

2021

The Predictive Relationship Between Probation/Parole Officer Factors and Recidivism Rates Among Female Offenders

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Walden University

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Walden University

College of Social and Behavioral Sciences

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Crystal Clark

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Walden University
2021

Abstract

The Predictive Relationship Between Probation/Parole Officer Factors and Recidivism
Rates Among Female Offenders

by

Crystal Clark

M.A., Houston Graduate School of Theology, 2013

B.A., Louisiana Tech University, 2011

Dissertation Submitted in Partial Fulfillment
of the Requirements for the Degree of
Doctor of Philosophy
Psychology

-

Walden University

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Abstract

The purpose of this quantitative, longitudinal, correlational study was to examine if probation officers' (POs) knowledge of the post release needs of the female offender, their use of positive feedback with the offender, and their supportive relationship with offender were significantly predictive of recidivism at 3 years post release in a sample of 363 female offenders under probation/parole in the state of Michigan between 2011–2014. The study was guided by the PO as coach theory. Data obtained from archival data sets from the Probation/Parole Officer Interactions with Women Offenders, Michigan, 2011–2014 study were utilized in the study. One binomial logistic regression was conducted to address the three research questions. Results showed that the POs' higher degree of knowledge of the post-release needs of the offender and a higher degree of using positive feedback with the offender were significantly predictive of increased odds of not recidivating 3 years post release. A more supportive relationship between the PO and the offender was not, however, significantly predictive of recidivism status 3 years post release. Results from this study can be used as a foundation for future research and may contribute to positive social change by informing the development of initiatives that enhance the PO female offender relationship and lower female offenders' recidivism rates.

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Dedication

I wholeheartedly dedicate this study to my parents. Although they are no longer with me, they were always my source for my inspiration to aspire to push myself to reach all my goals. They were always there to support me emotionally, spiritually, and when all else failed, financially. I was the first in my family on both sides to go to college, and I swore that I would make them proud and reach for the stars.

I would also want to dedicate this to my younger brother who has always been my best friend. He has been there for me not only through the storms but when there was sunshine. I would also like to dedicate this to my three beautiful daughters who push me to be more and more daily. My daughters are truly my anchor and without them none of this would be possible.

And lastly, I dedicate this to my higher power for giving me the strength, perseverance, and a healthy life to complete this journey.

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I would love to thank Walden University for affording me the opportunity to further my education and complete my study. My chair member, Dr. Jessica Hart, has been there through the frustration, challenges, and the success from my efforts to complete this study. I thank her for the patience, the guidance, and the wisdom she has provided through this time,

I would also like to acknowledge another very important person that has also helped me through this journey and that's Dr. Stephen Hampe. I'm forever grateful for your kind words and guidance through this study. Without any of you I wouldn't reach my dreams.

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Chapter 1: Introduction to the Study

More expansive and stringent sentencing laws, especially for drug offenses; targeted arrests in ethnic minority and low-income communities; and a revolving door system of arrests and rearrests has resulted in an “imprisonment binge” among females, who are the fastest-growing population in the U.S. criminal justice system (National Resource Center on Justice Involved Women, 2018, p. 1). As of 2019, slightly over 1 million women were under community supervision (i.e., probation or parole; The Sentencing Project, 2020). Three years after release, an average of 60% of women under community supervision recidivate, commit a repeat offense that results in a rearrest, reconviction, and/or reincarceration (National Resource Center on Justice Involved Women, 2018). High recidivism rates among women offenders under community supervision are indicative of the struggles they experience integrating back into society (Farmer, 2019; Zettler, 2019, 2020).

Probation and parole officers (POs) play central roles in ensuring reduced recidivism rates among offenders (Bradner et al., 2020; Rizer et al., 2020). POs can act as positive role models, be sources of knowledge and trust, and provide emotional and social support, all of which can contribute to a lower likelihood of recidivism (Morash et al., 2019; Mueller et al., 2021; Okonofua et al., 2021). However, despite the emergence of theoretical work, such as Lovins et al. (2018) PO as coach (POC) theory, and empirical literature that have argued that relational-based strengths of the PO are critical to the post-release success of the female offender (Cornacchione et al., 2016; Morash et al., 2015, 2016; Mueller et al., 2021; Smith et al., 2016, 2020a, 2020b; Sturm et al., 2021),

there has been little examination as to the specific PO interpersonal dimensions that may reduce such rates among female offenders (Morash et al., 2019; Okonofua et al., 2021). The purpose of this quantitative, longitudinal, correlational study was to examine if the POs' knowledge of the post-release needs of the female offender, their use of positive feedback with the offender, and supportive and trusting relationship with offender were significantly predictive of recidivism status at 3 years post-release in a sample of female offenders. This study has numerous implications for social change, including informing the development of initiatives that enhance the PO–female offender relationship and contribute to lowering female offenders' recidivism rates.

Background

As both probation, court-ordered community supervision in place of incarceration, and parole, conditional community supervised release following imprisonment (Kaeble & Alper, 2020), have been elements of the U.S. criminal justice system for over 70 years, the role of the PO is critical to its functioning (Bradner et al, 2020; Brady, 2020). The U.S. probation and parole systems were initially developed as a rehabilitative effort, with POs providing offenders counseling and assistance with education, employment, housing, and social services (Hsieh et al., 2015; Wilson et al., 2020). Attitudes at the organizational and individual PO level shifted in the 1970s after the rehabilitative approaches were criticized for having little effect on reducing offender recidivism rates (Hsieh et al., 2015; Wilson et al., 2020). The 1970s “get tough” perspective of community supervision that emphasized the law enforcement roles of POs continued into the 1990s, likely a result of conservative federal policies emphasizing

punishment; stringent criminal penalties; and an increasing caseload of offenders, often violent, at greater risk for reoffending (Hsieh et al., 2015; Phelps, 2020).

The PO position shifted once again in the 1990s to become a more balanced case management role (Hsieh et al., 2015), informed by and informing Andrew et al.'s (1990) risk, need, and responsivity (RNR) model and the emerging theoretical and empirical work on gendered pathways to crime (Nuytiens & Christiaens, 2016). Implicit to the RNR community supervision and gendered pathways scholarly arguments was that because criminal behavior often stemmed from adverse and traumatic experiences in childhood and resultant impaired adult relationships, warm and trusting relationships with others were critical to reducing the likelihood of offending and reoffending (Farmer, 2019; Liu et al., 2020; Welsh, 2019). The criminal justice system's adoption of empirically aligned case management paradigms to community supervision necessitated changes in not only the roles and responsibilities of the POs but also in their relationship with the offender changes in the PO–offender relationship (Hsieh et al., 2015; Williams & Schaefer, 2020). Emotional and interpersonal intelligence and the ability to build a collaborative and trusting alliance with offenders have become required skills necessary to fulfill the job responsibilities of the PO position in the 21st century (Bares & Mowen, 2020; Morash et al., 2015).

The case management approach, with its emphasis on building trusting alliances between the PO and the offender, is increasingly relevant as more women become involved in the criminal justice system (Morash et al., 2019). The overwhelming majority (i.e., 82%) of the 1.3 million criminal justice-involved women are those under probation

or parole (The Sentencing Project, 2020), and 60% of community supervised women recidivate within 3 years (National Resource Center on Justice Involved Women, 2018). In response to the high rates of recidivism among female offenders, scholars have called for an increased empirical understanding of the gendered pathways to recidivism (Bell et al., 2019; Zettler, 2020), especially in relation to the PO–offender dynamic (Morash et al., 2015, 2016, 2019). The relatively new theoretical model proposed by Lovins et al. (2018), the POC theory, with its emphasis on the interpersonal qualities of the PO as coach (e.g., knowledgeable, positive, encouraging, supportive) thought to reduce offender recidivism, provides a fitting theoretical framework for understanding the PO’s role in the female offender’s pathway to recidivism (Latessa & Schweitzer, 2020).

Despite the critical role that the PO plays in the female offender’s life (O’Meara et al., 2020), there has been little empirical exploration of the facets of the PO–offender relationship and their effects on recidivism rates among female offenders, impeded by lack of theoretical guidance (Morash et al., 2015, 2019). While a minimal body of literature on the PO–female offender relationship exists (Morash et al., 2019), empirical evidence has aligned with the theoretical postulates of Lovins et al. (2018) that POs’ knowledge of female offenders’ post-release needs and use of positive reinforcement techniques and relational support contributes to lower reoffending, rearrest, and/or reconviction (Morash et al., 2015, 2016, 2019). There remains a need to extend the gendered pathways to recidivism literature to examine if aspects of the PO–offender relational dynamic significantly predict recidivism among female offenders.

Problem Statement

The problem addressed in this study was that it was not known if POs' knowledge of the female offender's post-release needs, their use of positive feedback with the female offender, and their supportive relationship with the female offender are significantly predictive of the offender's recidivism 3 years post-release. Since 1980, the number of women involved with the U.S. criminal justice system has increased by 700%, and of the 1 million women under community supervision (i.e., probation or parole), 60% will recidivate within 3 years (The Sentencing Project, 2020). There are theoretical arguments, such as Lovins et al.'s (2018) POC theory, and empirical evidence (e.g., Chamberlain et al., 2018; Morash et al., 2015, 2016, 2019; Smith et al., 2020a, 2020b; Stone et al., 2018; Sturm et al., 2021) that POs who can act as a positive role model; be a source of trust, knowledge, information, and guidance; and provide encouragement and support can contribute to a lower likelihood of recidivism among female offenders. However, the empirical work on the PO–female offender relationship and recidivism is nascent (Morash et al., 2019; Okonofua et al., 2021), and has, until recently, lacked theoretical guidance (Duru et al., 2020; Zettler, 2020). As such, there remains little empirical examination as to whether the POs' knowledge of the female offender's strengths and weaknesses, use of positive reinforcement, and relational support help to reduce recidivism rates among female offenders.

Purpose of the Study

In this quantitative study, I employed a longitudinal, correlational design to examine if three characteristics of the PO (i.e., the predictor variables of knowledge of

offender's post release needs, use of positive feedback with offender, and supportive relationship with offender) were significantly predictive of recidivism status among female offenders post release .The one criterion variable was recidivism, operationalized as a new arrest or conviction 3 years post-release, among female offenders. This study advanced understanding of Lovins et al.'s (2018) POC theory and addressed the gaps noted in the empirical literature (see Chamberlain et al., 2018; Morash et al., 2015, 2016, 2019) regarding the lack of examination of the effects of POs' skills, attitudes, and behaviors on recidivism rates among women offenders.

Research Questions and Hypotheses

This study was guided by three research questions, each having associated null and alternative hypotheses. In this longitudinal, correlational study, I utilized Wave 2 (2012–2013) and Wave 3 (2013–2014) from Morash et al.'s (2015) archival data set. The research questions and associated hypotheses were:

RQ1: Is there a significant predictive relationship between the POs' knowledge of the post-release needs of the offender and recidivism status 3 years post-release among female offenders?

*H*₀1: There is not a predictive significant relationship between the POs' knowledge of the post-release needs of the offender, as measured at Wave 2 (2012–2013) using the Number of Post release Issues Discussed with PO (NID-PO) scale (Morash et al., 2015), and recidivism (i.e., new arrest or conviction) status 3 years post-release among female offenders, as measured at Wave 3 (2013–2014).

H_{a1}: There is a significant predictive relationship between the POs' knowledge of the post-release needs of the offender, as measured at Wave 2 (2012–2013) using the Post releaseNID-PO scale (Morash et al., 2015), and recidivism (i.e., new arrest or conviction) status 3 years post-release among female offenders, as measured at Wave 3 (2013–2014).

RQ2: Is there a significant relationship between the POs' use of positive feedback to the offender and recidivism status 3 years post-release among female offenders?

H₀₂: There is not a significant relationship between the POs' use of positive feedback to the offender, as measured at Wave 2 (2012–2013) using the Promoting Self-Efficacy to Avoid Criminal Lifestyle (PSEACF) scale (Morash et al., 2015), and recidivism (i.e., new arrest or conviction) status 3 years post-release among female offenders, as measured at Wave 3 (2013–2014).

H_{a2}: There is a significant predictive relationship between the POs' use of positive feedback to the offender, as measured at Wave 2 (2012–2013) using the PSEACF scale (Morash et al., 2015), and recidivism (i.e., new arrest or conviction) status 3 years post-release among female offenders, as measured at Wave 3 (2013–2014).

RQ3: Is there a significant predictive relationship between POs' supportive relationship with the offender and recidivism status 3 years post-release among female offenders?

H₀₃: There is not a significant predictive relationship between POs' supportive relationship with the offender, as measured at Wave 2 (2012–2013) using the Dual Relationship Inventory (DRI; Skeem et al., 2007) and recidivism (i.e., new arrest or conviction) status 3 years post-release among female offenders, as measured at Wave 3 (2013–2014).

H_{a3}: There is a significant predictive relationship between POs' supportive relationship with the offender, as measured at Wave 2 (2012–2013) using the DRI (Skeem et al., 2007) and recidivism (i.e., new arrest or conviction) status 3 years post-release among female offenders, as measured at Wave 3 (2013–2014).

I tested the study hypotheses by conducting one binomial logistic regression. A binomial logistic regression is used to estimate the relationship between one or more predictor variables (which can be categorical or continuous) a criterion variable that is dichotomous, “taking on only two possible values coded 0 and 1” (Kornbrot, 2005, p. 1). For the analysis, the three PO predictor variables, which are interval and were measured at Wave 2, were entered collectively into the binominal logistic regression model, with 3-year recidivism status (coded as 1 = yes or 0 = no) as the criterion variable, assessed 1 year later at Wave 3. The use of a longitudinal design along with the utilization of binomial logistic regression to test study hypotheses allowed for examination of predictive relationships between PO interpersonal qualities assessed at Wave 2 (2012–2013) and female offenders' new arrest or conviction assessed 1 year later at Wave 3 (2013–2014).

Theoretical Framework

Guiding this study was the POC theory, developed by Lovins et al. (2018). (Lovins, et al., 2018) argued for a shift from PO as “referee,” in which the focus is on enforcing rules, to PO as “coach,” which emphasizes behavioral change among supervisees (Lovins, et al., 2018) identified six key, job-related skills needed for POs: (a) ability to emphasize and aim toward offenders’ success, (b) professional expertise in changing behavior, (c) focus on offender accountability (and not punishment) concerning rule infractions, (d) knowledge of offender strengths and weaknesses, (e) use of positive and supportive feedback to offender, and (f) ability to develop and maintain a supportive relationship with offender. The six attributes of the PO distinguish them as a coach or referee.

The last three dimensions, the POs’ knowledge of the offender’s strengths and weaknesses, use of positive feedback with the offender, and a supportive relationship with the offender, which were the focus of this study, pertain to the POs’ interpersonal qualities of the PO as coach (or referee) thought to reduce offender recidivism (see Lovins et al., 2018; Smith, 2018). The knowledge dimension has a “parallel skill” of using risk assessments to identify the strengths and limitations of the offender because they provide information on which to build the skills of the offender, reducing the likelihood of recidivism (Lovins et al., 2018, p. 15). Lovins et al.’s (2018) positive reinforcement and relational dimensions impart benefits on offender outcomes through the development of trusting and supportive PO–offender relationships because they act as factors of social control; provide positive role-modeling opportunities; and contribute to

increasing the offender's self-esteem, resilience, and self-efficacy, all of which reduce recidivism (Roddy et al., 2019; Smith et al., 2019, 2020a, 2020b). Positive reinforcement is thought to be especially affective in promoting positive behavioral change among offenders (Morash et al., 2019). An effective PO has knowledge of the strengths and needs of the offender, utilizes positive reinforcement to promote the prosocial behavior of the offender, and has a supportive and trusting relationship with the offender (Lovins et al., 2018).

There has been minimal empirical testing of Lovins et al.'s (2018) POC theory, despite its recognition in the criminal justice and probation communities and the implementation of professional development training and initiatives founded on the POC theory principles (National Institute of Corrections, 2019; Smith, 2018). While there are empirical arguments that PO attributes identified in Lovins et al.'s (2018) POC theory help to reduce offender recidivism rates (e.g., Duru et al., 2020; Latessa & Lovins, 2019), the empirical examination of the effects of POs' knowledge of the offender's strengths and weaknesses, use of positive feedback with the offender, and a supportive relationship with the offender on female offender recidivism rates is completely lacking. This study helped to address the gaps in the criminal justice literature concerning female recidivism as framed by Lovins et al.'s (2018) POC theory.

Nature of the Study

A quantitative, longitudinal, correlational research design aligned with the purpose and structure of this study. The longitudinal design entails the collection of data at two or more timepoints from a cohort of participants (Caruana et al., 2015; Collins,

2006). In this study, I utilized the archival data sets from the Probation/Parole Officer Interactions with Women Offenders, Michigan, 2011–2014 study (Morash et al., 2016). The longitudinal, correlation design was fitting for this study because the purpose was to utilize Morash et al.'s (2015) archival data to examine if there are significant predictive relationships between the Wave 1 predictor variables of POs' knowledge of the offenders' strengths and weaknesses, use of positive feedback with the offender, and a supportive relationship with the offender and the Wave 3 criterion variable of recidivism 3 years post-release. Because longitudinal, correlational designs establish temporal precedence (i.e., an attitude or behavior preceding another attitude or behavior; Caruana et al., 2015; Collins, 2006), and because 3-year recidivism rates are objective data, it can be stated that this study examined if the POs' characteristics (i.e., knowledge of strengths and weaknesses, use of positive reinforcement, and relational supportiveness) significantly predicted female offenders' recidivism rates. I conducted a binomial logistic regression to examine the predictive relationships between the POs' interpersonal qualities and female offenders' 3-year recidivism status (coded as a dichotomous variable). Therefore, use of a longitudinal, correlational design with binomial logistic regression was appropriate for this study.

Definitions

PO: An officer with a community supervisory position in their role as part of the U.S. criminal justice system (Andersen & Wildeman, 2015). POs are charged with ensuring that offenders follow and comply with the conditions of their probation or parole, including committing no new offenses, and they help offenders to successfully

reintegrate into society through case management; counseling; service planning; and connecting clients to health, mental health, employment, and social resources and support services (Andersen & Wildeman, 2015).

POs' knowledge of offender post-release needs: The first predictor variable of the study was the POs' knowledge of the offender's post release needs. This variable was assessed using the 14-item Post release NID-PO scale (see Morash et al., 2015). The NID-PO "measures factors known to predict women's recidivism," and risk factors on the measure include those associated with housing, employment, money/finances, mental health, substance/alcohol use, exposure to crime and criminal peers/partners, parenting, and general life problems (Morash et al., 2015, p. 422).

POs' supportive relationship with offender: The third and last predictor variable, the POs' supportive relationship with the female offender, was measured using the 30-item DRI (see Skeem et al., 2007). The DRI was developed to measure the relationship quality between a PO and their supervisee, with emphasis placed on the offender's perceptions of the social bonds, sense of partnership, trust, mutual respect, and commitment to the working alliance with the PO (Skeem et al., 2007).

POs' use of Positive feedback with offender: The second predictor variable, the POs' use of positive feedback with the offender, was assessed using the 8-item Promoting Self-Efficacy to Avoid Criminal Lifestyle (PSEACF scale; (see Morash et al., 2015). The PSEACF scale measures the offender's perceptions as to whether the PO makes the offender feel more secure about avoiding risk factors for criminal behavior,

including drug and alcohol use, being in criminal situations, and/or being involved with criminal and antisocial peers (Morash et al., 2015).

Recidivism: Repeat offending that results in rearrest, reconviction, and/or reincarceration within a specific time frame, usually 2 to 3 years post-release (Alper & Durose, 2018). In this study, the criterion variable of recidivism was operationalized as a new arrest or conviction as of Wave 3, 3 years post-release.

Assumptions

All research has a basic set of assumptions, or self-evident truths, that provide an empirical and methodological foundation to the study (Ellis & Levy, 2009). There was a theoretical assumption of this study that Lovins et al.'s (2018) POC theory is a sound and relevant lens through which to explore the effects of the POs' relational-based qualities on female offenders' recidivism rates, an argument supported in the literature (see Haas & Smith, 2019; Latessa & Lovins, 2020). There were also assumptions specific to the context of the study. One assumption was that the variables in Morash et al.'s (2015) archival data sets effectively capture Lovins et al.'s theoretical dimensions of the POs' knowledge of offender strengths and weaknesses, the use of positive reinforcement, and a supportive relationship with the offender. Lovins et al. developed the POC theory after the publication of Morash et al.'s study; however, both were informed by the gendered pathway literature and Andrew's (2001) RNR model. Moreover, the three specific PO qualities assessed in this study (i.e., knowledge, positive reinforcement, and supportive relationship) have received empirical attention in studies by Morash and colleagues (i.e., Morash et al., 2019; Roddy & Morash, 2020).

The use of an archival data set reframed some of the assumptions commonly seen in studies using primary data. One common assumption in archival research is that the study sample represents the population to the degree that findings can be generalized. The sample in this study were the female offenders in Michigan under community supervision who participated in Morash et al.'s (2015) study. As such, findings can only be generalized to the population of women offenders who were under community supervision in Michigan between 2011 and 2014.

There was also a common assumption that participants provided honest and truthful responses on the survey information. As stated by Morash et al. (2015), while the focus on an offender sample required that the women be recruited through their POs, the researchers followed ethical recruitment and data collection processes aimed at reducing offenders' distrust and reluctance and increasing their level of comfort with the research process; moreover, the women were interviewed in private, with only the interviewer, and their information could not and was not shared with prison officials. The procedures implemented by Morash et al. likely enhanced the truthfulness of the women's responses.

Scope and Delimitations

To address the study problem concerning the lack of empirical understanding of the effects of the POs' characteristics on female offenders' recidivism, the scope of this study was bound to the perceptions of POs as experienced and reported by Michigan female offenders under probation or parole who participated in Morash et al.'s (2015) study. The current study was delimited to exploring female offenders' perceptions of the POs within the theoretical framework positing by Lovins et al. (2018) and further

delimited to the examination of three theoretical PO characteristics: knowledge of offender strengths and weaknesses, use of positive reinforcement, and a supportive relationship with the offender.

I also set delimitations for the purpose of this study. This study was delimited to a quantitative, longitudinal, correlational design. While the use of longitudinal data sets allowed for the examination of prediction, the correlational design precluded the ability to determine cause-and-effect relationships. Additionally, this study was delimited to specific measures that align with Lovins et al.'s (2018) theoretical postulates and assess the study predictor (i.e., the POs' knowledge, positive reinforcement, and supportive relationship) and criterion (i.e., 3-year recidivism status) variables. There were variables in Morash et al.'s (2015) data sets that could have been used to measure the predictor variables (e.g., POs' communication behavior) as well as other PO and/or offender variables of theoretical and/or empirical interest (e.g., POs' communication behavior) that may have been significantly associated with 3-year recidivism rates. The delimitations I imposed limited the generalizability of findings but, nonetheless, were needed to ensure that the study's objectives were achieved.

Limitations

This study had some limitations. There was a methodological limitation resulting from the use of a longitudinal, correlational design; namely, because it was nonexperimental, causality could not be determined in this study. Another limitation, which was methodological in nature but was due to the use archival data sets, was the lack of inclusion of confounding variables. While the variables of ethnic group and

probation/parole status were found to not be significantly predictive of recidivism status, there were likely additional confounding variables that were not assessed in this study. In alignment, the use of Morash et al.'s (2015) archival data limited (and delimited) the operationalization of study constructs to the measures utilized by Morash et al. in their study. I utilized Morash et al.'s archival data sets on female offenders under community supervision in the Michigan correctional system during the years of 2011–2014. As such, findings cannot be generalized to U.S. female offenders currently under probation or parole. Finally, the use of Lovins et al.'s (2018) POC theory introduced a theoretical limitation in that the study findings could only be interpreted in relation to the POC theory, not to other recidivism theories.

Significance

This study had theoretical significance because it was among the first to advance theoretical knowledge by empirically testing elements of Lovins et al.'s (2018) POC theory, helping to validate if three PO qualities related to their knowledge, positive feedback, and supportive relationship with the offender significantly contributed to lower recidivism rates among female offenders. I selected the POC theory not only for its empirical relevance but also because it was gaining recognition in the criminal justice and probation communities, which have provided funding support for POC-driven initiatives and/or implemented professional development training and initiatives that are founded on the POC theory principles (see National Institute of Corrections, 2019; Smith, 2018).

This study had empirical significance. It was a timely study, not only aligning with Lovins et al.'s (2018) work but also the emerging gendered pathways literature

examining female-specific risk factors for recidivism (e.g., Liu et al., 2020; Zettler, 2019). Moreover, while gendered pathways to recidivism research studies have increased in number since the early 2010s (Zettler, 2019), few studies have framed their arguments in accordance with theory (see Lovins et al., 2018), and only a handful of studies have focused on relational dimensions of the PO and the offender vis-à-vis recidivism rates among female offenders (e.g., Morash et al., 2015, 2016, 2019). This study advanced the body of literature on POs and female offender recidivism rates initiated in large part by Morash et al. (2015) and went beyond the existing research by placing the empirical examination into a theoretical context, operationalizing variables in alignment with theory, and focusing on 3-year recidivism rates, which were yet to be explored by Morash et al. (2015, 2016, 2019).

This study also had implications for practice, policy, and positive social change. Findings from this study may help to advance POC-based initiatives specific to enhancing PO skills and aimed at decreasing recidivism among female offenders. Findings from this study may help to advance criminal justice policies associated with PO standards and training as well as offender community reintegration. Findings may also be used to advance social change by increasing awareness of the post-release needs of female offenders and identifying the qualities of the PO–offender working alliance that reduce female offenders’ recidivism rates.

Summary

The role that the PO plays in the female offender’s life has become increasingly important (Morash et al., 2015). There is an emerging body of research that suggests that

a female offender's healthy and supportive relationship with her PO is critical to her post-release success (Morash et al., 2015; Stone et al., 2018) and contributes to a lower likelihood of recidivism (Morash et al., 2016). However, there remains little examination as to specific PO qualities that may promote female offenders' reintegration success and reduce recidivism (Morash et al., 2015). This study addressed the gaps noted in the empirical literature (i.e., Chamberlain et al., 2018; Morash et al., 2015, 2016) regarding the effects that the POs' skills, attitudes, and behaviors may have on recidivism rates among women offenders. The purpose of this study was to determine whether POs' knowledge of the offender's post-release needs, their use of positive feedback, and their supportive relationship with the offender significantly contribute to recidivism status 3 years post-release among female offenders who were under community supervision in Michigan during the years of 2011–2014.

Chapter 2 is specific to the theoretical and empirical information pertinent to this study. All with all chapters, Chapter 2 is divided into sections, each addressing a specific topic. First presented is the literature search strategy. The theoretical foundation section contains information on Lovins et al.'s (2018) POC theory, which informed this study. The empirical literature is comprehensively reviewed in the following section. The chapter ends with a summary.

Chapter 2: Literature Review

This study addressed the problem that it was not known if POs' knowledge of the female offender's post-release needs, their use of positive feedback with the female offender, and their supportive relationship with the female offender is significantly predictive of the offender's recidivism 3 years post-release. Since 1980, the number of women involved with the U.S. criminal justice system has increased by 700% (The Sentencing Project, 2020). Due to the substantial increase of women involved in the U.S. criminal justice system, 1 million women are under community supervision (i.e., probation or parole), and of those, 60% will recidivate within 3 years (The Sentencing Project, 2020). There are theoretical arguments, such as Lovins et al.'s (2018) POC theory, and empirical evidence (i.e., Chamberlain et al., 2018; Morash et al., 2015, 2016, 2019; Smith et al., 2020a, 2020b; Stone et al., 2018; Sturm et al., 2021) that POs who can act as a positive role model; be a source of trust, knowledge, information, and guidance; and provide encouragement and support can contribute to a lower likelihood of recidivism among female offenders. However, the empirical work on the PO–female offender relationship and recidivism is nascent (see Morash et al., 2019; Okonofua et al., 2021), and has, until recently, lacked theoretical guidance (Duru et al., 2020; Zettler, 2020). As such, there is a gap in the literature regarding whether the POs' knowledge of the female offender's strengths and weaknesses, use of positive reinforcement, and relational support help to reduce recidivism rates among female offenders.

In this quantitative study, I employed a longitudinal, correlational design to examine if three characteristics of the PO (i.e., the predictor variables of knowledge of

offender post-release needs, use of positive feedback with offender, and supportive relationship with offender) were significantly predictive of recidivism rates among female offenders post release. The study had 1 criterion variable, recidivism, which was operationalized as a new arrest or conviction 3 years post-release, among female offenders. This study advanced understanding of Lovins et al.'s (2018) POC theory. It also the gaps noted in the gendered pathways to recidivism empirical literature (Chamberlain et al., 2018; Morash et al., 2015, 2016, 2019) regarding the lack of examination of the effects of POs' skills, attitudes, and behaviors on recidivism rates among women offenders.

Literature Search Strategy

I conducted a literature search during the summer and early fall of 2020 to obtain relevant, current, peer-reviewed research articles for a comprehensive review and synthesis of the pertinent empirical literature on the topic. As it began in 2020, the literature search was initially limited to peer-reviewed studies published within the past 5 years (i.e., between 2015 and 2020). However, I continued to review the literature through the early spring of 2021, resulting in additional resources published in the 2020 and early 2021. In conducting the literature review, I primarily appraised the empirical literature in the fields of forensic psychology, criminal justice, crime and delinquency, and offender rehabilitation; I later expanded my search to include the disciplines of social psychology, sociology, law, and communications. The literature search strategy was initiated in databases accessible through the Walden University Library, namely Academic Search Elite, Criminal Justice Database, PsycArticles, PsycINFO, and

SocINDEX with Full Text accessed. The SAGE Journals and Google Scholar search engines were also used. The keyword search terms used individually and in combination were *probation, parole, community supervision, corrections, officer; incarceration, incarcerated, crime, criminal, criminogenic; risk-needs-responsivity, risk, strengths, post release needs; reentry, reintegration; gendered pathways, female pathways, women, gender, differences; relationships, connections, social bonds, social support, social ties, social capital, communication, rapport, messages, working alliance; recidivism, reoffending, repeat offending, rearrest, reconviction; and probation officer as coach theory.*

The literature search initially yielded approximately 62 articles published in peer-reviewed journals between 2015 and 2021. The studies were published primarily in criminal justice journals, including *Crime & Delinquency, Criminal Justice and Behavior*, and the *American Journal of Criminal Justice*. I collated and organized these 62 studies for an initial review, which resulted in the culling of 19 articles that (a) were scholarly commentaries or public policy reviews, (b) did not analyze findings separately by gender group, or (c) addressed tangential topics (e.g., POs' attitudes about sentencing, work-related stress among POs, women offenders' identity search). The review and organization of the peer-reviewed resources resulted in 43 studies that addressed the study topics, which are summarized, discussed, and synthesized in this chapter.

Theoretical Foundation

Lovins et al. (2018), in their POC theory, identified six dimensions of the PO role, including knowledge of the strengths and weaknesses of the offenders, the use of positive

feedback with the offender, and a supportive and trusting relationship with offender, which may help to reduce recidivism rates among offenders. (Lovins et al.'s 2018). POC theory is informed by numerous psychological theories, primarily social cognitive theory, parenting theory, behaviorism, and coaching theory, and it utilizes concepts, such as positive reinforcement, authoritative parenting, and self-efficacy. The POC theory also incorporates elements from criminal justice and probation theories, including social control, RNR, social capital, social control, and relational theory, with Lovins et al. using these theories to identify the qualities of the PO–offender relationship that may contribute to positive offender outcomes.

Lovins et al. (2018), adopting a sports metaphor, argued for a shift from PO as “referee,” in which the focus is on control and the enforcement of rules, to PO as “coach,” who emphasizes positive behavioral change among supervisees. The sports metaphor is fitting because it provides a clear picture of the different roles that coaches and referees play, placed within the context of the offenders as players and the game of desistance (Lovins et al., 2018). Referees are removed from the players, and their role is to enforce the rules of the game; referees provide oversight but not assistance to the players. They are involved in the game playing, but only tangentially affect the winning of the game. In contrast, coaches are involved and interact with players, and their role is to help the players win the game using various strategies and tools. They play an indirect yet powerful role on the winning of the game by enhancing the skills of the player. Lovins et al. (2018) identified six attributes of the PO “coach,” as compared to those of the PO “referee,” that contribute to offender success. For each dimension, Lovins et al.

(2018) made comparisons between the PO as coach and the PO as referee. The six dimensions are presented in Figure 1 and discussed in the following sections.

The first three attributes pertain to the internal qualities of the PO, specifically the PO's job-related perceptions concerning their primary job function, the professional expertise required for the position, and the professional response to probation/parole violations (Lovins et al., 2018). The three job perceptions differ for the PO as coach and the PO as referee. For the PO as coach, the primary job role is to "win" the PO coach views each supervisee "as an opportunity for a win or loss - for success or failure" and coaches them in ways that ensure for their success (Lovins et al., 2018, p. 14). Because the PO as coach is focused on offender success, they place more value on gaining professional expertise in changing offender attitudes and behavior than on control and enforcement (Lovins et al., 2018). Moreover, the PO as coach responds to offender violations with an attitude of creating offender accountability, helping the offender to learn from their mistakes. Because the PO as coach is focused on offender changes and helps the offender to change, they are likely to create a winning outcome.

The PO as referee contrasts that of the PO of coach. The PO as referee views their primary role as enforcing rules (Lovins et al., 2018). Because the PO as referee sees their role as that of enforcer, they place more value on professional knowledge and expertise about rules, penalties, and what to do when an offender violates their parole or probation. As such, the PO focuses on offender's potentially criminal behavior, ignoring potentially prosocial changes in the offender. Because the PO as referee focuses on rule

infringement, they are not involved in building the capacity of the offender and as such, “does not have a win-loss record” (Lovins et al., 2018, p. 14).

While the first three dimensions concerned internal attributes, the last three dimensions focus on the interpersonal qualities of the PO as coach (or referee) thought to reduce offender recidivism. These three dimensions, the PO’s knowledge of the offender’s strengths and weaknesses, relationship with the offender, and feedback given to the offender, are the focus of the current study. The three PO interpersonal dimensions are driven by cognitions regarding the perceived roles and responsibilities of the PO, with the PO as coach behaving differently than the PO as referee (Lovins et al., 2018). Because the PO as coach is invested in behavioral change, they recognize the importance of gathering knowledge on the strengths and weakness of the offender and uses this information to make the best “game plan” for the offender (Lovins et al., 2018). The PO as coach recognizes the positive benefits of building a supportive and trustworthy relationship with the offender, and the PO as coach uses positive reinforcement techniques, including support and encouragement, to develop and enhance the offender’s skills needed for success.

The interpersonal characteristics of the PO as referee differ from those of the PO as coach. The primary role of the PO as referee is to “know the rules and enforce them,” as such, the PO as referee is concerned about gaining knowledge on the offender’s rule-breaking and violation history (Lovins et al., 2018, p. 15). In the role of enforcer, the referee does not need to know the strengths and limitations of the offender; the PO as referee only needs to respond to the offender’s rule-breaking behavior. Moreover, the PO

as referee does not need to develop a relationship with the offender to perform their role of rules enforcer. In fact, the PO as referee avoids building a relationship with the offender because it “might bias their ability” to equitably enforce the rules (Lovin et al., 2018, p. 15). Ultimately, the offender as player receives minimal direction from the PO as referee; the PO as referee only assists the players in playing a “fair game” but does not help the offender to win the game (Lovin et al., 2018).

The premise of this study was built on the three interpersonal dimensions of PO as coach: the PO’s knowledge of the offender’s strengths and limitations, a positive relationship between the PO and offender, and the PO’s use of positive feedback to build offender skills. Lovins et al. (2018) provided elaboration on the three interpersonal dimensions of the PO as coach and their effects on offender behavioral changes, using psychological and criminal justice theoretical postulates to support their arguments. The knowledge dimension has a “parallel skill” of using risk assessments to identify the strengths and limitations of the offender because they provide information on which to build the skills of the offender, reducing the likelihood of recidivism (Lovins et al., 2018, p. 15). Lovins et al.’s relational dimension imparts positive benefits on offender outcomes through a trusting and supportive PO–offender relationship that acts as social control, provides support and opportunities for modeling positive behavior, and enhances offender self-efficacy, all of which reduce recidivism. While positive reinforcement is often a component of a positive relationship, Lovins et al. identified it as a separate dimension due to its importance in affecting behavioral change. As stated by Lovins et al.:

... strategies rooted in punitive, deterrence-oriented principles have a poor record of achieving reduced recidivism ... nowhere in the literature on effective coaching is there any recommendation to use punishment or negativity as a means of behavioral change ... coaching [focuses] on the use of strengths and positive emotions to effect change. (p. 16)

The POC theory is gaining recognition in the criminal justice and probation communities, who have embraced and advocated for the development and implementation of training and programs built around it (National Institute of Corrections, 2019; Smith, 2018). National and state organizations have provided funding support for POC-driven initiatives and/or implemented professional development training and initiatives that are founded on the POC theory principles (National Institute of Corrections, 2019; Smith, 2018). While much of the applied work surrounding the POC is too new to yet produce results, there is some empirical evidence supporting its theoretical premise concerning the reduction of offender recidivism rates (Latessa & Schweitzer, 2020; Williams & Schaefer, 2020). The current study was among the first to test the theoretical postulates that the PO's knowledge of the offender's strengths and limitations, supportive relationship with the offender, and use of positive reinforcement through supportive communication contribute to reduced recidivism rates in female offenders.

Literature Review

Probation and Parole Officers

The pre- and post release community supervision systems of probation and parole are critical components of the U.S. justice system. At the end of 2018, almost 6.5 million U.S. adults were under probation or parole, resulting in one per every 58 adults in the United States being under community supervision (Kaeble & Alper, 2020). Of the U.S. persons under community supervision, approximately 16% are female (Kajstura, 2019; The Sentencing Project, 2020). Probation is court-ordered community supervision in place of incarceration; in contrast, parole is conditional community supervised release “following a term in state or federal prison” (Kaeble & Alper, 2020, p. 1). There are approximately 1 million female offenders under community supervision, with most (75%) on probation (The Sentencing Project, 2020).

In the 70 years since their inceptions in the 1940s and 1950s, the U.S. probation and parole systems have shifted back and forth in their purpose, vacillating between one advocating for the punishment and control of offenders to one focused on offender rehabilitation, treatment, and successful reintegration into the community (Brady, 2020; Phelps, 2020). Both the U.S. parole system, which was adopted nationwide by all states by 1942, and the probation system, in use by all states by 1956 (Hsieh et al., 2015), were established with the intent of offender rehabilitation and providing “a less punitive, more constructive alternative” to incarceration, in the case of probation, or long incarceration periods, in the case of parole (Brady, 2020, p. 1). However, the rehabilitation perspective guiding the system through the 1950s and 1960s shifted in the 1970s when the

rehabilitative approaches were criticized for having little effect on reducing offender recidivism rates (Hsieh et al., 2015; Phelps, 2020). The “get tough” perspective of community supervision continued into the 1990s, likely a result of conservative federal policies emphasizing punishment and an increasing number of probation/parole populations, especially violent criminals at greater risk for reoffending (Hsieh et al., 2015; Wilson et al., 2020).

The historical shifting of the guiding perspectives of probation and parole have resulted in changing and often conflicting roles and responsibilities of POs over the past 70 years (Hsieh et al., 2015; Wilson et al., 2020). During the 1950s and 60s, POs were charged with providing counseling and services, including assistance with employment and housing, to their supervisees, and study findings from the time documented that POs “were more in favor of rehabilitation and were less in favor of a punishment philosophy in community corrections” (Hsieh et al., p. 21). However, starting in the 1970s, the roles and responsibilities of POs began to move to one of law enforcement (Hsieh et al., p. 21); this shift corresponded to the substantial increases in the number of individuals under community supervision (Brady, 2020). In 1980, the criminal justice system served less than 2 million persons under community supervision, but by 1990, the number of persons under probation or parole more than doubled, increasing to 5 million (Brady, 2020).

The emphasis on law enforcement was reflected in state statutory role/responsibility requirements of POs in the 1990s, with POs’ rehabilitation tasks comprising a minority of their overall responsibilities (Hsieh et al., 2015; Wilson et al., 2020). In their review of the statutory tasks required of POs in all 50 states, Burton et al.

(1992) reported that few states mandated that POs provide general support/counseling services to offenders (15 states), referrals for offenders' medical, mental health, or social needs (7 states), or employment assistance (2 states). Indeed, the primary roles of POs in the 1990s as mandated in over 80% of state statutes were to enforce supervision requirements, monitor offender behavior, and "maintain contact with courts" (Hsieh et al., 2015, p. 21). The organizational emphasis on law enforcement was reflected in the opinions and behaviors of POs at the time (Hsieh et al., 2015; Wilson et al., 2020). As noted by Hsieh et al. (2015, p. 21), studies published in the 1990s and early 2000s reported that "the majority of POs at the time embraced the law enforcement model" and were twice as likely to engage in law enforcement activities than rehabilitation efforts.

Starting in the late 1990s, in response to a growing body of theoretical work on effective correctional treatment practices, community supervision systems shifted once again (Hsieh et al., 2015; Wilson et al., 2020). The roles of POs became more balanced, moving to a case management model where officers functioned as both law enforcers and social workers integrating control and surveillance practices with counseling and treatment (Hsieh et al., 2015, p. 22). While probation and parole officers had different supervisory responsibilities, under the case management approach, they both had the same "dual roles" of law enforcer and social worker (Andersen & Wildeman, 2015, p. 630). As law enforcers, POs must ensure that the offenders follow and comply with the conditions of their probation or parole, including committing no new offenses (Andersen & Wildeman, 2015). In their social worker role, POs help offenders to successfully reintegrate into society through case management, counseling, and service planning,

including connecting clients to health, mental health, employment, and social resources and support services (Andersen & Wildeman, 2015).

The case management approach was largely informed by Andrew's (2001) RNR model (Andersen & Wildeman, 2015). The RNR model is considered "the most influential model for the assessment and treatment of offenders" (Bonta & Andrews, 2007, p. 4), and there is substantial empirical evidence that the implementation of case management practices based on the RNR model significantly reduce recidivism rates among male offenders (Serin & Lloyd, 2017). The RNR model is based on three principles, namely that. rehabilitation efforts should be (a) matched to the level of offender risk to reoffend; (b) informed by assessment findings of the offender's criminogenic needs, defined as risk factors associated with criminal behavior; and (c) should involve responsivity elements using social cognitive learning theory strategies (Andrews, 2001, Serin & Lloyd, 2017).

With the restructuring of the U.S. community supervision system starting in the early 2000s to incorporate programs and services aligned with the RNR model, POs were increasingly assigned case management tasks (Rizer et al., 2020). The roles and responsibilities included (a) aligning the level of program intensity to the level of offender risk (risk principle, providing the most intensive services to offenders most at risk); (b) utilizing risk assessment instruments and being able to interpret evaluation findings concerning offender criminogenic needs; and (c) providing responsive and tailored interventions founded on social cognitive learning theory concepts, including modeling, positive reinforcement, and enhancement of self-efficacy (Bonta & Andrews,

2007). Since 2002, state statutes have expanded to increasingly include case management functions for POs, and, as of 2015, 56% of states have integrated case management functions as part of the roles and responsibilities of POs (Bradner et al., 2020; Hsieh et al., 2015).

The adoption of RNR-aligned case management paradigms, which emphasized the importance of a “warm, respectful, and collaborative” PO offender relationship (Bonta & Andrews, 2007, p. 4), necessitated changes in the PO offender relationship (Hsieh et al., 2015; Brady, 2020). POs shifted from having interactions with their supervisees to building collaborative relationships with them (Hsieh et al., 2015; Wilson et al., 2020). Effective interpersonal skills on the part of the PO were necessary to not only the effective evaluation and subsequent development of targeted interventions for each offender but were required to build a collaborative and trusting alliance with offenders (Hsieh et al., 2015; Rizer et al., 2020). The female offender’s relationship with the PO garnered increased empirical attention as the number of women involved in the criminal justice system escalated in the 1980s, leading to the emergence of a new body of literature on gendered pathways to recidivism (Morash et al., 2015; Okonofua et al., 2021).

Female Offenders and Gendered Pathways to Recidivism

Since 1980, U.S. society has experienced an “imprisonment binge” among females, who are the fastest-growing population in the criminal justice system (National Resource Center on Justice Involved Women, 2018, p. 1). The number of women incarcerated in state and federal penal institutions has increased at an astonishing rate

over the past 40 years, growing in number from 26,378 in 1980 to 225,455 in 2019 (The Sentencing Project, 2020). During these 40 years, incarceration for women has outpaced those for men by over 50% (National Resource Center on Justice Involved Women, 2018). The overwhelming majority of 1.3 million criminal justice-involved women are the approximate million under community supervision, with 72% under probation and 10% under parole (The Sentencing Project, 2019).

The increasing numbers of female offenders have led to the empirical examination of differences between male and female offenders concerning types of offenses and sentencing terms. Researchers have found that women are less likely to commit violent crimes, especially crimes involving weapons, as compared to men (Johnson, 2015; McKendy & Ricciardelli, 2019; The Sentencing Project, 2019, 2020). The primary offenses committed by women are fraud, property crimes, and drug-related offenses (National Resource Center on Justice Involved Women, 2018; The Sentencing Project, 2019, 2020). In fact, harsher penalties for drug-related crimes have largely contributed to the increase of incarcerated women, with drug-related offenses comprising between 25% to over 35% of all offenses committed by women (National Resource Center on Justice Involved Women, 2018; The Sentencing Project, 2019, 2020). The types of offenses committed and associated with the differing sentencing terms for women and men, with women having an average sentence of 30 months and men averaging around 47 months (National Resource Center on Justice Involved Women, 2018; The Sentencing Project, 2019, 2020). There is consistent empirical evidence that women commit different crimes and are incarcerated for shorter periods as compared to

men (Johnson, 2015; McKendy & Ricciardelli, 2019; The Sentencing Project, 2019, 2020).

The dramatic upsurge in the female offender population has also led to the examination of gender differences in recidivism rates. In its broadest terms, recidivism refers to a reoffense, rearrest, and/or reincarceration after release from prison/jail within a specific time frame (e.g., 1 year, 2 years, or 3 years post release) (Saris et al., 2016). A higher percentage of male federal offenders tend to reoffend (70%), be rearrested (49%), and/or be reincarcerated (39%) within 1 year of release as compared to female federal offenders, 48% of whom re-offend, 31% of whom are rearrested, and 22% of whom are reincarcerated 1 year after release from prison (Pryor et al., 2017). The gender differences in recidivism rates become smaller between two to five years post release, and by 5 years post release, 68% of female offenders and 78% of male offenders recidivate (National Resource Center on Justice Involved Women, 2018). Despite the gender differences in recidivism rates, the rates of recidivism among women offenders are nonetheless disconcertingly high and indicative of the multiple obstacles and problems women face once as they reintegrate back into society (Johnson, 2015; McKendy & Ricciardelli, 2019).

In response to the high rates of recidivism among female offenders, scholars have called for an increased empirical understanding of the gendered pathways to recidivism (Bell et al., 2019; Morash et al., 2016, 2019; Smith et al., 2020a, 2020b). Gendered pathways scholars posit that relationships are central to women's sense of identity and worth, noting that adverse childhood experiences, including abuse, trauma, and

maladaptive relationship factors, often play key roles in determining women's criminal attitudes and behaviors (Farmer, 2019; O'Meara et al., 2020; Nuytiens & Christiaens, 2016; Welsh, 2019). As stated by Farmer (2019, p. 4).

Relationships are the central, organizing feature in women's development ...
women develop a sense of self and self-worth [from] connections with others ...
Connections are so crucial for women that women's psychological problems can
be traced to disconnections or violations within relationships – whether in
families, with personal acquaintances, or in society at large.

Additional findings from studies suggest that criminal behavior among women can best be understood within the context of relationships. DeHart (2018), in their seminal study on female offender typologies, identified five distinct groups of female offenders, all of which had a relational component. These typologies were (a) “aggressive career offenders” who often engaged in criminal activities with a male partner; (b) females who committed offenses in self-defense, often related to domestic violence; (c) females who abused children; (d) “substance-abusing women experiencing intimate partner violence;” and (e) “social capital offenders,” who often committed offenses with criminal peers and partners (DeHart, 2018, p. 1461). As documented in (DeHart's, 2018) study, criminal behavior among women is rarely a solo activity, and it is instead driven by relational factors that are maladaptive and unhealthy.

Gendered pathways research has documented that while males and females have some shared risk factors for criminality; for example, both men and women who are younger and commit violent offenses are more likely to recidivate (Bell et al., 2019).

However, there are notable gender differences concerning relationship-based risk and protective factors for recidivism (Bell et al., 2019; Morash et al., 2015; Zettler, 2019).

While study findings have shown that proximity to negative or positive family members, peers, and spouse/partner, most notably those who have antisocial personality attributes and substance abuse problems, contributes to higher recidivism rates for both male and female offenders, these relationships tend to be more pronounced for female offenders (Bell et al., 2019; Huebner & Pleggenkuhle, 2015; Zettler, 2020). Being married and having children, in contrast, tend to reduce recidivism among women but not men (Bell et al., 2019; Zettler, 2020). The strongest findings in the gendered pathways literature concern are that strong social bonds and higher levels of instrumental and emotional support from family, peers, and spouse/partner tend to be more significantly predictive of lower recidivism rates for female as compared to male offenders (Bell et al., 2019; Scott et al., 2016; Solinas-Saunders & Stacer, 2017; Taylor, 2015; Zettler, 2020).

The PO and Female Offender Relationship

The relationship with the PO may be especially important to female offenders (O'Meara et al., 2020; Sturm et al., 2021). As a woman's sense of identity and self-worth is largely shaped by her relationships with others (Farmer, 2019), a female offender's healthy and supportive relationship with her PO is critical to her community reintegration post release success (Morash et al., 2016; Smith et al., 2020a, 2020b; Stone et al., 2018; Sturm et al., 2021). The PO can act as a positive role model, be a source of trust, provide emotional and social support, and link the offender to supportive networks and resources, all of which can contribute to a lower likelihood of recidivism (Morash et al., 2016;

Okonofua et al., 2021; Stone et al., 2018). While a minimal body of literature on the PO female offender relationship exists, findings from these studies have aligned with theoretical importance noted by Lovins et al. (2018) regarding the importance of relationship factors among the PO and female offender, inclusive of the POs' knowledge of female offenders' strengths and weaknesses, PO offender relationship qualities, and the POs' use of positive reinforcement techniques (Irwin et al., 2018; Morash et al., 2015, 2016; Stone et al., 2018).

POs' Knowledge of Female Offenders' Strengths and Limitations

Due to the links between the POs' knowledge of female offenders' strengths and limitations and the use of recidivism risk assessments (Lovins et al., 2018), most studies have been evaluative, examining the effects of the POs' use of assessments and subsequent decision-making on female offenders' outcomes (Geraghty & Woodham, 2015; Irwin et al., 2018). In their review of the literature of gender-responsive literature, Irwin et al. (2018) provided a list of recommendations for effective and meaningful gender-responsive community supervision for female offenders. One highly recommended activity is conducting a risk and needs assessment with the offender, helping the PO to identify the offender's specific mental health and health needs (Irwin et al., 2018). Additional recommendations are to (a) assistance for housing and employment, to ensure and "promote the safety and security" of offenders; (b) coordinate social service systems; and (c) identify risks for "future victimization" and provide "social support and protection" (Irwin et al., 2018, p. 15). Critics of risk assessments instruments for offenders have argued that such tools may not adequately capture the

risks that “affect women in unique and personal and social ways,” such as relationship factors, victimization, trauma, lack of support, and family issues (Geraghty & Woodham, 2015, p. 28).

Geraghty and Woodman (2016) provided an excellent summary of the applicability of recidivism risk assessments used with male offenders to female offenders in their comprehensive review of the female offender needs assessment evaluation literature. The authors’ systematic review yielded 15 studies on 8 assessments published since 2000, with some studies including the assessment of 2 or more instruments (Geraghty & Woodman, 2015). The most utilized assessment was the Level of Service Inventory (LSI), with eight of the 15 studies examining the predictive validity of the LSI in female offenders. The LSI was also found to have the highest degree of predictive validity concerning recidivism in female offenders. The Historical Clinical and Risk Management Scale and the Psychopathy Checklist-Revised were used in four studies, respectively, and Geraghty and Woodman (2015) found these assessments to have moderate degrees of predictive validity of recidivism. The remaining assessment tools used in studies were the Correctional Offender Management Profiling for Alternative Sanctions, Child and Adult Taxon Scale Self-Report, Offender Group Reconviction Scale (OGRS), Risk Assessment Scales, and the Violence Appraisal Guide. None of these assessments were found to have sound predictive validity for female offender recidivism, despite showing validity in studies with male offender samples (Geraghty & Woodman, 2015).

There have been additional evaluations of risk assessments utilized often with male offenders. Skeem et al. (2016) tested the predictive validity of the Post-Conviction Risk Assessment (PCRA) with over 14,000 federal offenders. The PCRA is a risk assessment instrument that assesses risks in five domains: criminal history, social networks, substance abuse, and prosocial/antisocial attitudes (Skeem et al., 2016). The researchers found while PCRA scores were significantly predictive of re-arrest 1-year post release for both male and female offenders, statistical models overestimated recidivism rates for female offenders (Skeem et al., 2016). Walters (2020) evaluated the predictive validity of the Lifestyle Criminality Screening Form; frequently used to assess recidivism risk among substance abusing offenders. In their study with 616 men and 195 women on parole in a northern American state, Walters (2020) found that the Lifestyle Criminality Screening Form scores were predictive of 3-month recidivism rates for males but not females. The equivocal findings found by Geraghty and Woodman (2015), Skeem et al. (2016), and Walters (2020) raise concerns about the validity, reliability, and applicability of risk assessment tools developed on male offenders to the female offender population.

More common are evaluation studies specific to violent female offenders (Britt et al., 2019; Walters & Lowenkamp, 2016). Walters and Lowenkamp (2016) tested the predictive validity of the Psychological Inventory of Criminal Thinking Styles (PICTS) in a sample of over 80,000 male and over 14,000 female offenders, examining the relationships between PICTS scores and recidivism at 6 months, 12 or more months, and 24 or more months post release. The research findings showed that higher PICTS scores,

indicative of criminal cognitions, predicted recidivism at all three time-points for both males and females (Walters & Lowenkamp, 2016). Britt et al. (2019) examined the predictive validity of the Iowa Violence and Victimization Instrument for female parolees' recidivism. The authors found that the Iowa Violence and Victimization Instrument had usefulness in predicting violent offenses but not a misdemeanor or drug offenses in a sample of 200 female offenders (Britt et al., 2019). The findings from Walters and Lowenkamp (2016) and Britt et al. (2019) demonstrated that the assessment of specific risks (e.g., sexual risk-taking, violent attitudes, and behavior) may have predictive validity concerning recidivism, especially concerning violent offenses, for female offenders.

There is remarkably little research outside of the PO training evaluation and assessment literature that has examined the effects of the POs' knowledge of offenders' strengths and limitations. The current study is primarily informed by Morash et al.'s (2015) study, who examined the link between the number of relevant issues discussed with the offenders and recidivism, operationalized as the number of arrests and convictions two years post release (Wave 2 data), in a sample of 226 female offenders supervised by 55 POs in Michigan. Correlational analyses revealed no significant associations between the number of issues discussed and the number of arrests and convictions in female offenders. It should be noted that this study will utilize Morash et al.'s (2016) measure of the number of issues discussed with the offender; however, the current study focus is recidivism 3 years post release.

POs' Use of Positive Reinforcement/Feedback With Female Offenders

Positive reinforcement techniques used by POs and their effects on offender recidivism rates have received some empirical attention, although studies differ on the operationalization of positive reinforcement. Most studies have examined positive reinforcement communication styles and techniques; there is less work on POs' use of positive reinforcement behaviors. These studies are reviewed in the following sections.

POs' Use of Reinforcing Behavior. There has been little examination of the effects of the POs' use of positive reinforcement techniques, with this construct being operationalized in different ways. Morash et al. (2019) examined the relationships between PO supervision intensity and the use of treatment (reinforcing) and punishment responses made by POs in response to offenders' drug and non-drug violations and three-year recidivism rate (coded as *yes* or *no*) in a sample of 385 women offenders. Findings from (Morash et al.'s, 2019) study revealed that a higher number of treatment (reinforcing) responses made by the PO concerning drug violations was significantly predictive of lower recidivism rates while a higher number of punishment responses concerning drug violations was significantly predictive of higher recidivism rates. In a follow-up study by Smith et al. (2020a), using Morash et al.'s (2015) data sets, the researchers found that female offenders with POs having a more authoritarian and punishing supervision style had a significantly higher likelihood of being rearrested within two years post release. The findings from (Morash et al.'s, 2019) and (Smith et al.'s, 2020) studies indicate that PO's use of positive reinforcement versus punishment techniques have differing influences on female offenders' recidivism.

One of the most rigorous studies to date on the POs' use of positive reinforcement techniques and female offender recidivism was conducted in Okonofua et al.'s (2021) randomized field experiment testing the effectiveness of an empathic intervention for female offenders. In (Okonofua et al.'s, 2021) experiment, 216 POs, stratified by race and gender, were assigned to an empathic intervention condition or a control condition (where the POs learned about use of technology for their positions). The empathic intervention focuses on POs' officers use of positive reinforcement techniques (e.g., using empathic language, encouraging, and valuing offenders' perspectives, using positive messages), which aims to "curb recidivism by leveraging [POs'] psychological strategies" emphasizing the constructive value of the PO/offender relationship (Okonofua et al., 2021, p. 2). The evaluation of the empathic intervention was conducted in the field, with researchers examining the probation and parole violation and 10-month recidivism rates of all female offenders under the supervision of the POs involved in the study (Okonofua et al., 2021). Study findings showed that the violation and recidivism rates of female offenders supervised by POs in the empathic intervention were significantly lower than the rates of female offenders supervised by POs in the control group (Okonofua et al., 2021). (Okonofua et al.'s, 2021) findings suggest that the PO's use of positive reinforcement via empathic interactions during supervision imparts protective benefits for the female offender.

POs' Use of Supportive Communication. Supportive communication on the part of the PO can act as a positive reinforcement mechanism to promote prosocial attitudes and behaviors of female offenders (Cornacchione et al., 2016; Johnson, 2015). In their

narrative inquiry, Johnson (2015) explored the PO female offender relationship dynamic with 60 female parolees in the South. Qualitative thematic findings revealed the importance of women offenders' positive rapport with their POs, leading (Johnson, 2015) to conclude that supportive communication from the PO acted as a form of accountability for the women's community behavior and helped them avoid using drugs and criminal peers, thus reducing recidivism (Johnson, 2015). Cornacchione et al. (2016) also conducted a qualitative study, exploring female offenders' perceptions of memorable messages from their POs, framed by the authors as a type of positive reinforcement. Memorable messages were defined as memorable verbal exchanges that are perceived as having "a major influence" on the person, and as such, act as motivating factors for behavioral change (Cornacchione et al., 2016, p. 61). The findings from (Johnson, 2015) and (Cornacchione et al., 2016) suggest that positive communication, including the use of encouraging words and memorable messages, may impart numerous benefits for women offenders.

The reinforcing qualities of PO offender communication were furthered explored by Cornacchione and Smith (2017) in their mixed-method study with 402 women on probation or parole in Michigan. The authors explored female offenders' motivating factors for engaging in communication with their PO, providing additional information on the types of issues for which social support and advice were sought (Cornacchione & Smith, 2017). The qualitative element of the study involved thematic analyses of data from semi-structured interviews conducted with the offenders (Cornacchione & Smith, 2017).

Results from Cornacchione and Smith (2017) indicated that the primary reasons for the women's desire to engage in a conversation with their PO were best classified into two main goals, best classified as the avoidance of punishment versus the seeking of reward. The first purpose was to inform and/or 'come clean with' the PO on some issue or infraction, often to avoid punishment (Cornacchione & Smith, 2017). The second purpose was to elicit social support, inclusive of emotional, informational, tangible, and general support, from the PO (Cornacchione & Smith, 2017). As such, the motivating factors were either to avoid punishment or to receive support. Qualitative findings also revealed the most common topics of conversation: (a) post release needs, especially concerning housing, finances, transportation, and employment; (b) concerns regarding relapsing, especially concerning substance use and related criminality; (c) mental health concerns; and (d) relational issues, including contact with criminal peers, negative intimate relationships/domestic abuse, and issues concerning family and children. Based on (Holmstrom et al., 2017) and (Cornacchione and Smith's, 2017) findings, POs provide an important resource for women seeking clarity and support regarding numerous community reintegration, personal/relationship, and social support needs. Supportive communication with the PO serves as an effective positive reinforcement tool, helping women achieve their post release goals.

Holmstrom et al. (2017), referencing social support theory and literature, noted the numerous benefits of supportive communication but also highlighted a lack of empirical examination as to how the differing types of PO supportive communication are perceived as reinforcing among female offenders. The study (Holmstrom et al., 2017)

explored perceptions of PO supportive communication, focusing on types and effects, in their mixed-method study with 284 female offenders in Michigan. (Holmstrom et al., 2017) conducted thematic analyses of data gathered in interviews to identify the most common types of PO communication support reported by the offenders and the perceived effects of these types of support. The most common type of PO communication support reported by the women was informational support, inclusive of providing referrals and offering advice; followed by emotional support, exemplified by demonstrations of sympathy, empathy, and understanding, listening, and encouragement, and esteem support (Holmstrom et al., 2017). Less common were tangible support and network support. Thematic findings further revealed that informational, emotional, and esteem support acted as positive reinforcers by influencing positive behavioral, psychological, and relational changes on the part of the offenders (Holmstrom et al., 2017).

Roddy et al.'s (2019) study delved into the concept of communicated social support and its positive reinforcement effects in their qualitative study with 355 female offenders in Michigan. While (Roddy et al.'s, 2019) study was not specific to recidivism outcomes, focusing instead on post release needs regarding employment, the study findings nonetheless provide pertinent information on the types and effects of supportive communication with PO. Data were collected from interviews conducted with offenders and analyzed using thematic analysis techniques. While numerous types of social support were identified, the types varied in frequency and importance (Roddy et al., 2019). The most frequently reported type of supportive communication was informational support, followed by emotional and esteem support; in contrast, tangible support was infrequent

(Roddy et al., 2019). Additional qualitative findings showed that informational, emotional, and esteem support imparted numerous positive effects, including a sense of validation, feelings of encouragement, and increased self-efficacy (Roddy et al., 2019).

POs' Use of Conversational and Conformity Communication Orientations.

Smith et al. (2016, 2019, 2020b) examined PO supportive communication using Koerner and Fitzpatrick's (2002) family communications patterns theoretical framework, differentiating between the positive benefits of the conversational communication orientation and the punitive elements of the conformity orientation of communication. The conversational orientation is interactive, exemplified by open discussion of thoughts, feelings, and ideas and collaborative "participation in decision making" (Smith et al., 2016, p. 507). The conversational communication orientation acts as positive reinforcement, influencing both PO and offender behavior (Smith et al., 2019). Moreover, the conversational communication orientation is aligned with communicated social support (Smith et al., 2019). In their study with 258 POs in Michigan, Smith et al. (2019) found that, within the PO offender social milieu, the PO's use of a conversational communication orientation was significantly associated with the PO's use of informational and emotional support, which in turn contributed to offenders' positive affect, wellbeing, and higher self-efficacy for post release success. While the PO's use of conversational communication techniques imparts benefits upon the offender, the conformity communication orientation is punitive in nature. (Koerner & Fitzpatrick, 2002; Smith et al., 2016). Conformity communication is one-directional, involving an authority figure who "makes the decisions" and a subordinate who follows them (Koerner

& Fitzpatrick, 2002, p. 40). This type of communication stresses the importance of “uniformity of beliefs ... conformity [and] conflict avoidance (Koerner & Fitzpatrick, 2002, p. 40). Conformity communication may act as a punishment; within the context of the PO and offender, such conversation may lead to emotional stress, distancing, and lower self-efficacy for post release success (Smith et al., 2016).

The studies by Smith et al. (2016, 2020b) provide information on the communication patterns between POs and offenders and their effects on offender outcomes. (Smith et al., 2016), in a study using data from 250 female offenders on probation or parole, explored the direct and indirect effects (i.e., through offender emotional reactance and self-efficacy) of PO conversational versus conformity communication style on recidivism, operationalized as the number of drug-related violation 18 months post release. Smith et al. (2016) conducted structural equation modeling to test their complex model. Findings from the study showed a direct significant effect of PO conversational style on a lower number of drug violations; however, PO conformity conversational style was not significantly associated with the number of drug violations (Smith et al., 2016). In a related study with 312 female offenders in Michigan, (Smith et al., 2020b) found correlational evidence between the POs’ use of conversational style and offender self-efficacy and prosocial attitude as well as the use of the POs’ use conformity conversation style and a higher number of technical violations and arrests committed by the offender.

Roddy and Morash (2020) examined the direct and indirect (i.e., through the mediator of psychological reactance) effects of PO conversational versus conformity

conversation style on female offenders' job-seeking self-efficacy. In their study with 96 POs and 130 female offenders in Michigan, (Roddy and Morash, 2020) utilized both PO self-report and offender reports of the PO's conversational and conformity communication orientations, examining their linkages to offender psychological reactance and job-seeking self-efficacy. Findings from a series of mediated regression analyses confirmed the study hypotheses regarding the positive benefits of conversational communication and the negative impact of conformity communication on offender outcomes (Roddy & Morash, 2020). Both PO and offender reports of PO conversational style of communication were significantly predictive of higher levels of offender job-seeking self-efficacy, while PO and offender reports of PO conformity communication style predicted low job-seeking self-efficacy among offenders (Roddy & Morash, 2020). Regression findings further showed that offender psychological reactance mediated these relationships (Roddy & Morash, 2020). That is, the POs' use of a conversational communication orientation was significantly predictive of lower levels of offender psychological reactance, which in turn predicted higher job-seeking self-efficacy (Roddy & Morash, 2020). Opposite findings were reported for the POs' use of the conformity communication orientation (Roddy & Morash, 2020). Findings from (Roddy & Morash, 2020) emphasized the benefits of the PO's use of conversational communication on both emotional and self-efficacy outcomes in offenders.

Findings across studies were equivocal regarding the non-significant (Smith et al., 2016) versus negative (Roddy & Morash, 2020) effects of POs' use of the *conformity* communication orientation on female offender attitudes and behaviors. However, there

was consistent evidence from all three studies that the POs' use of the *conversational* communication orientation not only contributed to lower recidivism rates but also contributed to a more positive sense of self among female offenders (Roddy & Morash, 2020; Smith et al., 2016, 2020b). This study expanded upon this body of literature to examine the positive reinforcing effects of the POs' use of a conversational communication orientation on recidivism, operationalized as having a new arrest or conviction three years post release, a topic that has yet to be examined in the literature.

POs' Supportive Relationships With Female Offenders

The examination of the female offender's supportive relationship with her PO and subsequent recidivism and related outcomes has received some empirical attention. Vidal et al. (2015) utilized data collected as part of a 5-year longitudinal study on adolescent development with 140 female juvenile parolees between the ages of 17-20 (at Time 1) and 20-23 (at Time 3) in Virginia. (Vidal et al., 2015) examined the effects of two elements of a positive relationship with PO, interpersonal sensitivity, and professionalism, as reported by the offenders at Time 1, on recidivism, operationalized as having committed a violent offense 3 years post release (Time 3). There was an additional examination as to whether parental support moderated between the two PO offender relationship variables to influence recidivism (Vidal et al., 2015).

Findings from Vidal et al.'s (2015) showed that a perceived positive interpersonal and professional relationship with the PO was significantly predictive of recidivism (Vidal et al., 2015). That is, the more positive the interprofessional and professional elements of the relationship with the PO were perceived, the less likely the women were

to commit a violent offense 3 years post release (Vidal et al., 2015). Moderation regression analyses further revealed that these relationships were strongest for female offenders who had low parental support (Vidal et al., 2015). The findings from (Vidal et al., 2015) suggested that a positive relationship with the PO may be beneficial, especially for female offenders who lack support from their parents.

Morash et al. (2015, 2016) has conducted most of the empirical work on the PO offender relationship, linking it to self-efficacy and recidivism outcomes. The first study by Morash et al. (2015) was conducted utilizing data from 402 female offenders from the first two waves of the Probation/Parole Officers Interactions with Women Offenders study. The authors examined the effects of PO supportive and punitive relationships singly and in interaction with offender vulnerabilities (i.e., depression and substance use) on offender's self-reported anxiety, psychological reactance (i.e., anger and counterargument when faced with a threat to freedom), and self-efficacy to avoid a criminal lifestyle (Morash et al., 2015). Regression findings revealed significant effects of supportive and punitive relationship styles on offender anxiety, with a supportive style predicting decreased anxiety and a punitive style predicting increased anxiety (Morash et al., 2015). The researchers further found that a supportive relationship style – but not a punitive relationship style - was significantly predictive of reduced psychological reactance (Morash et al., 2015). Moderation for regression findings showed that these relationships were strongest for women having a higher level of vulnerabilities (Morash et al., 2015). (Morash et al.'s , 2015) findings provide evidence that a positive

relationship with the PO imparts numerous benefits while a punitive relationship with the PO tends to be ineffective in producing positive outcomes among offenders.

While recidivism was examined only tangentially in (Morash et al.'s, 2015) study – operationalized as self-efficacy for avoiding a criminal lifestyle – it was the focus of (Morash et al.'s, 2016) study. (Morash et al., 2016) examined the linkages between the POs' supportive relationship, measured using the DRI supportive subscale (Skeem et al., 2007), and offender recidivism, operationalized as two variables, the number of arrests and number of convictions at 2 years post release (Wave 2 data), in a sample of 226 female offenders supervised by 55 POs in Michigan. The authors also examined if the POs' relational styles influenced recidivism indirectly by influencing the offender's anxiety levels (Morash et al., 2016). Results from correlation versus regression analyses revealed different findings (Morash et al., 2016). Correlational results showed that a perceived supportive relationship with the PO was not significantly associated with neither the number of arrests nor the number of convictions at 24 months post release (Morash et al., 2016). However, moderation regression analysis findings showed that women's supportive relationships with their POs influenced recidivism indirectly, by reducing offenders' anxiety levels (Morash et al., 2016). The findings from (Morash et al., 2015, 2016) demonstrated that a positive relationship with the PO may have indirect benefits on recidivism by reducing offenders' psychological reactance and anxiety.

There has been contemporary examination of the effects of a trusting PO/offender relationship on female offender outcomes. (Sloas et al., 2020), in a study with 303 male (69%) and female (31%) offenders, found a significant relationship between a more

trusting working alliance between the PO and offender and fewer numbers of parole/probation violations for both genders. (O'Meara et al., 2020) identified female offenders' trusting relationships with their POs as a primary contributor to the women's post release success. (Mueller et al., 2021), utilizing an archival data set from over 300 female offenders containing data on the PO offender relationship, found that the women's positive and encouraging relationships with their POs engaged in higher rates of rule compliance during supervision. (Sturm et al., 2021), examined the long-term effects of offenders' perceptions of a trusting relationship with their PO on 4-year recidivism rates in a study with both male and female offenders in the Netherlands. (Sturm et al.'s. 2021) findings showed that offenders who reported higher levels of trust in their relationship with their PO had significantly lower recidivism rates 4 years post release, with results being slightly more significant for female offenders. The findings from the studies (Mueller et al. 2021; O'Meara et al. 2020; Sloas et al. 2020; and Sturm et al. 2021) suggest that a trusting relationship between the offender and PO "may create a space in which" the offender "becomes engaged in a changing process" (Sturm et al., 2021, p. 1).

Summary

While male offenders recidivate at higher rates than female offenders, the rates of recidivism among women offenders are nonetheless disconcertingly high and indicative of the multiple obstacles and problems women face once as they reintegrate back into society (Johnson, 2015; McKendy & Ricciardelli, 2019). As of 2019, 1.3 million women were under community supervision, that is, probation or parole (The Sentencing Project, 2020). Of these women, 60% will recidivate within 3 years post release (The Sentencing

Project, 2020; National Resource Center on Justice Involved Women, 2018). The high recidivism rates among women offenders suggest that they are lacking supportive and caring relationships that often help them cope with the struggles of integrating back into society (Farmer, 2019; Zettler, 2019, 2020).

In response to the high rates of recidivism among female offenders, scholars have called for an increased empirical understanding of women's pathways to recidivism (Bell et al., 2019; Morash et al., 2019; Okonofua et al., 2021; Smith et al., 202a, 2020b). Due to the critical role of POs in women offenders' lives, there has been increased theoretical (Lovins et al., 2018) and empirical examination of the PO offender relationship qualities and their effects on recidivism and associated behaviors (e.g., self-efficacy, prosocial attitudes) (Morash et al., 2015, 2016; Roddy & Morash, 2020; Okonofua et al., 2021; Smith et al., 202a, 2020b). However, to date, there has not been comprehensive examinations of the influence of the PO's relational qualities (i.e., knowledge of the female offender's needs, their use of positive feedback with the offender, and their supportive relationship with the female offender) on recidivism 3 years post release. This study advanced the empirical research by (Morash et al., 2015) placing the empirical examination of the PO offender relationship and recidivism into a theoretical context, operationalizing variables in alignment with (Lovins et al.'s, 2018) POC theory.

Chapter 3: Research Method

In this quantitative study, I used a longitudinal, correlational design. The study involved conducting a binomial logistic regression to examine if three characteristics of the PO (i.e., the predictor variables of knowledge of offender post release needs, use of positive feedback with offender, and supportive relationship with offender) were significantly predictive of recidivism rates among female offenders post release. The one criterion variable was recidivism status, operationalized as a new arrest or conviction 3 years post release, among female offenders. This study advanced understanding of (Lovins et al.'s, 2018) POC theory and addressed the gaps noted in the gendered pathways to recidivism empirical literature (see Chamberlain et al., 2018; Morash et al., 2015, 2016, 2019) regarding the lack of examination of the effects of POs' skills, attitudes, and behaviors on recidivism rates among women offenders.

Research Design and Rationale

In this quantitative, longitudinal, correlational study, I utilized data from (Morash et al.'s, 2015) Probation/Parole Officer Interactions with Women Offenders, Michigan, 2011–2014 study. The following research questions and corresponding hypotheses guided this study post release :

RQ1. Is there a significant predictive relationship between the POs' knowledge of the post release needs of the offender and recidivism status 3 years post release, among female offenders?

*H*₀₁: There is not a predictive significant relationship between the POs' knowledge of the post release needs of the offender, as measured at Wave

2 (2012–2013) using the Post releaseNID-PO scale (Morash et al., 2015), and recidivism (i.e., new arrest or conviction) status 3 years post release among female offenders, as measured at Wave 3 (2013–2014).

H_{a1}: There is a significant predictive relationship between the POs' knowledge of the post release needs of the offender, as measured at Wave 2 (2012–2013) using the Post releaseNID-PO scale (Morash et al., 2015), and recidivism (i.e., new arrest or conviction) status 3 years post release among female offenders, as measured at Wave 3 (2013–2014).

RQ2: Is there a significant relationship between the POs' use of positive feedback to the offender and recidivism status 3 years post release among female offenders?

H₀₂: There is not a significant relationship between the POs' use of positive feedback to the offender, as measured at Wave 2 (2012–2013) using the PSEACF scale (Morash et al., 2015), and recidivism (i.e., new arrest or conviction) status 3 years post release among female offenders, as measured at Wave 3 (2013–2014).

H_{a2}: There is a significant predictive relationship between the POs' use of positive feedback to the offender, as measured at Wave 2 (2012–2013) using the PSEACF scale (Morash et al., 2015), and recidivism (i.e., new arrest or conviction) status 3 years post release among female offenders, as measured at Wave 3 (2013–2014).

RQ3: Is there a significant predictive relationship between POs' supportive relationship with the offender and recidivism status 3 years post release among female offenders?

H₀₃: There is not a significant predictive relationship between POs' supportive relationship with the offender, as measured at Wave 2 (2012–2013) using the DRI (Skeem et al., 2007). and recidivism (i.e., new arrest or conviction) status 3 years post release among female offenders, as measured at Wave 3 (2013–2014).

H_{a3}: There is a significant predictive relationship between POs' supportive relationship with the offender, as measured at Wave 2 (2012–2013) using the DRI (Skeem et al., 2007). and recidivism (i.e., new arrest or conviction) status 3 years post release among female offenders, measured at Wave 3 (2013–2014).

This study had three predictor variables: (a) the PO's knowledge of the post release needs of the offender, quantified using the NID-PO scale (see Morash et al., 2015); (b) the PO's use of positive feedback, quantified using the PSEACF instrument (see Morash et al., 2015); and (c) the PO's supportive relationship with the offender, quantified using the DRI (see Skeem et al., 2007). Data on the predictor variables were collected at Wave 2, in 2012–2013, approximately 2 years after the women were released from prison. The one criterion variable, recidivism status, was operationalized as a new arrest or conviction, data which were collected at Wave 3, in 2013–2014, 3 years post release. When the predictor variables are interval or ratio and the criterion variable is

nominal, a nonparametric correlational analysis is required for analysis (Field, 2013; Tabachnick & Fidell, 2013).

In this study, I conducted one binomial logistic regression to test the study hypotheses. A binomial logistic regression is used to estimate the relationship between one or more predictor variables and a dichotomous criterion variable (Kornbrot, 2005). For the binomial logistic regression analysis, the three PO quality variables were entered as collective predictors of the female offenders' 3-year recidivism status, a dichotomous variable. To aid in the interpretation of the logistic regression, the recidivism status criterion variable was coded as 1 = no, the ex-offender was not rearrested/reconvicted within 3 years post release, and 0 = yes, the ex-offender was rearrested/reconvicted within 3 years post release. Because I employed the use of binomial logistic regression, it can be said that the study examined if PO interpersonal qualities assessed at Wave 2 (2012–2013) significantly predicted female offenders' recidivism status assessed at Wave 3 (2013–2014).

The purpose and structure of this study required the use of a quantitative, longitudinal, correlational research design. The quantitative methodology is deductive and employs the scientific method: Hypotheses are derived from theory, numerical data are collected on study constructs and statistically tested, and findings inform the decision to reject or fail to reject the hypotheses (Gray, 2013). Per the requirements of the scientific method, in this study (a) the research questions and hypotheses were developed and informed by (Lovins et al.'s, 20018) POC theory; (b) numerical data from (Morash et al.'s, 2018) archival data sets were statistically analyzed; and (c) results from the

statistical analyses, with significance set at $p < .05$, determined the decision to reject or fail to reject the study null hypotheses. Therefore, this study aligned with the quantitative methodology.

In this study, I used a longitudinal, correlational design. A longitudinal, correlational design is employed to examine participant trends and gain an “understanding of the degree and direction of change” among two or more variables over time (Caruana et al., 2015, p. E537). Because longitudinal, correlational designs “have value for describing ... temporal changes” (Cook & Ware, 1981, p. 1), they help to establish temporal precedence (i.e., demonstrating that an attitude or behavior preceded (came before) another attitude or behavior Caruana et al., 2015; Collins, 2006). As such, it can be stated in this study that the female offenders’ perceptions of their relationships with their POs 2 years post release preceded their recidivism status 3 years post release. Therefore, a longitudinal, correlational design was appropriate for this study.

Methodology

Population

Because I utilized archival data from (Morash et al., 2015) in this study, the target population was female offenders under community supervision in Michigan during the years of 2011–2014. Morash et al. set certain criteria for participation: The women had to have committed and were charged with a felony offense; served their sentence at a penal institution in Michigan; and were under community supervision, either probation or parole, in Michigan during the years of 2011 to 2014. There were approximately 8,000

female felony offenders under probation and parole in Michigan between 2011 and 2014 (Morash et al., 2015).

Sampling and Sampling Procedures

In this study, I utilized (Morash et al.'s, 2015) data from a convenience sample of Michigan female offenders who were on probation or parole collected during the years of 2011 to 2014. Convenience sampling is a nonrandom sampling technique in which participants who meet study criteria are recruited based on their accessibility, proximity, availability, and willingness to participate in the study (Etikan et al., 2016). The sampling frame included those women under community supervision in Michigan between the years of 2011 and 2014, with criteria for inclusion being that the female offenders (a) had committed a felony, (b) had a history of substance abuse, and (c) had been under community supervision for at least 3 months.

The authors (Morash et al., 2015) obtained Wave 1–Wave 3 data from 390 female offenders between 2011 and 2014. To determine if this sample size was sufficient for the study, I conducted an a priori power analysis using G*Power (see Faul et al., 2007) for a binomial logistic regression (two-tailed). Certain parameters were set: The odds ratio was set to 1.5, a small effect size (see Hosmer et al., 2013), significance was set to $p < .05$ (two-tailed), and power was set to .80. To account for the multiple predictors (see Faul et al., 2007), I set the R^2X to .1. Results from the power analysis, presented in Figure 1, determined that a sample size of $N = 231$ was required for one binomial logistic regression. The sample size of $N = 390$ as reported by Morash et al. exceeded the necessary sample size of $N = 231$.

Figure 1

*Power Analysis Results From G*Power*

Test family		Statistical test	
z tests		Logistic regression	
Type of power analysis			
A priori: Compute required sample size - given α , power, and effect size			
Input Parameters		Output Parameters	
Determine =>		Critical z	1.9599640
Tail(s)	Two	Total sample size	231
Odds ratio	1.5	Actual power	0.8015233
Pr(Y=1 X=1) H0	0.5		
α err prob	0.05		
Power (1- β err prob)	0.80		
R ² other X	.1		
X distribution	Normal		
X parm μ	0		
X parm σ	1		

Procedures for Recruitment, Participation, and Data Collection

Morash et al. (2015) recruited female offenders by first contacting over 100 Michigan POs with specialized caseloads of female offenders. Seventy-three (96% female) of the 100 POs agreed to recruit their supervisees and act as a liaison between the offenders and the study investigators (Morash et al., 2015). The researchers met the 73 POs in person to discuss the purpose of the study, the roles of the POs and offenders, and recruitment procedures. The female offenders were recruited through the POs, who discussed the study with the offenders during a regularly scheduled meeting, asking the offenders if their contact information could be shared with the study investigators, and then scheduling a meeting between the offenders and researchers. At this meeting, the

researchers provided information to the women, outlining the purpose and goals of the study and the data collection activities in which the offender would be involved.

Informed consent was obtained from the women during this initial meeting, followed by a confirmation of the next meeting time and place, where data would be collected. The data collection was conducted in person, with the investigators conducting one-on-one interviews, at a mutually agreed-upon location, such as a restaurant or public library.

Data collection involved the researchers reading the study protocol, including each of the questionnaire items, and asking the participants to respond to each question. Wave 1 data were collected from the offenders between 3 to 6 months after release in 2011–2012, Wave 2 data were collected between the months 18 and 24 (i.e., 2 years post release) in 2012–2013, and Wave 3 data were collected between months 30 and 36 (i.e., 3 years post release) in 2013–2014. The female offenders received an incentive of \$30 for their participation in the Wave 1 data collection and \$50 for the Wave 2 and Wave 3 data collection periods.

I used the archival data sets from the Probation/Parole Officer Interactions with Women Offenders, Michigan, 2011–2014 study (see Morash et al., 2015) in the current study. These archival data sets contained numerous variables surrounding PO officers' training and expertise as well as female offenders' perceptions of their relationships with the PO (Morash et al., 2015). The data sets were retrieved from the Open Inter-university Consortium for Political and Social Research (ICPSR) website (<https://www.openicpsr.umich.edu>), which provides data sets for research use for university faculty and researchers. Permission is automatically granted for the use of

these data sets, and the Statistics Program for Social Sciences (SPSS) data sets are available to download at the Open ICPSR website

(<https://www.openicpsr.org/openicpsr/search/studies?start=0&ARCHIVE=openicpsr&sort=score%20desc%20DATEUPDATED%20desc&rows=25&q=Morash>).

Instrumentation and Operationalization of Constructs

This study was limited to the variables as operationally defined by Morash et al. (2015). The study predictor variable measuring the PO's knowledge of the post release needs of the offender was quantified using the NID-PO (Morash et al., 2015). The PO's use of positive feedback was assessed using the PSEACF (Morash et al., 2015), and the PO's supportive relationship with the offender was measured using the DRI (Skeem et al., 2007). Data on the NID-PO, PSEACF, and DRI were collected at Wave 2, in 2012-13. The study had one criterion variable, recidivism status, operationalized as a rearrest or reconviction by Wave 3 data collection, in 2013-14. The study also included three descriptive variables, probation and parole status, age, and ethnic group membership, using data collected at Wave 1, in 2011-12. The study instruments and the operationalization of study variables are presented in the following sections.

Predictor Variable 1: POs' Knowledge of Offender Post Release Needs

The POs' knowledge of the post release needs of the offender was assessed using the 14-item interval NID-PO (Morash et al., 2015). The NID-PO items "measure factors known to predict women's recidivism" and include risk factors surrounding housing, employment, money/finances, mental health, substance/alcohol use, exposure to crime and criminal peers/partners, parenting, and general life problems (Morash et al., 2015, p.

422). The items are dichotomous, scored as 1 = yes, this topic was discussed between the offender and PO, and 0 = no, this topic was not discussed between the offender and PO. The composite NID-PO interval scale score is derived by summing the scores on the 14 items (Morash et al., 2015). NID-PO composite scale scores can range from 0 to 14, with a higher score indicating a higher number of post release issues discussed between the offender and the PO (Morash et al., 2015). NDI-PO scores are significantly correlated with higher levels of self-efficacy and lower levels of substance use, providing evidence of its criterion-related validity (Morash et al., 2015, 2016). The NID-PO has sound reliability, with a Kuder-Richardson 20 (KR-20) of .78 (Morash et al., 2015).

Predictor Variable 2: POs' Use of Positive Feedback With Offender

The POs' use of positive feedback with the offender, was quantified using the 8-item PSEACF scale (Morash et al., 2015). The PSEACF scale inquires as to the offender's perceptions as to whether the PO makes the offender feel more secure about avoiding risk factors for criminal behavior, including drug and alcohol use, being in criminal situations, and/or being involved with criminal and antisocial peers (Morash et al., 2015). The PSEACF items have Likert-type coding from 1 = *very strongly disagree* to 7 = *very strongly agree* (Morash et al., 2015). The interval PSEACF composite scale score is derived by summing the 8 items and dividing by 8 (the number of items) so that scores can range from 1 to 7, with a higher score indicating higher levels of reported positive feedback by the PO (Morash et al., 2015). Scores on the PSEACF have been significantly correlated with measures of perceived PO supportive communication style and offenders' perceptions of restoration of freedom (Morash et al., 2015; Smith et al.,

2016, 2020b). The PSEACF has sound reliability, with Cronbach's alphas in the .80s and .90s (Morash et al., 2015; Smith et al., 2016, 2020b).

Predictor Variable 3: POs' Supportive Relationship With Offender

The POs' supportive relationship with the female offender was measured using the 30-item DRI (Skeem et al., 2007). The DRI was developed to measure the relationship quality between a PO and his/her supervisee, with emphasis placed on the offender's perceptions of the social bonds, sense of partnership, trust, mutual respect, and commitment to the working alliance with the PO (Skeem et al., 2007). The DRI items have Likert-type scoring from 1 = *never* to 7 = *always*, and the 30 items are summed and then divided by 30 (the number of items) to derive the interval DRI scale score (Skeem et al., 2007). A higher DRI score indicates a more supportive relationship with the PO as perceived by the offender (Skeem et al., 2007). Statistical findings have shown that the DRI is a sound measure of "theoretically meaningful ... offender-officer" relationship constructs (Kennealy et al., 2012, p. 498), providing evidence of its construct validity. DRI scores have been significantly associated with scores on the Working Alliance Inventory as well as measures of relationship satisfaction, documentation of its criterion-related validity (Kennealy et al., 2012; Morash et al., 2015; Skeem et al., 2007). The reliability of the DRI is excellent, with Cronbach's alphas in the .90s (Kennealy et al., 2012; Skeem et al., 2007; Sloas et al., 2020)

Criterion Variable 1: Recidivism Status

The criterion variable of recidivism status was operationalized as a new arrest or conviction as of Wave 3, 3 years post release. The recidivism criterion variable was

dichotomous, scored where 1 = *No, the ex-offender was not rearrested/reconvicted within 3 years post release*, and 0 = *Yes, the ex-offender was rearrested/reconvicted within 3 years post release* (Morash et al., 2015). This dichotomous coding of the criterion variable aided in the interpretation of the odds ratios found in the binomial logistic regression findings.

Descriptive Variable 1: Age

This study included age as a descriptive variable. The age variable was assessed at Wave 1 (2011). Age was an interval variable and can range from 18 to 60 years (Morash et al., 2015).

Descriptive Variable 2: Ethnic Group

The second variable included for descriptive purposes was the female offender's ethnic group, gathered at Wave 1 during 2011 (Morash et al., 2015). Ethnic group membership was a nominal (categorical) variable coded where 1 = *White only*, 2 = *Black only*, 3 = *Other*. The ethnic group variable was also examined as a potential confound variable.

Descriptive Variable 3: Probation/Parole Status

There was a third descriptive variable, which assessed female offenders' probation and/or parole status. Probation or parole status was a nominal (categorical) variable coded where 1 = *probation*, 2 = *parole*, and 3 = *both probation and parole* (Morash et al., 2015). The probation/parole status variable was also examined as a potential confound variable.

Data Analysis Plan

The Probation/Parole Officer Interactions with Women Offenders, Michigan, 2011-2014 archival data sets (Morash et al., 2015) were used in this study. Permission was automatically granted for the use of these data sets at the ICPSR, which provides data sets for research use for university faculty and researchers. SPSS data sets were retrieved and downloaded from the ICPSR the data sets were saved as SPSS 28.0 data files, and SPSS 28.0 software was used for all statistical analyses. The data analysis plan followed a sequential process, with the steps denoted in the following sections.

Step 1: Data Cleaning and Organization

The first step involved the merging of data sets and the cleaning and organization of data. A new data set was created with variables across the waves merged into one file using case ID numbers. The study data set included (a) the Wave 1 variables of age, ethnicity, and probation and parole status; (b) the predictor variables assessing qualities of the PO, collected at Wave 2; and (c) the recidivism status variable, which was assessed at Wave 3. Once these data were merged into one data set, they were reviewed for missingness using the SPSS 28.0 missing value analysis functions and Little's missing completely at random (MCAR) test to determine if cases were MCAR or missing not at random (MNAR). Per statistical recommendations (Field, 2013; Tabachnick & Fidell, 2013), cases with MNAR data or cases with greater than 25% of MCAR data were removed from the data set while data were imputed for cases with 25% or less MCAR data using linear interpolation methods.

The data cleaning and organization step also entailed testing for scale the inter-item reliability by computing a KR-20 for the NID-PO, as it is comprised of items that are dichotomously coded as *yes* or *no* (Field, 2013) and computing Cronbach's alphas for the ESCEAF and DRI scales, as the items on these scales have Likert scaling from 1 to 7. A KR-20 or Cronbach's alpha of .65 or higher is considered acceptable for inter-item reliability, although a value higher than .70 is preferred (Vaske et al., 2017). As (Morash et al., 2015) had already created the respective composite scales for the study instruments, there was no need to compute the composite scale scores for the NID-PO, ESCEAF, and DRI scales.

Step 2: Computation of Descriptive Statistics

The second step of the data analysis was the computation of descriptive statistics for the study variables. The descriptive statistics reported for the dichotomous criterion variable of recidivism status and the nominal descriptive variables of ethnic group and probation/parole status were frequencies and percentages. The mean, median, standard deviation, and standard error were computed for the NID-PO, ESCEAF, and DRI predictor variables and the descriptive variable of age. To test if ethnic group and probation/parole status were potential confound variables, two chi-square (χ^2) tests of independence were conducted.

Step 3: Testing of Assumptions for Logistic Regression

The statistical test used for hypothesis testing was one binomial logistic regression. There are three assumptions for logistic regression: (a) no significant outliers for the interval variables, (b) lack of multicollinearity among predictor variables, and (c)

linearity between the predictor variable and the log of the criterion variable (Hosmer et al., 2013). Respective statistical tests were conducted to determine if data met these three assumptions.

No Significant Outliers. The first assumption tested was no significant outliers. The assumption of no significant outliers was tested by computing Mahalanobis distance values and associated significance (with $p < .05$) to identify multivariate outlier cases. The data set was large enough to allow for the removal of multivariate outlier cases, should any be found. Examination and identification of univariate outliers (for the predictor variables) entailed utilizing SPSS 28.0 extreme value functions and computing boxplots for the NID-PO, ESCEAF, and DRI scale scores. Univariate outliers were winsorized (i.e., replaced with the next lowest and high score; Ghosh & Vogt, 2012).

Lack of Multicollinearity Among Predictor Variables. The second assumption of the data that was examined was lack of multicollinearity among the predictor variables. Lack of multicollinearity was addressed by computing Pearson bivariate correlations and variance inflation factors (VIFs). Pearson bivariate correlations that are $r > .80$, $p < .001$, and VIFs that are > 4.00 indicate a violation of the lack of multicollinearity assumption (Field, 2013). As the predictor variables measured different but potentially similar constructs pertaining to the PO-offender relationship, collinearity was a possibility in this study.

Linearity Between Continuous Predictor Variables and the Logit of the Criterion Variable.

Linearity was tested by conducting a Box Tidwell regression analysis. The Box Tidwell test requires that new interaction terms be created by multiplying the predictor variable score by its logit (Hosmer et al., 2013; Zeng, 2020). The predictor variables, followed by the interaction variables, are then entered into a logistic regression model with the respective criterion variable (Hosmer et al., 2013; Zeng, 2020). Significant ($p < .05$) findings denote a violation of the linearity assumption, requiring predictor variable transformation (e.g., log-linear, square root) per recommendations (Hosmer et al., 2013; Zeng, 2020).

Step 4: Binominal Logistic Regression

The statistic conducted for hypothesis testing was one binomial logistic regression. A binomial logistic regression is used to estimate the relationship between a predictor variable, usually interval or ratio, and a criterion variable that is dichotomous, “taking on only two possible values coded 0 and 1” (Kornbrot, 2005, p. 1). All three predictor variables, which were interval, were entered collectively into the binominal logistic regression model, with recidivism status 3 years post release as the criterion variable. Results regarding both overall model and predictor-criterion relationship effects were reported. The binomial logistic regression model statistics, which provide information on the collective influence of all predictor variables on the criterion variable (Field, 2013; Hosmer et al., 2013) noted were the model chi-square and associated significance level (with $p < .05$), the Nagelkerke R^2 , a measure of effect size (Field,

2013), and the classification table. Model effects do not provide information specific to each predictor-criterion variable relationship (Field, 2013; Hosmer et al., 2013). As such, each predictor variable and its effect on the criterion variable were denoted by a reporting of the Wald statistic (with $p < .05$), the odds ratio, and the 95% confidence interval for the odds ratio.

Threats to Validity

Quantitative research must demonstrate external, internal, and statistical conclusion validity (Gray, 2013). External validity concerns the generalizability of study findings to other samples, settings, and times (Gray, 2013). Internal validity for longitudinal correlational research is defined as the degree to which the relationships between variables tested are not influenced by other factors (Schaie, 1983). A quantitative study should also have statistical conclusion validity, that is, findings are accurate and “justified ... as far as statistical issues are concerned” (García-Pérez, 2012, p. 1). There are threats associated with external, internal, and statistical conclusion validity (Gray, 2013), discussed in the following sections.

Threats to External Validity

External validity threats are aspects of the research that limit the generalizability of study findings to other samples, settings, or times (Gray, 2013). The population validity threat refers to the inability to apply study findings to the general population and/or other samples (Gray, 2013). The data conducted by the researchers (Morash et al., 2015) were specific to female offenders in Michigan. It may be that findings from this study using (Morash et al.’s, 2015) Michigan data may not be generalizable to the

American population of female offenders on probation or parole and/or female offenders under supervision in other states. The temporal validity threat refers to the inability to generalize study findings to other times (Gray, 2013). (Morash et al., 2015) collected data between 2011 and 2014, and therefore findings from this study may not be generalizable to Michigan female offenders who were under community supervision before 2011 or after 2014. The last external validity threat is the threat of ecological validity, or the inability to generalize findings to studies conducted in different settings and under different conditions (Gray, 2013). (Morash et al.'s, 2015) collected data by conducting interviews with the female offenders, and therefore, study findings may differ from studies utilizing different data collection methods, such as self-report or observational methods.

Threats to Internal Validity

There are similar internal validity threats for longitudinal and experimental/quasi-experimental research, as these designs involve the “repeated [measurements of] the same individuals over time” (Schaie, 1983, p. 5). The primary threats to the internal validity of a longitudinal study are (a) testing, or familiarity with questions resulting from repeated testing (Slack & Draugalis, 2001); (b) regression to the mean, that is, extreme scores tend to move closer to the mean in repeated testing (Schaie, 1983); (c) instrumentation, or changes in survey scores due to use of different instruments or data collector; and (d) attrition, or loss of participants over time (Menard, 2007; Schaie, 1983). The testing, regression to the mean, and instrumentation threats were not of concern in this study, as the women offenders completed the study variables at Wave 2 (not Wave 1), and Wave 2

data were used to assess the predictor variables. Attrition was not a concern: the Wave 3 data set included data from a total of 390 participants, 97% of the original sample of 402 female offenders. Longitudinal studies also have an internal validity threat found in correlational studies that are associated with convenience sampling: self-selection bias (Menard, 2007; Schaie, 1983). The self-selection bias refers to selective study participation, where the study participants differ from those who did not participate (Gray, 2013). There may have been self-selection bias in (Morash et al.'s, 2015) study; for example, the female offenders who chose to participate may have had a stronger and more trusting relationship with their PO and/or had fewer risk factors for recidivism as compared to female offenders who chose not to participate.

Threats to Statistical Conclusion Validity

Statistical conclusion validity threats are elements of the study that reduce the statistical accuracy “in revealing a link” between the predictor and criterion variables “as far as statistical issues are concerned” (García-Pérez, 2012, p. 2). Threats to statistical conclusion validity include low statistical power, violations of data assumptions, and poor instrument reliability (García-Pérez, 2012). Low power was not a concern in this study: based on the results from a post hoc power analysis using G*Power (Faul et al., 2007), the power was a robust .98. The testing of the binomial logistic regression assumptions and confirmation that the data did not violate assumptions eliminated the threat of violations of data assumptions. The use of reliable instruments/measures, as documented by Morash et al. (2015), helped to reduce the threat of poor instrument reliability.

Ethical Procedures

This study used Morash et al. (2015) archival data sets, available to download at the Open ICPSR website. As the data were archival in this study, some ethical procedures were not applicable. Informed consent was not required, as (Morash et al., 2015) already obtained informed consent from study participants. Moreover, due to the use of (Morash et al.'s, 2015) archival data set, which contained no information that could be used to identify the participants; the participants were completely anonymous to the researcher. Participants' confidentiality was ensured.

There were certain ethical procedures followed in this study. The data analysis commenced once Walden University Institutional Review Board (IRB) approval was obtained. Ethical procedures when storing and destroying the data sets and other study materials (e.g., SPSS output) were followed. I had access to the data sets, and the dissertation chair, committee, and other university personnel may request to access the data sets. The archival data were saved in one SPSS 28.0 data file, which was stored on an encrypted and password-protected USB drive. The USB drive and related study materials (e.g., SPSS output) were secured in a locked file cabinet in my home office. Study materials will be maintained for 5 years, after which they will be destroyed.

Summary

As both the theoretical and empirical work on the PO female offender relationship and recidivism is nascent (Lovins et al., 2018; Morash et al., 2019; Vidal et al., 2015), there exists a gap in the empirical literature as to whether the POs' knowledge of the female offender's strengths and weaknesses, use of positive reinforcement, and relational

support help to reduce recidivism rates among female offenders. The purpose of this quantitative, longitudinal, correlational study was to examine if the POs' knowledge of the post release needs of the female offender, their use of positive feedback with the offender, and their supportive and trusting relationship with offender, were significantly predictive of recidivism status 3 years post release in a sample of female offenders under probation/parole in Michigan during the years 2011-2014.

This study employed a longitudinal correlation design. As temporal precedence can be established when using a longitudinal design, it can be stated that the female offenders' perceptions of their relationships with their POs 2 years post release preceded and predicted their recidivism status 3 years post release. The data sets used in this study came from (Morash et al.'s, 2015) Probation/Parole Officer Interactions with Women Offenders, Michigan, 2011-2014 study, conducted with convenience sample of 390 Michigan female. The sample size of 390 participants exceeded the necessary sample size of 231, a determined by conducting an a priori power analysis. This study had three predictor variables, the PO's knowledge of the post release needs of the offender, quantified using the NID-PO (Morash et al., 2015), the PO's use of positive feedback, quantified using the PSEACF instrument (Morash et al., 2015), and the PO's supportive relationship with the offender, quantified using the DRI (Skeem et al., 2007). There was one criterion variable, recidivism 3 years post release. As the criterion variable, recidivism status, was dichotomous, the appropriate statistical analysis for the study was a binomial logistic regression. The study included for descriptive purposes the women's age, ethnic group, and probation/parole status.

Chapter 4: Results

POs can act as positive role models, be sources of knowledge and trust, and provide emotional and social support, all of which can contribute to a lower likelihood of recidivism (Morash et al., 2019; Mueller et al., 2021; Okonofua et al., 2021). There has been an emergence of theoretical work, such as Lovins et al. (2018) POC theory, and empirical literature that have argued that relational-based strengths of the PO are critical to the post release success of the female offender (Cornacchione et al., 2016; Morash et al., 2015, 2016; Mueller et al., 2021; Smith et al., 2016, 2020a, 2020b; Sturm et al., 2021). However, to date, has been little examination as to the specific PO interpersonal dimensions that may reduce such rates among female offenders (Morash et al., 2019; Okonofua et al., 2021). The purpose of this quantitative, longitudinal, correlational study was to examine if the POs' knowledge of the strengths and weaknesses of the female offender, their use of positive feedback with the offender, and supportive and trusting relationship with offender were significantly predictive of recidivism at 3 years post release in a sample of female offenders. The study was guided by the following three research questions, each with corresponding null and alternative hypotheses:

RQ1: Is there a significant predictive relationship between the POs' knowledge of the post release needs of the offender and recidivism status 3 years post release, among female offenders?

*H*₀₁: There is not a predictive significant relationship between the POs' knowledge of the post release needs of the offender, as measured at Wave 2 (2012–2013) using the Post releaseNID-PO scale (Morash et al., 2015),

and recidivism (i.e., new arrest or conviction) status 3 years post release among female offenders, as measured at Wave 3 (2013–2014).

H_{a1}: There is a significant predictive relationship between the POs' knowledge of the post release needs of the offender, as measured at Wave 2 (2012–2013) using the Post releaseNID-PO scale (Morash et al., 2015), and recidivism (i.e., new arrest or conviction) status 3 years post release among female offenders, as measured at Wave 3 (2013–2014).

RQ2: Is there a significant relationship between the POs' use of positive feedback to the offender and recidivism status 3 years post release among female offenders?

H₀₂: There is not a significant relationship between the POs' use of positive feedback to the offender, as measured at Wave 2 (2012–2013) using the PSEACF scale (Morash et al., 2015), and recidivism (i.e., new arrest or conviction) status 3 years post release among female offenders, as measured at Wave 3 (2013–2014).

H_{a2}: There is a significant predictive relationship between the POs' use of positive feedback to the offender, as measured at Wave 2 (2012–2013) using the PSEACF scale (Morash et al., 2015), and recidivism (i.e., new arrest or conviction) status e years post release among female offenders, as measured at Wave 3 (2013–2014).

RQ3: Is there a significant predictive relationship between POs' supportive relationship with the offender and recidivism status 3 years post release among female offenders?

H₀₃: There is not a significant predictive relationship between POs' supportive relationship with the offender, as measured at Wave 2 (2012–2013) using the DRI (Skeem et al., 2007). and recidivism (i.e., new arrest or conviction) status 3 years post release among female offenders, as measured at Wave 3 (2013–2014).

H_{a3}: There is a significant predictive relationship between POs' supportive relationship with the offender, as measured at Wave 2 (2012–2013) using the DRI (Skeem et al., 2007). and recidivism (i.e., new arrest or conviction) status 3 years post release among female offenders, as measured at Wave 3 (2013–2014).

Data Collection

In this study, I utilized (Morash et al.'s, 2015) Probation/Parole Officer Interactions with Women Offenders, Michigan, 2011–2014 archival data sets. Data were collected by the investigators from 402 female offenders, which was reduced to 390 at Wave 3 (i.e., in 2014), on probation and parole in Michigan between 2011 and 2014. Morash et al.'s data sets were retrieved from the Open ICPSR website, which provides data sets for research use for university faculty and researchers. Permission is automatically granted for the use of these data sets. I downloaded the three SPSS data sets for Morash et al.'s study from the Open ICPSR. The data files were saved in SPSS

28.0, and SPSS 28.0 was used for all data analyses. Data retrieval and analyses occurred during the summer of 2021. There were no discrepancies in the data collection plan or analyses presented in Chapter 3.

The first step in the data analysis was data cleaning and organization. I reviewed the data for entry errors, and none were found. The three study predictor variables measuring the POs' knowledge of the post release needs of the offender (NID-PO), use of positive feedback (PSEACF), and supportive relationship with offender (DRI) were already computed as composite scale scores, as was the recidivism variable. I then reviewed the data set for missing data. There were nine cases that had missing data for the recidivism variable and 2 or 3 of the study predictor variables. These cases were found have to data that were MNAR and were removed from the data set.

I identified multivariate outliers by computing Mahalanobis distance values related significance (p) for each participant by conducting a multiple linear regression (Field, 2013; Treiman, 2014) with the three predictor variables and one randomly selected interval variable (i.e., neighborhood risk at Wave 2). Eighteen cases were identified as multivariate outliers, having Mahalanobis distances that were significant at $p < .05$. These outlier cases were removed from the data set, resulting in a final sample of $n = 363$ (93% of the initial sample). The removal of a total number of 26 cases did not affect power. A post hoc power analysis, with the sample size set to 363, the odds ratio set to 1.5, and the significance set to $p < .05$, determined that the power achieved was 0.98.

I then reviewed the data for univariate outliers. The predictor variable measuring the POs' use of positive reinforcement with the participant had 10 univariate outliers (all very low scores) and the variable assessing the POs' positive relationship with the offender had one univariate outlier. These outliers were winsorized, which involves replacing the outlier score with the next highest or lowest score (see Ghosh & Vogt, 2012). Because the univariate outliers were very low scores, the next lowest score was used for winsorization.

Results

In this section, I first present the descriptive statistics for the sample demographics; the three predictor variables assessing the POs' knowledge of the post release needs of the offender, use of positive reinforcement, and a positive relationship with the offender; and the criterion variable of recidivism 3 years post release. The statistical analyses and subsequent results for the testing of the assumptions for binomial logistic regression follow. In the last subsection, I provide the results from the binomial logistic regression conducted for hypothesis testing and with discuss the findings related to each of the three research questions.

Descriptive Statistics: Participants

The female offenders were, on average, 33.82 years of age ($Mdn = 32$ years, $SD = 10.61$ years), and their ages ranged from 18 to 60 years. Almost half ($n = 170$, 46.8%) of the women were White, 119 (32.8%) were Black, 67 (18.5%) were Hispanic, and 7 (1.9%) were of other ethnicities. There were no significant recidivism differences across the three ethnic groups, $\chi^2(3) = 3.31$, $p = .346$. Most ($n = 274$, 75.5%) of the women were

on probation, 86 (23.7%) were on parole, and three (0.8%) were on both probation and parole. Women under probation or parole did not significantly differ on recidivism status, $\chi^2(1) = 0.09, p = .767$.

Descriptive Statistics: Predictor and Criterion Variables

I first computed descriptive statistics for the three predictor variables: (a) knowledge of the offenders' post release needs, as assessed by the NID-PO scale (see Morash et al., 2015); (b) use of positive reinforcement with the offender, as measured by the PSEACF scale (see Morash et al., 2015); and (c) a positive relationship with the offender, quantified using the DRI (see Skeem et al., 2007). The NID-PO scale post release had an $M = 4.57$ ($Mdn = 4.00, SD = 2.90, Min = 0.00, Max = 13.00$), indicative of lower-than-average PO knowledge of offender post release needs. The PSEACF scale had an $M = 5.30$ ($Mdn = 5.00, SD = 1.244, Min = 2.33, Max = 7.00$), denoting higher-than-average PO use of positive reinforcement with the offender. The DRI had an $M = 5.62$ ($Mdn = 6.00, SD = 1.30, Min = 2.00, Max = 7.00$), indicative of a higher-than-average positive relationship with the offender. The measures for the three predictor variables had excellent interitem reliability, with Cronbach's alphas in the mid- to high .90s.

I computed descriptive statistics (i.e., frequencies and percentages) for the criterion variable of recidivism at 3 years post release. Most offenders ($n = 308, 84.8%$) had not been arrested and/or convicted of a new offense 3 years post release. Fifty-five (15.2%) of offenders did recidivate by 3 years post release. The recidivism rate of 15.2% was significantly lower than the average of 60%, $\chi^2(1) = 93.39, p < .001$.

However, the sample of 363 women did not include those offenders who dropped out of the study during the three-wave (i.e., 2011–2014) data collection period or the multivariate outlier cases, some of whom may have recidivated.

Testing of Assumptions for Binomial Logistic Regression

I used binomial logistic regression for hypothesis testing. There are three assumptions for logistic regression: (a) no significant outliers for the interval variables, (b) lack of multicollinearity among predictor variables, and (c) linearity between the predictor variable and the log of the criterion variable (Hosmer et al., 2013). The statistics computed for these assumptions and the results, with interpretation, are presented in the following subsections.

Assumption 1: No Significant Outliers

The first assumption for binomial logistic regression is no significant outliers (Field, 2013). I had to address the outliers prior to data analyses, including descriptive statistics, because multivariate outlier cases were removed from the data set and univariate outliers were winsorized. At the data cleaning and organization stage, Mahalanobis distance values and associated significance (with $p < .05$) values were calculated to identify multivariate outlier cases. Because the data set was large enough to allow for the removal of multivariate outlier cases, 26 cases that had significant Mahalanobis distance values were removed from the data set. Univariate outliers were identified and winsorized. Figures 3 through 5 show the boxplots for the three predictor variables. As noted in the boxplots in the Appendix, there were no significant outliers after winsorization.

Assumption 2: Lack of Multicollinearity

The second assumption for binary logistic regression is lack of multicollinearity among the predictor variables (Field, 2013). I addressed lack of multicollinearity by computing Pearson bivariate correlations and VIFs. Pearson bivariate correlations that are $r > .80$, $p < .001$, and VIFs that are > 4.00 indicate a violation of the lack of multicollinearity assumption (Field, 2013). VIFs were calculated by a multiple linear regression with the three predictors and a randomly selected variable (i.e., extroversion assessed at Wave 2). Table 5 provides the Pearson bivariate correlation matrix and the VIFs for the three predictor variables. All the VIFs were lower than the critical value of 4.00, denoting lack of multicollinearity. The assumption of lack of multicollinearity was met. Table 1

Test of Multicollinearity: Variance Inflation Factors (N = 363)

Variable	NID-PO	PSEACF	DRI	VIF
NID-PO knowledge of offender post release needs	--			1.15
PSEACF use of positive reinforcement with the offender	.37***	--		1.94
DRI positive relationship with the offender	.24***	.66***	--	1.77

*** $p < .001$

Assumption 3: Linearity

The third assumption for binary logistic regression is linearity between interval or ratio coded predictor variables and the logit of the criterion variable (Field, 2013). To test for linearity, a Box Tidwell test was conducted. This test entailed (a) deriving the log of each predictor variable; (b) computing an interaction variable by multiplying the

predictor variable score by its log; and (c) conducting a logistic regression, with the three predictors and the newly created interaction variables entered as predictors of the criterion variable (Hasan, 2020; Hosmer et al., 2013). Significant ($p < .05$) results for the respective predictor-criterion relationship denote a violation of the linearity assumption (Hosmer et al., 2013). Results from the Box Tidwell test are presented in Appendix A. None of the interaction variables significantly predicted the criterion variable (NID-PO interaction variable significance: $p = .547$; PSEACF interaction variable significance: $p = 4.08$; and DRI interaction variable significance: $p = .090$). The assumption of linearity was met in this study.

Hypothesis Testing: Binary Logistic Regression Results

The statistic conducted for hypothesis testing was one binomial logistic regression. For the binary logistic regression, the NID-PO, PSEACF, and DRI variables, assessing the respective constructs of POs' knowledge of offender post release needs, use of positive feedback with the offender, and a supportive relationship with the offender, were entered collectively into the binominal logistic regression model as predictors of the dichotomous recidivism status criterion variable. For clarity, the criterion variable was coded as 0 = *was arrested and/or convicted in the past 3 years* and 1 = *was not arrested and/or convicted in the past 3 years*. This removed the potential for an odds ratio less than 1.00, aiding in the interpretation of findings.

Table 6 provides the results of the binary logistic regression. The model chi-square was significant, $\chi^2(3, 363) = 39.06, p < .001$, indicating that the significant collective effects of the three predictor variables on the criterion variable of recidivism

three years post release. The Nagelkerke R^2 was .178, denoting that the three predictor variables collectively explained 17.8% of the variance in recidivism three years post release. The classification table showed that 84.6% of the participants were correctly classified into the recidivate/did not recidivate categories, based on the three predictor variables. The model information does not, however, provide results specific to each predictor-criterion variable relationship. These findings are presented after Table 6 and address the three research questions.

Table 2

Binary Logistic Regression: POs' Knowledge of Offender Postrelease Needs, Use of Positive Reinforcement, and Positive Relationship With Offender Predicting Recidivism at 3 Years Post-Release (N = 363)

	<i>B</i>	SE <i>B</i>	Wald χ^2	<i>p</i>	<i>OR</i>	<i>OR</i> 95% CI	
						Lower	Upper
NID-PO knowledge of offender post release needs	.20	.07	7.96	.005	1.22	1.06	1.40
PSEACF use of positive reinforcement with the offender	.50	.18	7.56	.006	1.65	1.15	2.35
DRI positive relationship with the offender	.01	.15	0.00	.954	1.01	0.75	1.35

Research Question 1

For the first research question, results from the binary logistic regression that the POs' knowledge of post release needs was significantly predictive of recidivism status, Wald $\chi^2 (1) = 7.96, p = .005 (OR = 1.22, OR 95\% CI: 1.06-1.40)$. A higher reported degree of POs' knowledge of the post release needs of the offender significantly associated with 1.22 increased odds of *not* recidivating in the past 3 years. Due to the significant findings, the null hypothesis, as measured at Wave 2 (2012-13) using the Number of Post release Issues Discussed with PO scale (NID-PO; Morash et al., 2015),

and recidivism (i.e., new arrest or conviction) status 3 years post release among female offenders, as measured at Wave 3 (2013-14), failed to be retained.

Research Question 2

For the second research question, binary logistic regression findings showed that the POs' use of positive reinforcement was significantly predictive of recidivism status, Wald $\chi^2(1) = 7.56, p = .006$ ($OR = 1.65, OR\ 95\% \text{ CI: } 1.15-2.35$). A higher reported level of positive feedback used by the offender's PO was significantly related to 1.65 increased odds of *not* recidivating in the past three years. As a result of the significant findings, as measured at Wave 2 (2012-13) using the PSEACF scale (Morash et al., 2015), and recidivism (i.e., new arrest or conviction) status 3 years post release among female offenders, as measured at Wave 3 (2013-14), failed to be retained.

Research Question 3

For the third research questions, the findings from the binary logistic regression showed that the POs' positive relationship with the offender was not significantly predictive of recidivism status, Wald $\chi^2(1) = 0.00, p = .954$ ($OR = 1.01, OR\ 95\% \text{ CI: } 0.75-1.35$). Due to the non-significant results, , as measured at Wave 2 (2012-13) using the DRI (Skeem et al., 2007), and recidivism (i.e., new arrest or conviction) status 3 years post release among female offenders, as measured at Wave 3 (2013-14), was retained.

Summary

This was a quantitative study that utilized a longitudinal correlational design to examine if three characteristics of the PO (i.e., knowledge of offender needs, use of positive feedback with offender, and supportive relationship with offender) were

significantly predictive of recidivism rates among female offenders. The study utilized data from Morash et al.'s (2015) study specific to 363 female offenders who were under community supervision for the years 2011-2014. The women were, on average, 33.82 years of age; almost half (46.8%) were White, 18.5% were Black, and 1.9% were of other ethnic groups. The large majority (75.5%) were on probation, while 23.7% were on parole and 0.8% had both probation and parole. There were no significant ethnic group or probation/parole status differences regarding recidivism 3 years post release.

The study had three predictor variables: the POs' knowledge of the post release needs of the offender, their positive feedback to the offender, and their supportive relationship with the offender. Based on the descriptive findings, it was found that the female offenders reported lower-than-average levels of the POs' knowledge of offender post release needs. However, the offenders noted, on average, higher-than-average levels of the POs' use of positive reinforcement with the offender and a higher-than-average positive relationship. The one criterion variable was recidivism, assessed as an arrest and/or conviction 3 years post release. A small percentage (15.2%) of the women recidivated within 3 years, a much lower than expected percentage when compared to the average of 60%, $\chi^2(1) = 93.39, p < .001$.

One binary logistic regression was conducted to address the three research questions. The data met all assumptions for logistic regression. Results from the logistic regression showed that a higher reported degree of POs' knowledge of the post release needs of the offender was significantly predictive of 1.22 increased odds of *not* recidivating in the past 3 years. Results further showed that a higher reported level of

positive feedback used by the offender's PO was significantly predictive of 1.65 increased odds of *not* recidivating in the past 3 years. However, findings were not significant for the POs' positive relationship with the offender and recidivism status 3 years post release. As a result, the first and second null hypotheses failed to be retained while the hypothesis for the third research question was retained.

This study advanced understanding of (Lovins et al.'s, 2018) POC theory and addressed the gaps noted in the empirical literature (Chamberlain et al., 2018; Morash et al., 2015, 2016, 2019) regarding the lack of examination of the effects of POs' skills, attitudes, and behaviors on recidivism rates among women offenders. Chapter 5 provides an elucidation of the findings as they related to (Lovins et al.'s, 2018) POC theory and pertinent literature. The last chapter also presents study strengths and limitations, and it ends with recommendations for future research studies and implications for practice and social change.

Chapter 5: Discussion, Conclusions, and Recommendations

In this quantitative, longitudinal, correlational study, I examined if three characteristics of POs' knowledge of offender post release needs, use of positive feedback with offender, and supportive relationship with offender were significantly predictive of recidivism status among female offenders. Archival data sets from (Morash et al.'s, 2015) Probation/Parole Officer Interactions with Women Offenders, Michigan, 2011–2014 study were used in this study. The final sample size was 363 female offenders who were, on average, 33.82 years of age and primarily White (46.8%) or Black (32.8%; 1.9% were of other ethnic groups). Most offenders (75.5%) were on probation, 23.7% were on parole, and 0.8% had both probation and parole. The offenders, on average, reported that their POs had a lower-than-average knowledge of their post release needs, but they noted a higher-than-average use of positive reinforcement by their POs and a positive relationship with their POs. Only 15.5% of the female offenders recidivated within 3 years after their release, a significantly lower percentage than the average percentage of 60% (see National Resource Center on Justice Involved Women, 2018).

I conducted a binomial logistic regression to address the three research questions in the study. The three predictor variables were correlated with one another but not to the degree that multicollinearity occurred, and the data met the assumptions of no significant outliers and linearity. Findings from the binomial logistic regression showed that higher levels of the POs' knowledge of the offenders' post release needs and use of positive reinforcement were significantly predictive of not recidivating 3 years post release. There

was not, however, a significant predictive relationship between the PO–offender positive relationship and recidivism status.

In this chapter, I elucidation the findings in relation to the guiding theory of (Lovins et al.'s, 2018) POC theory and pertinent research. Study limitations and suggestions for research and practice are also presented.

Interpretation of the Findings

The findings from this study share commonalities and differences with the existing gendered pathways to recidivism literature. They also align to some degree with (Lovins et al.'s, 2018) POC theory. In this section, I present my interpretation of findings and discuss them in consideration of the archival data sets utilized and the scope of the study.

One notable descriptive difference was the low percentage (15.5%) of women who recidivated, contrasting with national average percentages. Studies have shown that 48% of women offenders reoffend, 31% of whom are rearrested, and 22% of whom are reincarcerated 1 year after release from prison (Pryor et al., 2017). The average percentage of women who recidivate by 3 years is 60% (National Resource Center on Justice Involved Women, 2018). There may be reasons for the low recidivism percentage, which is a good outcome for the women. Some offenders dropped out of (Morash et al.'s, 2015) original study, and in the current study, I removed multivariate outlier cases for statistical reasons. It is likely that at least some the women whose data were not used recidivated within 3 years post release. Specific to Morash et al.'s study, the female offenders who volunteered to participate in the study may have had more resources and

support from family, friends, and their POs, which may have helped to prevent recidivism. It could also be that participation in Morash et al.'s study offered benefits to the female offenders, helping them to not recidivate.

In this study, I found that POs' knowledge of the female offender's post release needs and use of positive reinforcement were significantly predictive of not recidivating; however, a positive PO-offender relationship was not. This study focused on these three predictor variables because there had been little examination specific to the POs' knowledge of the female offender's post release needs and use of positive reinforcement on recidivism, and studies have not examined these two predictors in coordination with a positive PO-offender relationship to assess their collective effects on recidivism (see Morash et al., 2015, 2019; Smith et al., 2020a). There is little research outside of the PO training evaluation and assessment literature that has examined the effects of the POs' knowledge of offenders' strengths and limitations. However, the significant link between the POs' knowledge of the female offenders' post release needs aligned with findings reported in the female offender assessment literature that showed that the POs' use of recidivism assessment tools to gauge female offenders' specific mental post release needs helped to reduce their recidivism (see Britt et al., 2019; Geraghty & Woodham, 2015; Irwin et al., 2018; Lowenkamp, 2016). In addition, the finding that the POs' use of positive reinforcement with the female offender was aligned with results reported in previous studies (see Morash et al., 2019); Okonofua et al., 2021; Smith et al., 2020a), in which it was found that a higher number of treatment (i.e., reinforcing) responses made by the PO

concerning drug violations was significantly predictive of lower recidivism rates among female offenders.

The nonsignificant findings concerning the female PO-offender positive relationship differed from prior literature. Studies have shown that the relationship with the PO may be especially important to female offenders (O'Meara et al., 2020; Sturm et al., 2021) and that the female offender's healthy and supportive relationship with her PO is critical to her post release success (Farmer, 2019) and helps to reduce the likelihood of recidivism (Morash et al., 2016; Mueller et al., 2021; Sloas et al., 2020; Sturm et al., 2021; Vidal et al., 2015). It should be noted that, while the predictor variables did not show collinearity, I did find that a positive PO-offender relationship was significantly correlated with the POs' knowledge of the offenders' post release and the POs' use of positive reinforcement with the offender. It may be that these variables had shared variance that influenced the findings. It could also be that a positive relationship provided the foundation for the POs and the female offenders, and due to this positive relationship, the POs were likely to have higher levels of knowledge of the strengths and weaknesses of the offender and use a higher degree of positive reinforcement with them.

The POC theory (Lovins et al., 2018) informed this study. Lovins et al., adopting a sports metaphor, argued for a shift from PO as "referee," in which the focus is on control and the enforcement of rules, to PO as "coach," who emphasizes positive behavioral change, including reduced recidivism, among offenders. The authors identified six key characteristics of effective PO "coaches," three of which were interpersonal qualities of the PO and the focus of this study: (a) knowledge of the

offender's strengths and weaknesses, (b) use of positive feedback with the offender, and (c) a supportive and positive relationship with the offender. Findings from this study confirmed Lovins et al.'s premise that the POs' knowledge of the offenders' strengths and weaknesses, as operationalized as post release needs, and the POs' use of positive reinforcement aided in the reduction of recidivism among female offenders. Because the PO as coach is invested in behavioral change, they recognize the importance of gathering knowledge on the strengths and weakness of the offender and uses this information to make the best "game plan" for the offender (Lovins et al., 2018). The PO as coach uses positive reinforcement techniques, including support and encouragement, to develop and enhance the offender's skills needed for success. While there was no empirical support for the positive effects of female offenders' supportive relationships with their POs, there was a suggestion, based on correlational findings, that a positive female PO-offender relationship resulted in increased knowledge and use of positive reinforcement. As such, it can be suggested that if POs develop a supportive and trustworthy relationship with the female offender, they may be more likely to build and utilize their coaching skills to aid in the female offenders' post release success.

Limitations of the Study

This study had both strengths and limitations. One strength was that this study was among the first to advance theoretical knowledge by empirically testing elements of the POC theory (Lovins et al., 2018). The study was also timely, and the findings, for the most part, aligned with those noted in the gendered pathways literature to recidivism literature specific to female offenders (see Liu et al., 2020; Zettler, 2019). There were

also methodological strengths, which included a large sample size, resulting in a post hoc power of .98; the use of valid and reliable measures; and the binomial logistic regression, which allowed for the collective examination of the three predictors post release and their effects on recidivism status among female offenders.

The limitations in this study mostly pertained to the guiding theory, study design, measurement of variables, and analysis. The use of the POC theory (Lovins et al., 2018) introduced a theoretical limitation in that study findings could only be interpreted in relation to the theory and not to other recidivism theories. Because I used a longitudinal, correlational design, which is a nonexperimental design (see Collins, 2006), the results cannot be said to be causal. I utilized (Morash et al.'s. 2015) archival data sets on female offenders under community supervision in the Michigan correctional system during the years of 2011–2014 in this study. Moreover, operational definitions of study constructs were limited to the measurements and instruments used by Morash et al. As such, the findings cannot be generalized to Michigan and/or other U.S. female offenders currently under probation or parole or may findings be the same in studies utilizing other instruments to assess the study variables. Concerning data analysis, two potential confounding variables (i.e., ethnic group and probation/parole status) were tested, but they were found to not be significantly predictive of recidivism status. Nonetheless, there were likely additional confounding variables that were significantly predictive of recidivism status that I did not assess in this study.

Recommendations

I have numerous suggestions for future research that can build upon this study. There is a need for longitudinal, correlational, replication studies that examine if POs' knowledge of female offenders' post release needs, use of positive reinforcement, and a supportive and positive relationship with the female offenders significantly contributes to recidivism. Such studies could examine PO effects on the female offenders' recidivism rates at 1, 2, 3, and more years beyond their release from a penal institution. It would be interesting as well to examine if additional interpersonal and communication qualities of the PO contribute to female offenders' post release success. It may be, as the findings of this study suggested, that a positive female PO–offender relationship leads to the POs' increased knowledge of the offenders' needs and use of positive reinforcement. Correlational studies, both cross-sectional and longitudinal, that examine the direct effects of a positive female PO–offender relationship on POs' behaviors and actions would be beneficial, as would studies that assess if such PO behaviors mediate between a positive relationship with the female offender and the offenders' recidivism status. Qualitative studies that used interviews or focus groups to capture female offenders' perspectives of their relationships with their POs and how such relationships help the offenders to succeed after release would also be beneficial.

The study limitations, while minimal, also provide opportunities for future research. This study was limited to a relatively young and predominantly biracial (i.e., White and Black) sample of female offenders, and I did not examine the effects across age or ethnic groups. In a similar vein, it would be interesting if the age, gender, and/or

ethnicity of the POs influences their behaviors to differentially influence recidivism outcomes in female offenders. Additionally, there remains a need for empirical examination into whether POs' interpersonal characteristics influence recidivism status differently according to the female offender's age and ethnic group. This study was also limited to a sample of Michigan female offenders under community supervision during the years of 2011–2014. More contemporary research is needed to determine if the significant relationships found in this study apply to female offenders currently under probation or parole. I did not examine potential confounders beyond the women's ethnic group and probation/parole status in this study. It is likely that other factors played significant roles in the women's recidivism status. Therefore, complex correlational and longitudinal studies that examine the effects of multiple predictor variables and use path analyses and structural equation modeling to test numerous pathways to recidivism are needed.

Implications

This study has numerous implications for theory, practice, and social change. This was the first study to test the relevance of the POC (Lovins et al., 2018) theory to female offenders. While this study confirmed certain propositions made by Lovins et al., further empirical work is needed to assess if all six PO qualities impart benefits to female offenders. Future empirical research should also expand its focus and test the relevance of Lovins et al.'s POC theory to male offenders. Such studies could provide evidence in support of the POC theory and could lead to POC-driven initiatives and/or implemented professional development training and initiatives that are founded on the POC theory

principles (see National Institute of Corrections, 2019; Smith, 2018). Findings from this study may help to advance criminal justice practices and policies associated with PO standards and training as well as offender community reintegration. It is clear from the study findings that the POs play a key role in female offenders' reintegration success; what is less clear is if the criminal justice system currently promotes training and programs to enhance POs' interpersonal skills and communication with female offenders and if such initiatives are effective in reducing female offenders' recidivism rates. This study was a step toward advancing social change by increasing awareness of the post release needs of female offenders and identifying the qualities of the PO-offender working alliance that reduces female offenders' recidivism rates. I hope that the study findings can lead to social change so that female offenders are more successful in their reintegration with society.

Conclusion

The U.S. criminal justice system is currently experiencing an "imprisonment binge" for females (National Resource Center on Justice Involved Women, 2018, p. 1), the majority of whom will exit penal institutions under community supervision (i.e., probation or parole; The Sentencing Project, 2020). Female offenders in the community have a high likelihood for recidivism that is indicative of the struggles they experience integrating back into society (Farmer, 2019; Zettler, 2019, 2020). In this study, I found that the behaviors and actions of female offenders' POs can play a profound role in the offenders' community reintegration success. As noted in this study, POs' knowledge of the female offenders' post release needs and use of positive reinforcement techniques

with female offenders can contribute to a lower likelihood of recidivism, consonant with prior research (see Morash et al., 2019; Mueller et al., 2021; Okonofua et al., 2021; Smith et al., 2020). Because women continue to increasingly engage with the criminal justice system, it is important that they are provided support and guidance to encourage their post release success and well-being.

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Appendix: Statistical Findings

Descriptive Statistics: Demographic Variables

		Age
N	Valid	363
	Missing	0
Mean		33.82
Median		32.00
Std. Deviation		10.609
Minimum		18
Maximum		60

OneRaceVariable

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	white only	170	46.8	46.8	46.8
	black only	119	32.8	32.8	79.6
	hispanic	67	18.5	18.5	98.1
	unclear or other	7	1.9	1.9	100.0
	Total	363	100.0	100.0	

Probation/Parole Status

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Probation	274	75.5	76.1	76.1
	Parole	86	23.7	23.9	100.0
	Total	360	99.2	100.0	
Missing	Both	3	.8		
Total		363	100.0		

Chi-square Tests of Independence

Crosstab

Recidivism_Recode

		.00			1.00			Total	
		N	%	Adjusted Residual	N	%	Adjusted Residual	N	%
OneRaceVariable	white only	31	56.4%	1.5	139	45.1%	-1.5	170	46.8%
	black only	16	29.1%	-.6	103	33.4%	.6	119	32.8%
	hispanic	8	14.5%	-.8	59	19.2%	.8	67	18.5%
	unclear or other	0	0.0%	-1.1	7	2.3%	1.1	7	1.9%
Total		55	100.0%		308	100.0%		363	100.0%

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	3.314 ^a	3	.346
Likelihood Ratio	4.345	3	.227
Linear-by-Linear Association	3.082	1	.079
N of Valid Cases	363		

a. 1 cells (12.5%) have expected count less than 5. The minimum expected count is 1.06.

Crosstab

Recidivism_Recode

		.00			1.00			Total	
		N	%	Adjusted Residual	N	%	Adjusted Residual	N	%
Probation/Parole Status	Probation	41	74.5%	-.3	233	76.4%	.3	274	76.1%
	Parole	14	25.5%	.3	72	23.6%	-.3	86	23.9%
Total		55	100.0%		305	100.0%		360	100.0%

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2- sided)	Exact Sig. (1- sided)
Pearson Chi-Square	.088 ^a	1	.767		
Continuity Correction ^b	.015	1	.901		
Likelihood Ratio	.086	1	.769		
Fisher's Exact Test				.734	.443
Linear-by-Linear Association	.087	1	.768		
N of Valid Cases	360				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 13.14.

b. Computed only for a 2x2 table

Descriptive Statistics: Study Variables

		T2 Number of issues discussed with PO	T2 elicited self-efficacy for avoiding criminal lifestyle	T2 Composite Supp DRI-R Off-PO
N	Valid	363	363	363
	Missing	0	0	0
Mean		4.5675	5.2976	5.6219
Median		4.0000	5.0000	6.0000
Std. Deviation		2.90413	1.24460	1.29673
Minimum		.00	2.33	2.00
Maximum		13.00	7.00	7.00

Recidivism

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes 0	55	15.2	15.2	15.2
	No 1	308	84.8	84.8	100.0
	Total	363	100.0	100.0	

Pearson Bivariate Correlations among Predictor Variables

		T2 Number of issues discussed with PO	T2 elicited self- efficacy for avoiding criminal lifestyle	T2 Composite Supp DRI-R Off- PO
T2 Number of issues discussed with PO	Pearson Correlation	1	.372**	.239**
	Sig. (2-tailed)		<.001	<.001
	N	363	363	363
T2 elicited self-efficacy for avoiding criminal lifestyle	Pearson Correlation	.372**	1	.663**
	Sig. (2-tailed)	<.001		<.001
	N	363	363	363
T2 Composite Supp DRI-R Off-PO	Pearson Correlation	.239**	.663**	1
	Sig. (2-tailed)	<.001	<.001	
	N	363	363	363

** . Correlation is significant at the 0.01 level (2-tailed).

Variance Inflation Factors

		Coefficients ^a					
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity St Tolerance
		B	Std. Error	Beta			
1	(Constant)	2.902	.264		10.990	<.001	
	T2 Number of issues discussed with PO	-.042	.020	-.118	-2.075	.039	.864
	T2 elicited self-efficacy for avoiding criminal lifestyle	.063	.061	.075	1.029	.304	.516
	T2 Composite Supp DRI- R Off-PO	.017	.056	.021	.306	.760	.566

a. Dependent Variable: Extroversion - Mini IPIP

Box Tidwell Regression Test for Linearity

Variables in the Equation

	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
							Lower	Upper
Step 1 ^a								
T2 Number of issues discussed with PO	.506	.305	2.748	1	.097	1.658	.912	3.016
T2 elicited self-efficacy for avoiding criminal lifestyle	1.788	2.176	.675	1	.411	5.975	.084	425.417
T2 Composite Supp DRI-R Off-PO	1.730	2.120	.666	1	.414	5.641	.088	359.671
INT_NID	-.312	.296	1.112	1	.292	.732	.409	1.308
INT_PSEACF	-1.172	1.944	.363	1	.547	.310	.007	13.988
INT_DRI	-1.562	1.886	.685	1	.408	.210	.005	8.461
Constant	-7.164	4.224	2.877	1	.090	.001		

a. Variable(s) entered on step 1: T2 Number of issues discussed with PO, T2 elicited self-efficacy for avoiding criminal lifestyle, T2 Composite Supp DRI-R Off-PO, INT_NID, INT_PSEACF, INT_DRI.

Binomial Logistic Regression

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	39.061	3	<.001
	Block	39.061	3	<.001
	Model	39.061	3	<.001

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	269.727 ^a	.102	.178

a. Estimation terminated at iteration number 5 because parameter estimates changed by less than .001.

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	9.965	8	.267

Contingency Table for Hosmer and Lemeshow Test

		Recidivism_Recode = .00		Recidivism_Recode = 1.00		Total
		Observed	Expected	Observed	Expected	
Step 1	1	19	15.634	17	20.366	36
	2	10	9.900	26	26.100	36
	3	5	7.524	31	28.476	36
	4	5	6.058	31	29.942	36
	5	2	4.722	34	31.278	36
	6	4	3.695	32	32.305	36
	7	2	2.759	34	33.241	36
	8	5	2.128	31	33.872	36
	9	1	1.570	35	34.430	36
	10	2	1.011	37	37.989	39

Classification Table^a

	Observed	Recidivism_Recode	Predicted		Percentage Correct
			.00	1.00	
Step 1	Recidivism_Recode	.00	4	51	7.3
		1.00	5	303	98.4
Overall Percentage					84.6

a. The cut value is .500

Variables in the Equation

	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
							Lower	Upper
Step 1 ^a T2 Number of issues discussed with PO	.197	.070	7.963	1	.005	1.218	1.062	1.397
T2 elicited self-efficacy for avoiding criminal lifestyle	.499	.181	7.563	1	.006	1.647	1.154	2.350
T2 Composite Supp DRI-R Off-PO	.009	.151	.003	1	.954	1.009	.751	1.356
Constant	-1.553	.653	5.662	1	.017	.212		

a. Variable(s) entered on step 1: T2 Number of issues discussed with PO, T2 elicited self-efficacy for avoiding criminal lifestyle, T2 Composite Supp DRI-R Off-PO.