

Recidivism Among Probationers in Lycoming County, Pennsylvania

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Abstract

The recidivism rates of probationers is a topic of interest among criminal justice practitioners. However, there are limited studies on specific types of offenders, such as ones with prior records, and how their behavior while under probation supervision impacts later outcomes. Previous research focuses mainly on recidivism rates among people that are released from prison. This study examines the recidivism rates (measured as new offenses) of individuals who completed probation between April 2015 and April 2016 (n = 1,053) in Lycoming County, Pennsylvania. The recidivism rates of first-time offenders were compared to repeat offenders. Behaviors while on probation, such as probation violations and positive drug tests, were also assessed to determine if it increased the likelihood of recidivism after probation. In a two-year period after completing probation, 14.5% (n=153) of the sample were found to have recidivated. A higher percentage of recidivists were found to have prior offenses, as well as positive drug tests and probation violations during their probation than non-recidivists. This knowledge could be valuable to probation offices in order to target individuals for more intensive programs and supervision. The paper will discuss previous research regarding this topic, the data and methods of the current study, and the results of the research.

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Introduction

Similar to incarceration, probation over the years has experienced a steady increase in its already large population. Between 1995 and 2015, the number of people under supervision (i.e., probation and parole) in the United States increased by almost one million, with approximately 4.6 million people reported to be under supervision in 2015 (Glaze, 2003; Kaeble, 2016). However, since 2015, the probation population has been gradually decreasing (Kaeble, 2018). Pennsylvania has been found to have one of the highest rates of community supervision in the United States (Sawyer & Bertram, 2018). Since the probation population is so immense, it is important to understand the characteristics of individuals under supervision and what factors may impact their likelihood of recidivating, especially in Pennsylvania.

The ultimate goal of probation is to deter criminals, typically nonviolent offenders, from committing future crimes by helping rehabilitate them back into society while still punishing them for their criminal actions. Probation is a way to decrease prison overcrowding by diverting individuals to a sanction other than prison. Probation officers have the assigned duty to do their best to hold people on probation accountable and prevent them from recidivating in the future (Klockars, 1972). Recidivism is defined as when a convicted criminal reoffends (Gray, Fields, and Maxwell, 2001). With this as the definition, many studies look at new offenses and technical violations (violations of the rules of probation) committed while individuals are still on probation. Research has found that individuals sentenced to probation have lower rates of recidivism than those who serve time in prison (Tillyer, Caudy, & Tillyer, 2018). This is because going to prison is criminogenic, meaning it is likely to cause criminal behavior, and high-risk offenders in prison are not receiving the treatment they need. Also, the people that typically are

put on probation are low-risk offenders. Low-risk offenders are less likely to commit another crime, which may be the reason why people on probation have lower recidivism rates compared to those released from prison. Many probation offices put strategies in place that officers should follow in order to decrease the recidivism rates of probationers, but each probation office is distinct and focuses on different aspects of the probation experience (Klockars, 1972).

Recidivism is a growing topic of interest among criminal justice practitioners and the community due to the importance of trying to prevent new crimes from happening, to keep the community safe, and to reduce costs. Most of the research that has been done related to recidivism has studied prisoners and their behavior after they are released from prison. There is only a small amount of research examining what types of probationers are more likely to recidivate and the different ways that probation can help prevent recidivism in probationers (Petersilia, Turner, & Peterson, 1986; Tillyer et al., 2018).

The present study will contribute to the literature by looking at recidivism rates in Lycoming County, Pennsylvania for people who were on probation. The main research questions for the current study examine which characteristics increase the likelihood of recidivism among probationers, whether first-time offenders differ from those who have previously been on probation and how infractions during probation might contribute to higher recidivism rates.

This paper is organized as follows. First, prior studies on recidivism among probationers are discussed, specifically, what factors predict recidivism after probation and how probation officers can address these factors are reviewed. Next, the data and methodology of the current study are outlined. Finally, the findings, limitations, implications, and suggestions for future research are highlighted.

Literature Review

Given the high rates of both the prison and probation population, there is a current trend in criminal justice research that examines rates and predictors of recidivism (Alper, Durose, & Markman, 2018; Gendreau, Little, & Goggin, 1996). The current literature on recidivism rates focuses on a variety of different topics. Some of these topics include predictors of recidivism, such as differences between genders (Olson, Alderden, & Lurigio, 2003; Rettinger & Andrews, 2010), individual characteristics like specific personality traits (Sampson & Laub, 1990; Von Hirsch, 1985; Zara & Farrington, 2016), and behavior while on probation (Gray, Fields, & Maxwell, 2001; Rodriguez & Webb, 2007). Other topics include ways that probation offices can reduce recidivism by using evidence-based practices and certain assessment tools (MacKenzie, 2006; Perez, 2009). While limited, there is also research reviewing the recidivism outcomes of probationers, as measured by the likelihood of a new offense and the time to new offense, as well as probation violations while on supervision (Petersilia, Turner, & Peterson, 1986). These ideas help to provide ways for probation offices to understand recidivism and attempt to decrease it.

Recidivism Outcomes of Probationers

Recidivism can be defined in different ways. Most commonly, studies focus on the commitment of a new offense and time to new offense (Petersilia, Turner, & Peterson, 1986). However, probation violations are often also examined (Grattet, Petersilia, Lin, & Beckman, 2009). These different ways matter because they show why offenders may be reoffending, which can help assess how to prevent recidivism from occurring. The timing of when recidivism occurs after the completion of probation is also important to know because it shows why recidivism may be happening. There has been little research done on the time to recidivism among adult

probationers. However, there is some research on probation recidivism (Petersilia, Turner, & Peterson, 1986). To date, most of the research on time to re-offense focuses on recidivism among juveniles or prisoners, not probationers. For instance, Yonai, Levine, and Glicksohn (2013) found that most reconvictions among juveniles occurred in the first 15 months upon release from prison. Alper, Durose, and Markman (2018) found that 83% of prisoners that were released in 2005 in 30 different states were rearrested at least once in the following nine years. In addition, about half of the people who did recidivate, did so in the first year of being released.

Predictors of Recidivism

Gender Differences. A prominent topic in the literature is gender differences and how particular factors relating to gender differences effect recidivism rates among probationers. Specifically, individual needs while under community supervision have been examined. Up until recently, females typically were not a large topic of interest. This is due to the fact that there are significantly fewer females going through the criminal justice system than there are males (Morash, Kashy, Smith, & Cobbina, 2016).

Most of the research concerning females focuses on their backgrounds and the life that they lived prior to entering the criminal justice system. Intimate partner violence and trauma are common experiences for women who are entering the criminal justice system (Scott, Dennis, & Lurigio, 2017). Stalans and Lurigio (2015) look at how these effects of interpersonal violence can interfere with how a woman complies with the rules of probation and whether she will commit a new offense. These authors found that an unstable residence and a non-conforming, abusive partner can increase the number of missed appointments a woman on probation experiences and result in new arrests.

Social support is a part of life that people want and need to have in order to be successful. Females who have gone through the criminal justice system tend to lack social support needed from their peers (Harp, Oser, & Leukefeld, 2012). Probation officers may have to provide this necessary support for women on probation, specifically ones with substance abuse problems, in multiple ways, such as informational, emotional, and esteem support, in order to reduce recidivism (Holmstrom, Adams, Morash, Smith, & Cobbina, 2017). Men typically do not need this extensive support in their lives. Support from probation officers is important for females', however, it is not the main factor influencing their recidivism rates. Outside factors, such as finances, employment, housing, education, and conditions in the community are more likely to predict recidivism among females (Morash, Kashy, Smith, & Cobbina, 2016; Olson, Alderden, & Lurigio, 2003).

While people with a history of substance abuse have been found to be more likely to reoffend (Rettinger & Andrews, 2010), another difference that exists between men and women is that women are more likely to have a history of substance abuse than males (Bennett, Holloway, & Farrington, 2008; Morash, Kashy, Smith, & Cobbina, 2016). In addition to being more at risk of recidivism, this also suggests that women on probation need to be supervised differently than men because they have different needs.

Ultimately, female offenders have different criminogenic needs than males (Schulenberg, 2007; Scott, Dennis, & Lurigio, 2017). These differences must be considered by the probation offices and officers in order to properly supervise females in ways that will effectively reduce recidivism among both populations. This is just one factor that probation offices need to take into consideration when trying to address recidivism.

Felony Probationers. The type and category of crime committed by someone may influence the likelihood of recidivism. Petersilia, Turner, and Peterson (1986) researched felony probationers in California. The results of the study found that 65 percent of the sample were rearrested and 34 percent were then actually sent to prison for new charges. The majority of these new charges were for burglary, robbery, and other violent crimes. These findings alone show that felons and high-risk offenders may not be the right fit for probation. This also puts the community at risk because of these specific probationers causing more of a threat due to continued criminal behavior. High-risk offenders may need to be supervised more intensely. This study shows that felonies, such as burglary and robbery, may be a contributing factor towards the risk level of someone after they complete probation. There is a higher risk due to the type of crime which then leads to higher recidivism according to these findings. It also explains that due to the higher chances of recidivism, regular probation supervision may not be effective for individuals who commit more serious crimes.

Background and History of Individual. Research has found that one's previous criminal history is the best predictor of future criminal activity (Kelly, 2016; MacKenzie, 2006; Sampson and Laub, 1990; Von Hirsch, 1985). Most studies show that people with criminal histories are more likely to commit future crimes than first-time offenders (Sampson & Laub, 1990; Von Hirsch, 1985). There are some people who will only commit one crime and then desist. However, for the majority of people, the chances of repeat offending will increase after every subsequent conviction (Zara & Farrington, 2016).

Olsen, Alderden, and Lurigio (2003) found that probationers with prior convictions were more likely to be rearrested than probationers with no criminal history. Similarly, Mears and Cochran (2018) studied first-and second-time felons and whether the severity of the punishment

influences how likely they are to recidivate. Surprisingly, their results showed that for both first- and second-time felons, severe punishments did not result in decreased recidivism. This research contradicts the general public's belief that tough punishments and severe sentencing deters, which is based on the "tough on crime" movement that has been prevalent in the United States in recent years (Kelly, 2016). This shows that many citizens do not know what research says about what actually works to support their beliefs. It is important for probation officers to know the results of these studies in order to evaluate what types of offenders they should focus specific techniques on in order to prevent that person from committing that same behavior again. Specifically, it is not helpful for individuals with limited criminal histories to be supervised harshly or have severe punishments while on probation supervision.

Life course persistent offenders (LCPs) are a type of offender that is considered a repeat offender due to their personality and characteristics (Zara & Farrington, 2016). These are offenders who begin to commit crime at a young age and never grow out of that phase. They will continue to commit crimes throughout their entire life, but as they get older, their criminal habits may decrease slightly. The personalities of these types of offenders tend to remain stable over time and do not change significantly. With these personality characteristics and neurobiological factors, LCPs tend to learn their criminal habits early on in childhood (Zara & Farrington, 2016). This research shows how an individual's background and history can affect their criminal behavior over time.

Greenwood and Abrahamse (1982) attempted to find ways to identify criminals considered high-risk based on their offense types and whether this can predict future serious crime as well. The authors investigated criminal records, employment, and social and drug history in inmates in California, Michigan, and Texas. The findings were consistent with prior

research since criminal history, the age when the offender was first involved with the criminal justice system, drug use, and employment history all predicted the identification of someone labeled as a high-risk offender. This shows that prior criminal histories are important in someone's risk assessment.

Behavior While on Probation. The behavior of the probationer while under supervision can be important in understanding future behaviors. Violations while on supervision can be a large concern for probation officers. Probation violations can influence recidivism rates since there is the possibility of being sent to prison because of the violation. Violations may also be a sign of what life might be like for the offender after they completed probation. Probation violations are also believed to be one way to tell whether probation supervision is successful. Types of probation violations can show what areas of a probationer's life the officers need to be concerned about and with which they are struggling.

There are a wide variety of violations an individual can receive while under supervision. Any new crimes, absconding (running away), positive drug tests, failing or not showing up to mandatory programs, alcohol violations, and not paying cost and fines after a certain amount of time can all be designated as probation violations, as well as many more offenses (Gray, Fields & Maxwell, 2001). It can be difficult to know whether a probationer will just get a warning or a true probation violation since a probation officer has a large amount of discretion in this decision (Klockars, 1972; Rodriguez & Webb, 2007). Drug testing during supervision greatly affects probation failures and violations (Gray, Fields & Maxwell, 2001). Rodriguez and Webb (2007) discovered that revoked probationers (ones who got their probation sentence taken away and were sentenced to jail instead) were most likely to have gone to jail due to a probation violation instead of a new offense, which means that they are less of a threat to the community.

In a study conducted by Grattett, Petersilia, Lin, and Beckman (2009) on individuals on parole between 2003 and 2004 in California, it was found that probation violations were fairly common (50 percent committed a violation). However, the authors found that the more time spent outside of prison and in the community, the less likely an individual was to commit either a new offense or probation violation. Multiple factors were found to increase the likelihood of parole being revoked for these individuals. Criminal history, specific offenses (sexual and violent), and the seriousness of the violation or new offense were some of these factors. Surprisingly, demographic variables like age and gender did not play a large role in revocation decisions. This research shows how different factors can contribute to an individual's behavior while on probation and how the majority of individuals under supervision end up violating the conditions of probation.

Many probation offices consist of different programs that are designed for specific types of offenders. Perez (2009) researched how effective a residential drug treatment program would be in decreasing recidivism among high-risk probationers. The results of her research showed that participants who received residential drug treatment were found to have more probation violations than the control group that was randomly assigned to regular supervision. This finding could be because people in the residential drug treatment were supervised more closely and strictly, that more violations were found, which would mean that both groups could be violating at the same rates in reality. Extended research needs to be done in order to determine whether this residential drug treatment program does lead to more violations or if it is just because of more extensive supervision while in the program. The main focus of this research shows how much discretion probation officers have and how that discretion can influence whether someone receives a probation violation.

In addition to officer discretion, an individual's risk factors may also impact whether one receives a probation violation. One study conducted by Gray et al. (2001) researched factors relating to probation violations, whether these factors were influenced by how serious the violation was, and the timing of when the violation occurred. More specifically, they looked at the amount of time that it took from the beginning of supervision to when each person violated probation. Gray et al. found that most violations, 28 percent, could be considered moderately serious, which includes not attending mandatory programs. One quarter of the entire sample had no violations at all. Not reporting was the most common violation and failing a drug test was the second most common violation. Most of the violations that did occur took place in the first 100 days of being on probation supervision, with the most serious types of violations happening later on in probation supervision. All of these results can be very useful to probation officers in order to know what to look for, by whom, and when they should look for certain types of violations in order to help decrease this type of recidivism.

Prior research examines types of probation violations, what factors influence their occurrence, and why they occur. However, there is a lack of research on how probation violations can affect individuals later on in their lives. The number of probation violations a person receives while under supervision may be predictive of recidivism after the probationer completes probation successfully. More research must be done to determine whether probation violations can affect recidivism after the completion of probation. As research has found however, one problem is the fact that the discretion of officers plays a large part in determining probation violations (Steen, Opsal, Lovegrove, & McKinzey, 2013). Since discretion is so heavily relied upon when determining probation violations, it is difficult to use this variable in research concerning recidivism because it varies so much.

Ways to Reduce Recidivism During Probation

Evidence-based practices are defined as using scientific research evidence to make important and valid decisions to help develop and sustain effective policies (MacKenzie, 2006). Accurate and detailed studies can help provide necessary information to attempt to reduce recidivism and result in better practices in the criminal justice system. Risk assessments to help categorize people on supervision are one way that evidence-based practices are being implemented in probation offices.

Assessments are commonly used in probation in order to understand an individual's risk level and how they should be supervised. Gendreau, Little, and Goggin (1996) researched what assessments would best predict recidivism. The LSI-R was found to be the most predictive assessment of recidivism, but it could be improved to better understand recidivism. Static risk factors are factors that lead to recidivism that are not able to be changed from intervention. For example, age and prior offenses are static factors. Dynamic risk factors are factors that are able to be changed through intervention and treatment. Examples of dynamic risk factors are factors such as drug use and unemployment. Both are examined in the LSI-R (Gendreau, Little, & Goggin, 1996). Other research has concentrated on the risk assessment that each probationer completes in the beginning of their probation sentence and how the results of this assessment can effectively help reduce recidivism among probationers (Bosker, Witteman, & Hermanns, 2013). Bosker et al. (2013) examined the intervention plan that probation officers develop for individuals on probation. Results of the study determined that instruments that probation offices are supposed to use, such as the risk and needs assessment, most of the time do not match the intervention plan developed by the officer. This research is important because it discusses how

probation offices and their strategies can influence how well the probationers end up doing on probation and afterwards.

Conclusion

There is a great deal of research on recidivism, but the majority of it deals specifically with the recidivism rates among people who were released from prison and certain types of offenders. While there is research on what influences an individual's behavior while on probation, such as what increases the likelihood of probation violations, there is an absence of research concerning how probation violations may be significant in predicting behavior after probation. Due to the lack of studies that focus on the recidivism rates of probationers, including the time to recidivism, the current research will expand this area.

This study will help expand the literature and provide more knowledge on what types of people are more likely to commit a new crime after probation within two years. The current study's main objective is to determine what increases the likelihood of recidivism among probationers. This research is important to the adult probation office in Lycoming County because their primary belief is that they should focus their attention on first-time offenders and assist them in successfully completing probation. The results of this research can help this office implement new ideas if needed to help decrease recidivism among certain groups of probationers. The results and findings of this research can help the Lycoming County Adult Probation Office specify what characteristics increase the likelihood of recidivism after the completion of probation.

Data and Methods

Data

The data used in this study consisted of data received from the Lycoming County Adult Probation Office in Williamsport, Pennsylvania. The probation office provided information on individuals who successfully completed probation between April 2015 and April 2016 (n=1,053). Additional data on these individuals, such as demographic information, prior criminal history, and an individual's current offense and probation sentence was compiled by accessing the Unified Case Management (UCM) database in the adult probation office. The UCM database is a database used by the probation office and other criminal justice agencies in Pennsylvania to manage their caseloads and communicate information efficiently to other agencies. An individual's behavior while on supervision, such as whether they had a probation violation hearing or positive drug test while under supervision, was also tracked.

Recidivism data for these individuals was then collected for up to two years after their completion of supervision using online public court docket sheets. The Pennsylvania Unified Judicial System (UJS) Portal was used to gather this data for each individual. The UJS Portal is an online system that provides information about court cases and docket sheets to the public. Any criminal case that occurred after the completion of probation can be accessed through these docket sheets. This allows for a determination of whether a person was re-arrested, when the arrest occurred and for what type of an offense. In addition, whether the person was convicted and, if so, their sentence, can also be tracked. Based on this information, recidivism rates were compiled and analyzed.

Hypotheses

Based on prior research, two hypotheses have been formulated. The first hypothesis is that the more prior offenses a person has, the higher their likelihood of recidivating.

H1: First time offenders are less likely to recidivate than repeat offenders.

The second hypothesis for this study is that the more infractions one has while under probation supervision, the more likely they are to recidivate. (Probation violations may differ from positive drug tests and so will be examined separately.)

H2: Individuals who receive infractions (i.e. probation violations or positive drug tests) are more likely to recidivate than those without.

Overall, it is believed that recidivists and non-recidivists will differ based on certain individual and criminal history characteristics. The main goal of this study is to determine what these characteristics are.

Independent Variables

The independent variables used in this study are whether an individual is a repeat offender, whether an individual received a violation while on probation and whether an individual tested positive for drugs while on probation. In the current study, whether someone is a repeat offender is defined as someone who had one or more prior offenses. Probation violations and positive drug tests were measured as a yes or no measure and were retrieved from the UCM database at the Lycoming County Probation Office. These variables were measured dichotomously due to the information that was available in the UCM database.

Dependent Variable

The dependent variable used in this study is whether an individual recidivated in Lycoming County. Recidivism is when someone commits a new crime after previously being

convicted of a different crime (Zara & Farrington, 2016). Recidivism is defined in the current study as a new arrest that is committed within two years of completing their probation supervision. No data is included regarding arrests that occurred during supervision. Recidivism will be measured in the following two ways: 1) whether or not someone recidivated within two years of completing probation and 2) the time to the new offense (in days).

Demographic Variables

Additional demographic variables were examined to determine the effect on recidivism. These demographic variables include race, gender, and age. Please refer to Table 1 for the descriptive statistics of individuals in the sample.

The majority of the individuals in this sample are white (86.2%, n=907) and male (68.7%, n=723). The mean age of someone on probation in this sample is 38 years old. The individuals reside primarily in Lycoming County (70.7%, n=744). The most common offense type for someone on probation is a DUI (44.3%, n=466). In the sample, it was found that 14.5% (n=153) would go on to commit another offense in the next two years after completing probation. Most of these offenses then led to new convictions (82.8%, n=144).

Analysis

First, the differences between recidivists and non-recidivists in terms of demographic and criminal history variables were analyzed, using chi-square, cross-tabulations, and t-tests. Specifically, the study is looking at whether there is a difference in recidivism between first-time and repeat offenders. In addition, the study also explored whether there was a difference in recidivism between individuals who had a probation violation or drug test while under supervision. Further analyses were conducted based on gender, race and age to assess who is

more likely to recidivate. The time to recidivism was determined as well. Logistic regressions were run to analyze probabilities of recidivism with different situations and variables.

Results

The research problem focused on different variables that might determine whether someone who has completed probation would end up recidivating. The main hypotheses addressed prior offenses and infractions during probation supervision and whether those variables differed significantly between recidivists and non-recidivists. Overall, the main focus of the analyses were the differences between these two groups. Overall, recidivists were more likely to be male (75.8%) and white (77.0%), and the average age was 35.7 years old. This differs from the overall samples, of which 68.7% were male, 86.2 % were white, and the average age was 38.1. There was a significantly higher percentage of males who recidivated compared to non-recidivists (75.8% versus 67.4%; $\chi^2 = 4.26$; $p < .01$).

Recidivists were more likely to have a prior criminal history compared to non-recidivists. Specifically, 70.6% of recidivists who were found to have prior offenses compared to 48% of non-recidivists ($\chi^2 = 26.7$; $p < .01$). In addition, recidivists had a higher number of prior probation sentences compared to non-recidivists (58.2% versus 37.0%; $\chi^2 = 23.9$; $p < .01$). The two groups also differed in terms of infractions while on supervision. There was a greater percentage of recidivists (34.6%) who had probation violations while on supervision compared to non-recidivists (16.0%) ($\chi^2 = 29.9$; $p < .01$). Recidivists were also more likely to have a positive drug test during supervision (52.9%) compared to non-recidivists (23.2%) ($\chi^2 = 57.9$; $p < .01$). There was no significant difference in length of supervision between recidivists and non-recidivists.

Different types of offenses can yield different results when looking at recidivism.

Overall, drug offenders were the most likely to recidivate and DUI offenders were the least likely

to recidivate. Among recidivists, 27.5% who were drug offenders, compared to 18.4% of non-recidivists ($\chi^2 = 6.7$; $p < .01$). On the other hand, 29.4% of recidivists were DUI offenders, compared to 46.8% of non-recidivists ($\chi^2 = 16$; $p < .01$). There was no significant difference in terms of likelihood of recidivating among other offense types. Refer to Table 2 to see all of the differences between recidivists and non-recidivists on demographic and criminal history variables.

The time to recidivism was analyzed and it was found that most recidivism occurred in the first couple of months after completing supervision. Among the individuals who recidivated, 36.0% did so within the first three months after supervision completion. Figure 1 depicts when recidivists reoffended after their completion of probation. Zero months represents everybody who recidivated within the first 30 days of completing probation. The graph shows that the results for time to recidivism was positively skewed.

The logistic regression shows that probation violations, prior offenses, and positive drug tests significantly increased the likelihood of recidivism. The probability of a person with a probation violation, prior offense, and a positive drug test recidivating is 0.3819 (38.19%). The probability of a person with a probation violation and a prior offense recidivating is 0.1796 (17.96%). The probability of a person with a probation violation and a positive drug test recidivating is 0.2401 (24.01%). The probability of a person with a prior offense recidivating is 0.1185 (11.85%). The probability of a person with a probation violation recidivating is 0.0991 (9.91%). The probability of a person with a positive drug test recidivating is 0.1624 (16.24%). The logistic regression results are shown in Table 3.

Discussion

This research set out to explore the differences between recidivists and non-recidivists, with a specific focus on prior offenses and infractions that occurred while under supervision. The results support the hypotheses that were predicted. There were differences between recidivists and non-recidivists concerning a few variables. This shows that these variables, such as prior offenses and violations while under probation, might increase the likelihood of someone reoffending after they are finished probation. The logistic regression results show that individuals with positive drug tests have a higher likelihood of recidivating than individuals with prior offenses or probation violations. The difference between positive drug tests and probation violations could be possibly explained by the discretion of probation officers. Probation officers make the ultimate decision to violate someone due to a positive drug test, so this difference may be explained by this discretion.

The amount of time on supervision did not significantly differ between those who recidivated and those who did not. This shows that other factors during supervision must influence recidivism. The results of this research show that behaviors, such as positive drug tests and violations of probation terms, can have an impact on one's future behavior. Recidivists were found to have more infractions during their supervision which shows that how they behave during supervision may suggest how they will behave after supervision as well. This information is important for probation officers to understand because it may impact how they approach supervision and allow them to recognize who is more likely to commit another offense in the future.

The results of this research are important since there are very few research studies that look at the recidivism rates of individuals who have completed probation. With these results, the

probation office can determine how to effectively implement their resources, including who should be more closely supervised.

The results of the current research are similar to previous research in the sense that people with criminal histories are more likely to commit future offenses than first time offenders (Sampson & Laub, 1990; Von Hirsch, 1985). Olsen, Alderden, and Lurigio (2003) also found that probationers with prior convictions were more likely to be rearrested than probationers with no criminal history. One of the major findings of the current study was that most recidivism occurred in the first couple of months after completion of probation supervision. These results align with previous research that was done as well (Alper et al., 2018; Grattett et al., 2009; Sampson & Laub, 1990).

Limitations and Future Research

There are a few limitations that are relevant for this study. One limitation is the fact that risk assessment scores were not assessed to see if the scores predicted recidivism after probation. This is because these scores were not available for every person in the sample.

There are multiple types of probation supervision to which one can be assigned. Another limitation to this study is the fact that the type of supervision was not evaluated to determine if different supervision types influence recidivism outcomes. Information about specialized courts, such as drug courts, DUI courts, and mental health courts was also not available to determine if the likelihood of recidivism differs among participants.

Recidivism rates could be influenced by the number of probation violations during supervision instead of simply whether one occurs. The problem with using the number of probation violations is discretion plays such a large role when officers are deciding whether to violate someone. This occurs in every probation office all over the country. Future research that

looks into the number of violations in regards to recidivism, but takes into account the variation in officer discretion, would be useful information.

Recidivism was only examined in one county in Pennsylvania. Lycoming County was chosen since that is where these people were on probation. This is a limitation since recidivism can occur anywhere, not just in Lycoming County, but recidivism information for other parts of the state or other states was not accessible. A narrow definition of recidivism which was limited to Lycoming County because that was the county of interest for this dataset. Future research should attempt to look at recidivism in other places, not just one county since the full scope of recidivism is not examined then. Broadening this definition to other counties and other states provides a more comprehensive look at recidivism outcomes.

Since it was found that most recidivism occurs shortly after completing supervision, there should be more research that looks into why this happens and what causes people to commit another crime right after probation. Qualitative research may be beneficial when evaluating this topic because it can obtain the opinions of people who did recidivate and examine what caused them to commit another crime. Despite these limitations, this study still offers valuable information for the probation office in understanding who is more likely to recidivate based on different characteristics.

Conclusion

The results of this research contribute to the existing literature on probation. Previous literature has mainly examined recidivism among individuals who were released from prison or defined recidivism as a probation revocation. This research provides information on recidivism among individuals that completed probation. This study found that factors, such as prior offenses and probation violations or positive drug tests while on supervision, were all found to affect

recidivism. These findings are relevant to probation officers so that they have a better understanding of the risk factors that predict recidivism after probation completion. This knowledge can help officers supervise different offenders in ways that might help prevent future recidivism.

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Table 1. Descriptive Statistics on Lycoming County Probation Completers Between April 2015 and April 2016 (n = 1,053)

Variable	N	%
Demographic Information		
Sex		
<i>Male</i>	723	68.7
<i>Female</i>	330	31.3
Race		
<i>White</i>	907	86.2
<i>Black</i>	139	13.2
<i>Hispanic</i>	6	0.6
Age (in years)		
<i>Mean (SD)</i>	38.0	12.2
County of Residence		
<i>Lycoming County</i>	744	70.7
<i>Outside Lycoming County</i>	308	29.3
Criminal History Information		
Prior Offenses		
<i>No priors</i>	513	48.8
<i>1 prior</i>	196	18.6
<i>2 prior</i>	117	11.1
<i>3 or more priors</i>	226	21.5
Prior Probation Sentences		
<i>None</i>	631	59.9
<i>1</i>	210	19.9
<i>2 or more</i>	212	20.2
Offense Type		
<i>Violent</i>	53	5.0
<i>Property</i>	208	19.8
<i>Drugs</i>	208	19.8
<i>Public Order/Other</i>	58	5.5
<i>DUI</i>	466	44.3
<i>Other</i>	53	5.0
<i>Unknown</i>	7	0.6
Felony/Misdemeanor/Summary		
<i>Felony</i>	86	8.2
<i>Misdemeanor</i>	945	89.7
<i>Summary</i>	20	1.9
<i>Unknown</i>	2	0.2
Type of Probation Supervision		
<i>ARD</i>	124	11.8
<i>IP</i>	263	25.0
<i>Parole</i>	169	16.0
<i>Probation</i>	494	46.9
<i>Unknown</i>	3	0.3
PV Hearings Under Supervision		
<i>No</i>	855	81.2
<i>Yes</i>	191	18.2
<i>Out of County</i>	6	0.6

Positive Drug Tests Under Supervision	<i>No</i>	763	72.5
	<i>Yes</i>	290	27.5
Average Sentence Length (in months)	<i>Mean (SD)</i>	17.3	16.8
Length of Probation Supervision (in days)	<i>Mean (SD)</i>	521.2	517.6
Early Termination	<i>Yes</i>	182	17.3
	<i>No</i>	80.9	82.7
Recidivated	<i>Yes</i>	153	14.5
	<i>No</i>	900	85.5

Note. Unknown refers to missing data.

Table 2. Demographic and Criminal History Information of Recidivists and Non-Recidivists (n = 1,053)

Variable	Recidivists (n=153; 14.5%)		Non-Recidivists (n=900; 85.5%)		χ^2/t value
	N	%	N	%	
Demographic Information					
Sex					$\chi^2 = 4.3^{**}$
	<i>Male</i>	116	75.8	607	67.4
	<i>Female</i>	37	24.2	293	32.6
Race					$\chi^2 = 14.6^{**}$
	<i>White</i>	117	77.0	791	88.4
	<i>Black</i>	35	23.0	104	11.6
Age (in years)					$t = 2.43^{**}$
	<i>Mean (SD)</i>	35.7	10.7	38.4	12.5
Criminal History					
Prior Offenses					$\chi^2 = 26.7^{**}$
	<i>No priors</i>	45	29.4	468	52.0
	<i>1 or more priors</i>	108	70.6	432	48.0
Prior Probation					$\chi^2 = 23.9^{**}$
	<i>None</i>	64	41.8	567	63.1
	<i>1 or more</i>	89	58.2	333	37.0
Drug Offenses					$\chi^2 = 6.7^{**}$
	<i>No</i>	111	72.5	734	81.6
	<i>Yes</i>	42	27.5	166	18.4
DUI Offenses					$\chi^2 = 16.0^{**}$
	<i>No</i>	108	70.6	479	53.2
	<i>Yes</i>	45	29.4	421	46.8
PV Hearings Under Supervision					$\chi^2 = 29.9^{**}$
	<i>No</i>	100	65.4	756	84.0
	<i>Yes</i>	53	34.6	144	16.0
Positive Drug Tests Under Supervision					$\chi^2 = 57.9^{**}$
	<i>No</i>	72	47.1	691	76.8
	<i>Yes</i>	81	52.9	209	23.2
Length of Probation Supervision (in days)					$t = -0.605$
	<i>Mean (SD)</i>	544.5	510.1	517.2	519.0

Note. ** p <.01.

Table 3. Logistic Regression of Recidivism

	B	Exp(B)	Sig.
Probation Violations	.489	1.631	.021
Prior Offenses	.670	1.954	.001
Positive Drug Tests	1.036	2.817	.000
Constant (Recidivism)	-2.676	.069	-

Figure 1. Months Between Closure Date and Re-offense Date

