that the PRVC helps probation officers identify these needs earlier, and collaborative supervision emphasizes a supportive and individualized model, we hypothesize that Pathways-assigned individuals will have increased odds of being assigned a referral into at least one of these programs,

receive a larger number of referrals, and receive these referrals earlier in their supervision.

Results

We received datafiles from the ACPD containing information on all participants in the PRCS population. For each participant, we observe their age, gender, race, date of birth, risk-assessment score,² probation officer, referral history, and information on whether they received a pre-release video conference (PRVC).³ Importantly, we also observe when each participant was initially released, when and if they reported to their probation officer, any programs the probation officer referred them to, and any time there was a change to their probation status, including a revocation.⁴

Prior to conducting our analysis, we perform a number of sample restrictions. We start with a sample of all clients who (i) were released to PRCS after December 31, 2018, and before July 31, 2020 (the time horizon in which random assignment to the Pathways program took place), and (ii) were supervised by ACPD from release through either a revocation or completion. From this group, we then restrict our sample to include only men, due to the low number of women in the overall sample. This excludes two women from Pathways and 23 overall. Second, we drop all individuals with a risk assessment score lower than 16 out of 20, which is the minimum risk score necessary for Pathways eligibility.⁵ Third, as our study takes place during the COVID-19 pandemic, we drop any individuals who were released to a hotel for quarantine immediately following their release. These individuals were all visited by their probation officer while quarantined and, therefore, did not have the same opportunity to report or abscond as the individuals that were not released to quarantine. This restriction excludes five individuals from Pathways and 39 overall. Finally, we exclude individuals who were still under active community supervision during their year-long supervision period at the end of our study period, as we are not able to observe a year's worth of outcome data for these individuals. Table 1 summarizes the numbers of individuals removed through each sample restriction.

² The COMPAS Risk Assessment tool is administered before a client's release from prison. The tool uses an algorithm to assess recidivism risk and contains a battery of questions pertaining to criminal history, disciplinary history, compliance, security classification, family and social support, gang affiliation, substance use, education, mental health, residential stability, work and financial plans, criminal thinking, criminal attitudes, personality, self-efficacy, aspirations, and anger (ACPD Risk and Needs Assessment—Reentry Document).

³ Online Appendix Table 2A includes details on how these variables are coded or constructed.

⁴ Other status changes include transfer to a different probation system (outside of ACPD) or death.

⁵ Clients are only eligible for PRCS if they are being released from prison after serving a sentence for a non-violent, non-serious, and non-sexual offense. However, many clients are still deemed high-risk based on the results of their risk and need assessments, which takes into account factors like their gang affiliation, mental health, conviction history, and in-prison behavior. In fact, 65% of all PRCS clients are determined to be high-risk upon their release, which ACPD defines as having a total risk assessment score of 16 or higher out of a 20-point total.

Table 1 Analytical sample restrictions

	Total sample of participants	Sample assigned to pathways
Full data	558	76
Men only	535	74
Eligible based on risk score	364	74
Not sent to quarantine	325	69
Observed for 1 year	261	66

Table 2 Summary statistics

	(1) Control	(2) Pathways	(3) Overall	(1)-(2) <i>p</i> value
Age	38.805 (0.796)	39.22 (1.691)	37.416 (0.734)	0.152
Black	0.600 (0.035)	0.545 (0.062)	0.586 (0.031)	0.439
Risk Score	18.538 (0.098)	19.030 (0.146)	18.663 (0.083)	0.010
N	195	66	261	

Standard errors are reported in parentheses. *P* values for differences are computed using two-sided *t* tests

In Table 2, we provide sample means for age, race, and risk score across both the control and treatment groups. We find no significant differences between groups when looking at age and race. The treatment group is found to have slightly higher risk scores than the control group. However, these differences describe a riskier treatment population relative to the control group, potentially biasing downward any positive effects we might see as a result of Pathways assignment.

We also explicitly test for differences between client groups by regressing assignment to assignment to Pathways on age, race, and risk assessment scores. In the data, we see no evidence of differences between those assigned to Pathways versus traditional supervision on observable covariates (Table 3). Consistent with Table 2, we do see differences in risk assessment scores that potentially bias downward our findings.

We begin by examining whether individuals assigned to Pathways who received a PRVC have a higher probability of initially reporting to their assigned probation officer relative to those in the non-Pathways group. Using two-day reporting as the benchmark, we run a linear model regressing an indicator for two-day reporting on PRVC assignment, first without controls (Model 1) and then controlling for age, race, and risk score (Model 2). We provide a rationale for our use of linear models with a binary outcome (as opposed to logit models) in Appendix C. The models in Table 4 provide evidence that the PRVC significantly increases the likelihood of two-day reporting for recently released clients. Specifically, we find that, all else equal, clients assigned to PRVC are 16.7 percentage

Table 3 Balance for assignment to Pathways Home program

	(1)	(2)	(3)	(4)	(5)
Age	0.003 (0.002)		0.003 (0.002)		0.003 (0.002)
Black		-0.042 (0.055)	-0.047 (0.055)		-0.036 (0.054)
Risk score				0.052** (0.020)	0.051** (0.020)
Constant	0.131 (0.089)	0.278*** (0.042)	0.154* (0.093)	-0.714* (0.372)	-0.793** (0.385)
F-Stat	2.06	0.60	1.40	6.77	3.09
Prob>F	0.15	0.44	0.25	0.01	0.03
N	261	261	261	261	261
N. Pathways	66	66	66	66	66

Models regress assignment to Pathways on age in Model 1, race (a dummy variable for Black racial identity) in Model 2, both race and age in Model 3, COMPAS risk assessment scores (out of 20) in Model 4, and all three contextual variables in Model 5. * $p < 0.10$, ** $p < 0.06$, *** $p < 0.01$

Table 4 PRVC and early reporting

	(1)	(2)
PRVC	0.167*** (0.064)	0.192*** (0.065)
Age		-0.001 (0.002)
Black		0.040 (0.057)
Risk score		-0.044** (0.021)
Constant	0.667*** (0.032)	1.487*** (0.404)
N	261	261
N. PRVC	66	66

Model 1 presents a linear regression model regressing an indicator for 2-day reporting on PRVC assignment alone. Model 2 presents a linear regression model regressing an indicator for two-day reporting on PRVC assignment controlling for age, race (a dummy variable for Black racial identity), and risk score (out of 20). * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

points more likely to report within 2 days compared to those in the control group (83.4% versus 66.7%, $p < 0.01$).

We next examine whether this early reporting has longer-term impacts on participants' probation outcomes. In Fig. 1, we present the likelihood of having one's probation revoked at various time horizons for clients who reported to their probation officer within 2 days, relative to those who did not. We find that

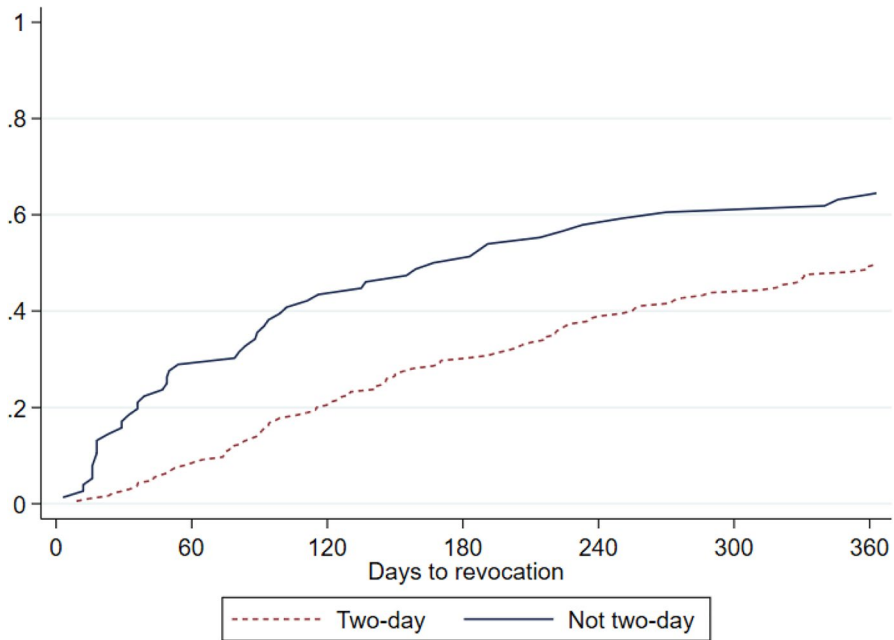


Fig. 1 Days to revocation by early reporting status. Note: In Fig. 1, the dotted line presents the likelihood of having one's probation revoked given the number of days since one's release for participants who reported to their probation officer within the 2-day following release. The solid line presents the data for probation clients that did not report within 2 days

participants who reported on time are less likely to have their probation revoked across all time horizons.

We formally test the relationship between timely probation reporting (i.e., reporting within the first 48 h, as required by the terms of supervision) and probation completion in two regression models in Table 5. In Model 1, we regress an indicator for successful probation completion on an indicator for two-day reporting without controls. We define probation as a “success” if a client's probation has not been revoked within their year-long supervision period. In Model 2, we control for age, race, and COMPAS risk score. We find that participants who report within two business days are 14 percentage points more likely to successfully complete probation ($p < 0.05$) according to Model 1 and 11 percentage points more likely to successfully complete probation according to Model 2 ($p < 0.10$).

Given evidence that a PRVC leads to increased likelihood of 2-day reporting and that 2-day reporting leads to increased likelihood of successful probation, we next examine whether assignment to Pathways leads to an increased likelihood of probation success. In Fig. 2, we present the likelihood of having one's probation revoked separately for those assigned to Pathways and those who are not. We find that after approximately 180 days, those assigned to Pathways are less likely to have their probation revoked.

Table 5 Timely probation reporting and probation completion

	(1)	(2)
Report w/in 2 days	0.136** (0.067)	0.109* (0.066)
Age		0.003 (0.003)
Black		0.069 (0.060)
Risk score		−0.077*** (0.022)
Constant	0.329*** (0.056)	1.636*** (0.440)
N	261	261
N. Pathways	66	66

Model 1 regresses an indicator for successful probation on an indicator for 2-day reporting alone. Model 2 regresses an indicator for 2-day reporting on Pathways assignment controlling for age, race (a dummy variable for Black racial identity), and COMPAS risk score (out of 20). * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

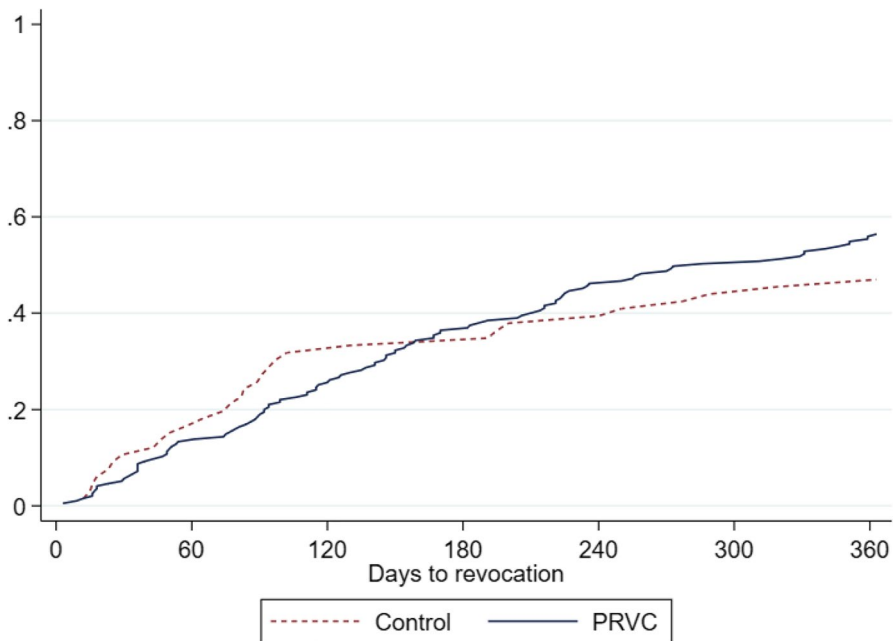


Fig. 2 Days to revocation by Pathways assignment. Note: In Fig. 2, the dotted line presents the likelihood of having one's probation revoked for those not assigned to Pathways. The solid line presents the data for probation clients that were assigned to Pathways

Table 6 Probation success probability by number of days from release

	(1)	(2)	(3)	(4)	(5)	(6)
N. days	14 days	30 days	90 days	180 days	270 days	365 days
Pathways	0.004 (0.018)	− 0.041 (0.036)	− 0.035 (0.057)	0.082 (0.067)	0.125* (0.070)	0.141** (0.070)
Black	0.003 (0.016)	− 0.007 (0.031)	0.050 (0.050)	0.103* (0.059)	0.141** (0.061)	0.106* (0.061)
Age	0.000 (0.001)	0.000 (0.001)	− 0.001 (0.002)	0.000 (0.002)	0.001 (0.003)	0.002 (0.003)
Risk score	− 0.009 (0.006)	− 0.027** (0.011)	− 0.067*** (0.018)	− 0.092*** (0.022)	− 0.094*** (0.023)	− 0.091*** (0.023)
Control mean	0.985 (0.009)	0.949 (0.016)	0.815 (0.028)	0.636 (0.035)	0.518 (0.036)	0.436 (0.036)
N	261	261	261	261	261	261
N. Pathways	66	66	66	66	66	66

Table presents a series of OLS models regressing successful probation (or the absence of a revocation) within 6 time periods ranging from 14 days (column 1) to 1 year (column 6) following release. The model uses fixed effects for age, race, and risk score. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

We formally test whether assignment to Pathways leads to an increased likelihood of probation success in Table 6. This table presents a sequence of simple tests specified by: $S(t)_i = \alpha + \text{Pathways}_i + \varepsilon_i$, where $S(t)_i$ is an indicator for whether person i has not received a revocation within t days of release and Pathways_i is an indicator for person i being assigned to Pathways. The model uses fixed effects for age, race, and risk score, and we estimate the model within six time periods ranging from 14 days (column 1) to 1 year (column 6) following release.

The data do not show significant short-term differences in the likelihood of revocation. However, we find statistically significant effects for Pathways clients in their longevity on community supervision. In other words, we find that Pathways-assigned individuals are 13 percentage points ($p < 0.10$) more likely to make it to the 270-day mark of probation without a revocation (column 4) and 14 percentage points ($p < 0.05$) more likely to successfully complete probation after 1 year (column 5).

We then turn our attention to service referrals with the intention of exploring the underlying mechanisms by which Pathways might reduce revocation rates among individuals. We first analyze whether assignment to Pathways increases the probability of being assigned any referral and whether assignment increases the probability of receiving specific types of program referrals. In Table 7, we present regression results for four linear probability models. In Models 1 and 3, we check for differences in the probability of receiving any program referral, while in Models 2 and 4, we broadly categorize the referrals into employment, education, health, housing, transportation, and others. In Models 3 and 4, we include fixed effects for age,

Table 7 Referrals to outside programs

	(1)	(2)	(3)	(4)
Referral: any	0.182*** (0.069)		0.234*** (0.069)	
Referral: employment		0.041 (0.059)		0.075 (0.059)
Referral: education		-0.046 (0.058)		-0.044 (0.057)
Referral: health		0.264*** (0.056)		0.236*** (0.055)
Referral: housing		0.075 (0.058)		0.100* (0.057)
Referral: transport		0.152 (0.160)		0.169 (0.158)
Referral: others		0.090 (0.057)		0.098* (0.056)
Constant	0.104* (0.062)	0.084 (0.046)	-1.210*** (0.397)	-1.161*** (0.381)
FE	No	No	Yes	Yes
N	261	261	261	261
N. Pathways	66	66	66	66

Model 1 regresses an indicator for Pathways assignment on an indicator for receiving any referral during an individual's probation period. Model 2 regresses an indicator for Pathways assignment on indicators for a number of mutually exclusive program referral types that could be made during probation. Models 3 and 4 mirror Models 1 and 2, respectively, but include controls for age, race (a dummy variable for Black racial identity), and COMPAS risk score (out of 20). * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 8 Number of program referrals

	(1)	(2)	(3)	(4)
Pathways	1.103*** (0.272)	1.308*** (0.268)	0.822*** (0.277)	0.952*** (0.280)
Constant	1.851*** (0.137)	6.748*** (1.668)	2.375*** (0.148)	4.825*** (1.760)
FE	No	Yes	No	Yes
Includes no referrals	No	No	Yes	Yes
N	261	261	213	261
N. Pathways	66	66	61	61

Model 1 regresses the number of program referrals received within 60 days of release on an indicator for Pathways assignment Models 2 mirrors Models 1 including controls for age, race (a dummy variable for Black racial identity), and COMPAS risk score (out of 20)

Table 9 Time until first program referral

	(1)	(2)
Pathways	-26.898*** (11.437)	-26.121** (11.813)
Constant	30.947*** (6.121)	55.619 (74.311)
FE	No	Yes
N	213	213
N. Pathways	61	61

Model 1 regresses the time until the first referral on an indicator for Pathways assignment. Models 2 mirrors Models 1 including controls for age, race (a dummy variable for Black racial identity), and COMPAS risk score (out of 20). As described in the text, we exclude 48 individuals, five of which were assigned to Pathways, from this analysis. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

race, and risk score. Relative to 78% of the control group, we find that 92% of the Pathways clients receive a referral at some point in their supervision term (Model 3, $p < 0.01$).⁶ From Model 4, we see that the differences in referrals are largely driven by differences in health (including drug treatment) and housing referrals.

Having established that clients assigned to Pathways are more likely to receive a referral, we next analyze whether they receive a greater total number of referrals. In Table 8, we present results from four linear probability models. In Model 1, we check for differences in the number of referrals within 60 days of release⁷ between clients assigned to Pathways and those in the control. Model 2 replicates this analysis adding fixed effects for age, race, and risk score. We find that clients assigned to Pathways receive an average of 1.1 more referrals than those assigned to the control group ($p < 0.01$). Models 3 and 4 replicate Models 1 and 2, excluding individuals who receive zero program referrals. These results are broadly consistent with those in Models 1 and 2 and suggest that not only are clients assigned to Pathways more likely to receive a program referral, but they also receive more referrals.

In looking at the differences in the timing of program referrals (Table 9), we present results from two linear probability models.⁸ In Model 1, we check for differences in the time between release and the date of the first program referral. Model 2 replicates this analysis adding fixed effects for age, race, and risk score. We find that while those in the control group receive their first program referral after 31 days

⁶ See Fig. 3A of the Online Appendix for percentages of clients that receive any referral during probation.

⁷ We considered several factors when choosing this cutoff. First, based on our results in Table 9, most clients in the control group do not receive their first referral until after 30 days, and so choosing a cutoff earlier than that may bias our sample against the control group. However, those in the control group are also more likely to revoke after 180 days, and many would be ineligible to receive many program referrals. Thus, reducing or increasing this cutoff has the potential to introduce upward bias into our estimate.

⁸ Since only individuals who received any program referrals can be analyzed in this way, we exclude 48 individuals, five of which were assigned to Pathways, from this analysis.

on average, those assigned to Pathways receive their referral fully 26 days earlier ($p < 0.01$) or 5 days after release. Given the importance of timely access to programs (Metraux & Culhane, 2004; Nelson et al., 1999; Remster, 2019), the results in Tables 7–9 suggest a specific way that assignment to Pathways might lead to more successful probation outcomes.

Discussion

Using an experimental design and administrative data from the Alameda County Probation Department's Pathways Home program, we find evidence that a collaborative case-planning model that includes release planning, prioritizes the officer-client relationship, and invites the client to actively participate in their reentry can reduce recidivism for high-risk post-release probation clients. Specifically, we find that pre-release planning increases the likelihood of a client reporting to his probation officer after release. Additionally, we find that those assigned to the Pathways Home program are more likely to successfully complete their full post-release supervision term, relative to similar individuals on PRCS who are not assigned to the collaborative program. Finally, we find that individuals assigned to the more collaborative model are more likely to be assigned a service referral, receive a larger number of referrals, and receive these referrals earlier in their supervision. The data we present is not only descriptive, but leverages a causal framework to estimate effects between comparable groups of clients assigned to PRCS.

There are several potential caveats to our findings that bear mention. First, our research was only conducted with high-risk male clients, defined as individuals with a risk assessment score greater than 16 (out of a total of 20). Most release planning initiatives have been developed primarily to serve individuals deemed high risk, as these individuals are thought to experience the greatest challenges to successful reentry (Nelson & Trone, 2000). However, it is an open question as to whether the collaborative supervision model we describe would be as effective for medium and low-risk clients, given that they have lower failure rates to begin with and a different constellation of risks and needs. Existing research suggests, in fact, that intensive supervision and case planning can have the opposite effect for these clients (Latessa & Lowenkamp, 2005). Specifically, “a meta-analysis of 80 studies” found that “when placed in programming higher risk offenders are 5 times less likely to reoffend compared to lower risk offenders” (Andrews & Bonta, 2010). However, placing lower risk clients in intensive treatment can actually increase recidivism, compared to lower risk clients placed in minimal treatment (Viglione & Taxman, 2018). This paradox further highlights the need to address personalized needs of individuals on supervision, given that no one-size-fits-all approach has been shown to be effective (Latessa et al., 2020).

Our analysis also included men only, based on sample size considerations. We therefore cannot say whether our results would generalize across gender groups. More broadly, our study focuses on PRCS only for those who are assigned to supervision after serving a term in prison. This is distinct from probation that is assigned

as an alternative to incarceration. Given these caveats, our results are not necessarily generalizable to other forms of community supervision or other subgroups of probationers.

Our dataset also has limitations. One important question is whether Pathways is effective at reducing revocations by providing clients with a solid foundation for reentry or by mitigating officers' response to sanctions (or both). Officers do not have any explicit additional leeway with Pathways clients as opposed to traditional PRCS clients when it comes to their approach to violations. Nevertheless, a more collaborative model may change officers' approach to clients, as they develop a qualitatively different working relationship. Unfortunately, our dataset is not able to illuminate whether revocations are due to new charges or convictions or whether they are due to technical violations.⁹ As such, we are unable to unequivocally reject that some of the difference across group revocation rates may be explained by a change in officer approach. However, our exploration into the differences in number and timing of service referrals across groups suggests that at least some of the revocation reduction may be explained by increased connection to services.

In addition, while our results suggest that referrals to supportive programs might help explain the success of Pathways Home, we also recognize that the utility of the programs and services to which clients are referred depends on the availability and quality of services in the broader community (Hannon & DeFina, 2010). Alameda County, situated in the Bay Area, has a wealth of social services relative to many other counties across the state and country. Indeed, the Alameda County Probation Department has contracts with more than 30 programs and services that cover a wide range of reentry needs, including career training, education, employment planning and goal-setting, family reunification, peer mentoring, housing, substance use, mental health counseling, court services, and transportation. We note that both the concentration and quality of services provided to PRCS clients in Alameda County might be a necessary condition for the strong effects we uncover of this model of supervision. Additional research should explore variation in the effects of collaborative supervision across counties with differing levels of service provision and service quality.

In the same vein, our results should not be interpreted as implying that collaborative community supervision can be accomplished in any setting. Rather, community supervision departments that lack sufficient budget, personnel, and resources to craft holistic case plans for clients and provide adequate connections to services might inadvertently cause harm by failing to deliver on promises to clients. As the Vera Institute notes, a "focus on community corrections could be a moment of enormous opportunity, but desired public safety and budgetary outcomes will come about only if policymaking is well-informed and thoughtful, *and is accompanied by upfront investment in capacity building* for affected agencies" (2013:128–9, emphasis added). Additionally, we would posit that successful implementation of a collaborative case planning model requires support from leadership and buy-in from

⁹ Moreover, the dataset does not differentiate between individuals that are revoked for a short period and return to PRCS and those that return to prison for a longer timeframe.

officers. In agencies where this would require a meaningful cultural shift, a substantial amount of up-front training and on-going incentivizing might be required.

These qualifiers aside, our study has important implications for the future of PRCS and parole reform. The most striking aspect of our findings is the large effect that a pre-release video meeting has on the reporting rate for clients immediately following their release from prison. Many post-release supervision departments suffer from small budgets and strained resources, presenting a critical need for cost-efficient and effective interventions (Lin & Petersilia, 2014). The cost of a pre-release video conference is trivial, and many prisons now have access to video conferencing technology. Given that individuals are especially vulnerable during the first few weeks after release, including to lethal outcomes like suicide and drug overdose, connecting with a PRCS or parole officer can literally mean the difference between life and death (Lim et al., 2012; Leach and Oliver, 2011; Binswanger et al., 2007).

In contrast, the cost of redefining agency principles to be more collaborative and retraining post-release supervision officers is likely to be substantially higher (e.g., Smith et al., 2012). The transition from a more traditional top-down model to a collaborative case-planning model requires significant upfront investments, as everything from “job descriptions, officer training, promotion criteria, and reward structures must be reviewed and adapted” (Vera Institute of Justice 2013: 134). This transformation may be challenging for cash-strapped departments around the country. However, our estimate of the long-term impact of a more collaborative case-planning approach on post-release supervision success rates provides compelling evidence that it is likely to be worthwhile.

More broadly, understanding contemporary post-release supervision and reentry from prison is integral to understanding criminal justice in America. The postscript of the nation’s mass incarceration crisis is, ultimately, a reentry crisis. Understanding whether institutions and policies can facilitate or hinder how individuals come home is thus likely to be one of the most critical questions for criminal justice in the years to come.

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References

- Alameda County Probation Department. (2018). Redesigning the pathways home. Alameda County's pilot to positive reentry. Bureau of Justice Assistance Award Information. Available at: <https://bja.ojp.gov/funding/awards/2018-cz-bx-0023>
- Andrews, D. A., & Bonta, J. (2010). *The psychology of criminal conduct* (5th ed.). LexisNexis Matthew Bender.
- Angrist, Joshua D. & Pischke, Jörn-Steffen (2009). Mostly harmless econometrics: An empiricist's companion. Economics Books, Princeton University Press, edition 1, number 8769.
- Aos, S., Miller, M. G., & Drake, E. (2006). *Evidence-based adult corrections programs: What works and what does not*. Washington State Institute for Public Policy.
- Armstrong, M., & Lewis, N. (2019). What gate money can (and cannot) buy for people leaving prison. *The Marshall Project*, 10.
- Ball, D., Weisberg, R., & Dansky, K. (2008). The first 72 hours of re-entry: Seizing the moment of release. *Stanford Criminal Justice Center*.
- Binswanger, I. A., Stern, M. F., Deyo, R. A., Heagerty, P. J., Cheadle, A., Elmore, J. G., & Koepsell, T. D. (2007). Release from prison — A high risk of death for former inmates. *New England Journal of Medicine*, 356(2), 157–165. <https://doi.org/10.1056/NEJMsa064115>
- Blasko, B. L., Friedmann, P. D., Rhodes, A. G., & Taxman, F. S. (2015). The parolee–parole officer relationship as a mediator of criminal justice outcomes. *Criminal Justice and Behavior*, 42(7), 722–740.
- Bureau of Justice Statistics, Annual Probation Survey and Annual Parole Survey, 2005–2020.
- Bureau, U. C. (n.d.). *2020 census illuminates racial and ethnic composition of the country*. Census.Gov. Retrieved June 6, 2022, from <https://www.census.gov/library/stories/2021/08/improved-race-ethnicity-measures-reveal-united-states-population-much-more-multiracial.html>
- California Department of Corrections and Rehabilitation (CDCR). (n.d.). Post release community supervision. <https://www.cdcr.ca.gov/law/enforcement-resources/home/prcs/>
- California_probation_executive_summary.pdf. (n.d.). Available at: https://www.cpoc.org/sites/main/files/file-attachments/california_probation_executive_summary.pdf?1555517616. Accessed date November 15, 2021.
- Caplan, J. M. (2006). Parole system anomie: Conflicting models of casework and surveillance. *Fed Probation*, 70, 32.
- Chamberlain, A. W., Gricius, M., Wallace, D. M., Borjas, D., & Ware, V. M. (2018). Parolee–parole officer rapport: Does it impact recidivism? *International Journal of Offender Therapy and Comparative Criminology*, 62(11), 3581–3602.
- Chief Probation Officers of California. (2019). *2018 California probation summary*. Retrieved from: https://www.cpoc.org/sites/main/files/fileattachments/california_probation_executive_summary.pdf?1555517616
- Cox, A. L. (2017). Trapped in a vice: The consequences of confinement for young people. *Rutgers University Press*.
- Crime and work: What we can learn from the low-wage labor market. (n.d.). *Economic Policy Institute*. Available at: https://www.epi.org/publication/books_crimeandwork/. Accessed date November 12, 2021.
- Cullen, F. T., John P. Wright, & Applegate, B. K. (1996). Control in the community: The limits of reform? Alan T Harland., In *Choosing Correctional Options That Work: Defining the Demand and Evaluating the Supply* (pp. 69–116). Sage Publications. Available at: <https://www.ojp.gov/ncjrs/virtual-library/abstracts/control-community-limits-reform-choosing-correctional-options-work>. Accessed date November 15, 2021.
- Dawal, Marcus. (n.d.) Letter from the Interim Chief. <https://probation.acgov.org/strategic-plan/letter-from-chief.page>
- deVuono-powell, S., Schweidler, C., Walters, A., & Zohrabi, A. (2015). *Who pays? The true cost of incarceration on families*. Ella Baker Center, Forward Together, Research Action Design.
- Doleac, J. L. (2018). Strategies to productively reincorporate the formerly-incarcerated into communities: A review of the literature. *Social Science Research Network*. <https://doi.org/10.2139/ssrn.3198112>
- Dowden, C., & Andrews, D. A. (2004). The importance of staff practice in delivering effective correctional treatment: A meta-analytic review of core correctional practice. *International Journal of*

- Offender Therapy and Comparative Criminology*, 48(2), 203–214. <https://doi.org/10.1177/0306624X03257765>
- Durose, M. R., & Langan, P. A. (2007). Felony sentences in state courts, 2004. *American Psychological Association*. <https://doi.org/10.1037/e669692007-001>
- Eno Louden, J., Skeem, J. L., Camp, J., Vidal, S., & Peterson, J. (2012). Supervision practices in specialty mental health probation: What happens in officer–probationer meetings? *Law and Human Behavior*, 36(2), 109–119. <https://doi.org/10.1037/h0093961>
- Evidence-based corrections: Identifying what works - Doris Layton MacKenzie, 2000. (n.d.). Available at: https://journals.sagepub.com/doi/abs/10.1177/0011128700046004003?casa_token=o8MQpXJFIQAAAAA:jU95OrcXxMq7XmD9wyt-3oascEFWmyR41QGEvfJcT31KInALkqbgZXeTQ1xDxuEfMVqLvodBXSo_A. Accessed date November 15, 2021.
- Field, G. (1985). The cornerstone program: A client outcome study. *Federal Probation*, 49(2), 50–55.
- Finn, P. (1999). Job placement for offenders: A promising approach to reducing recidivism and correctional costs | office of justice programs. Available at: <https://www.ojp.gov/ncjrs/virtual-library/abstracts/job-placement-offenders-promising-approach-reducing-recidivism-and->. Accessed date November 15, 2021.
- Gendreau, P., Goggin, C., Cullen, F. T., & Andrews, D. A. (2000). Effects of community sanctions and incarceration on recidivism. *Forum on Corrections Research*, 12(2), 1–4.
- Glaze, L. E., & Bonczar, T. P. (2002). *Probation and parole in the United States, 2001*. US Department of Justice, Bureau of Justice Statistics.
- Gleicher, L., Manchak, S. M., & Cullen, F. T. (2013). Creating a supervision tool kit: How to improve probation and parole. *Federal Probation*, 77(1), 22–27.
- Gossner, D., Simon, T., Rector, B., & Ruddell, R. (2016). Case planning and recidivism of high risk and violent adult probationers. *Journal of Community Safety and Well-Being*, 1(2), 32–43. <https://doi.org/10.35502/jcswb.4>
- Grattet, R., & Martin, B. (2015). *Probation in California*. Public Policy Institute of California.
- Grattet, R., Lin, J., & Petersilia, J. (2011). Supervision regimes, risk, and official reactions to parolee deviance. *Criminology*, 49, 371–399.
- Haney, C. (2001). The psychological impact of incarceration: Implications for post-prison adjustment. *ASPE*. Available at: <https://aspe.hhs.gov/reports/psychological-impact-incarceration-implications-post-prison-adjustment-0>. Accessed date November 5, 2021.
- Hannon, L., & DeFina, R. (2010). The state of the economy and the relationship between prisoner reentry and crime. *Social Problems*, 57(4), 611–629. <https://doi.org/10.1525/sp.2010.57.4.611>
- Harding, D. J., Morenoff, J. D., Nguyen, A. P., & Bushway, S. D. (2017). Short- and long-term effects of imprisonment on future felony convictions and prison admissions. *Proceedings of the National Academy of Sciences*, 114(42), 11103–11108. <https://doi.org/10.1073/pnas.1701544114>
- Harlow, C. W. (2003). *Education and correctional populations*. Bureau of Justice Statistics. Available at: <https://bjs.ojp.gov/library/publications/education-and-correctional-populations>. Accessed date November 11, 2021.
- Hartmann, D. J., Wolk, J. L., Johnston, J. S., & Colyer, C. J. (1997). Recidivism and substance abuse outcomes in a prison-based therapeutic community. *Federal Probation*, 61(4), 18–25.
- Henrichson, C., & Delaney, R. (2012). The price of prisons: What incarceration costs taxpayers. *Federal Sentencing Reporter*, 25(1), 68–80.
- Hipp, J. R., Petersilia, J., & Turner, S. (2010). Parolee recidivism in California: The effect of neighborhood context and social service agency characteristics*. *Criminology*, 48(4), 947–979. <https://doi.org/10.1111/j.1745-9125.2010.00209.x>
- Horrace, W., & Oaxaca, R. (2006). Results on the bias and inconsistency of ordinary least squares for the linear probability model. *Economics Letters*, 90(3), 321–327.
- Houston, E., & Bernstein, J. (2000). *Crime and work: What we can learn from the low-wage labor market*. Available at: https://www.epi.org/publication/books_crimeandwork/. Accessed date November 5, 2021.
- Hughes, T., Wilson, D., & Beck, A. (2001). Trends in state parole, 1990–2000. Washington, DC.
- Hutcherson, D. T. (2008). *Street dreams: The effect of incarceration on illegal earnings*. The Ohio State University. Available at: https://etd.ohiolink.edu/apexprod/rws_olink/r/1501/10?clear=10&p10_accession_num=osu1218205841. Accessed date November 11, 2021.
- Hyatt, J., & Barnes, G. (2015). Intensive community supervision for high-risk offenders does little to reduce crime. *USApp – American Politics and Policy Blog*. Online resource, The London School

- of Economics and Political Science. Available at: <http://blogs.lse.ac.uk/usappblog/>. Accessed date November 4, 2021.
- Jalbert, S. K., & Rhodes, W. (2012). Reduced caseloads improve probation outcomes. *Journal of Crime and Justice*, 35(2), 221–238.
- Jonson, C. L., & Cullen, F. T. (2015). Prisoner reentry programs. *Crime and Justice*, 44, 517–557.
- Kaeble, D. (2018). Bureau of Justice Statistics (BJS) - Time served in state prison, 2016. Available at: <https://www.bjs.gov/index.cfm/index.cfm?ty=pbdetail&iid=6446>. Accessed date November 15, 2021.
- Kennealy, P. J., Skeem, J. L., Manchak, S. M., & Eno Loudon, J. (2012). Firm, fair, and caring officer-offender relationships protect against supervision failure. *Law and Human Behavior*, 36(6), 496–505. <https://doi.org/10.1037/h0093935>
- Klingele, C. (2021). *The role of human services providers during community supervision*. National Institute of Justice.
- La Vigne, N., Davies, E., Palmer, T., & Halberstadt, R. (2008). *Release planning for successful reentry: A Guide for corrections, service providers, and community groups* (pp. 1–104). Urban Institute Justice Policy Center.
- Laberge, D., & Morin, D. (1995). The overuse of criminal justice dispositions: Failure of diversionary policies in the management of mental health problems. *International Journal of Law and Psychiatry*, 18(4), 389–414. [https://doi.org/10.1016/0160-2527\(95\)00019-E](https://doi.org/10.1016/0160-2527(95)00019-E)
- LAO Budget Series. (2020). The 2021–22 budget: state correctional population outlook. Available at: <https://lao.ca.gov/Publications/Report/4304>. Accessed date November 4, 2021.
- Latessa, E. J., & Lowenkamp, C. (2005). What works in reducing recidivism exploring alternatives to the incarceration crisis: Panel: Issues of Recidivism. *University of St. Thomas Law Journal*, 3(3), 521–535.
- Latessa, E. J., Johnson, S. L., & Koetzle, D. (2020). *What works (and doesn't) in reducing recidivism*. Routledge.
- leachOliver, D. P. (2011). Drug-related death following release from prison: A brief review of the literature with recommendations for practice. *Current Drug Abuse Reviews*, 4(4), 292–297.
- Legislative Analyst's Office. (2022). How much does it cost to incarcerate an inmate? https://lao.ca.gov/policyareas/cj/6_cj_inmatecost
- Lerman, A. E., & Mooney, A. C. (2021). The downside of downsizing: Persistence of racial disparities following state prison reform. *Punishment & Society*, 1–25. <https://doi.org/10.1177/14624745211006039>
- Lim, S., Seligson, A. L., Parvez, F. M., Luther, C. W., Mavinkurve, M. P., Binswanger, I. A., & Kerker, B. D. (2012). Risks of drug-related death, suicide, and homicide during the immediate post-release period among people released from New York City jails, 2001–2005. *American Journal of Epidemiology*, 175(6), 519–526. <https://doi.org/10.1093/aje/kwr327>
- Lin, J., & Petersilia, J. (2014). *Follow the money: How California counties are spending their public safety realignment funds* (SSRN Scholarly Paper No. ID 2395527). Social Science Research Network. <https://doi.org/10.2139/ssrn.2395527>.
- Loeffler, C. E. (2013). Does imprisonment alter the life course? Evidence on crime and employment from a natural experiment. *Criminology*, 51(1), 137–166. <https://doi.org/10.1111/1745-9125.12000>
- Lovins, B. K., Cullen, F. T., Latessa, E. J., & Jonson, C. L. (2018). Probation officer as a coach: Building a new professional identity. *Federal Probation*, 82(1), 13–19.
- Lowenkamp, C. T., Latessa, E. J., & Smith, P. (2006). Does correctional program quality really matter? The Impact of adhering to the principles of effective intervention*. *Criminology and Public Policy*, 5(3), 575–594. <https://doi.org/10.1111/j.1745-9133.2006.00388.x>
- Lowenkamp, C. T., Flores, A. W., Holsinger, A. M., Makarios, M. D., & Latessa, E. J. (2010). Intensive supervision programs: Does program philosophy and the principles of effective intervention matter? *Journal of Criminal Justice*, 38(4), 368–375. <https://doi.org/10.1016/j.jcrimjus.2010.04.004>
- Lucken, K. (1997). Privatizing discretion: “Rehabilitating” treatment in community corrections. *Crime and Delinquency*, 43(3), 243–259. <https://doi.org/10.1177/0011128797043003001>
- Lurigio, A. J., Rollins, A., & Fallon, J. (2004). The effects of serious mental illness on offender reentry. *Federal Probation*, 68(2), 45–52.
- Lutze, F. E., Rosky, J. W., & Hamilton, Z. K. (2014). Homelessness and reentry: A multisite outcome evaluation of Washington State's reentry housing program for high risk offenders. *Criminal Justice and Behavior*, 41(4), 471–491. <https://doi.org/10.1177/0093854813510164>

- Lutze, F. E. (2013). *Professional lives of community corrections officers: The invisible side of Reentry*. SAGE Publications.
- MacKenzie, D. L. (2000). Evidence-based corrections: Identifying what works. *Crime and Delinquency*, 46(4), 457–471. <https://doi.org/10.1177/001128700046004003>
- MacKenzie, D. L. (2006). *What works in corrections: Reducing the criminal activities of offenders and delinquents*. Cambridge University Press.
- Mallik-Kane, K., & Visser, C. A. (2008). Health and prisoner reentry: How physical, mental, and substance abuse conditions shape the process of reintegration: (719772011–001). *American Psychological Association*. <https://doi.org/10.1037/e719772011-001>
- McKean, L., & Ransford, C. (2004). *Current strategies for reducing recidivism*. Center for Impact Research.
- McKim, A. (2017). *Addicted to rehab: Race, gender, and drugs in the era of mass incarceration*. Rutgers University Press. <https://doi.org/10.36019/9780813587653>.
- Metraux, S., & Culhane, D. P. (2004). Homeless shelter use and reincarceration following prison release*. *Criminology and Public Policy*, 3(2), 139–160. <https://doi.org/10.1111/j.1745-9133.2004.tb00031.x>
- Miller, J. (2014). Probation supervision and the control of crime opportunities: An empirical assessment. *Crime and Delinquency*, 60(8), 1235–1257. <https://doi.org/10.1177/001128712443186>
- Miller, J. (2015). Contemporary modes of probation officer supervision: The triumph of the “synthetic” officer? *Justice Quarterly*, 32(2), 314–336. <https://doi.org/10.1080/07418825.2013.770546>
- Miller, W. R., & Rollnick, S. (2012). *Motivational interviewing: Helping people change*. Guilford press.
- Minton, T., Beatty, L. G., & Zeng, Z. (2021). Correctional populations in the United States, 2019 – Statistical Tables. *Bureau of Justice Statistics*. Available at: <https://bjs.ojp.gov/library/publications/correctional-populations-united-states-2019-statistical-tables>. Accessed date November 4, 2021.
- Morash, M., Kashy, D. A., Smith, S. W., & Cobbina, J. E. (2015). The effects of probation or parole agent relationship style and women offenders’ criminogenic needs on offenders’ responses to supervision interactions. *Criminal Justice and Behavior*, 42(4), 412–434. <https://doi.org/10.1177/0093854814551602A>
- Nelson, M., Deess, P., & Allen, C. (2011). The first month out: Post-incarceration experiences in New York City. *Federal Sentencing Reporter*, 24(1), 72–75. <https://doi.org/10.1525/fsr.2011.24.1.72>
- Nelson, M., & Trone, J. (2000). Why planning for release matters | Office of Justice Programs. Available at: <https://www.ojp.gov/ncjrs/virtual-library/abstracts/why-planning-release-matters>. Accessed date November 12, 2021.
- Nelson, M., Deess, P., & Allen, C. (1999). The first month out: Post-incarceration experiences in New York City. *Vera Institute of Justice Working Paper*.
- Office of Justice Programs. (n.d.). Why planning for release matters. Available at: <https://www.ojp.gov/ncjrs/virtual-library/abstracts/why-planning-release-matters>. Accessed date November 15, 2021.
- Ostermann, M., Miller, J., & Matejkowski, J. (2013). Are “parole failures” parolees when they fail? Incorporating supervision terms and the timing of arrest events into parolee recidivism rates. *Justice Research and Policy*, 15(2), 1–20.
- Pager, D., Bonikowski, B., & Western, B. (2009). Discrimination in a low-wage labor market: A field experiment. *American Sociological Review*, 74(5), 777–799. <https://doi.org/10.1177/000312240907400505>
- Paparozi, M. A., & Gendreau, P. (2005). An intensive supervision program that worked: Service delivery, professional orientation, and organizational supportiveness. *The Prison Journal*, 85(4), 445–466. <https://doi.org/10.1177/0032885505281529>
- Petersilia, J. (1999). Parole and prisoner reentry in the United States. *Crime and Justice*, 26, 479–529. <https://doi.org/10.1086/449302>
- Petersilia, J., & Turner, S. (1993). Intensive probation and parole. *Crime and Justice*, 17, 281–335. <https://doi.org/10.1086/449215>
- Petersilia, J. (2000). *When prisoners return to the community: Political, economic, and social consequences*. U.S. Department of Justice, Office of Justice Programs, National Institute of Justice.
- Pew Charitable Trusts. (2018). *Probation and parole systems marked by high stakes, missed opportunities*. Available at: <https://pew.org/2CX6pZC>. Accessed date November 11, 2021
- Phelps, M. S. (2013). The paradox of probation: Community supervision in the age of mass incarceration. *Law and Policy*, 35(1–2), 51–80. <https://doi.org/10.1111/lapo.12002>
- Phelps, M. S. (2017). Mass probation: Toward a more robust theory of state variation in punishment. *Punishment and Society*, 19(1), 53–73. <https://doi.org/10.1177/1462474516649174>

- Phelps, M. S. (2020). Mass probation from micro to macro: Tracing the expansion and consequences of community supervision. *Annual Review of Criminology*, 3(1), 261–279. <https://doi.org/10.1146/annurev-criminol-011419-041352>
- Phelps, M. S., & Ruhland, E. L. (2021). Governing marginality: Coercion and care in probation. *Social Problems*, (spaa060). <https://doi.org/10.1093/socpro/spaa060>.
- Re-Entry Policy Council. (2005). Report of the re-entry policy council: Charting the safe and successful return of prisoners to the community. *Restorative Justice*. Available at: <http://restorativejustice.org/rj-library/report-of-the-re-entry-policy-council-charting-the-safe-and-successful-return-of-prisoners-to-the-community/5410/>. Accessed date November 4, 2021
- Remster, B. (2019). A life course analysis of homeless shelter use among the formerly incarcerated. *Justice Quarterly*, 36(3), 437–465. <https://doi.org/10.1080/07418825.2017.1401653>
- Rex, S., & Hosking, N. (2013). A collaborative approach to developing probation practice: Skills for effective engagement, development and supervision (SEEDS). *Probation Journal*, 60(3), 332–338. <https://doi.org/10.1177/0264550513499002>
- Robinson, G. (2005). What works in offender management? *The Howard Journal of Criminal Justice*, 44, 307–318. <https://doi.org/10.1111/j.1468-2311.2005.00374.x>
- Roth, A., Kajeepeta, S., & Boldin, A. (n.d.). The perils of probation: How supervision contributes to jail populations, 50.
- Ryan, J., Williams-Butler, A., & Courtney, M. (2013). Adolescent neglect, juvenile delinquency and the risk of recidivism. *Journal of youth and adolescence*, 42. <https://doi.org/10.1007/s10964-013-9906-8>
- Schaefer, L., & Little, S. (2020). A quasi-experimental evaluation of the “environmental corrections” model of probation and parole. *Journal of Experimental Criminology*, 16(4), 535–553. <https://doi.org/10.1007/s11292-019-09373-2>
- Schwalbe, C. S. (2012). Toward an integrated theory of probation. *Criminal Justice and Behavior*, 39(2), 185–201. <https://doi.org/10.1177/0093854811430185>
- Seiter, R. P., & Kadela, K. R. (2003). Prisoner reentry: What works, what does not, and what is promising. *Crime and Delinquency*, 49(3), 360–388. <https://doi.org/10.1177/0011128703049003002>
- Seiter, R. P., & West, A. D. (2003). Supervision styles in probation and parole: An analysis of activities. *Journal of Offender Rehabilitation*, 38(2), 57–75.
- Skeem, J. L., & Manchak, S. (2008). Back to the future: From Klockars’ model of effective supervision to evidence-based practice in probation. *Journal of Offender Rehabilitation*, 47(3), 220–247. <https://doi.org/10.1080/10509670802134069>
- Skeem, J. L., Eno Loudon, J., Polaschek, D., & Camp, J. (2007). Assessing relationship quality in mandated community treatment: Blending care with control. *Psychological Assessment*, 19, 397–410.
- Smith, P., Schweitzer, M., Labrecque, R. M., & Latessa, E. J. (2012). Improving probation officers’ supervision skills: An evaluation of the EPICS model. *Journal of Crime and Justice*, 35(2), 189–199. <https://doi.org/10.1080/0735648X.2012.674826>
- Stemen, D., & Rengifo, A. F. (2009). Mandating treatment for drug possessors: The impact of Senate Bill 123 on the criminal justice system in Kansas. *Journal of Criminal Justice*, 37(3), 296–304. <https://doi.org/10.1016/j.jcrimjus.2009.04.010>
- Sung, H.-E., & Richter, L. (2006). Contextual barriers to successful reentry of recovering drug offenders. *Journal of Substance Abuse Treatment*, 31(4), 365–374. <https://doi.org/10.1016/j.jsat.2006.05.010>
- Taliaferro, W., & Pham, D. (2017). *Incarceration to reentry: Education & training pathways in California. Reconnecting Justice in the States. Center for Postsecondary and Economic Success*. Center for Postsecondary and Economic Success. Available at: <https://eric.ed.gov/?id=ED582912>. Accessed date November 15, 2021
- Taxman, F. S. (2002). Supervision - exploring the dimensions of effectiveness. *Federal Probation*, 66(2), 14–27.
- Taxman, F. S. (2008). No illusions: Offender and organizational change in Maryland’s proactive community supervision efforts*. *Criminology and Public Policy*, 7(2), 275–302. <https://doi.org/10.1111/j.1745-9133.2008.00508.x>
- Taxman, F. S., & Ainsworth, S. (2009). Correctional milieu: The key to quality outcomes. *Victims and Offenders*, 4(4), 334–340. <https://doi.org/10.1080/15564880903227347>
- Taxman, F. S. (2012). Probation, intermediate sanctions, and community-based corrections. *The Oxford Handbook of Sentencing and Corrections* (pp. 363–389).
- Travis, J., & Petersilia, J. (2001). Reentry reconsidered: A new look at an old question. *Crime and Delinquency*, 47(3), 291–313.

- Trotter, C. (2015). *Working with involuntary clients: A guide to practice*. Routledge.
- Trupin, E., Wood, P. N., & Harris, V. L. (1999). Mentally ill offenders and community transitions: Resource acquisition and recidivism. *Journal of Correctional Health Care*, 6(1), 27–40. <https://doi.org/10.1177/107834589900600103>
- Uggen, C., & Stewart, R. (2015). Piling on: Collateral consequences and community supervision. *Minnesota Law Review*, 99(5), 1871–1912.
- US Census Bureau. (2020). *2020 Census Illuminates Racial and Ethnic Composition of the Country*.
- Viglione, J., & Taxman, F. S. (2018). Low risk offenders under probation supervision: Risk management and the risk-needs-responsivity framework. *Criminal Justice and Behavior*, 45(12), 1809–1831.
- Wakefield, S., & Garcia-Hallett, J. (2017). Incarceration effects on families. In *Oxford Research Encyclopedia of Criminology and Criminal Justice*.
- Walters, G. D. (2016). Working alliance between substance abusing offenders and their parole officers and counselors: Its impact on outcome and role as a mediator. *Journal of Crime and Justice*, 39(3), 421–437.
- Walters, S. T., Clark, M. D., Gingerich, R., & Meltzer, M. (2007). Motivating offenders to change: A guide for probation and parole | Office of Justice Programs. Available at: <https://www.ojp.gov/ncjrs/virtual-library/abstracts/motivating-offenders-change-guide-probation-and-parole>. Accessed date November 11, 2021.
- Warwick, K., Dodd, H., & Neusteter, S. R. (2013). Case management strategies for successful jail reentry. *National Institute of Corrections*. Available at: <https://nicic.gov/case-management-strategies-successful-jail-reentry>. Accessed date November 15, 2021.
- Werth, R. (2012). I do what I'm told, sort of: Reformed subjects, unruly citizens, and parole. *Theoretical Criminology*, 16(3), 329–346. <https://doi.org/10.1177/1362480611410775>
- Western, B. (2018). *Homeward: Life in the year after prison*. Russell Sage Foundation.
- Whetzel, J., Paparozzi, M., Alexander, M., & Lowenkamp, C. T. (2011). Goodbye to a worn-out dichotomy: Law enforcement, social work, and a balanced approach (a survey of federal probation officer attitudes) Evidence-Based Practices in Action. *Federal Probation*, 75(2), 7–12.
- Willis, G. M., & Grace, R. C. (2008). The quality of community reintegration planning for child molesters: Effects on sexual recidivism. *Sexual Abuse*, 20(2), 218–240. <https://doi.org/10.1177/1079063208318005>

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