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Explaining Male Sex Offender Recidivism: Accounting for Differences in Correctional Supervision

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Abstract

Purpose: Contrary to public opinion, empirical studies have consistently shown that persons convicted of a sexual offense (PCSO) are less likely to recidivate with a general offense. While researchers often point toward the surreptitiousness of sexual offending to explain low rates of recidivism, this paper tests a novel explanation: SOs recidivate at lower rates than persons convicted of a non-sexual offense (PCNSO) because they are more often revoked to prison before they are able to commit a new crime, perhaps owing to more restrictive post-release supervision guidelines.

Methods: Using a sample of 196,468 unique male releases, the difference in general and sexual recidivism between PCSO (n = 29,420) and PCNSO was assessed through survival analyses (Cox regression models).

Results: Results demonstrated that PCSO were significantly less likely to be reconvicted for a general crime, but more likely for a sex offense. They were also more likely to be reincarcerated due to a revocation without a new sentence. Accounting for revocations, the difference in reconviction risk lessens between the groups but does not disappear.

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Conclusions: This analysis provides evidence that differences in community supervision are contributing to the difference in recidivism rates between PCSO and PCNSO. Implications and future research are discussed.

Keywords
sex offenses, community reintegration, recidivism, sex offender policy

Introduction

Attention to the recidivism of persons convicted of a sexual offense (PCSO) has grown over time, particularly since the 1990s (Minnesota Department of Corrections [MN DOC], 2007; Russell & Evans, 2021), and continues to capture the attention of criminal justice actors, lawmakers, and citizens alike (Harrison et al., 2020). Beginning in the 1930s, state and federal legislators responded to high-profile sex crimes with laws targeting PCSO in an attempt to prevent or reduce reoffending (Sample & Bray, 2006). Underlying these efforts was the assumption that PCSO pose a significant threat to the public. Restrictive legislation was later reintroduced and strengthened in the 1990s, including mandated registration and community notification, civil commitment of persons convicted of sexually violent crimes, and strict residency restrictions (Zgoba & Simon, 2005).

Contrary to public opinion, empirical studies of general recidivism consistently demonstrate that PCSO are less likely to recidivate than are persons convicted of non-sexual offenses (PCNSO) (Alper & Durose, 2019; Sample & Bray, 2003). While the preponderance of research suggests that PCSO have a lower risk to recidivate than do other offenders, PCSO recidivism studies are difficult to compare due to differences in operational definitions of both "sex offender" and "recidivism" (Andersen & Skardhamar, 2017; Hanson & Bussière, 1998). Though studies have shown that PCSO have a higher sexual recidivism rate than do PCNSO, these rates are markedly low compared to general recidivism, even with follow-up periods extending to 15 years. However, studies exploring differences in recidivism between PCSO and PCNSO have been limited (Alper & Durose, 2019; Lösel et al., 2020; Przybylski, 2015). One notable issue has been sample size: in Lösel and Schmucker's (2005) meta-analysis, only 13% of prior studies included more than 500 subjects. Additionally, many studies have failed to consider how differences in community supervision of PCSO and PCNSO influence recidivism. While Duwe and Donnay (2010) showed a relationship between failure-to-register restrictions and sexual recidivism, more research is needed to better understand how being revoked back to prison can impact differences in recidivism between PCSO and PCNSO. We contend that, as a result of stricter supervision of PCSO following release, a differential incapacitation effect arises. Specifically, we argue that since PCSO are supervised more closely than

PCNSO, they are more likely to be reincarcerated for technical violations, which in turn reduces their likelihood to reoffend in general.

Review

Threat of Sexual Reoffending

Meta-analyses have demonstrated that, on average, about 13% of PCSO reoffend within the first four to five years of release from prison (Hanson & Bussière, 1998; Hanson & Morton-Bourgon, 2005). This rate is less than a fifth of estimates made by the public, which is closer to 75% (Levenson et al., 2007; Rosselli & Jeglic, 2017). Despite PCSO reoffending at a lower rate than the public believes, PCSO still present as a threat to public safety as the public perceives PCSO as more dangerous and because, relative to other groups, sex offenses are argued to be more detrimental to victims and the community (Harrison et al., 2020; Ozkan et al., 2020).

These perceptions may not consider the wide variation in sex offenses (Levenson et al., 2007). Further, perceptions may be influenced by media, institutional myths, and policies related to sexual offending (Zatkin et al., 2022). Gaps in PCSO recidivism research, as well as fear of PCSO in general, obfuscate the reality of PCSO reoffending. As a result, policies and perceptions regarding PCSO have become overexaggerated and overly targeted relative to the proportionately greater amount of harm that *any* potential offender can cause to the public.

Laws and Policies for PCSO

Past evidence shows that PCSO are less likely to recidivate than PCNSO for non-sexual offenses (Alper & Durose, 2019). Yet, a variety of supervision laws targeting PCSO have been passed as a result of concerns related to sex crimes, particularly since the mid-1990s and into the early 2000s (Grubesic et al., 2011; Mancini, 2014). Many of these laws involve harsh punishments, comprising long prison sentences and severe supervision restrictions upon release (Ozkan et al., 2020). Other restrictions include mandatory registration, community notification, electronic monitoring, and residency restrictions (Bouffard & Askew, 2019). Cochran and colleagues (2021) examined whether courts in Florida acted in a punitive manner toward PCSO and other felony offenders. They found that there was a steady increase in the frequency and length of sentencing for PCSO when compared to matched samples of other offenders convicted of felonies (e.g., drug, property, or violent). Although all offenders received increasingly tougher punishments from the 1990s into the 2000s, punishment for PCSO was particularly punitive despite decreasing rates of sexual violence during that time period.

Increasingly punitive measures yielded a broad range of limitations on PCSO relative to PCNSO and have shifted correctional policy away from rehabilitation and toward both retribution and incapacitation (Vess, 2009). Notably, these new laws have

not been empirically linked to changes in sexual crime activity (Velázquez, 2008), which has been declining in the United States (U.S.) despite these punitive measures (Lösel et al., 2020; Planty et al., 2013). On the contrary, the primary impact such policies have had is to simply limit the likelihood of successful reentry among PCSO, even increasing the chance that PCSO will reoffend in the future (Farmer et al., 2015). Only recently has discourse around these perspectives shifted from punitive policies towards strengths-based approaches born from rehabilitation (Kewley, 2017). However, to date, little empirical evidence has unpacked the relative differences between a punitive approach and a rehabilitative approach toward PCSO.

Incapacitation of PCSO

Understanding the policies and laws that make up the foundation of crime prevention among PCSO is fundamental to understanding recidivism of PCSO. This is because incapacitative and retributive policies are driven by perceptions of what PCSO *may* do, instead of by the crime(s) for which they were initially convicted (Farkas & Stichman, 2002). Although laws and policies directed toward PCSO are justified as a means to help them rehabilitate, scholars contend that they are in reality punitive and/or incapacitative in outcome, and hence, must have been punitive and/or incapacitative by design (American Psychiatric Association, 1999; Burdon & Gallagher, 2002).

According to legal precedent, at least some PCSO laws are considered incapacitative and *not* punitive. For instance, in Kansas v. Hendricks (1997), the U.S. Supreme Court considered a Kansas statute that allowed civil commitment for persons considered to be sexually violent predators and upheld the law, finding it to be non-punitive and a necessary safeguard for community protection. While in the course of civil commitment, there may be additional mental health or treatment resources, but these rehabilitation practices are fundamentally coupled with incapacitation because there may not be genuine efforts to provide legitimate treatment despite evidence showing the effectiveness of certain types of treatment for PCSO (American Psychiatric Association, 1999; Burdon & Gallagher, 2002).

In addition to civil commitment, mandatory registration and community notification provide a long-term strategy to informally incapacitate PCSO (Burdon & Gallagher, 2002). Specifically, wider and stricter supervision, through a risk management approach, can result in a greater likelihood of detecting a new criminal offense or a violation of probation/parole rules. This can translate into a quicker response toward revocation, which itself operates as a mechanism to initiate physical incapacitation. This strategy is not uncommon. In a study examining the correctional continuum of rehabilitation and control for persons under community supervision, Schaefer (2019) found that risk management, characterized by inhibiting a person's ability to continue criminal behavior, was most regularly used by community corrections officers when working with PCSO. He also found this strategy involved themes of surveillance (e.g., multiple contacts) and incapacitation (home visits and GPS). In the latter case,

incapacitation involved restricting the person's mobility as an attempt to prevent reoffending.

Importantly, risk management via incapacitation and surveillance, along with the wide range of mandated statutes concerning sexual offending, entails high costs in terms of resources, time, and effort (Farkas & Zevitz, 2000; Letourneau et al., 2023) while its actual impact on reducing future criminal offending lacks direct empirical support (Zandbergen et al., 2010; Zgoba et al., 2008). Incapacitation via incarceration is one alternative and, while perhaps providing a more direct solution to solving these supervision challenges, is even more resource-intensive (Letourneau et al., 2023). Additionally, it would only delay recidivism in the long-run and would change nothing related to incapacitative supervision policies and practices (Velázquez, 2008).

Sexual Reoffending

As a result of more intensive and longer periods of supervision following release, there are two predominant outcomes: deterrence from engaging in continued criminal behavior or detection of these types of behavior may be improved, resulting in more revocations (MN DOC, 2007). As the number and length of revocations for technical violations increases, offenders may not have the opportunity to sexually or generally recidivate due to incapacitation. Yet, the MN DOC (2007) found that supervision intensity did not show a strong relationship with general recidivism, which was about three-fourths of new offenses for recidivating PCSO; this demonstrates that, overall, supervision intensity may not be as effective as hoped.

However, given the substantial public interest in preventing sexual offending, a large portion of sex offense research focuses on adequately measuring and describing its specific patterns. Contrary to public perceptions, repeat PCSO are fairly rare; many PCSO tend to desist from future sexual offending (Lösel et al., 2020; Piquero et al., 2012). In fact, previous research has shown that sexual recidivism rates are relatively low (approximately 10% or less) when compared to general reoffending (Jennings, 2015; McCann & Lussier, 2008). When PCSO do reoffend, non-sexual offenses make up approximately three-fourths of their recidivism events (Langan et al., 2003).

It is worth noting that rates of sexual recidivism are higher among PCSO than they are among PCNSO (Hanson & Bussière, 1998; Hanson & Morton-Bourgon, 2005; Przybylski, 2015). A recent study from Alper and Durose (2019) found that persons convicted of rape or sexual assault were upwards of three times more likely than PCNSO to be re-arrested for a sexual offense. Importantly, these rates are substantively low compared to being re-arrested for any other offense; only 7.7% of PCSO were re-arrested for rape or sexual assault within nine years compared to 2.3% of all other offenders.

Further, there are challenges to identifying variables related to recidivism among PCSO, particularly with sexual reoffending. Barriers include the low base rate of initial convictions of sex offenses and that sexual offending itself is difficult to track (e.g., when committed, such actions are often covert) (Ozkan et al., 2020; Smith & Monastersky, 1986). As Lussier

and colleagues (2023) commented, there is no reliable base rate of sexual recidivism that can be applied to all PCSO. Also, factors that are strong predictors of general recidivism are less predictive of sexual reoffending (Andrews & Bonta, 2010; Zimring et al., 2007). One underexplored predictor, and the primary topic of this study, involves the effect of community supervision. Although, the MN DOC (2007) found that, as a result of more intense and longer periods of supervision post-release, PCSO returned to prison at a higher rate due to technical revocations. Registration noncompliance is another factor that leads to revocation; one assumption regarding registration requirements is that PCSO who are noncompliant are a serious threat to public safety because they are attempting to avoid detection (Levenson et al., 2010).

Only a few studies, however, have examined the effect of noncompliance on re-offending. Barnoski (2006) investigated the association between failure to register and recidivism among PCSO in Washington State between 1990 and 1999. The failure to register conviction rate nearly quadrupled in that timeframe, and individuals who failed to register had higher general, violent, and sexual reoffending rates compared to those without a failure to register conviction. Further, Levenson and colleagues (2010) explored the association between failure to register and reoffending in a sample of 2,970 PCSO in South Carolina from 1995 to 2004. PCSO convicted of failure to register, compared to those who did register, showed a greater risk of general recidivism but not sexual reoffending. Duwe and Donnay (2010) also examined the effect of failure to register on sexual reoffending in a sample of PCSO released from Minnesota prisons. They found that a prior failure to register conviction did not significantly heighten risk for sexual or general reoffending but did increase the risk for a failure to register offense.

The Current Study

The current study advances the PCSO literature in two ways. First, by using a large population with a comprehensive operationalization of PCSO, this study scales up findings from prior studies. Specifically, we utilize a sample of 103,616 unique people, including 15,142 PCSO who were released between 1990 and 2021 from incarceration at the Wisconsin Department of Corrections (WI-DOC). With this larger sample, we sought to replicate prior studies which showed that PCSO had a lower general recidivism rate and higher sexual recidivism rate. Second, this analysis proposes and tests several novel explanations of the difference in recidivism between PCNSO and PCSO. Namely, we analyze the extent to which post-release community supervision, through revocations for community rule violations, influences differences in general and sexual reoffending between the two groups.

Method

In this section, we report how we determined our sample size, all data exclusions, all manipulations, and all measures in the study. We examined a sample of 103,616 unique WI-DOC offenders. We first investigated differences in reconviction and

reincarceration between PCSO and PCNSO. Then, to assess community supervision across both groups, we examined reincarceration without a new sentence. Finally, to test the impact of community supervision on reoffending behavior, we assessed the effect of revocation on reconviction.

Hypotheses

The primary research question concerns the effect of community supervision on recidivism. The following hypotheses were tested.

Hypothesis 1: PCSO will have a lower baseline general reconviction rate, but higher baseline sexual reconviction rate, compared to PCNSO.
Hypothesis 2: PCSO will be more likely than PCNSO to return to prison for *any* reason (revocation or new criminal sentence).
Hypothesis 3: PCSO will be more likely than PCNSO to return to prison for a technical violation only.
Hypothesis 4: When no-new sentence revocations are accounted for, there will be no difference in general or sexual reconviction between PCSO and PCNSO.

Sample

This analysis drew from Wisconsin adult men sentenced to incarceration in WI-DOC prisons and who released from prison between 1990 and 2021. Women (n = 12,186) were excluded because, relative to men in the sample, there were too few female PCSO (n = 249) to allow for valid statistical modeling of recidivism. Further, a pooled sample of male and female PCSO was not included as female PCSO are qualitatively different from male PCSO. For example, female PCSO are more likely to assault men and strangers (Allen, 1991), tend to commit sexual offenses with a co-offender (Matthews et al., 1991), typically have different motivations for their offense (Nathan & Ward, 2002), and perhaps most importantly, are less likely to reoffend overall (Freeman & Sandler, 2008). Further, in their meta-analysis, Cortoni et al. (2010) found that sexual recidivism rates for female PCSO were less than three percent. Due to their low base rate, those authors suggested management practices of female PCSO should differ from those of male PCSO. Releases from temporary stays (e.g., holds, temporary placements, short-term sanctions, or alternatives to revocation), releases to other states, and releases due to death were also excluded (n = 12,657). There was missing data for demographic variables for race (.4% missing), education (2.2% missing), and whether a person had a partner (1.6% missing). Due to the large sample and the low level of missingness, we were not concerned about statistical power, and listwise deletion was used to deal with missing values in all models (Allison, 2001). An analysis between cases with missing values and those without showed that all effect size differences on the independent and dependent variables were small between releases with missing values and those without. After missing data were dropped (2.8% overall;

5,579 releases), the final sample included 196,468 release events consisting of 167,048 PCNSO and 29,420 PCSO releases. Institutional research ethics review was not required as this study was based on archival, anonymized data considered to be public information.

Measures

Recidivism. Recidivism was operationalized in two ways. To track new criminal behavior, we used reconviction for any offense (general reconviction) and reconviction for any sexual offense (sexual reconviction). Reconviction was measured as the first date of a criminal offense following release that resulted in a new conviction and sentence to WI-DOC custody and supervision. Time to recidivism was defined as the time between the release date and the date of the offense. The second measure, meant to examine the effect of supervision, was reincarceration, or more simply a return to prison, whether it was for a new sentence or for a technical violation. We also used reincarceration for a technical violation(s) only, which excludes reincarceration events associated with a new conviction. Unlike reconviction, we did not analyze general and sexual reincarceration separately. Since a person can be reincarcerated without a new sentence, including an offense-specific distinction would be misleading. Moreover, new sentence reincarcerations are not easily matched to the new offense; complications of timing related to the criminal justice process, from arrest to conviction, make linking specific convictions to specific reincarceration events too unreliable to be defensibly pursued. Therefore, reincarceration includes new sentences or technical violations, whether or not they were sexual in nature. It should be noted that, after analyzing rearrest patterns for the same cohort, we found the trends and relative differences between PCNSO and PCSO to be very similar to reconviction patterns. Though the absolute rearrest rates differed, the findings resulted in the same conclusions discussed here; thus, we did not pursue it further.

PCSO Status. PCSO status was ascertained by combining two methods. First, any person who had at least one active sex offense conviction at the time of release was flagged as being convicted of a sex offense. Crimes that may include sexually-based components, but cannot be reliably classified as sex offenses, were excluded. For instance, in Wisconsin statute, kidnapping that involved a sexually-based motive is considered a sex offense (Wisconsin State Statute, 2001a). However, neither the kidnapping statute as a whole, nor any of its sub-statutes, is sufficient to identify a kidnapping conviction as a sex offense. Therefore, a person would not be identified as being convicted of a sexual offense if they had only a kidnapping conviction. Additionally, sex offense convictions were only included if the individual was still serving that conviction at the time of their release. In other words, if a person was released from prison with only an active robbery conviction, and had fully served a sentence related to a prior sex offense conviction, they would not be flagged as a person convicted of a sexual offense for that release.

We also flagged PCSO who were registered with the Wisconsin Sex Offender Registry Program. The registry includes all current and past registered PCSO from the inception of the program in 1993 to the present. According to Wisconsin Statute, persons are required to register if they were convicted of, adjudicated for, or committed for a violation or attempt of a violation of any registerable offense (Wisconsin State Statute, 2001b). The registrant may be in prison, on probation, on parole, in a mental health or correctional institution, or none of the above. Most people register for fifteen years with a single sex offense conviction, but a person may be registered for life if they have more than one sex offense conviction. Certain offenses require lifetime registration regardless of the number of other convictions. A person was flagged as being convicted of a sexual offense only if they were registered at the time of release.

Revocation. While on community supervision, a person may return to prison as a result of a violation of their supervision rules. This is referred to as a revocation. A new sentence revocation results when an individual violates a rule or condition of supervision and *has* engaged in criminal behavior that results in a new conviction and sentence. In contrast, revocations without a new sentence occur when a person violates a rule or condition of supervision and *may or may not* have engaged in criminal behavior. Only those revocations that led to additional incarceration under WI-DOC jurisdiction were included. Revocations to Wisconsin jails were excluded. After review of the data, we found that nearly all revocations from a post-prison period of supervision resulted in a revocation to prison.

Control Variables. Demographic variables were drawn from WI-DOC's offender management system. Race was limited to White, Black or Other. Too few people self-reported as Hispanic/Latino to include as an additional measure of ethnicity. Race was included as a control because past research has shown that PCSO are more likely to be White (Greenfeld, 1997), while other work has revealed that people of color, particularly Black individuals, are disproportionately represented on state PCSO registries (Ackerman & Sacks, 2018). The relationship between race and recidivism is complex. Research shows that underserved racial groups returning to the community are more likely to recidivate in part due to varying neighborhood contexts, socioeconomic disadvantages, lower educational attainment, and disparities in obtaining employment when compared to White offenders reentering the community (Jung et al., 2010; Lockwood et al., 2015). Age was included since research has consistently shown that people tend to desist from crime as they become older (Sampson & Laub, 2003). Age at release was calculated as the person's self-reported date of birth subtracted from their release date, rounded down to the year. A mean-centered age was used in the analyses. A binary indicator for high school completion was used, which is based on self-reports upon entering prison. Education was included because lower educational achievement has been linked to a greater likelihood to reoffend (Andrews & Bonta, 2010). Finally, relationship status (called "has partner" here) may also be related to offending. Having a partner, especially a partner who is not involved in criminal behavior, can result in

reduced criminality (Airaksinen et al., 2023; Sampson et al., 2006). Taken together, research shows that PCSO are somewhat more likely to be White, to be older, and to have a higher average level of educational attainment than PCNSO (Hanson & Morton-Bourgon, 2005; Przybylski, 2015; Zgoba & Simon, 2005). Further, research demonstrates relationship status may be related to sexual offending for certain types of PCSO (Chan & Myers, 2023; Navarro & Jasinski, 2015; Reijnen et al., 2009).

Analysis Plan

We used survival models to examine differences in recidivism between PCSO and PCNSO. The Cox proportional hazard model (Cox model) is ideal for testing discrete time-dependent outcomes, such as reoffending (Duwe & Goldman, 2009; MN DOC, 2007). It performs well by controlling for varying follow-up periods, differing release times, and influential covariates (Hosmer et al., 2008). Cox models estimate differences in risk to recidivate between PCSO and PCNSO (yes or no), and estimate the length of time to the reoffending event if it occurred. Since Cox models measure time to reoffend and whether a person reoffended, results are expressed as risk of recidivating. Stated otherwise, effects that contribute to recidivism lead to an increase in the likelihood to recidivate at any point in time following release. If a person committed a new offense following release, the time to the new offense was tracked; otherwise, cases were censored if they reached one of two endpoints: death or reaching the end of the file (12/31/2021). Also, to avoid double-counting releases being technically associated with the same reconviction event (caused if a person returns to prison without a new conviction), only the first release was retained for models testing this hypothesis. For the Cox regression models, Schoenfeld residuals were examined to assess whether any covariates that could change over time (e.g., age) violated the proportional hazards assumption. After computing these residuals and plotting them, we found that none of the covariates were time variant; therefore, the data did not violate this assumption.

Results

Descriptive Statistics

Table 1 displays descriptive statistics for the PCNSO, PCSO, and total samples of releases from 1990 to 2021. 15.0% of all releases were identified as PCSO. For clarity in the results, “PCNSO” and “PCSO” refer to independent release events, not independent people. The same is true when speaking of the sample in general. The average age was 31.1 years for PCNSO and 36.2 for PCSO. Additionally, the majority of releases were White within both the PCNSO and PCSO samples (52.8% and 71.4%, respectively). These initial descriptives are similar to Cochran et al.’s (2021) study, whose sample of PCSO tended to be White and older. Further, while 53.8% of the PCNSO sample in our study had at least a high school education or more, 59.9% of the PCSO sample did. Compared to PCNSO (10.1%), 16.5% of PCSO had a partner.

Table 1. Descriptive Statistics for Recidivism Cohorts, 1990–2021.

	PCNSO	PCSO	Total Releases
Unique number of people	88,474	15,142	103,616
Demographic information (unique # of people)	*%/M(SD)*	*%/M(SD)*	*%/M(SD)*
Age	31.1 (10.2)	36.2 (12.8)	31.9 (10.8)
Race			
White	52.8	71.4	55.5
Black	42.7	24.0	40.0
Other	4.5	4.6	4.5
At least HS education	53.8	59.9	54.7
Has a partner	10.1	16.5	11.0
Recidivism outcomes (unique # of releases)			
General reconviction ever	54.4	38.7	52.1
Sexual reconviction ever	1.2	5.0	1.7
General reconviction within 3 yrs	39.2	24.5	37.0
Sexual reconviction within 3 yrs	0.9	3.6	1.3
Days to general reconviction[a]	654.0 (1,220.2)	848.0 (1,392.9)	671.0 (1,243.1)
Days to sexual reconviction[a]	690.0 (1,272.7)	367.0 (1,160.5)	531.5 (1,233.2)
Reincarceration ever	52.6	50.4	52.3
Reincarceration within 3 yrs	41.9	44.4	42.3
Days to reincarceration[a]	561.0 (1,104.8)	469.0 (977.0)	546.0 (1,088.6)
Length of reincarceration stay[a]	484.0 (789.8)	685.0 (1,187.9)	508.0 (872.7)
Revocation prior to reconviction	16.3	28.3	18.1
N	167,048 (85.0%)	29,420 (15.0%)	196,468 (100.0%)

[a]Note: The median is provided in place of the mean due to the data being right-skewed.

Although 54.4% of PCNSO were reconvicted for a general crime following release, 38.7% of PCSO were. 39.2% of PCNSO were reconvicted within three years while 24.5% of PCSO were. Shifting to reconvictions for a sexual offense, .9% of PCNSO were reconvicted within three years compared to 3.6% of PCSO. The median time to general and sexual reconviction for PCNSO releases was 1.8 and 1.9 years, respectively (654 days and 690 days). For PCSO, the median time to general and sexual reconviction was 2.3 and 1.0 years, respectively (848 days and 367 days). Consistent with prior research, a substantial proportion of reconviction for both groups (and as we will see, reincarceration as well) occurred within the first three years following release.

Regarding reincarceration, 41.9% of PCNSO were reincarcerated within 3 years of release. Somewhat similarly, 44.4% of PCSO were reincarcerated within three years. Additionally, the median time to reincarceration for PCNSO was 1.5 years, while it was

1.3 years (561 days and 469 days, respectively) for PCSO. Upon being reincarcerated, PCNSO spent 484 days incarcerated, while PCSO spent 685 days, a significant difference of 201 days ($p < .001$). In addition, 16.3% of PCNSO were revoked at least once prior to reconviction across the entire period while 28.3% of PCSO were. Taken together, evidence is beginning to show a relationship between reincarceration, revocation, PCSO status, as well as an incapacitation effect whereby PCSO spent more time reincarcerated than did PCNSO.

Additional analyses examining trends over time in five-year general and sexual reconviction rates from 1990 to 2015 are presented because there may be an effect of time (e.g., year) on recidivism rates, particularly because of strict laws in place for PCSO that have existed for decades as well as greater awareness of sexual victimization (Lussier et al., 2023). Findings showed that PCSO had a consistently lower general reconviction rate than did PCNSO. Further, we only go to 2015 because of the time lag needed for recidivism calculations. As seen in Figure 1, PCSO exhibited a lower rate of general reconviction over time, with a rate that was on average 16.3 percentage points less than PCNSO year-to-year. Differences between the two groups over this timeframe were fairly stable.

Figure 2 gives five-year sexual reconviction rates for PCNSO and PCSO over the same period. Whereas the difference in general reconviction rates between PCNSO and PCSO was relatively stable, a change in sexual reconviction was quite evident. Across the timeframe, PCSO had a sexual reconviction rate 4.4 percentage points higher than PCNSO; however, this difference was wider in the 1990s (a 6.6 percentage point difference from 1990–1999) than it was later (3.1 percentage points from 2000 to 2015). These trends are consistent with prior research: PCSO seem to have a consistently higher rate of sexual reconviction relative to PCNSO.

Lastly, Figure 3 displays reincarceration differences over time. While PCSO had a lower 5-year reincarceration rate in the 1990s (by 3.2 percentage points on average from 1990–1999), they had a higher rate starting in 2000 (by 2.8 percentage points on average from 2000–2015). As discussed further below, this difference was, in

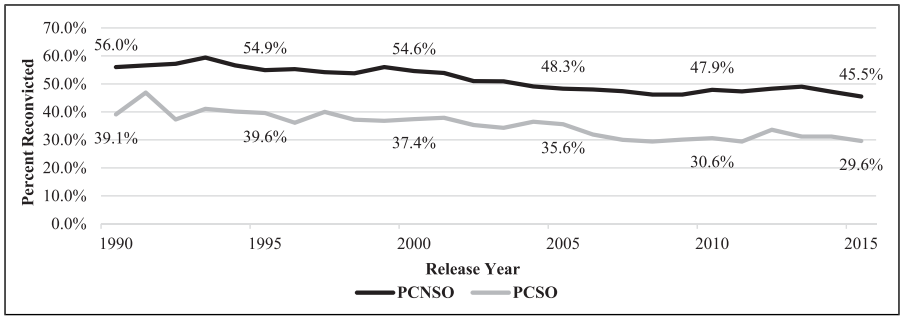

Figure 1. General five-year reconviction trends, 1990-2015 by PCSO status.

aggregate, statistically significant: PCSO had an overall higher risk for reincarceration than did PCNSO.

Additionally, Kaplan-Meier survival plots for general reconviction, sexual reconviction, reincarceration, and reincarceration – technical violation are provided in the appendix to visually depict differences between PCNSO and PCSO recidivism. Figure A1 shows that PCNSO and PCSO followed similar trends, but PCNSO decelerated at a slower rate. Figure A2 displays differences in sexual reconviction, showing that PCSO reconvicted more often within the first few years of release before following a similar trend to PCNSO. For both general and sexual reconviction, differences between PCNSO and PCSO resulted from a divergence in rates within the first few years following release, which is consistent with prior research. The curves in Figure A3 follow remarkably similar trajectories over time, showing that most reincarceration occurred within the first few years following release, with little difference between PCNSO and PCSO. Finally, Figure A4 plots reincarceration without a new sentence. There is a clear divergence between the groups in the first four to five years, after which the gap stays roughly the same, showing that PCSO were reincarcerated at a higher rate without a new sentence.

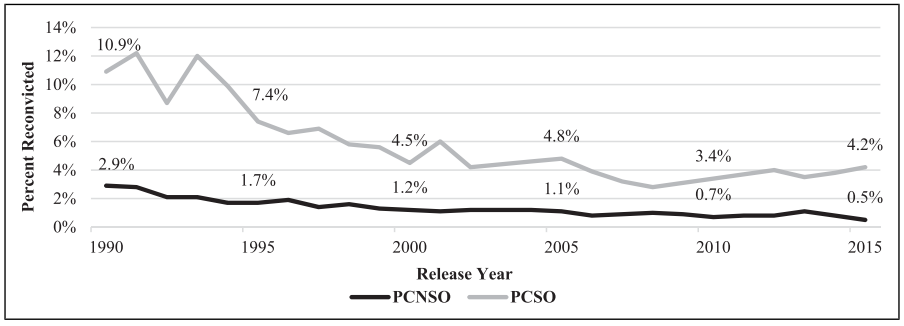

Figure 2. Sexual five-year reconviction trends, 1990-2015 by PCSO status.

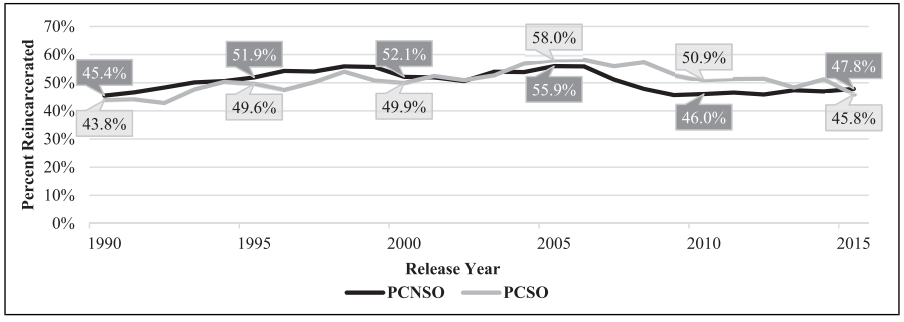

Figure 3. Reincarceration five-year trends, 1990-2015 by PCSO status.

Survival Analysis

H_1: PCSO will have a lower baseline general reconviction, but higher baseline sexual reconviction rate, compared to PCNSO.

We expected PCSO to have a lower general reconviction rate compared to PCNSO. As shown in Table 1, there is a substantive difference in reconviction rates between PCNSO and PCSO. The 3-year rate of general reconviction for PCSO was approximately 15% less than the rate for PCNSO. The Cox models in Table 2 demonstrate that this difference is statistically significant ($p < .001$). As seen in Model 1, PCSO status was related to a statistically lower hazard rate relative to PCNSO. These effects held while controlling for demographic factors (see Model 2). In other words, PCSO status is protective with regard to general reconviction.

Moving to reconviction for a sexual offense, modeling indicated a contrasting trend. Based on extant literature, we expected PCSO to have a higher rate of sexual reconviction compared to PCNSO; this is what was found in Models 3 and 4 in Table 2. As corroborated with information from Table 1, there was a substantial difference between PCNSO and PCSO regarding sexual reconviction ever (5.0% vs. 1.2%, respectively) and sexual reconviction within 3 years (3.6% vs. .9%, respectively). Survival modeling showed that this difference was statistically different ($p < .001$), with PCSO having a greater hazard rate of failure, even when controlling for other factors. Therefore, while PCSO status may be protective for general reconviction, PCSO status increases the risk to be reconvicted for a sexual offense.

In Table 2, we tested demographic differences in Model 2 for general reconviction and Model 4 for sexual reconviction. From these survival analyses, we see that the effect of PCSO status remains largely unchanged when controlling for these demographic interactions. Not only does the coefficient related to PCSO status remain negative for general reconviction and positive for sexual reconviction (and statistically significant [$p < .001$] for both), but the effect size is largely unchanged between respective models within each outcome.

H_2: PCSO will be more likely than PCNSO to return to prison for any reason.

Table 1 presents a simple descriptive picture of the difference in reincarceration between PCNSO and PCSO. If not limiting the follow-up period, PCNSO were reincarcerated slightly more often than PCSO; but note that without a limit to the follow-up period, older releases will have longer total follow-up periods than will new releases. With a standardized three-year follow-up period, the relationship reverses, with PCSO reincarcerating slightly more often than PCNSO. Additionally, PCSO tended to be reincarcerated faster, at a median of 469 days after release, or roughly three months sooner than PCNSO. Table 3 presents the findings of the predictor variables on reincarceration. Model 5 displays the effect of PCSO status and the demographic controls. Contrary to the general reconviction model in Table 2, released PCSO have a

Table 2. Cox Regression: Effect of PCSO Status & Any Revocation on 3-Year Reconviction.

	General Reconviction		Sexual Reconviction	
	Model 1	*Model 2*	*Model 3*	*Model 4*
	b (SE)	*b* (SE)	*b* (SE)	*b* (SE)
PCSO	−.480 (.010)***	−.375 (.010)***	1.733 (.035)***	1.844 (.036)***
Controls				
Age		−.030 (.001)***		−.025 (.003)***
Race (White as ref.)				
Black		.138 (.010)***		−.096 (.053)
Other		.294 (.014)***		.331 (.069)***
At least HS education		.088 (.010)***		−.212 (.046)***
Has partner		−.137 (.011)***		.033 (.057)
Interactions				
Age X education		.004 (.001)***		−.009 (.004)*
Black X education		−.104 (.013)***		.036 (.071)
Model parameters				
Log likelihood	−1,193,224.44	−1,189,061.40	−40,189.16	−39,992.17
df	1	8	1	8
N	196,463	196,463	196,463	196,463
DEV	2,386,448.89	2,378,122.80	80,378.32	79,984.34
BIC	2,386,461.08	2,378,220.31	80,390.51	80,081.85
AIC	2,386,450.89	2,378,138.80	80,380.32	80,000.34

Notes: Age was centered about the sample mean.
*$p < .05$; **$p < .01$; ***$p < .001$ (two-tailed tests).

statistically significant and positive relationship with reincarceration failure ($p < .001$), suggesting they have a higher risk to return to prison than do PCNSO. These findings provide evidence to support the hypothesis that PCSO are more likely to return to prison than are PCNSO.

H_3: PCSO will be more likely than PCNSO to return to prison for a technical violation only.

To test Hypothesis 3, the reincarceration outcome was modified to only consider returns without a new sentence; these indicated that the revocation occurred for a supervision violation (technical violation) rather than from a new criminal conviction. We also attempted to examine changes in revocation rates over time since revocations more directly capture supervision violations. However, we were unable to identify trends prior to 2011 due to data limitations. Failing to capture information prior to 2011 would miss many new PCSO laws and policies that were implemented in the

Table 3. Cox Regression: Effect of PCSO Status & Technical Revocation on 3-Year Reincarceration.

	General Reincarceration	
	Reincarceration - New Sentences and Technical Revocations	Reincarceration – Technical Revocations Only
	Model 5	*Model 6*
	b (SE)	*b* (SE)
PCSO	.136 (.009)***	.527 (.011)***
Controls		
Age	−.022 (.001)***	−.015 (.001)***
Race (White as ref.)		
Black	.347 (.010)***	.371 (.015)***
Other	.353 (.014)***	.391 (.020)***
At least HS education	.078 (.010)***	.042 (.014)**
Has partner	−.171 (.011)***	−.203 (.016)***
Interactions		
Age X education	.004 (.001)***	.001 (.001)
Black X education	−.113 (.013)***	−.079 (.019)***
Model parameters		
Log likelihood	−1,199,851.56	−583,585.08
df	8	8
N	196,468	196,468
DEV	2,399,703.11	1,167,170.17
BIC	2,399,800.62	1,167,267.68
AIC	2,399,719.11	1,167,186.17

Notes: Age was centered about the sample mean.
*$p < .05$; **$p < .01$; ***$p < .001$ (two-tailed tests).

1990s and early-to-mid 2000s, which is where we expected to see the greatest differences in revocations between PCNSO and PCSO. Even within this restricted timeframe, we found that the trend in revocation rates was extremely similar to the trends in reincarceration rates. As discussed earlier, if a person is revoked after release from prison, they tend to return to prison.

For this specific survival analysis, if a person returned to prison with a new sentence, it was censored at that time. Model 6 from Table 3 estimates this relationship. Like with reincarceration overall, the effect of PCSO status is positive and significant ($p < .001$); however, unlike with revocation overall, the size of the effect was much larger, approximately four times higher than the coefficient from Model 5. Taking the evidence

together, there is support for this hypothesis: PCSO are more likely to be reincarcerated for a technical violation than are PCNSO.

H_4: When no-new sentence revocations are accounted for, there will be no difference in reconviction rates between PCSO and PCNSO.

Given that released PCSO demonstrated a higher risk to return to prison overall, and that their specific risk to return without a new sentence was even higher, the question now becomes whether these returns are a significant driver of future general and sexual reconviction. Model 7 for general reconviction and Model 9 for sexual reconviction in Table 4 test the effect of revocation on reconviction. Those who were revoked after release, but before being reconvicted, had a statistically lower risk of failure ($p < .001$) for general reconviction compared to those who were not revoked. Stated otherwise, people who were revoked for any general crime or for a technical violation tended to have a lower risk of general reconviction. However, the interaction effect between revocations and PCSO status in Model 8 was non-significant, suggesting that the effect of revocation on general reconviction did *not* differ between PCNSO and PCSO.

In contrast, the effects for sexual reconviction are more complex. For PCNSO, the general effect of being revoked prior to reconviction was positive ($p < .01$), suggesting that those who were revoked had a greater risk of reconviction for a sexual offense. But for PCSO, the interaction effect is negative ($p < .001$) and, when combined with the general positive effect, is *larger* than the same combined effects seen in Model 8. In other words, the effect of being revoked prior to reconviction was similar for PCSO between the two models, but *different* for PCNSO. Perhaps being revoked places more scrutiny on PCNSO in general, who had not been as closely supervised before, thus increasing the risk to be reconvicted for a sexual offense at a later point. However, conjecture should be avoided; further analysis of this divergent relationship should be pursued.

Importantly, Model 8 in Table 4 shows that the risk for general reconviction related to PCSO status remains statistically significant ($p < .001$) and negative, though the effect size declines by 45% from −.48 to −.33. In other words, the independent risk for general reconviction for PCSO is still smaller than what it is for PCNSO; however, the size of the difference is smaller when revocation is considered. For sexual reconviction, the effect is again significant ($p < .001$) and negative but with a 13% decrease in effect size from 1.73 to 1.64. Thus, there is some support that being revoked has an impact on the difference in general and sexual reconviction rates between PCNSO and PCSO, but it is not enough to explain the difference completely. AIC and BIC scores both suggest that including being revoked is impactful enough, however, that they should be considered in models estimating risk to reconviction for sexual reconviction.

Table 4. Cox Regression: Effect of PCSO Status & General Revocation on 3-Year Reconviction.

	General Reconviction		Sexual Reconviction	
	Model 7	*Model 8*	*Model 9*	*Model 10*
	b (SE)	*b* (SE)	*b* (SE)	*b* (SE)
PCSO	−.331 (.012)***	−.334 (.014)***	1.489 (.041)***	1.636 (.045)***
Controls				
Age	−.032 (.001)***	−.032 (.001)***	−.010 (.003)**	−.010 (.003)**
Race (White as ref.)				
Black	.177 (.011)***	.177 (.011)***	.040 (.059)	.039 (.059)
Other	.336 (.016)***	.336 (.016)***	.467 (.078)***	.463 (.078)***
At least HS education	.105 (.010)***	.105 (.010)***	−.038 (.051)	−.038 (.051)
Has partner	−.161 (.012)***	−.161 (.012)***	−.114 (.065)	−.117 (.065)
Interactions				
Age X education	.005 (.001)***	.005 (.001)***	−.010 (.004)*	−.010 (.004)**
Black X education	−.104 (.014)***	−.104 (.014)***	.156 (.080)	.161 (.080)*
Revocation				
Revoked	−.365 (.009)***	−.366 (.010)***	−.172 (.050)**	.178 (.064)**
Revoked X PCSO		.011 (.027)		−.734 (.098)***
Model parameters				
Log likelihood	−950,750.90	−950,750.83	−30,627.69	−30,599.64
df	9	10	9	10
N	159,934	159,934	104,401	104,401
DEV	1,901,501.81	1,901,501.65	61,255.38	61,199.29
BIC	1,901,609.65	1,901,621.48	61,359.38	61,314.85
AIC	1,901,519.81	1,901,521.65	61,273.38	61,219.29

Notes: Age was centered about the sample mean.
*$p < .05$; **$p < .01$; ***$p < .001$ (two-tailed tests).

Discussion

Policymaking related to PCSO recidivism continues to be a controversial affair thanks to ongoing fear of PCSO and their impact on public safety, despite repeated research demonstrating lower recidivism rates among PCSO compared to PCNSO over time (Alper & Durose, 2019; Harrison et al., 2020; Planty et al., 2013; Sample & Bray, 2003). The current study contributes to prior work by examining the effect of PCSO status on reconviction and reincarceration in a sample of 196,468 releases from the WI-DOC. We found evidence to suggest that differences in post-release community supervision influence the sexual reconviction rates of these two groups. The results did not show that stricter supervision of PCSO is contributing to lower rates of general reconviction overall. However, stricter supervision may impact higher rates of re-incarceration for PCSO due to technical revocations.

In line with past research, PCSO exhibited a lower failure rate for general reconviction, but they were more likely to be reconvicted with a new sex offense. PCNSO had a greater prevalence of any reconviction event compared to PCSO, with a 16% difference between the two groups. Examining changes in general reconviction from 1990 to 2015, we observed that general reconviction decreased for PCNSO and PCSO over time, but that the difference between the two groups was relatively stable over time. This effect would seem to indicate that more punitive sanctions that arose in the 1990s and 2000s for PCSO did not have an appreciable impact on PCSO general reconviction; if they did have an impact, the gap between the two groups would have widened in the latter half of the period.

We also found that PCSO displayed a higher rate of sexual reconviction with a 4% difference between the groups. Previous work has shown that there have been decreasing rates of sexual offending over time in the U.S. (Cochran et al., 2021; Planty et al., 2013), which we too observed. There was a substantial decrease in PCSO sexual reconviction - seven percentage points - over the entire period from 1990 to 2015. This finding is similar to Cochran et al.'s (2021) research, where they also noted a decrease in sexual offending over time from 1990 to 2011. But note that, although PCSO displayed a greater risk for sexual reconviction than did PCNSO, the rates for both groups were still fairly low: by 2015, the five-year sexual reconviction rates were 4.2% for PCSO and .5% for PCNSO.

We further found that PCSO were reincarcerated more quickly regardless of whether they were imprisoned for a new criminal conviction or for a technical violation. Most importantly, we found that these returns to prison had an impact on being reconvicted for a sexual offense. The interaction between revocation and PCSO status, and its impact on general reconviction, did not provide evidence of an incapacitative effect because the impact of revocation did not significantly differ between PCNSO and PCSO. However, the sign-change in the independent effect of being revoked seen in Model 10 for sexual reconviction was more complex for PCNSO than for PCSO. Once the interaction between these variables is considered, PCSO who are revoked have a *decreased* risk of sexual reconviction, while PCNSO have an *increased* risk of sexual reconviction. Figure 4 illustrates this relationship and shows that, for both groups, being revoked resulted in a longer time to sexual reconviction if it occurred. Perhaps the greater supervision restrictions placed on PCNSO following a revocation then led to a greater likelihood to spot future sexual offending. Either way, further research on these differences is prudent.

Importantly, we did not include either prison-based or community-based sex offender treatment as a control variable in our analysis. It is possible that the changes in recidivism over time were related to a factor other than punitive policies, such as increased use of rehabilitation. While punitive policies leading to greater incapacitation of PCSO seems likely; for instance, Grubesic et al. (2011) and Mancini (2014) reported an increase in tougher sanctioning and sentencing of PCSO in the 1990s and 2000s, we did not include measures for treatment of either group. Therefore, we could not analyze

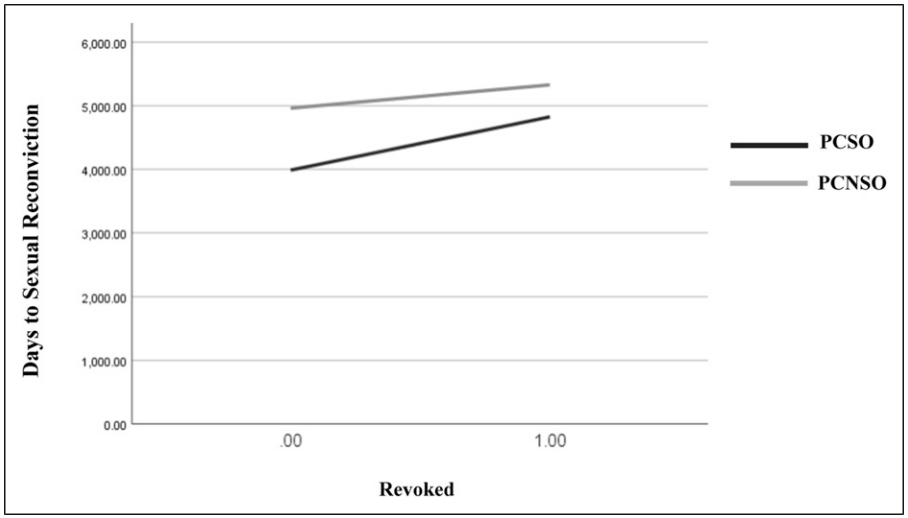

Figure 4. Interaction between revoked and PCSO status on days to sexual reconviction.

any therapeutic impact. This was largely due to limitations in available data on institutional and community programming.

Additionally, analyses like this and in the past showing that PCSO tend to recidivate for a sexual offense at much higher relative rates than PCNSO tend to lead to conclusions that good sexual crime prevention policy should continue to focus on PCSO. However, even though a larger percentage of PCSO were more likely to be reconvicted for a sexual offense than were the percentage of PCNSO, when examining the raw numbers of both groups, more PCNSO were reconvicted for a sex offense than were PCSO for some release years. For instance, of the 102 reconvictions for a sexual offense within five years from those released in 2013, 59.8% were PCNSO. Further, PCNSO releases had a greater raw number of sexual reconviction events for all years in this time period except for 2010, 2012, 2014, and 2015. This is obviously a function of the greater number of PCNSO prior to release relative to PCSO. Punitive policies during 1990 to 2015, especially the 1990s and 2000s, somewhat effectively targeted PCSO, but it seems they failed to consider PCNSO who went on to commit a sexual crime following release from prison. If a goal of crime prevention is to reduce sexual reoffending, then policymakers should be exploring how to reduce sexual recidivism for all offenders, not just for PCSO. Additionally, because the sexual reconviction rate was relatively low compared to the general reconviction rate, and similar to what Hanson et al. (2018) suggest from a risk management perspective, one could argue that resources should be more focused on reconviction in general. Perhaps these adjustments should be made in conjunction with better education about sexual offending for the public; policymakers' decisions are beholden to public concerns, so simultaneous work must be done to assuage public fear (Cochran et al., 2021).

Our results also seem to indicate that punitive policies were effective. However, we strongly caution against this conclusion. Analyzing changes over time in recidivism and the effects that impacted those changes was not a focus of this paper. To add, while the results showed that there was a decline in general and sexual reconviction over time, this should not be surprising for a different reason: research has shown that crime overall declined in that period, especially for felony offenses (Cochran et al., 2021; Thompson & Tapp, 2022). In fact, movement away from punitive policies seems better supported in this analysis. Our findings showed that reconviction differences between PCNSO and PCSO were stable from 1990 to 2015 *despite* implementation of tougher sentencing and more punitive supervision practices for PCSO. If more punitive policies were working, we would have seen the gap in reconviction rates between PCNSO and PCSO widen since the late 1990s and 2000s.

It is also worth noting that there are collateral consequences when it comes to stricter supervision practices and policies for PCSO. Stricter supervision of PCSO strains probation and parole resources (Zevitz & Farkas, 2000) and can cascade into the carceral environment. Since more intensive community supervision necessitates more resources and can result in greater detection of crimes or technical violations, an increase in returns to prisons is likely. Resources are finite, and more intensive community supervision can divert resources from prisons, which then become less able to influence future reoffending. Essentially, it becomes an oft used term in both criminal justice research and policymaking: a revolving door. Although incapacitation can provide a short-term solution, it is not practical over time (Liedka et al., 2006). In addition to being a practice that is not strongly supported by empirical evidence, incapacitation seems most useful when used for people who are likely to reoffend, something that PCSO have been consistently found to be unlikely to do relative to PCNSO.

A note on another PCSO criminal justice intervention involves civil commitment. For certain PCSO deemed especially dangerous, lifetime commitment to a treatment facility is mandated. Perhaps more frequent returns to prison among PCSO is operating as an alternative, cheaper form of incapacitation than civil commitment. Due to the high cost of civil commitment (about four times that of traditional imprisonment) and due to legal challenges, policymakers have looked toward alternatives to incapacitate high-risk offenders (Velázquez, 2008). More frequent revocations for technical violations may mirror what has been done with civil commitments. However, revocations cast a wider net, capturing all potential reoffenders rather than just those deemed "sexually violent predators" requiring civil commitment. Revocations may also operate under the guise of treatment, like civil commitments have (Farkas & Stichman, 2002), but more analysis is required to understand these effects. In terms of what the public perceives, technical revocations may result in a kind of selective incapacitation to keep PCSO out of the community in general because of their perceived threat. Civil commitment of *some* PCSO is then substituted by more frequent revocations among *all* PCSO. We did not test the effect of civil commitment, so an additional avenue of future research could

be to examine differences in recidivism between PCSO who have been civilly committed and those reincarcerated.

Similarly, but with a practice that does not require confinement within a facility, a notable post-release supervision difference between PCSO and PCNSO involves residency restrictions. Such restrictions may limit the ability of PCSO to move to another state. This is important to this study because we focused solely on reentry to WI-DOC, whether it is via reconviction or reincarceration. We were unable to capture whether people moved outside of Wisconsin, so we cannot know if certain people, PCNSO or PCSO, still resided in Wisconsin during the study timeframe. Regardless, such residency restrictions for PCSO may also act as a way to incapacitate PCSO within a geographical space and may increase their likelihood of recidivism when focusing on reconviction and technical violations within Wisconsin.

Limitations and Future Analyses

Although the current study offers a substantial contribution to our knowledge of post-release supervision and general and sexual reoffending for both PCNSO and PCSO, there were limitations. Our study involved a sample of male adults from only one state. Consequently, the findings cannot be generalized to youth samples, female offenders, or populations outside of Wisconsin. Expanding the sample to include non-WI-DOC offenders, from either different states or from other jurisdictions within Wisconsin, would be a natural next step.

Moreover, the models included a limited set of covariates; additional analyses should explore other known differences in recidivism metrics, especially offender-specific metrics such as socioeconomic status, social connections, or other criminogenic needs (Bonta & Andrews, 2007). Notably, we decided *not* to include additional covariates as a way to retain parsimonious models. Certainly, criminogenic risks and needs are important factors to consider but were not a primary aim of the current research, particularly because these all derive from risk/needs assessments which, much like supervision practices, may be subject to staff discretion. As a note, excluded factors were antisocial cognition, antisocial companions, antisocial personality, family, substance abuse, employment, and leisure and would have resulted in 79% of releases having missing data. Inclusion of these items would have led to a sexual reconviction model with little variation in the outcome variable, limiting statistical power. We ran the models, not shown here, and the effect of PCSO status remained the same. The only substantial difference was the interaction between revocations and PCSO status, where inclusion of the risk and needs factors in the general reconviction model resulted in a positive and significant relationship. This finding would suggest that PCSO who are revoked have a greater likelihood of general reconviction. Notably, this model included only 37,770 unique releases. One could argue that multiple imputation could be used to address the missing data for the risk and needs factors. That is an option; however, we simply chose not to include these factors and others (e.g., active offense and number of dependents, among others) for several reasons: they had no statistical impact on our

outcomes, they went against our theoretical and methodological direction, there were high levels of covariation amongst certain variables (e.g., race with conviction county), and data limitations due to when data was first available (2010 and forward for risk and programming information) that would have substantially limited the sample size. Future research could pursue a line of work that includes these factors and/or more to examine other predictors of recidivism differences between PCNSO and PCSO.

Inclusion of only demographic variables may help extend external validity. While states differ in laws and policies determining what behavior is considered sexual offending, leading to differences in who might be considered PCSO, WI-DOC's definition of sexual offenses is, primarily, based on the Uniform Crime Reporting (UCR) Program's definition of sex offenses, which may be more standard across the country. As described previously, PCSO were also identified through the state sex offender registry, which is closely aligned to the UCR, but it is also based on state statutes. While the findings still lack external generalizability due to other study limitations, inclusion of risk/needs factors would limit it even further because states vary in how they measure these items in their respective risk/needs assessments. The WI-DOC utilizes an instrument that has been validated with its justice-involved population and includes statistical weights and risk-level cut-offs that differ from other states' assessments. Further, risk/needs assessment items included may introduce their own timing effect because the instrument, and policies associated with it, has changed over time. While all of these mentioned factors may help explain PCSO recidivism, we decided to include parsimonious models because we tested a novel explanation for recidivism differences between PCNSO and PCSO – recidivism resulting from revocations from community supervision – while still retaining a large sample size. Though these revocations and reconvictions could be due to behavioral differences between the two groups, they may also be the consequence of supervision differences, insofar that parole officers may "over-police" PCSO more so than they do PCNSO. Therefore, tests of behavioral differences between PCNSO and PCSO that may result in significant differences in revocations (technical and/or resulting in reconviction) between the groups is an area needing further exploration.

Other potential social, behavioral, or cognitive differences between PCNSO and PCSO are noteworthy. Factors related to sexual offending, but not available in this data, that may predict risk for sexual reoffending include sexual risk-taking behavior (Chan, 2021; Lussier & Cale, 2013), paraphilic disorders or interests (Brouillette-Alarie et al., 2018; Mann et al., 2010), psychopathy (Hanson et al., 2009), and deficits in emotion regulation and interpersonal empathy (Gillespie et al., 2018; Schuler et al., 2021). Additionally, Ferretti et al. (2021) found that PCSO were less likely to have non-intimate relationships than PCNSO. These authors also showed that affective and interpersonal deficits may moderate the relationship between issues in non-intimate relationships and sexual offending. It is also possible that reductions in sexual reoffending over time may be the result of community notification; however, research has not clearly shown whether and/or how such notifications affect sexual reoffending

(Barnoski, 2005; Schram & Milloy, 1995), and this was not something we were able to include in our models.

Additionally, we did not include a measure for punitiveness of community supervision laws, whether it was for PCSO or PCNSO. The primary concern here is that, over the study timeframe, it is likely that community supervision practices changed. Other scholars have established that sentencing and supervision (e.g., community notification and sex offender registration) laws for PCSO became stricter during certain time periods (Grubesic et al., 2011; Mancini, 2014; Ozkan et al., 2020). In contrast, there have also been historical swings toward greater rehabilitation for all offenders. Consequently, changes in laws and practices over time, as well as programming, may have influenced our results. We attempted to show these changes over time in Figures 1–3. Future research could try to establish a historical scale with a range from punitive to rehabilitative to try and gauge how practices have changed over time. Such an approach would have to consider both federal- and state-level changes in laws and practices for PCSO. Another complicating factor is how media and public reaction interacted with these historical policies and practices. Regardless, this type of approach, or time series analyses pinpointing high profile changes in policies, may provide a more comprehensive view of how supervision practices have impacted PCSO and PNCSO recidivism over time.

Additionally, as with any recidivism analysis, unreported criminal acts remain unobservable (Duwe & Goldman, 2009). Edwards and Hensley (2001) indicated that because many victims of sex crimes know their assailant, they may be less likely to report the crime, for instance. Thus, official criminal histories likely underestimate the actual extent of both general and sexual reoffending for PCNSO and PCSO. Also, we included specific types of recidivism – general and sexual reconviction (ever and 3-year) and reincarceration (ever and 3-year). While there is no standard operationalization of "recidivism" across the U.S., other types of recidivism have and could be examined. As an example, Alper and Durose (2019) examined sexual re-arrest while Duwe and Goldman (2009) explored nine types of recidivism. Put simply, there are several ways in which to measure reoffending, and continued research is needed to replicate findings across these different recidivism types.

Further analysis should investigate the mechanism by which differences in supervision between PCNSO and PCSO is translated. We contend that reduced recidivism rates are attributed to the physical incarceration of the offender (incapacitation effect); but it could also be due to greater attention and resources afforded to the supervised offender, or perhaps it is a specific deterrent effect. It should be noted that while strict supervision seems to be related to lower rates of reoffending, we are unable to definitively make this conclusion. For instance, further studies investigating whether strict supervision on general offenders is equally as effective could untangle that specific mechanism. Perhaps most importantly, more research is needed before advocating for the adoption of further supervision restrictions or increased revocations. Generally, a fuller picture regarding reoffending for PCSO will not only aid these individuals in successfully reentering their communities but also serve to improve public safety and

reduce costs associated with incarceration. In other words, efforts to reduce re-offending, whether general or sexual, should focus on how policies are translated into practice, and not just follow the status quo of tougher crime policy.

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Supplemental Material

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References

Ackerman, A. R., & Sacks, M. (2018). Disproportionate minority presence on U.S. sex offender registries. *Justice Policy Journal*, *16*(2), 1–20.

Airaksinen, J., Aaltonen, M., Tarkiainen, L., Martikainen, P., & Latvala, A. (2023). Associations between cohabitation, marriage, and suspected crime: A longitudinal within-individual study. *Journal of Developmental and Life-Course Criminology*, *9*(1), 54–70. https://doi.org/10.1007/s40865-022-00219-6

Allen, C. (1991). *Women and men who sexually abuse children: A comparative analysis*. Safer Society Press.

Allison, P. D. (2001). *Missing data*. Sage.

Alper, M., & Durose, M. (2019). *Recidivism of sex offenders released from state prison: A 9-year follow-up (2005–14)*. U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics.

American Psychiatric Association. (1999). *Dangerous sex offenders: A task force report of the American psychiatric association*. American Psychiatric Association.

Andersen, S., & Skardhamar, T. (2017). Pick a number: Mapping recidivism measures and their consequences. *Crime & Delinquency*, *63*(5), 613–635. https://doi.org/10.1177/0011128715570629

Andrews, D. A., & Bonta, J. (2010). *The psychology of criminal conduct* (5th ed.). LexisNexis Group.

Barnoski, R. (2005). *Sex offender sentencing in Washington state: Has community notification reduced recidivism?* Washington State Institute for Public Policy.

Barnoski, R. (2006). *Sex offender sentencing in Washington state: Failure to register as a sex offender-revised*. Washington State Institute for Public Policy.

Bonta, J., & Andrews, D. A. (2007). Risk-need-responsivity model for offender assessment and rehabilitation. *Rehabilitation*, *6*(1), 1–22.

Bouffard, J. A., & Askew, L. N. (2019). Time-series analyses of the impact of sex offender registration and notification law implementation and subsequent modifications on rates of sexual offenses. *Crime & Delinquency*, *65*(11), 1483–1512. https://doi.org/10.1177/0011128717722010

Brouillette-Alarie, S., Proulx, J., & Hanson, R. K. (2018). Three central dimensions of sexual recidivism risk: Understanding the latent constructs of Static-99R and Static-2002R. *Sexual Abuse: A Journal of Research and Treatment*, *30*(6), 676–704. https://doi.org/10.1177/1079063217691965

Burdon, W. M., & Gallagher, C. A. (2002). Coercion and sex offenders: Controlling sex-offending behavior through incapacitation and treatment. *Criminal Justice and Behavior*, *29*(1), 87–109. https://doi.org/10.1177/0093854802029001006

Chan, H. C. O. (2021). Risky sexual behavior of young adults in Hong Kong: An exploratory study of psychosocial risk factors. *Frontiers in Psychology*, *12*(658179), 658179–658212. https://doi.org/10.3389/fpsyg.2021.658179

Chan, H. C. O., & Myers, W. C. (2023). Risky sexual behavior, paraphilic interest, and sexual offending: The study of a community sample of young adults in Hong Kong. *International Journal of Environmental Research and Public Health*, *20*(5), 4279. https://doi.org/10.3390/ijerph20054279

Cochran, J. C., Toman, E. L., Shields, R. T., & Mears, D. P. (2021). A uniquely punitive turn? Sex offenders and the persistence of punitive sanctioning. *Journal of Research in Crime and Delinquency*, *58*(1), 74–118. https://doi.org/10.1177/0022427820941172

Cortoni, F., Hanson, R. K., & Coache, M.-È. (2010). The recidivism rates of female sexual offenders are low: A meta-analysis. *Sexual Abuse: A Journal of Research and Treatment*, *22*(4), 387–401. https://doi.org/10.1177/1079063210372142

Duwe, G., & Donnay, W. (2010). The effects of failure to register on sex offender recidivism. *Criminal Justice and Behavior*, *37*(5), 520–536. https://doi.org/10.1177/0093854810364106

Duwe, G., & Goldman, R. A. (2009). The impact of prison-based treatment on sex offender recidivism: Evidence from Minnesota. *Sexual Abuse: A Journal of Research and Treatment*, *21*(3), 279–307. https://doi.org/10.1177/1079063209338490

Edwards, W., & Hensley, C. (2001). Contextualizing sex offender management legislation and policy: Evaluating the problem of latent consequences in community notification laws. *International Journal of Offender Therapy and Comparative Criminology*, *45*(1), 83–101. https://doi.org/10.1177/0306624X01451006

Farkas, M. A., & Stichman, A. (2002). Sex offender laws: Can treatment, punishment, incapacitation, and public safety be reconciled? *Criminal Justice Review*, *27*(2), 256–283. https://doi.org/10.1177/073401680202700204

Farkas, M. A., & Zevitz, R. G. (2000). The law enforcement role in sex offender community notification: A research note. *Journal of Crime and Justice*, *23*(1), 125–139. https://doi.org/10.1080/0735648X.2000.9721113

Farmer, M., McAlinden, A.-M., & Maruna, S. (2015). Understanding desistance from sexual offending: A thematic review of research findings. *Probation Journal*, *62*(4), 320–335. https://doi.org/10.1177/0264550515600545

Ferretti, F., Pozza, A., Carabellese, F., Schimmenti, A., Santoro, G., Mandarelli, G., Gualtieri, G., Carabellese, F., Catanesi, R., Coluccia, A., & Coluccia, A. (2021). Non-intimate relationships and psychopathic interpersonal and affective deficits as risk factors for criminal career: A comparison between sex offenders and other offenders. *Frontiers in Psychology*, *12*(600370), 600370. https://doi.org/10.3389/fpsyg.2021.600370

Freeman, N. J., & Sandler, J. C. (2008). Female and male sex offenders: A comparison of recidivism patterns and risk factors. *Journal of Interpersonal Violence*, *23*(10), 1394–1413. https://doi.org/10.1177/0886260508314304

Gillespie, S. M., Garofalo, C., & Velotti, P. (2018). Emotion regulation, mindfulness, and alexithymia: Specific or general impairments in sexual, violent, and homicide offenders? *Journal of Criminal Justice*, *58*, 56–66. https://doi.org/10.1016/j.jcrimjus.2018.07.006

Greenfeld, L. A. (1997). *Sex offenses and offenders: An analysis of data on rape and sexual assault*. US Department of Justice, Office of Justice Programs.

Grubesic, T., Murray, A., & Mack, E. (2011). Sex offenders, residence restrictions, housing, and urban morphology: A review and synthesis. *Cityscape*, *13*(3), 7–31. https://doi.org/10.2307/41426673

Hanson, R. K., Bourgon, G., Helmus, L., & Hodgson, S. (2009). *A meta-analysis of the effectiveness of treatment for sexual offenders: Risk, need, and responsivity (Corrections User Report No. 2009-01)*. Public Safety Canada.

Hanson, R. K., & Bussière, M. T. (1998). Predicting relapse: A meta-analysis of sexual offender recidivism studies. *Journal of Consulting and Clinical Psychology*, *66*(2), 348–362. https://doi.org/10.1037/0022-006X.66.2.348

Hanson, R. K., Harris, A. J. R., Letourneau, E., Helmus, L. M., & Thornton, D. (2018). Reductions in risk based on time offense free in the community: Once a sexual offender, not always a sexual offender. *Psychology, Public Policy, and Law*, *24*(1), 48–63. https://doi.org/10.1037/law0000135

Hanson, R. K., & Morton-Bourgon, K. (2005). The characteristics of persistent sexual offenders: A meta-analysis of recidivism studies. *Journal of Consulting and Clinical Psychology*, *73*(6), 1154–1163. https://doi.org/10.1037/0022-006X.73.6.1154

Harrison, J. L., O'Toole, S. K., Ammen, S., Ahlmeyer, S., Harrell, S. N., & Hernandez, J. L. (2020). Sexual offender treatment effectiveness within cognitive-behavioral programs: A meta-analytic investigation of general, sexual, and violent recidivism. *Psychiatry, Psychology and Law: An Interdisciplinary Journal of the Australian and New Zealand*

Association of Psychiatry, Psychology and Law, *27*(1), 1–25. https://doi.org/10.1080/13218719.2018.1485526.

Hosmer, D., Lemeshow, S., & May, S. (2008). *Applied survival analysis: Regression modeling of time-to-event data* (2nd ed.). Wiley.

Jennings, W. G. (2015). *Innovations and advancements in sex offender research*. Routledge.

Jung, H., Spjeldnes, S., & Yamatani, H. (2010). Recidivism and survival time: Racial disparity among jail ex-inmates. *Social Work Research*, *34*(3), 181–189. https://doi.org/10.1093/swr/34.3.181

Kansas v. Hendricks. (1997). 521 U.S. 346.

Kewley, S. (2017). Policing people with sexual convictions using strengths-based approaches. *Journal of Criminal Psychology*, *7*(3), 168–182. https://doi.org/10.1108/JCP-09-2016-0026

Langan, P., Schmitt, E., & Durose, M. (2003). *Recidivism of sex offenders released from prison in 1994*. U.S. Department of Justice, Bureau of Justice Statistics.

Letourneau, E. J., Roberts, T. W. M., Malone, L., & Sun, Y. (2023). No check we won't write: A report on the high cost of sex offender incarceration. *Sexual Abuse: A Journal of Research and Treatment*, *35*(1), 54–82. https://doi.org/10.1177/10790632221078305

Levenson, J. S., Brannon, Y. N., Fortney, T., & Baker, J. (2007). Public perceptions about sex offenders and community protection policies. *Analyses of Social Issues and Public Policy*, *7*(1), 137–161. https://doi.org/10.1111/j.1530-2415.2007.00119.x

Levenson, J. S., Letourneau, E., Armstrong, K., & Zgoba, K. (2010). Failure to register: Is it associated with sex offense recidivism? *Justice Quarterly*, *27*(3), 305–331. https://doi.org/10.1080/07418820902972399

Liedka, R. V., Piehl, A. M., & Useem, B. (2006). The crime-control effect of incarceration: Does scale matter? *Deterrence*, *5*(2), 263–293. https://doi.org/10.4324/9781315258089-9

Lockwood, S., Nally, J. M., Ho, T., & Knutson, K. (2015). Racial disparities and similarities in post-release recidivism and employment among ex-prisoners with a different level of education. *Journal of Prison Education and Reentry*, *2*(1), 16–31. https://doi.org/10.15845/jperv2i1.703

Lösel, F., Link, E., Schmucker, M., Bender, D., Breuer, M., Carl, L., Endres, J., & Lauchs, L. (2020). On the effectiveness of sexual offender treatment in prisons: A comparison of two different evaluation designs in routine practice. *Sexual Abuse: A Journal of Research and Treatment*, *32*(4), 452–475. https://doi.org/10.1177/1079063219871576

Lussier, P., & Cale, J. (2013). Beyond sexual recidivism: A review of the sexual criminal career parameters of adult sex offenders. *Aggression and Violent Behavior*, *18*(5), 445–457. https://doi.org/10.1016/j.avb.2013.06.005

Lussier, P., Chouinard Thivierge, S., Fréchette, J., & Proulx, J. (2023). Sex offender recidivism: Some lessons learned from over 70 years of research. *Criminal Justice Review*. Advance online publication. https://doi.org/10.1177/07340168231157385

Lösel, F., & Schmucker, M. (2005). The effectiveness of treatment for sexual offenders: A comprehensive meta-analysis. *Journal of Experimental Criminology*, *1*(1), 117–146. https://doi.org/10.1007/s11292-004-6466-7

Mancini, C. (2014). *Sex crime, offenders, and society: A critical look at sexual offending and policy*. Carolina Academic Press.

Mann, R. E., Hanson, R. K., & Thornton, D. (2010). Assessing risk for sexual recidivism: Some proposals on the nature of psychologically meaningful risk factors. *Sexual Abuse: A Journal of Research and Treatment*, *22*(2), 191–217. https://doi.org/10.1177/1079063210366039

Matthews, J. K., Mathews, R., & Speltz, K. (1991). Female sex offenders: A typology. In M. Q. Patton (Ed.). *Family sexual abuse: Frontline research and evaluation* (pp. 199–219). Sage.

McCann, K., & Lussier, P. (2008). Antisociality, sexual deviance, and sexual reoffending in juvenile sex offenders: A meta-analytical investigation. *Youth Violence and Juvenile Justice*, *6*(4), 363–385. https://doi.org/10.1177/1541204008320260

Minnesota Department of Corrections. (2007). *Sex offender recidivism in Minnesota*. Minnesota Department of Corrections.

Nathan, P., & Ward, T. (2002). Female sex offenders: Clinical and demographic features. *Journal of Sexual Aggression*, *8*(1), 5–21. https://doi.org/10.1080/13552600208413329

Navarro, J. N., & Jasinski, J. L. (2015). Demographic and motivation differences among online sex offenders by type of offense: An exploration of routine activities theories. *Journal of Child Sexual Abuse*, *24*(7), 753–771. https://doi.org/10.1080/10538712.2015.1077363

Ozkan, T., Clipper, S. J., Piquero, A. R., Baglivio, M., & Wolff, K. (2020). Predicting sexual recidivism. *Sexual Abuse: A Journal of Research and Treatment*, *32*(4), 375–399. https://doi.org/10.1177/1079063219852944

Piquero, A. R., Farrington, D. P., Jennings, W. G., Diamond, B., & Craig, J. (2012). Sex offenders and sex offending in the Cambridge study in delinquent development: Prevalence, frequency, specialization, recidivism, and (dis)continuity over the life-course. *Journal of Crime and Justice*, *35*(3), 412–426. https://doi.org/10.1080/0735648X.2012.688527

Planty, M., Langton, L., Krebs, C., Berzofsky, M., & Smiley-McDonald, H. (2013). *Female victims of sexual violence, 1994-2010*. Bureau of Justice Statistics.

Przybylski, R. (2015). *Recidivism of adult sexual offenders*. U.S. Department of Justice, Office of Justice Programs, Office of Sex Offender Sentencing.

Reijnen, L., Bulten, E., & Nijman, H. (2009). Demographic and personality characteristics of internet child pornography downloaders in comparison to other offenders. *Journal of Child Sexual Abuse*, *18*(6), 611–622. https://doi.org/10.1080/10538710903317232

Rosselli, M. K., & Jeglic, E. L. (2017). Factors impacting upon attitudes toward sex offenders: The role of conservatism and knowledge. *Psychiatry, Psychology and Law: An Interdisciplinary Journal of the Australian and New Zealand Association of Psychiatry, Psychology and Law*, *24*(4), 496–515. https://doi.org/10.1080/13218719.2016.1254562

Russell, K., & Evans, W. (2021). Exploring perceptions of safety: Developing safety and support measures to assess public attitudes of sex offense registration. *Justice Policy Journal*, *18*(2), 1–19.

Sample, L., & Bray, T. (2003). Are sex offenders dangerous? *Criminology & Public Policy*, *3*(1), 59–82. https://doi.org/10.1111/j.1745-9133.2003.tb00024.x

Sample, L., & Bray, T. (2006). Are sex offenders different? An examination of rearrest patterns. *Criminal Justice Policy Review*, *17*(1), 83–102. https://doi.org/10.1177/0887403405282916

Sampson, R. J., & Laub, J. H. (2003). Life-course desisters? Trajectories of crime among delinquent boys followed to age 70. *Criminology*, *41*(3), 555–592. https://doi.org/10.1111/j.1745-9125.2003.tb00997.x

Sampson, R. J., Laub, J. H., & Wimer, C. (2006). Does marriage reduce crime? A counterfactual approach to within-individual causal effects. *Criminology*, *44*(3), 465–508. https://doi.org/10.1111/j.1745-9125.2006.00055.x

Schaefer, R. L. (2019). Understanding sex offender community supervision: A mixed methods approach. *International Journal of Offender Therapy and Comparative Criminology*, *63*(7), 1038–1065. https://doi.org/10.1177/0306624X18812043

Schram, D. D., & Milloy, C. D. (1995). *Community notification: A study of offender characteristics and recidivism*. Washington State Institute for Public Policy.

Schuler, M., Mohnke, S., Amelung, T., Dziobek, I., Borchardt, V., Gerwinn, H., Kärgel, C., Kneer, J., Massau, C., Pohl, A., Weiß, S., Pieper, S., Sinke, C., Beier, K. M., Walter, M., Ponseti, J., Schiffer, B., Kruger, T. H. C., & Walter, H. (2021). Empathy in paedophilia and sexual offending against children: A longitudinal extension. *Journal of Sexual Aggression*, *28*(2), 178–195. https://doi.org/10.1080/13552600.2021.1931721

Smith, W. R., & Monastersky, C. (1986). Assessing juvenile sexual offenders' risk for reoffending. *Criminal Justice and Behavior*, *13*(2), 115–140. https://doi.org/10.1177/0093854886013002001

Thompson, A., & Tapp, S. N. (2022). *Criminal victimization, 2021*. U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics.

Velázquez, T. (2008). *The pursuit of safety: Sex offender policy in the United States*. Vera Institute of Justice.

Vess, J. (2009). Fear and loathing in public policy: Ethical issues in laws for sex offenders. *Aggression and Violent Behavior*, *14*(4), 264–272. https://doi.org/10.1016/j.avb.2009.04.004

Wisconsin State Statute. (2001a). *Kidnapping*. Pub. L. No. 940.31.

Wisconsin State Statute. (2001b). *Sex offender registration*. Pub. L. No. 301.45.

Zandbergen, P. A., Levenson, J. S., & Hart, T. C. (2010). Residential proximity to schools and daycares: An empirical analysis of sex offense recidivism. *Criminal Justice and Behavior*, *37*(5), 482–502. https://doi.org/10.1177/0093854810363549

Zatkin, J., Sitney, M., & Kaufman, K. (2022). The relationship between policy, media, and perceptions of sexual offenders between 2007 and 2017: A review of the literature. *Trauma, Violence, & Abuse*, *23*(3), 953–968. https://doi.org/10.1177/1524838020985568

Zevitz, R., & Farkas, M. A. (2000). The impact of sex-offender community notification on probation/parole in Wisconsin. *International Journal of Offender Therapy and Comparative Criminology*, *44*(1), 8–21. https://doi.org/10.1177/0306624X00441002

Zgoba, K., & Simon, L. (2005). Recidivism rates of sexual offenders up to 7 years later: Does treatment matter? *Criminal Justice Review*, *30*(2), 155–173. https://doi.org/10.1177/0734016805284146

Zgoba, K., Witt, P., Dalessandro, M., & Veysey, B. (2008). *Megan's Law: Assessing the practical and monetary efficacy*. New Jersey Department of Corrections.

Zimring, F. E., Piquero, A. R., & Jennings, W. G. (2007). Sexual delinquency in Racine: Does early sex offending predict later sex offending in youth and young adulthood? *Criminology & Public Policy*, *6*(3), 507–534. https://doi.org/10.1111/j.1745-9133.2007.00451.x